Transportation Analysis

The Park Druid Hills Multi-Use Development
Development of Regional Impact #1583
DeKalb County, Georgia

July 29, 2008



MARC R. ACAMPORA, PE, LLC

Transportation Analysis

The Park Druid Hills Multi-Use Development
Development of Regional Impact #1583
DeKalb County, Georgia

study prepared for:

Taylor & Mathis, Inc.
3500 Lenox Road, Suite 500
Atlanta, Georgia 30326

July 29, 2008



MARC R. ACAMPORA, PE, LLC
TRAFFIC ENGINEERING

858 Myrtle Street, NE
Atlanta, Georgia 30308
p (404) 885-9154
f (404) 885-9156
acamporatraffic@comcast.net

Summary

This Transportation Analysis was prepared for The Park Druid Hills DRI #1583, in compliance with the requirements of the Georgia Regional Transportation Authority. The site is currently developed with an office park, most of which will be removed and redeveloped. The project will be build in two phases, with Phase I to include 300,00 ft² of new office, 417,600 ft² of retail, 454 apartments, a 170 room hotel, and 15,000 ft² of civic use (assumed to be a library). For Phase I, 291,970 ft² of existing office will remain, as well. Phase II will add 577,600 ft² of new office plus 295,221 ft² of existing office to remain. In addition, 71,000 ft² of retail and 350 additional apartments will be added. Phase I will be completed by 2011 and the full build-out date for the project is 2016.

Access is provided to the current Executive Park office park at a main signalized entrance where Executive Park Drive meets North Druid Hills Road. Executive Park Drive terminates at its stop sign controlled approach at Sheridan Road. In addition, Executive Park South meets Chantilly Drive at the west side of the Park. Chantilly Drive heads in two directions, with a primary rear access to the site provided via Chantilly Drive to Cheshire Bridge Road near the I-85 ramps to and from the north. Chantilly Drive also extends from Executive Park South to Sheridan Road.

The site plan for the project calls for several modifications to the access and internal roadway network. Internally, Executive Park Drive at Sheridan Road will be rebuilt such that the main route of travel is directly between the eastern portion of Sheridan Road and Executive Park Drive. The western portion of Sheridan Road would "T" into this new main route and this new eastbound approach would be side street stop sign controlled. Additionally, Executive Park South at Executive Park Drive would be rebuilt such that the main route of travel is directly between Executive Park South and the southern portion of Executive Park Drive. The northern portion of Executive Park Drive would "T" into this new main route and this new westbound approach would be side street stop sign controlled. In Phase II, a new signalized full-movement access will be provided on North Druid Hills Road between Executive Park Drive and Briarcliff Road.

The study network for this Transportation Analysis extends along North Druid Hills Road from Goodwin Road (north of East Roxboro Road), across Buford Highway and I-85, through its intersection with Briarcliff Road, to Lavista Road. The network includes Briarcliff Road at Clairmont Road to the northeast, and continues southwest along Briarcliff past Sheridan Road, through Lavista and Clifton Roads to Johnson Road. To the west of the site, the study network includes Buford Highway at Lenox Road, south to Cheshire Bridge Road at Lavista / Lindbergh. A total of 25 intersections were evaluated for the weekday a.m. and p.m. peak periods, and the most critical of them were also evaluated for the Saturday peak time. Analysis time periods included the existing, 2011 no-build, 2011 build, 2016 no-build, and 2016 build.

The analysis of existing conditions reveal that no mitigation is necessary to achieve the proscribed level of service (LOS) standards. However, eleven recommendations were made to improve the existing condition, which are presented in Chapter 5.5.

The following is a list summarizing the mitigation developed for the 2011 no-build condition:

1) Intersection 7 – Build a second northbound exclusive right turn lane on North Druid Hills Road at the I-85 Northbound On-Ramp. Re-configure the on-ramp so the dual right turn lanes feed directly to the interstate, with a single lane splitting off to the right to feed the access road.

2) Intersection 11 – Construct a southbound exclusive right turn lane on Clairmont Road at Briarcliff Road.

3) Intersection 14 – Convert the inside southbound through lane on Briarcliff Road at Clifton Road to a second exclusive left turn lane and change the phasing for that movement to protected-only.

4) Intersection 22 – Construct a southbound exclusive left turn lane on Cheshire Bridge Road at Sheridan Road.

The following is a list summarizing the mitigation developed for the 2016 no-build condition:

1) Intersection 3 – Add a second northbound through lane from North Druid Hills Road to East Roxboro Road and widen East Roxboro Road to four lanes from North Druid Hills Road to the recently widened section north of West Roxboro Road.

2) Intersection 4 – Build a southbound exclusive right turn lane on North Druid Hills Road at Buford Highway.

3) Intersection 11 – Add a second westbound exclusive right turn lane on Briarcliff Road at Clairmont Road.

4) Intersection 13 – By 2016, the northbound and southbound through volumes on Briarcliff will be sufficient to justify widening Briarcliff to two through lanes in each direction through this area, including at its intersection with Lavista Road.

5) Intersection 14 – Add a second westbound right turn lane, creating dual right turn lanes, on Clifton Road at Briarcliff, along with an overlap phase that would provide a protected green arrow for these right turners concurrently with the southbound protected left turn phase.

6) Intersection 16 – Signalization of the intersection of Sheridan Road and Executive Park Drive will be necessary in the 2016 no-build condition to mitigate the delays to southbound left turners. The intersection may be reconstructed as part of The Park Druid Hills project.

7) Intersection 18 – Create eastbound dual right turn lanes (add one right turn lane) on eastbound Buford Highway at Lenox Road, accompanied by an overlap protected green arrow which would run concurrently with the northbound protected left turn phase. Additionally, add a second eastbound left turn lane from Buford Highway to northbound Lenox Road with protected-only phasing.

8) Intersection 23 – Add exclusive right turn lanes on both the southbound approach (most benefit) and the northbound approach of Cheshire Bridge Road at Lindbergh/Lavista.

The following is a list summarizing the mitigation developed for the 2011 build condition:

1) Intersection 4 – Add a northbound exclusive right turn lane on North Druid Hills Road at Buford Highway.

2) Intersection 8 – Consider providing two standard right turn lanes on North Druid Hills Road at Executive Park Drive, rather than the proposed slip ramp configuration.

3) Intersection 13 – Add a westbound right turn lane on Lavista Road at Briarcliff Road.

4) Intersection 16 – Perform a Signal Needs Study to determine if and when the signalization of the reconfigured intersection of Executive Park Drive at Sheridan Road may be appropriate according to the standards in the *Manual On Uniform Traffic Control Devices* (MUTCD).

5) Intersection 21 – Perform a Signal Needs Study to determine if and when the signalization of the intersection of Cheshire Bridge Road at Chantilly Drive may be appropriate according to the standards in the MUTCD.

The following is a list summarizing the mitigation developed for the 2016 build condition:

1) Intersection 4 – Add an eastbound right turn lane on Buford Highway at North Druid Hills Road.

2) Intersections 6 and 7 – Widen North Druid Hills Road to three through lanes in each direction (see text for qualifications about this recommedation).

3) Intersection 9 – Adding a second southbound left turn lane, a second southbound right turn lanes, and a second westbound right turn lane will provide substantial benefit, even though the LOS D standard is not achieved. As noted above, a discussion of alternate options, which may include prohibiting left turns at this intersection, is documented in Chapter 9.

4) Intersection 12 – Consideration should be given to widening Briarcliff to four through travel lanes at Sheridan Road. This is consistent with the findings of the 2016 no-build analysis that identified the need to widen Briarcliff to four travel lanes at Lavista Road. The County and Georgia DOT should anticipate widening Briarcliff to four through lanes from North Druid Hills Road through Lavista Road by 2016.

5) Intersection 22 – Add a second lane on westbound Sheridan Road at Cheshire Bridge Road.

6) Intersection 24 – Perform a signal needs study to determine if the MUTCD standards will be satisfied for the signalization of the reconfigured Executive Park Drive at Executive Park South.

The following recommendations are made for The Park Druid Hills site:

1) Provide roundabout at Driveway A to minimize impedance to flows on Executive Park Drive.

2) If feasible, align the access to the A.1/A.2 deck with Street 7 at Driveway B.

3) Provide the lane configuration presented in Figure 37, including two through lanes in each direction on Executive Park Drive.

4) Perform a signal needs study to determine if/when signalization at Driveway F will be appropriate.

It is noted that, to be conservative, the analysis assumed that Building B.16 will be developed as 350 standard apartments (in Phase II). However, it is considered likely that these units will, in fact, be developed as senior housing. Senior housing generates trips at rates substantially lower than standard apartments. Therefore, should B.16 actually be developed as senior housing, there will be a reduction in the trip generation of the site. The table below summarizes the differences in The Park Druid Hills trip generation that would result.

Table S1 – Full Build-Out Trip Comparison of Site With Apartments vs. Senior Housing

Land Use	A.M. Peak Hour			P.M. Peak Hour			24-Hour	Saturday Peak Hour		
	Enter	Exit	2-Way	Enter	Enter	Exit	2-Way	Enter	Enter	Exit
B.16 as 350 Apartments	35	140	175	137	73	210	2,254	82	81	163
B.16 at 350 Senior Housing	13	15	28	23	16	39	1,218	53	52	105
Difference	-22	-125	-147	-114	-57	-171	-1,036	-29	-29	-58
Site Unadjusted Trips with B.16 as Apartments	2,640	927	3,567	2,112	3,551	5,663	52,936	2,517	2,282	4,799
Total Unadjusted Trips with B.16 as Senior Housing	2,618	802	3,420	1,998	3,494	5,492	51,900	2,488	2,253	4,741
Difference	-22	-125	-147	-114	-57	-171	-1,036	-29	-29	-58
Site New External Trips with B.16 as Apartments	1,422	625	2,047	1,370	2,012	3,382	32,907	1,762	1,588	3,350
Site New External Trips with B.16 as Senior Housing	1,401	509	1,910	1,296	1,986	3,282	31,933	1,744	1,569	3,313
Difference	-21	-116	-137	-74	-26	-100	-974	-18	-19	-37

Table S1 reveals that, in the likely event that B.16 is developed as senior housing, when compared with the numbers used in this traffic study, there would be a reduction of 137 new site trips in the a.m. peak hour, 100 trips in the p.m. peak hour, 974 daily trips, and 37 trips in the Saturday peak hour. This reduction in trips would be expected to reduce delays in the 2016 build condition, to levels slightly below those reported in this study.

Contents

1. PROJECT DESCRIPTION 1

1.1 Project Phasing, Pods, and Land Uses 2
1.2 Site Plan 4
1.3 Site Access 4
1.4 On-Site Bicycle and Pedestrian Facilities 4
1.5 Transit Access 6
1.6 Parking 6

2. STUDY NETWORK 7

2.1 Peak Time Periods And Analysis Conditions 7
2.2 Level of Service Standard 8

3. EXISTING TRANSPORTATION FACILITIES 9

3.1 North Druid Hills Road 9
3.2 Briarcliff Road 12
3.3 Sheridan Road and Chantilly Drive 14
3.4 Cheshire Bridge Road and Lenox Road 17
3.5 Executive Park Drive and Executive Park South 19
3.6 Transit Service 22
3.7 Pedestrian and Bicycle Facilities 22

4. PROJECT TRAFFIC CHARACTERISTICS 23

4.1 Trip Generation 23
4.2 Trip Distribution and Assignment 23

5. EXISTING TRAFFIC ANALYSIS 40

5.1 Existing Traffic Volumes 40
5.2 Existing Lane Configuration 40
5.3 Existing Intersection Operations 45
5.4 Existing Facilities Needs Analysis 46
5.5 Other Recommendations For Existing Conditions 47

6. BASE (NO-BUILD) TRAFFIC ANALYSIS 49

6.1 2011 No-Build Traffic Volumes 49
6.2 2011 No-Build Intersection Lane Configuration 53
6.3 2011 No-Build Intersection Operations 53
6.4 2011 No-Build Facilities Needs Analysis 54
6.5 Summary of 2011 No-Build Mitigation 55
6.6 2016 No-Build Traffic Volumes 58
6.7 2016 No-Build Intersection Lane Configuration 58
6.8 2016 No-Build Intersection Operations 62
6.9 2016 No-Build Facilities Needs Analysis 62
6.10 Summary of 2016 No-Build Mitigation 65

7. FUTURE (BUILD) TRAFFIC ANALYSIS 68

7.1 2011 Build Traffic Volumes 68
7.2 2011 Build Lane Configuration 68

7.3 2011 Build Intersection Operations 73
7.4 2011 Build Facilities Needs Analysis 73
7.5 Summary of 2011 Build Mitigation 76
7.6 2016 Build Traffic Volumes 79
7.7 2016 Build Lane Configuration 79
7.8 2016 Build Intersection Operations 84
7.9 2016 Build Facilities Needs Analysis 85
7.10 Summary of 2016 Build Mitigation 87

8. INTERNAL SITE ANALYSIS 90

8.1 Site Access Assumptions 90
8.2 Site Access Operations 90
8.3 Pedestrian and Bicycle Access 95
8.4 Internal Circulation 95
8.5 Access, Pedestrian, and Bicycle Recommendations 96

9. ALTERNATE SCENARIOS 98

9.1 Alternate Scenario 1 – Boulevard Cross-Sections 98
9.2 Alternate Scenario 2 – Left Turn Prohibitions or Innovative Design Solutions at North Druid Hills / Briarcliff Intersection 99

10. PROGRAMMED INFRASTRUCTURE PROJECTS 102

11. COMPLIANCE WITH GRTA CRITERIA 103

Appendices

Tables

Table 1 – Phase I Proposed Land Uses and Sizes for The Park Druid Hills 3
Table 2 – Phase II Proposed Land Uses and Sizes for The Park Druid Hills 3
Table 3 – Summary of All Proposed Land Uses and Sizes for The Park Druid Hills 4
Table 4 – The Park Druid Hills On-Site Parking 6
Table 5 – Existing Intersections Included in the Study Network 7
Table 6 – The Park Druid Hills Phase I Unadjusted Trip Generation 27
Table 7 – The Park Druid Hills Phase I Trip Generation Adjustments 28
Table 8 – The Park Druid Hills Full Build-Out Unadjusted Trip Generation 30
Table 9 – The Park Druid Hills Full Build-Out Trip Generation Adjustments 32
Table 10 – Existing Intersection Levels of Service 45
Table 11 – Georgia DOT Historic AADT Data 49
Table 12 – 2011 No-Build Intersection Levels of Service 53
Table 13 – 2011 No-Build Intersection Levels of Service with Mitigation 55
Table 14 – 2016 No-Build Intersection Levels of Service 62
Table 15 – 2016 No-Build Intersection Levels of Service with Mitigation 65
Table 16 – 2011 Build Intersection Levels of Service 73
Table 17 – 2011 Build Intersection Levels of Service with Mitigation 76
Table 18 – 2016 Build Intersection Levels of Service 84
Table 19 – 2016 Build Intersection Levels of Service With Mitigation 87
Table 20 – 2011 Build Intersection Levels of Service 91
Table 21 – 2016 Build Intersection Levels of Service 92
Table 22 – Programmed Infrastructure Projects 102

Figures

Figure 1 – Area Map....1
Figure 2 – Site Aerial Photograph....2
Figure 3 – The Park Druid Hills Site Plan....5
Figure 4 – The Park Druid Hills Office Trip Distribution Percentages....24
Figure 5 – The Park Druid Hills Retail/Civic Trip Distribution Percentages....25
Figure 6 – The Park Druid Hills Residential / Hotel Trip Distribution Percentages....26
Figure 7 – The Park Druid Hills Phase I Site-Generated A.M. Peak Hour Trips....34
Figure 8 – The Park Druid Hills Phase I Site-Generated P.M. Peak Hour Trips....35
Figure 9 – The Park Druid Hills Phase I Site-Generated Saturday Peak Hour Trips....36
Figure 10 – The Park Druid Hills Full Build-Out Site-Generated A.M. Peak Hour Trips....37
Figure 11 – The Park Druid Hills Full Build-Out Site-Generated P.M. Peak Hour Trips....38
Figure 12 – The Park Druid Hills Full Build-Out Site-Generated Saturday Peak Hour Trips....39
Figure 13 – Existing A.M. Peak Hour Traffic Volumes....41
Figure 14 – Existing P.M. Peak Hour Traffic Volumes....42
Figure 15 – Existing Saturday Peak Hour Traffic Volumes....43
Figure 16 – Existing Lanes and Method of Traffic Control....44
Figure 17 – 2011 No-Build A.M. Peak Hour Traffic Volumes....50
Figure 18 – 2011 No-Build P.M. Peak Hour Traffic Volumes....51
Figure 19 – 2011 No-Build Saturday Peak Hour Traffic Volumes....52
Figure 20 – 2011 No-Build Mitigation....57
Figure 21 – 2016 No-Build A.M. Peak Hour Traffic Volumes....59
Figure 22 – 2016 No-Build P.M. Peak Hour Traffic Volumes....60
Figure 23 – 2016 No-Build Saturday Peak Hour Traffic Volumes....61
Figure 24 – 2016 No-Build Mitigation....67
Figure 25 – 2011 Build A.M. Peak Hour Traffic Volumes....69
Figure 26 – 2011 Build P.M. Peak Hour Traffic Volumes....70
Figure 27 – 2011 Build Saturday Peak Hour Traffic Volumes....71
Figure 28 – 2011 Build Lanes and Method of Traffic Control....72
Figure 29 – 2011 Build Mitigation....78
Figure 30 – 2016 Build A.M. Peak Hour Traffic Volumes....80
Figure 31 – 2016 Build P.M. Peak Hour Traffic Volumes....81
Figure 32 – 2016 Build Saturday Peak Hour Traffic Volumes....82

Figure 33 – 2016 Build Lanes and Method of Traffic Control....83
Figure 34 – 2016 Build Mitigation....89
Figure 35 – 2011 Site Access Peak Hour Volumes....93
Figure 36 – 2016 Site Access Peak Hour Volumes....94
Figure 37 – Site Access Lane and Control Recommendations....97

Photographs

Photograph 1 – N Druid Hills Road Facing North From Buford Highway....9
Photograph 2 – N Druid Hills Road Facing Northwest Toward W Druid Hills Drive....10
Photograph 3 – N Druid Hills Road Facing Southeast at Executive Park Drive....10
Photograph 4 – N Druid Hills Road Facing Southeast Near Proposed New Site Access....11
Photograph 5 – Queues on N Druid Hills Road Southeast-Bound at Lavista Road....11
Photograph 6 – Briarcliff Road Facing West Toward N Druid Hills Road....12
Photograph 7 – Briarcliff Road Facing North Toward Sheridan Road....13
Photograph 8 – Queues on Northbound Briarcliff Road at Lavista Road....13
Photograph 9 – Sheridan Road Facing West at Executive Park Drive....14
Photograph 10 – Sheridan Road Facing Northeast At Chantilly Drive....15
Photograph 11 – Sheridan Road Facing West at Cheshire Bridge Road....15
Photograph 12 – Chantilly Drive Facing East From Cheshire Bridge Road....16
Photograph 13 – Eastbound Chantilly Drive at Executive Park South....16
Photograph 14 – Lenox Road Facing North Toward Buford Highway From I-85....17
Photograph 15 – Cheshire Bridge Road Facing North at Chantilly Drive....18
Photograph 16 – Cheshire Bridge Road Facing South at Sheridan Road....18
Photograph 17 – Cheshire Bridge Road Facing South Toward Lavista Road / Lindbergh Drive....19
Photograph 18 – Executive Park Drive Facing West Near N Druid Hills Road....20
Photograph 19 – Executive Park Drive Facing Southwest at Executive Park South....20
Photograph 20 – Facing North Into Executive Park Drive From Sheridan Road....21
Photograph 21 – Executive Park South Facing East....21
Photograph 22 – Worn Pedestrian Path Along North Side of Executive Park South....22

1. Project Description

This Transportation Analysis was performed for the proposed Development of Regional Impact #1583 – The Park Druid Hills Multi-Use Development. The site is located southwest of the interchange of Interstate 85 at North Druid Hills Road in DeKalb County. An area map is presented in Figure 1 and an aerial photograph of the site is presented in Figure 2. The total square footage of the multi-use development will exceed 400,000 square feet, which is a DRI threshold for a multi-use development in a metropolitan region. This study was performed to meet the Georgia Regional Transportation Authority (GRTA) Development of Regional Impact (DRI) non-expedited review requirements, according to the GRTA DRI Review Package Technical Guidelines.

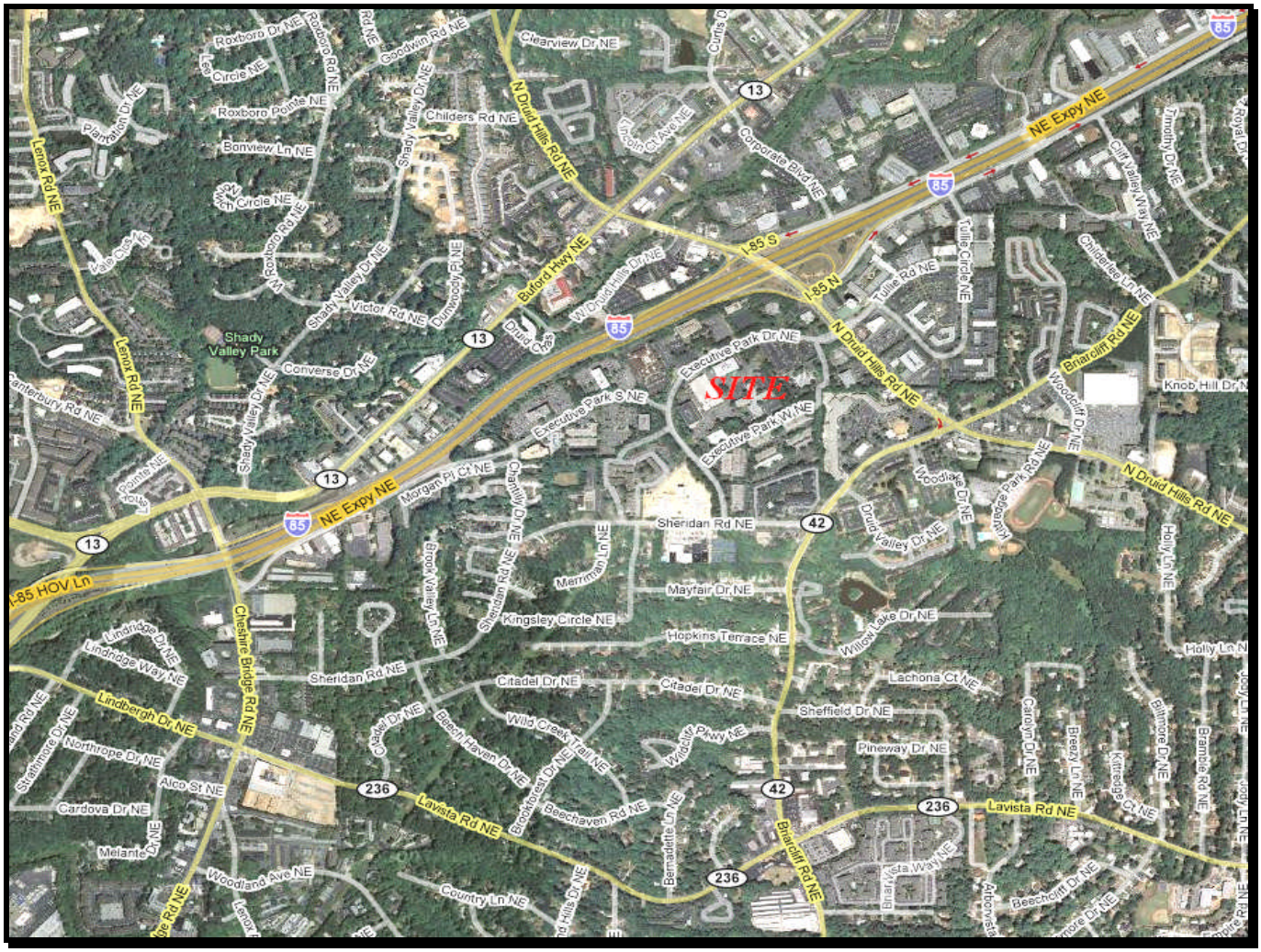


Figure 1 – Area Map

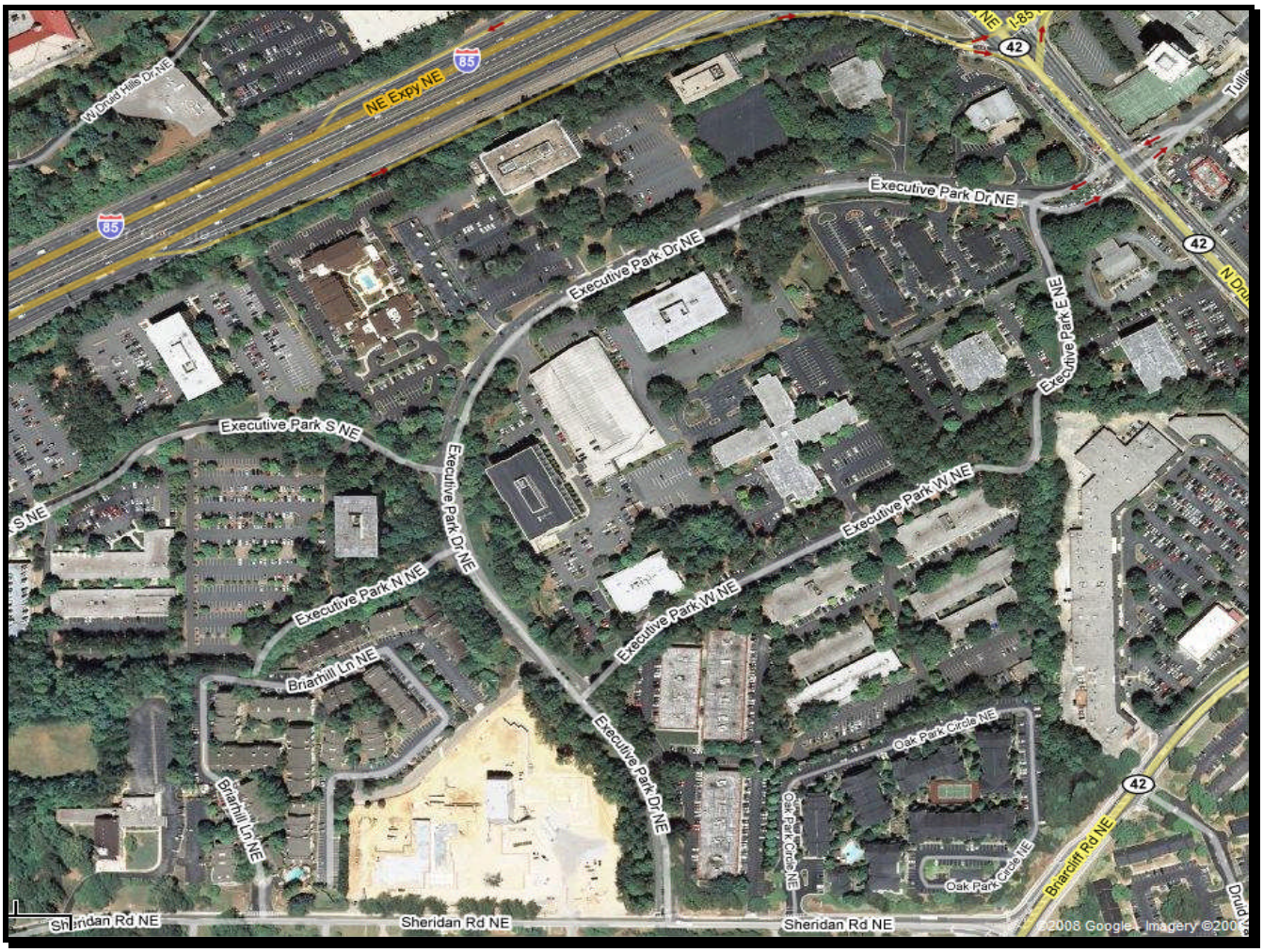


Figure 2 – Site Aerial Photograph

1.1 Project Phasing, Pods, and Land Uses

The site is currently developed with a low-to-moderate density office park. The proposed Park Druid Hills project will redevelop the site with a mix of land uses, including office, retail, residential, hotel, and civic spaces, organized around a grid street system. The total site acreage is approximately 70 acres, zoned OI, and the site is located entirely within unincorporated DeKalb County. The project will be built in two phases, with build-out of Phase I expected in 2011 and Phase II to be completed by 2016. The re-development of the site will include the removal of 365,000 square feet of existing office space. Table 1 presents the land uses and sizes programmed for Phase I; Table 2 shows the levels of development proposed for Phase II; Table 3 summarizes the entire Park Druid Hills programmed development.

Table 1 – Phase I Proposed Land Uses and Sizes for The Park Druid Hills

Building	Land Use	Size
A.1	New Office	300,000 ft²
B.1	Existing Office to Remain	59,436 ft²
B.2 – B.10	Retail	313,600 ft²
	Apartments	62 units
B.11	Retail	30,000 ft²
	Apartments	225 units
B.12	Existing Office to Remain	100,292 ft²
B.13	Retail	74,000 ft²
	Apartments	167 units
B.15	Hotel	170 rooms
B.17	Civic (assumed library)	15,000 ft²
B.18	Existing Office to Remain	132,242 ft²
Phase I Summary		
New Office		300,000 ft²
Existing Office to Remain		291,970 ft²
Retail		417,600 ft²
Apartments		454 units
Hotel		170 room
Civic (Library)		15,000 ft²

Table 2 – Phase II Proposed Land Uses and Sizes for The Park Druid Hills

Parcel	Land Use	Size
A.2	Restaurant	6,000 ft²
B.1	Retail (to replace office)	65,000 ft²
B.2	Office	27,600 ft²
B.16	Apartments	350 units
C.1 C.2	Existing Office to Remain	92,558 ft²
	Office	200,000 ft²
D.1-D.3	Existing Office to Remain	202,663 ft²
	Office	150,000 ft²
C.3	Office	200,000 ft²
Phase II Summary		
New Office		577,600 ft²
Existing Office to Remain		295,221 ft²
Retail		71,000 ft²
Apartments		350 units

Table 3 – Summary of All Proposed Land Uses and Sizes for The Park Druid Hills

Entire Project Summary	
New Office	877,600 ft²
Existing Office to Remain	587,191 ft²
Total Office	1,464,791 ft²
Retail	488,600 ft²
Apartments	804 units
Hotel	170 room
Civic (Library)	15,000 ft²

1.2 Site Plan

This study is based on the site plan called The Park Druid Hills, GRTA – Proposed Site Plan, prepared by Hughes Good O'Leary & Ryan, dated July 11, 2008. This site plan is presented in Figure 3. A larger-scale version of this plan will be submitted with this report for improved legibility.

1.3 Site Access

Current access into the site is at four primary locations: North Druid Hills Road at Executive Park Drive, Sheridan Road at Executive Park Drive, Sheridan Road at Chantilly Drive, and Cheshire Bridge Road at Chantilly Drive via Executive Park South. The site plan anticipates adding a new signalized access on North Druid Hills Road in Phase II. Additional modifications to the site access, and to the interstate access for this entire area, were being considered at the time of this study, including routing a northbound off- and on-ramp directly from I-85 to Executive Park Drive. This would be done in conjunction with other modifications to the I-85 / North Druid Hills Road interchange and would provide direct access from the northbound interstate to the subject development, as well as improved accessibility from the interstate to Briarcliff Road and areas to the south, and volume relief for heavily-traveled North Druid Hills Road. Additionally, a new bridge over I-85 between Buford Highway and Executive Park Drive was being discussed. However, to be conservative, this study develops recommendations that provide the best operations possible without the implementation of these major infrastructure improvements.

1.4 On-Site Bicycle and Pedestrian Facilities

This site is being developed with a grid of streets, with sidewalks on both sides of all streets. New sidewalks will connect to existing sidewalks on North Druid Hills Road and Sheridan Road and will be added along Executive Park Drive and Executive Park South. The site will also include a multi-purpose trail with a potential future connection to Kittredge Park. No specific bike lanes will be provided on-site, as these are usually most valuable along high capacity corridors, not on local urban streets. However, bicycle racks will be provided in front of retail and civic facilities.



The Park
DRUID HILLS

site plan prepared by Hughes Good O'Leary & Ryan

Figure 3 – The Park Druid Hills Site Plan

1.5 Transit Access

MARTA provides several bus routes in this area, including Route 8 – North Druid Hills, which travels through Executive Park, Route 16 – Noble, which also travels through Executive Park, Route 33 – Briarcliff which travels through the North Druid Hills / Briarcliff intersection, and Route 47 – I-85 Access Road / Woodcock, which travels down Chantilly Drive, Executive Park South, and Executive Park Drive. In addition, there is an Emory University "Cliff" Executive Park shuttle bus route that connects Executive Park to the Emory University Campus. The maps for the MARTA bus routes are included in Appendix K.

1.6 Parking

Parking will be provided on-site by a combination of parking decks, surface lots, and on-street parking. Detailed parking data is shown on the site plan submitted with this report. The on-site parking is summarized in Table 4.

Table 4 – The Park Druid Hills On-Site Parking

OCR District Off-Street Parking Requirements per DeKalb County Zoning	Total Required	Provided by Plan	Total Spaces Provided
Office – 4 spaces per 1,000 ft²	5,622 spaces	3 spaces per 1,000	4,216 spaces
Retail – 4 spaces per 1,000 ft²	1,730 spaces	4 spaces per 1,000	1,730 spaces
Multi-family – 1.75 spaces per unit	1,393 spaces	1.5 spaces per unit	1,194 spaces

parking data calculated by Hughes Good O'Leary & Ryan

2. Study Network

The study network for this project was determined in an analysis performed according to the GRTA Technical Guidelines, Section 4-109. The methodology employed in that analysis is documented in detail in Appendix B. Also included in Appendix B are the network determination calculations and graphics depicting the extents of the network. Based on a review of the findings of that analysis, and taking into consideration input from DeKalb County and Georgia DOT, twenty-five existing intersections were identified for analysis, as presented in Table 5. The intersection numbering scheme is used throughout this report for convenient reference.

Table 5 – Existing Intersections Included in the Study Network

#	Description	Saturday?*
1	East Roxboro Road @ Goodwin Road	
2	North Druid Hills Road @ Goodwin Road	
3	North Druid Hills Road @ East Roxboro Road	
4	North Druid Hills Road @ Buford Highway	
5	North Druid Hills Road @ West Druid Hills Drive	
6	North Druid Hills Road @ I-85 Southbound Ramps	X
7	North Druid Hills Road @ I-85 Northbound Ramps	X
8	North Druid Hills Road @ Executive Park Drive / Tully Road	X
9	North Druid Hills Road @ Briarcliff Road	X
10	North Druid Hills Road @ Lavista Road	
11	Clairmont Road @ Briarcliff Road	
12	Briarcliff Road @ Sheridan Road	X
13	Briarcliff Road @ Lavista Road	X
14	Briarcliff Road @ Clifton Road	
15	Briarcliff Road @ Johnson Road	
16	Sheridan Road @ Executive Park Drive (unsignalized)	X
17	Sheridan Road @ Chantilly Drive (unsignalized)	X
18	Lenox Road @ Buford Highway	
19	Lenox Road @ I-85 Southbound Off-Ramp	
20	Lenox Road @ I-85 Northbound On-Ramp	
21	Cheshire Bridge Road @ Chantilly Drive (unsignalized)	X
22	Cheshire Bridge Road @ Sheridan Road	
23	Cheshire Bridge Road @ Lavista Road / Lindbergh Drive	
24	Executive Park Dr @ Executive Park South (unsignalized)	X
25	Executive Park South @ Chantilly Drive (unsignalized)	X

Note: All intersections to be evaluated in the a.m. and p.m. peak hours. Those noted also to be evaluated in the Saturday peak hour.

2.1 Peak Time Periods And Analysis Conditions

All analyses are performed for the weekday a.m. peak hour and the weekday p.m. peak hour. Those intersections so-identified in Table 5 are also to be evaluated for the Saturday mid-day peak hour. The existing, 2011 no-build,

2011 Phase I build, 2016 no-build, and 2016 Phase II build conditions are evaluated. Appendix A provides more detail about the determination of peak hour volumes.

2.2 Level of Service Standard

The level of service standard is that level of service considered to be the minimum that provides acceptable operating conditions. A level of service (LOS) standard of D is used for suburban and urban areas and for this study, a LOS D standard was applied to all facilities, as agreed upon with GRTA. In the facilities needs analyses, mitigation is developed with LOS D as the minimum goal. However, should the existing LOS be worse than the standard, the existing LOS is taken to be the standard for that location and time period (but not to exceed LOS E), as set forth by GRTA procedures. Appendix A includes a description of the methodology used for the intersection analysis.

3. Existing Transportation Facilities

This section provides a description of the existing transportation infrastructure that will serve the proposed DRI. An inventory was performed of the geometrics and control at the existing traffic facilities in the vicinity of the site. The availability of transit, bicycle, and pedestrian facilities adjacent to the site was also reviewed. Figure 16, in the Existing Traffic Analysis section of this report, depicts the existing lane configurations for the roadway and intersection facilities in the study network and includes the locations of signals in the study area. The following is a brief description of each of these facilities.

3.1 North Druid Hills Road

North Druid Hills Road (SR 42 adjacent to the site) is a major arterial that begins at Peachtree Road, continues to the south, crossing Buford Highway, has an interchange with I-85, then continues past The Park Druid Hills site to the southeast. At Clairmont Road, North Druid Hills Road turns to the east and continues to its interchange at the Stone Mountain Freeway. Adjacent to the subject site, North Druid Hills Road has three through travel lanes in each direction. South of Briarcliff Road, North Druid Hills Road has two through travel lanes in each direction. Between I-85 and Buford Highway the road has two northwest-bound and three southeast-bound lanes, and between Buford Highway and East Roxboro Road, there are two through lanes in each direction with a center two way left turn lane. In the vicinity of the site, North Druid Hills Road is developed primarily with retail and commercial land uses. North of Buford Highway and south of Holly Lane (southeast of Briarcliff Road), the road is lined with mostly residential land uses, with retail reappearing near Lavista Road. The terrain along the roadway is gently rolling and the speed limit is 35 mph adjacent to the subject site. In 2006, the Georgia Department of Transportation (GDOT) recorded an Annual Average Daily Traffic (AADT) volume of 52,110 vehicles per day (vpd) on North Druid Hills Road at Executive Park Drive, 31,790 vpd north of I-85, and 31,240 vpd south of Briarcliff Road. The following photographs document conditions along North Druid Hills Road.



Photograph 1 – N Druid Hills Road Facing North From Buford Highway



Photograph 2 – N Druid Hills Road Facing Northwest Toward W Druid Hills Drive



Photograph 3 – N Druid Hills Road Facing Southeast at Executive Park Drive



Photograph 4 – N Druid Hills Road Facing Southeast Near Proposed New Site Access



Photograph 5 – Queues on N Druid Hills Road Southeast-Bound at Lavista Road

3.2 Briarcliff Road

Briarcliff Road (SR 42 from North Druid Hills Road to the south) is an arterial that begins at Henderson Mill Road near the interchange of I-285 at Lavista Road, then continues to the south and west, intersecting with Clairmont Road, North Druid Hills Road, then on past Clifton Road to Ponce de Leon Avenue, where it changes name to Moreland Avenue. The road has one through travel lane in each direction through the study network, with additional through lanes and exclusive turn lanes at certain major intersections. The terrain is gently rolling and the posted speed limit is typically 35 mph, with 25 mph found at some locations. Most of the length of Briarcliff Road is lined with residential land uses, with nodes of retail at major intersections. In 2006, GDOT recorded an AADT volume of 21,460 vpd Briarcliff Road south of Sheridan Road. The following photographs show sections of Briarcliff Road in the study network.



Photograph 6 – Briarcliff Road Facing West Toward N Druid Hills Road



Photograph 7 – Briarcliff Road Facing North Toward Sheridan Road



Photograph 8 – Queues on Northbound Briarcliff Road at Lavista Road

3.3 Sheridan Road and Chantilly Drive

Sheridan Road is a collector that begins at Cheshire Bridge Road and ends at Briarcliff Road. It has two travel lanes, gently rolling terrain, and a posted speed limit of 25 mph. The road serves residential land uses. Access from Executive Park is provided to Sheridan Road via Executive Park Drive and Chantilly Drive. Chantilly Drive is a two lane local street that begins at Cheshire Bridge Road and runs parallel to I-85 until it meets Executive Park South at an all-way stop. Chantilly Drive then bends south and continues to Sheridan Road. The western portion of Chantilly Drive serves commercial land uses, while the north/south section between Executive Park South and Sheridan Road is lined with residential uses. The posted speed limit on Chantilly Drive is 25 mph. The following photographs show sections of Sheridan Road and Chantilly Drive.



Photograph 9 – Sheridan Road Facing West at Executive Park Drive



Photograph 10 – Sheridan Road Facing Northeast At Chantilly Drive



Photograph 11 – Sheridan Road Facing West at Cheshire Bridge Road



Photograph 12 – Chantilly Drive Facing East From Cheshire Bridge Road



Photograph 13 – Eastbound Chantilly Drive at Executive Park South

3.4 Cheshire Bridge Road and Lenox Road

Cheshire Bridge Road begins at its interchange to/from the north on I-85 (north of which it is called Lenox Road), then continues to the south, intersecting with Chantilly Drive, Sheridan Road, and Lindbergh Drive / Lavista Road, before continuing southwest to its terminus at Piedmont Road. The road has two through lanes in each direction. Lenox Road begins north of the I-85 interchange and continues north across Buford Highway, and on to Peachtree Road. The road then continues to the north and west, commonly known as The Buckhead Loop, to Piedmont Road. Between I-85 and just north of Buford Highway, Lenox Road has between two and three lanes in each direction (varies by section). North of Buford Highway, the road narrows to two through lanes until the vicinity of Ferncliff Road, where it widens to four lanes. The following photographs depict segments of Cheshire Bridge Road and Lenox Road in the study network.



Photograph 14 – Lenox Road Facing North Toward Buford Highway From I-85



Photograph 15 – Cheshire Bridge Road Facing North at Chantilly Drive



Photograph 16 – Cheshire Bridge Road Facing South at Sheridan Road



Photograph 17 – Cheshire Bridge Road Facing South Toward Lavista Road / Lindbergh Drive

3.5 Executive Park Drive and Executive Park South

Executive Park Drive is the main artery running through Executive Park. The road begins at North Druid Hills Road, at a signalized intersection aligning with Tully Drive, then continues to the west then south to its side street stop controlled terminus at Sheridan Road. It has two travel lanes in each direction and is divided by a wide landscaped median. There are many median breaks and curb cuts along the facility, the terrain is gently rolling and the posted speed limit is 35 mph. Executive Park South is a two lane road that begins at an all-way stop at Chantilly Drive and connects to Executive Park Drive.



Photograph 18 – Executive Park Drive Facing West Near N Druid Hills Road



Photograph 19 – Executive Park Drive Facing Southwest at Executive Park South



Photograph 20 – Facing North Into Executive Park Drive From Sheridan Road



Photograph 21 – Executive Park South Facing East

3.6 Transit Service

MARTA provides several bus routes in this area, including Route 8 – North Druid Hills, which travels through Executive Park, Route 16 – Noble, which also travels through Executive Park, Route 33 – Briarcliff which travels through the North Druid Hills / Briarcliff intersection, and Route 47 – I-85 Access Road / Woodcock, which travels down Chantilly Drive, Executive Park South, and Executive Park Drive. In addition, there is an Emory University "Cliff" Executive Park shuttle bus route that connects Executive Park to the Emory University Campus. The maps for the MARTA bus routes are included in Appendix K.

3.7 Pedestrian and Bicycle Facilities

There are continuous sidewalks along both sides of North Druid Hills Road in the vicinity of Executive Park. There is a sidewalk along the north side of Sheridan Road near Executive Park Drive. There is also a sidewalk along the south side of Chantilly Drive. However, there are currently no sidewalks along Executive Park Drive. There is a section of sidewalk along the south side of Executive Park South near Executive Park Drive. Well-worn paths in the grass along these facilities reveal heavy pedestrian activity, as shown in Photograph 22. There are no bicycle lanes in the immediate vicinity of Executive Park.



Photograph 22 – Worn Pedestrian Path Along North Side of Executive Park South

4. Project Traffic Characteristics

This section provides a description of the traffic characteristics of The Park Druid Hills DRI, including the number of trips that will be generated, and where that traffic will travel.

4.1 Trip Generation

The trip generation for the proposed DRI was calculated for the weekday a.m. and p.m. peak hours, the weekday 24-hour period, and the Saturday mid-day peak hour. A discussion of the trip generation methodology is presented in Appendix A. This includes a discussion of the multi-use adjustments, transit adjustments, and pass-by reductions. Table 6 presents the unadjusted trip generation for Phase I of the project. Table 7 presents all adjustments for Phase I. Tables 8 and 9 present the unadjusted and adjusted trip generation for the full-build-out of The Park Druid Hills.

4.2 Trip Distribution and Assignment

Trip distribution percentages were developed, as discussed in the Study Network section of Appendix B. The office trip distribution percentages are shown in Figure 4; the retail (and civic) distribution is shown in Figure 5; and the residential (and hotel) distribution is presented in Figure 6. The project traffic, shown in Tables 7 and 9, was distributed to the roadway network based on these percentages. The traffic was assigned to each study intersection based on expected routes of travel. The total traffic expected to be generated solely by Phase I of The Park Druid Hills is shown in Figure 7 for the weekday a.m. peak hour, Figure 8 for the p.m. peak hour, and Figure 9 for the Saturday peak hour. The traffic that will be generated by The Park Druid Hills at full build-out is shown in Figures 10, 11, and 12, for the a.m., p.m., and Saturday peak hours, respectively.

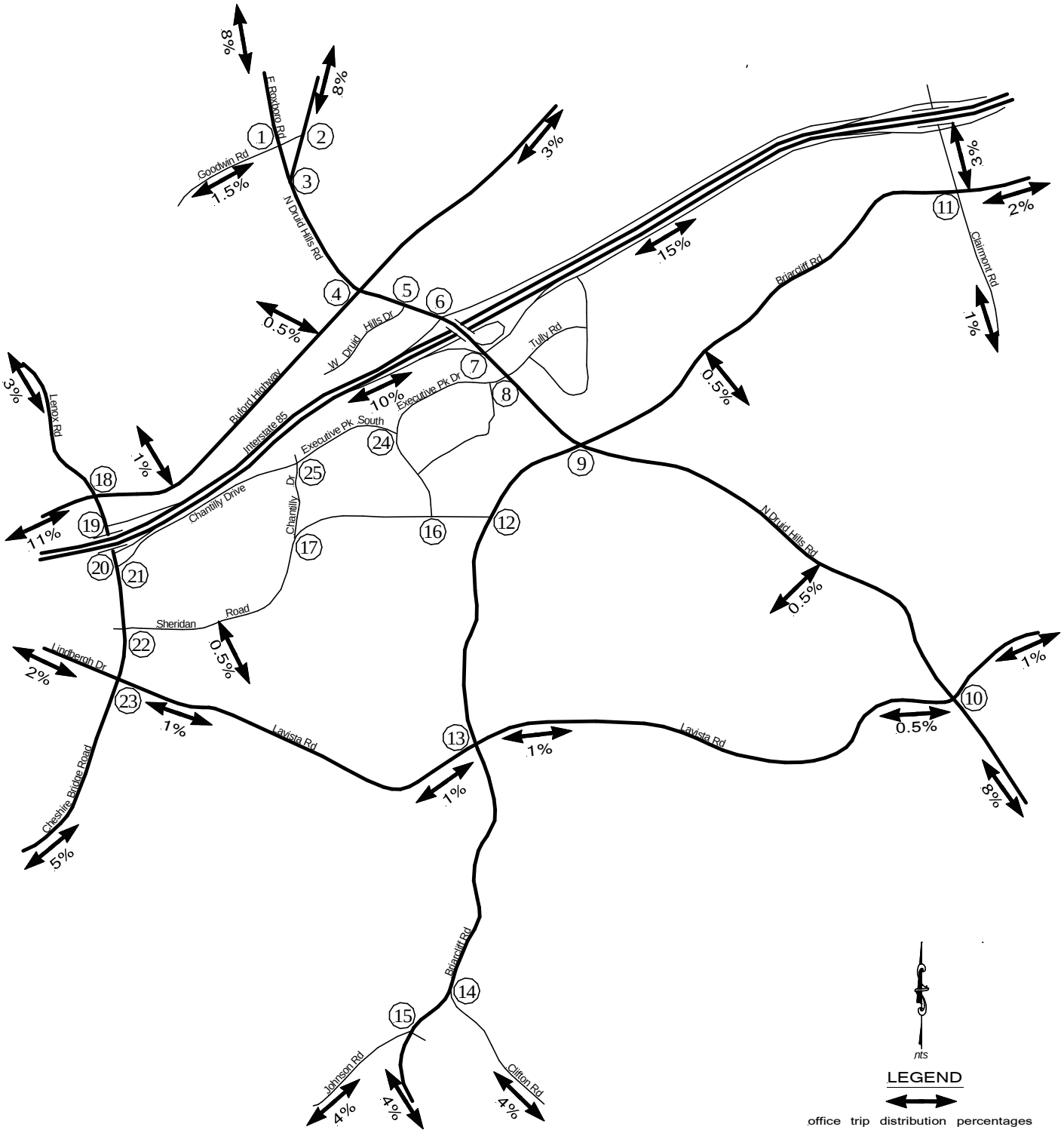


Figure 4 – The Park Druid Hills Office Trip Distribution Percentages

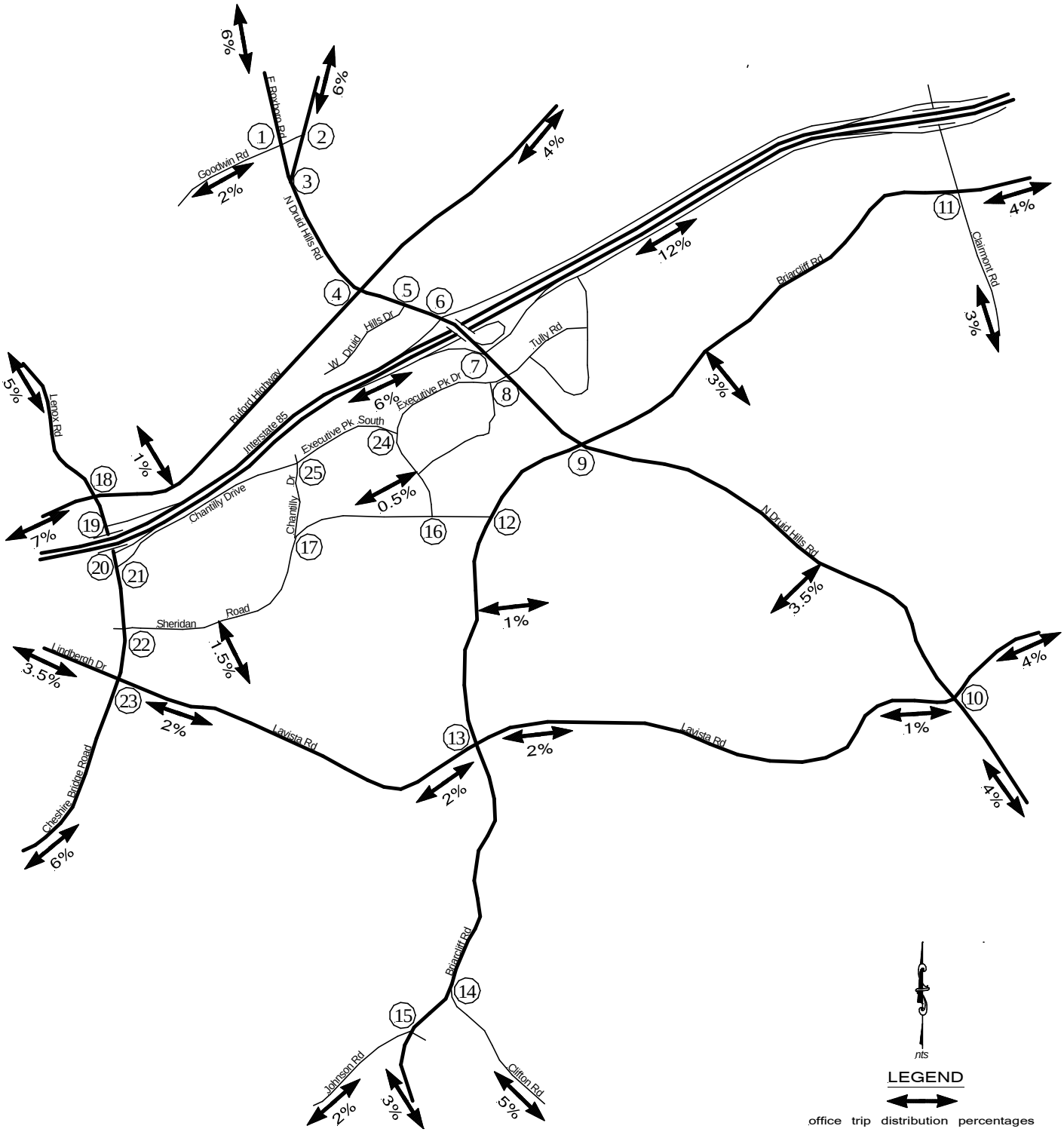


Figure 5 – The Park Druid Hills Retail/Civic Trip Distribution Percentages

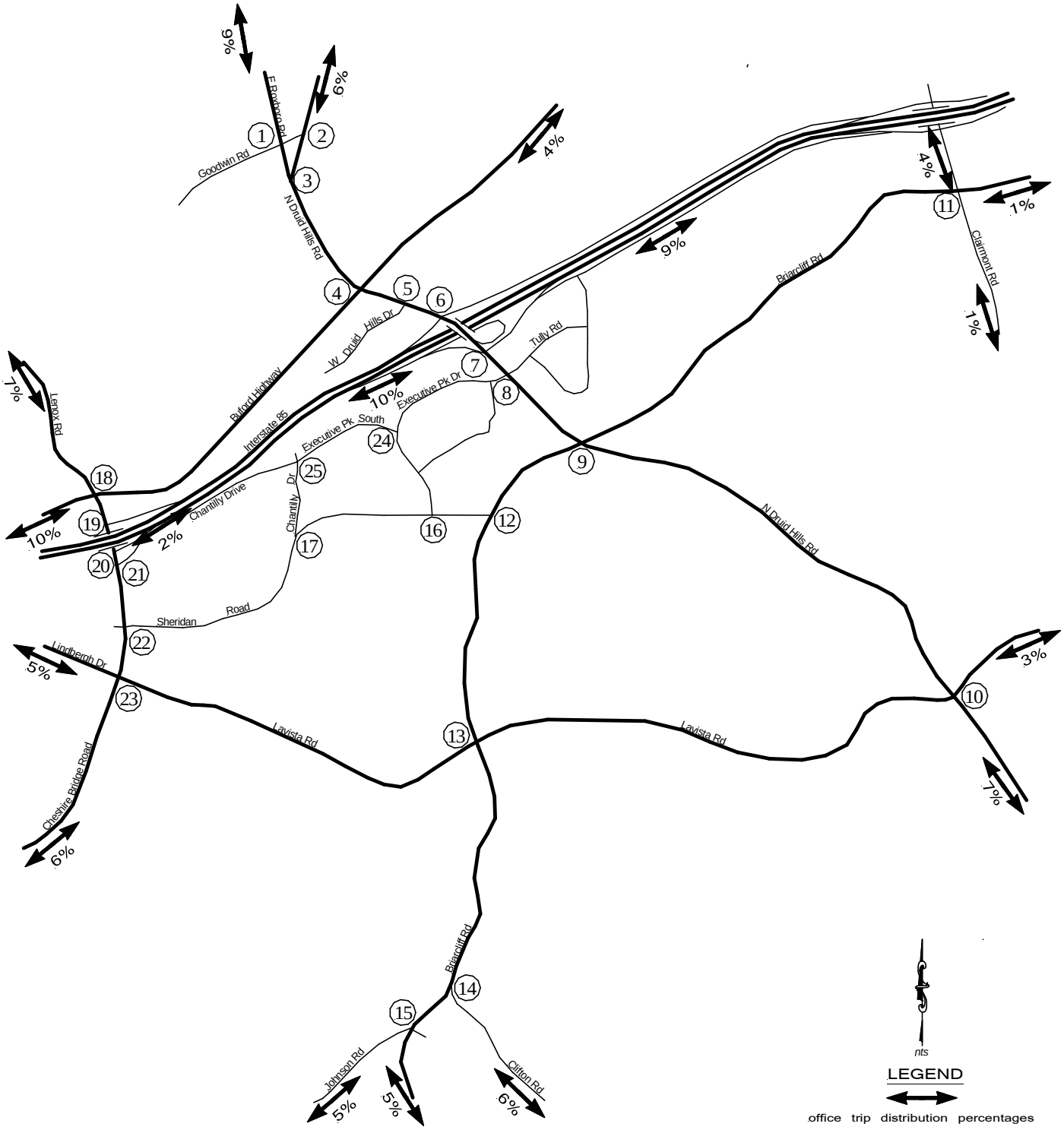


Figure 6 – The Park Druid Hills Residential / Hotel Trip Distribution Percentages

Table 6 – The Park Druid Hills Phase I Unadjusted Trip Generation

Parcel	Land Use	ITE Code	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour	Saturday Peak Hour		
				Enter	Exit	2-Way	Enter	Exit	2-Way	2-Way	Enter	Exit	2-Way
A.1	Office	710	300,000 ft²	397	55	452	71	344	415	3,108	49	41	90
B.1	Existing Office (Building 4E)	710	59,436 ft²	108	16	124	24	115	139	894	13	11	24
	current trips (62% occupancy)		36,850 ft²	74	10	84	20	100	120	618	9	7	16
B.2-B.10	Retail	820	313,600 ft²	190	121	311	639	692	1,331	14,276	946	873	1,819
	Apartments	220	62 units	7	27	34	34	18	52	524	22	23	45
B.11	Retail	820	30,000 ft²	46	30	76	136	147	283	3,106	206	190	396
	Apartments	220	225 units	23	91	114	92	49	141	1,502	56	55	111
B.12	Existing Office (Building 6)	710	100,292 ft²	165	23	188	32	159	191	1,338	20	17	37
	current trips (62% occupancy)		62,181 ft²	113	15	128	25	123	148	926	14	11	25
B.13	Retail	820	74,000 ft²	80	51	131	246	267	513	5,584	370	342	712
	Apartments	220	167 units	17	69	86	72	38	110	1,154	44	44	88
B.15	Hotel	310	170 rooms	49	31	80	53	47	100	1,148	68	54	122
B.17	Civic	590	15,000 ft²	8	3	11	49	53	102	974	54	47	101
B.18	Existing Office (Building 12)	710	132,242 ft²	207	28	235	39	188	227	1,654	25	21	46
	current trips (62% occupancy)		81,990 ft²	141	19	160	29	142	171	1,144	17	14	31

Table 7 – The Park Druid Hills Phase I Trip Generation Adjustments

Land Use	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour	Saturday Peak Hour		
		Enter	Exit	2-Way	Enter	Exit	2-Way	2-Way	Enter	Exit	2-Way
Total Phase I Office Trips (all at 100% occupancy)	591,970 ft²	877	122	999	166	806	972	6,994	107	90	197
Multi-Use Adjustment		-6	-6	-12	-22	-19	-41	-599	-28	-18	-46
subtotal		871	116	987	144	787	931	6,395	79	72	151
Transit/Alternative Mode Adjustment		-44	-6	-49	-7	-39	-47	-320	-4	-4	-8
Total External Phase I Office (includes existing space)		827	110	938	137	748	884	6,075	75	68	143
Total Phase I Retail	313,600 ft²	190	121	311	639	692	1,331	14,276	946	873	1,819
Total Phase I Civic	15,000 ft²	8	3	11	49	53	102	974	54	47	101
Total Phase I Retail + Civic		198	124	322	688	745	1,433	15,250	1,000	920	1,920
Multi-Use Adjustment		-30	-13	-43	-76	-100	-176	-1,934	-58	-92	-150
subtotal		168	111	279	612	645	1,257	13,316	942	828	1,770
Transit/Alternative Mode Adjustment		-8	-6	-14	-31	-32	-63	-666	-47	-41	-89
subtotal		160	105	265	581	613	1,194	12,650	895	787	1,682
Pass-by		-24	-16	-40	-87	-92	-179	-1,898	-134	-118	-252
Total External Phase I Retail + Civic		136	90	225	494	521	1,015	10,753	761	669	1,429
Total Phase I Residential	454 units	47	187	234	198	105	303	3,180	122	122	244
Total Phase I Hotel	170 rooms	49	31	80	53	47	100	1,148	68	54	122
Total Phase I Residential + Hotel		96	218	314	251	152	403	4,328	190	176	366
Multi-Use Adjustment		-11	-28	-39	-83	-62	-145	-1,465	-50	-64	-114
subtotal		85	190	275	168	90	258	2,863	140	112	252
Transit/Alternative Mode Adjustment		-4	-10	-14	-8	-5	-13	-143	-7	-6	-13
Total New Phase I Residential + Hotel		81	181	261	160	86	245	2,720	133	106	239

Table Continued on Next Page

Table Continued From Previous Page											
Total Unadjusted Trip Generation		1,171	464	,635	1,105	1,703	2,808	26,572	1,297	1,186	2,483
Multi-Use Adjustments		-47	-47	-94	-181	-181	-362	-3,998	-136	-174	-310
subtotal		1,124	417	1,541	924	1,522	2,446	22,574	1,161	1,012	2,173
Multi-Use Adjustment Percentages		4%	10%	6%	16%	11%	13%	15%	10%	15%	12%
Transit/Alternative Mode Adjustment		-56	-21	-77	-46	-76	-122	-1,129	-58	-51	-109
subtotal		1,068	396	1,464	878	1,446	2,324	21,445	1,103	961	2,064
Total Trip Reduction % Due to Multi-Use and Alt Modes		-9%	-15%	-10%	-21%	-15%	-17%	-19%	-15%	-19%	-17%
Retail Pass-by Adjustments		-24	-16	-40	-87	-92	-179	-1,898	-134	-118	-252
Total Phase I External Trips		1,044	380	1,424	791	1,354	2,145	19,548	969	843	1,812
Total Phase I Office	591,970 ft²	827	110	938	137	748	884	6,075	75	68	143
Existing Office to be Demolished and in Counts	226,300 ft²	-317	-43	-360	-56	-276	-332	-2,502	-39	-33	-72
Existing Office to Remain and in Counts	181,021 ft²	-328	-44	-372	-74	-365	-439	-2,688	-40	-32	-72
Total Office Trips Removed from Counts in Build Analysis	407,321 ft²	-645	-87	-732	-130	-641	-771	-5,190	-79	-65	-144
Total Phase I Office Trips Applied to Build Analysis	184,649 ft²	182	23	206	7	107	113	885	-4	3	-1
Total Phase I New External Trips		399	293	692	661	713	1,374	14,358	890	778	1,668

Notes:

1) Existing Office to be Demolished and in Counts and to Remain and in Counts are at 62% occupancy (including square footages shown)
2) Existing Office to be Demolished and to Remain are removed with no multi-use or transit reductions applied
3) Phase I assumes no activity at C and D – existing office will remain at 62% occupancy until end of new office construction for Phase II

Table 8 – The Park Druid Hills Full Build-Out Unadjusted Trip Generation

Parcel	Land Use	ITE Code	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour	Saturday Peak Hour		
				Enter	Exit	2-Way	Enter	Exit	2-Way	2-Way	Enter	Exit	2-Way
A.1 A.2	Office	710	300,000 ft²	397	55	452	71	344	415	3,108	49	41	90
	High Turnover Restaurant	932	6,000 ft²	36	33	69	40	26	66	762	76	44	120
B.1	Retail	820	65,000 ft²	74	47	121	226	245	471	5,132	340	314	654
B.2-B.10	Retail	820	313,600 ft²	190	121	311	639	692	1,331	14,276	946	873	1,819
	Apartments	220	62 units	7	27	34	34	18	52	524	22	23	45
	Office	710	27,600 ft²	59	8	67	19	91	110	496	7	6	13
B.11	Retail	820	30,000 ft²	46	30	76	136	147	283	3,106	206	190	396
	Apartments	220	225 units	23	91	114	92	49	141	1,502	56	55	111
B.12	Existing Office (Building 6)	710	100,292 ft²	165	23	188	32	159	191	1,338	20	17	37
	current trips (62% occupancy)		62,181 ft²	113	15	128	25	123	148	926	14	11	25
B.13	Retail	820	74,000 ft²	80	51	131	246	267	513	5,584	370	342	712
	Apartments	220	167 units	17	69	86	72	38	110	1,154	44	44	88
B.15	Hotel	310	170 rooms	49	31	80	53	47	100	1,148	68	54	122
B.16	Apartments	220	350 units	35	140	175	137	73	210	2,254	82	81	163
B.17	Civic	590	15,000 ft²	8	3	11	49	53	102	974	54	47	101
B.18	Existing Office (Building 12)	710	132,242 ft²	207	28	235	39	188	227	1,654	25	21	46
	current trips (62% occupancy)		81,990 ft²	141	19	160	29	142	171	1,144	17	14	31

Table Continued From Previous Page													
C.1 C.2	Existing Office (Building 17)	710	92,558 ft²	155	21	176	31	151	182	1,256	19	16	35
	current trips (62% occupancy)		57,386 ft²	106	14	120	24	119	143	870	13	11	24
	New Office	710	200,000 ft²	287	39	326	51	252	303	2,274	35	30	65
D.1-D.3	Existing Office (Buildings 57 and 59)	710	202,663 ft²	290	40	330	52	254	306	2,298	35	31	66
	current trips (62% occupancy)		125,651 ft²	198	27	225	37	183	220	1,590	24	20	44
	New Office	710	150,000 ft²	228	31	259	42	205	247	1,822	28	23	51
C.3	New Office	710	200,000 ft²	287	39	326	51	252	303	2,274	35	30	65

Table 9 – The Park Druid Hills Full Build-Out Trip Generation Adjustments

Land Use	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour	Saturday Peak Hour		
		Enter	Exit	2-Way	Enter	Enter	Exit	2-Way	Enter	Enter	Exit
Total Office Trips < ¼ mile of other uses (at 100% occupancy)	560,134 ft²	828	114	942	161	782	943	6,596	101	85	186
Multi-Use Adjustment (100% ITE per GRTA Table 3)		*-5*	*-5*	*-10*	*-17*	*-14*	*-31*	*-456*	*-22*	*-17*	*-39*
Total Office Trips ¼-½ mile of other uses (at 100% occupancy)	845,221 ft²	1,247	170	1,417	227	1,114	1,341	9,924	152	130	282
Multi-Use Adjustment (67% ITE per GRTA Table 3)		*-5*	*-5*	*-10*	*-17*	*-14*	*-31*	*-461*	*-22*	*-17*	*-39*
Total Office Trips (all at 100% occupancy)	1,405,355 ft²	2,075	284	2,359	388	1,896	2,284	16,520	253	215	468
Total ITE Multi-Use Adjustment		*-13*	*-13*	*-26*	*-43*	*-35*	*-78*	*-1,144*	*-54*	*-43*	*-97*
Multi-Use Adjustment Adjusted for GRTA Table 3		-10	-10	-21	-34	-28	-63	-917	-43	-34	-78
subtotal		2,065	274	2,338	354	1,868	2,221	15,603	210	181	390
Transit/Alternative Mode Adjustment		-103	-14	-117	-18	-93	-111	-780	-10	-9	-20
Total External Office		1,961	260	2,221	336	1,775	2,110	14,823	199	172	371
Total Retail	488,600 ft²	426	282	708	1,287	1,377	2,664	28,860	1,938	1,763	3,701
Total Civic	15,000 ft²	8	3	11	49	53	102	974	54	47	101
Total Retail + Civic		434	285	719	1,336	1,430	2,766	29,834	1,992	1,810	3,802
Total ITE Multi-Use Adjustment		*-65*	*-32*	*-97*	*-146*	*-163*	*-309*	*-3,382*	*-130*	*-155*	*-3,667*
Multi-Use Adjustment to all but C & D at 100%		*-52*	*-26*	*-78*	*-119*	*-120*	*-239*	*-2,337*	*-87*	*-101*	*-188*
Multi-Use Adjustment to C & D at 67%		*-9*	*-4*	*-13*	*-18*	*-29*	*-47*	*-700*	*-29*	*-36*	*-65*
Multi-Use Adjustment Adjusted for GRTA Table 3		-61	-30	-91	-137	-149	-286	-3,037	-116	-137	-253
subtotal		373	255	628	1,199	1,281	2,480	26,797	1,876	1,673	3,549
Transit/Alternative Mode Adjustment		-19	-13	-31	-60	-64	-124	-1,340	-94	-84	-177
subtotal		354	242	597	1,139	1,217	2,356	25,457	1,782	1,589	3,372
Pass-by		-53	-36	-89	-171	-183	-353	-3,819	-267	-238	-506
Total External Retail + Civic		301	206	507	968	1,034	2,003	21,639	1,515	1,351	2,866

Table Continued on Next Page

Table Continued From Previous Page											
Total Residential	804 units	82	327	409	335	178	513	5,434	204	203	407
Total Hotel	170 rooms	49	31	80	53	47	100	1,148	68	54	122
Total Residential + Hotel		131	358	489	388	225	613	6,582	272	257	529
Total ITE Multi-Use Adjustment		*-26*	*-59*	*-85*	*-128*	*-119*	*-247*	*-2,436*	*-101*	*-87*	*-2,624*
Multi-Use Adjustment to all but C & D at 100%		*-26*	*-52*	*-78*	*-120*	*-119*	*-239*	*-2,337*	*-101*	*-87*	*-188*
Multi-Use Adjustment to C & D at 67%		*0*	*-5*	*-5*	*-6*	*0*	*-6*	*-67*	*0*	*0*	*0*
Multi-Use Adjustment Adjusted for GRTA Table 3		-26	-57	-83	-126	-119	-245	-2,404	-101	-87	-188
subtotal		105	301	406	262	106	368	4,178	171	170	341
Transit/Alternative Mode Adjustment		-5	-15	-20	-13	-5	-18	-209	-9	-9	-17
Total External Residential + Hotel		100	286	386	249	101	350	3,969	162	162	324
Total Unadjusted Trip Generation		2,640	927	3,567	2,112	3,551	5,663	52,936	2,517	2,282	4,799
Multi-Use Adjustments (Adjusted for GRTA Table 3)		-97	-97	-195	-297	-296	-594	-6,358	-260	-258	-519
subtotal		2,543	830	3,372	1,815	3,255	5,069	46,578	2,257	2,024	4,280
Multi-Use Adjustment Percentages		4%	11%	5%	14%	8%	10%	12%	10%	11%	11%
Transit/Alternative Mode Adjustment		-127	-41	-169	-91	-163	-253	-2,329	-113	-101	-214
subtotal		2,415	788	3,204	1,724	3,092	4,816	44,249	2,144	1,922	4,066
Total Trip Reduction Percentages Due to Multi-Use and Alt. Modes		-9%	-15%	-10%	-18%	-13%	-15%	-16%	-15%	-16%	-15%
Retail Pass-by Adjustments		-53	-36	-89	-171	-183	-353	-3819	-267	-238	-506
Total External Trips		2,362	752	3,114	1,553	2,910	4,463	40,431	1,877	1,684	3,561
Total New Office	1,405,355 ft²	2,075	284	2,359	388	1,896	2,284	16,520	253	215	468
Existing Office to be Demolished and in Counts	285,736 ft²	-382	-52	-434	-68	-331	-399	-2,994	-47	-40	-87
Existing Office to Remain and in Counts	327,208 ft²	-558	-75	-633	-115	-567	-682	-4,530	-68	-56	-124
Total Office Trips to be Removed from Counts in Build Analysis	612,944 ft²	-940	-127	-1,067	-183	-898	-1,081	-7,524	-115	-96	-211
Total Office Trips to be Applied to Build Analysis	866,833 ft²	1,135	157	1,292	205	998	1,203	8,996	138	119	257
Total New External Trips		1,422	625	2,047	1,370	2,012	3,382	32,907	1,762	1,588	3,350

Notes:

1) Existing Office to be Demolished and in Counts and to Remain and in Counts are at 62% occupancy (including square footages shown)
2) Existing Office to be Demolished and to Remain are removed with no multi-use or transit reductions applied

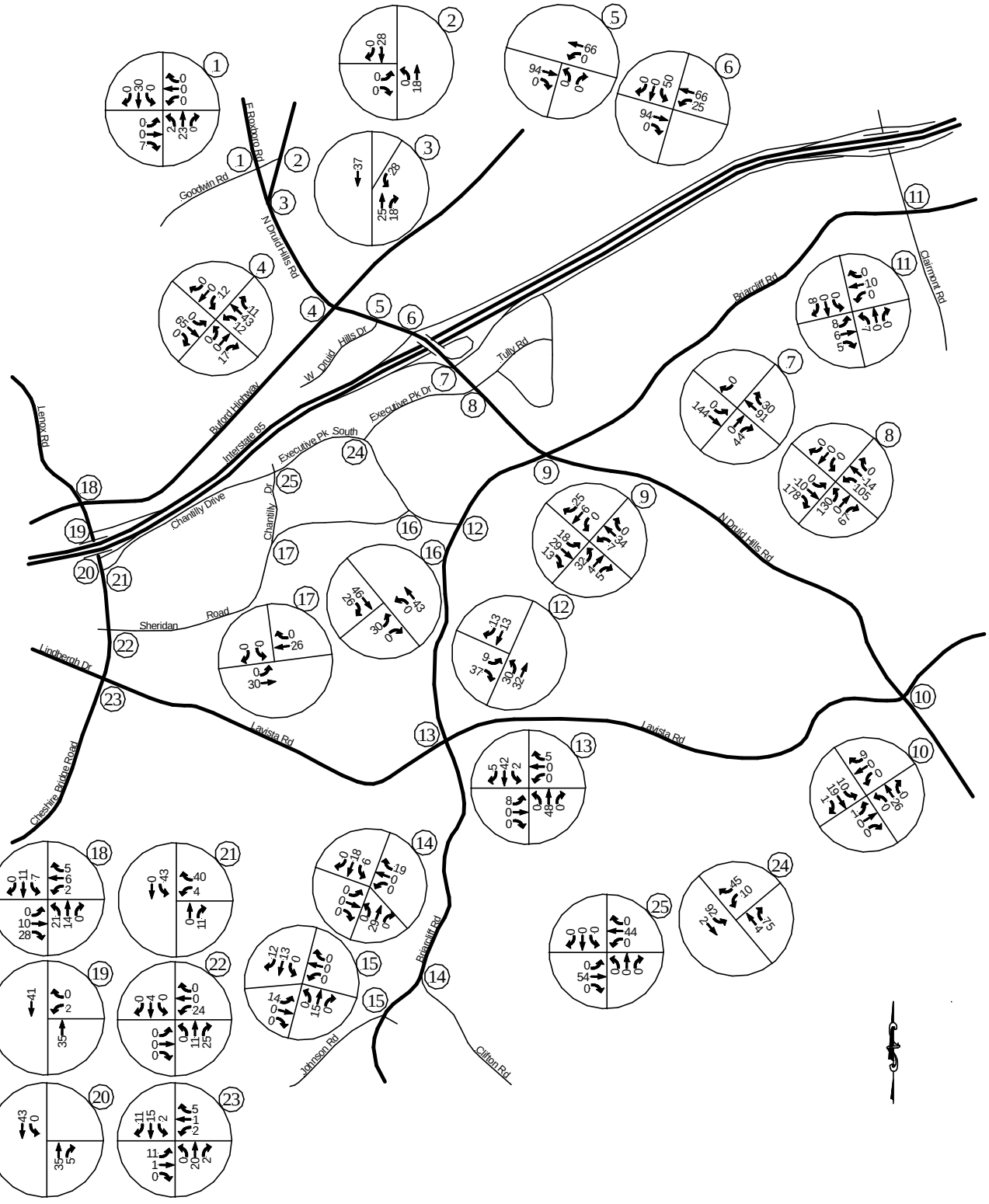


Figure 7 – The Park Druid Hills Phase I Site-Generated A.M. Peak Hour Trips

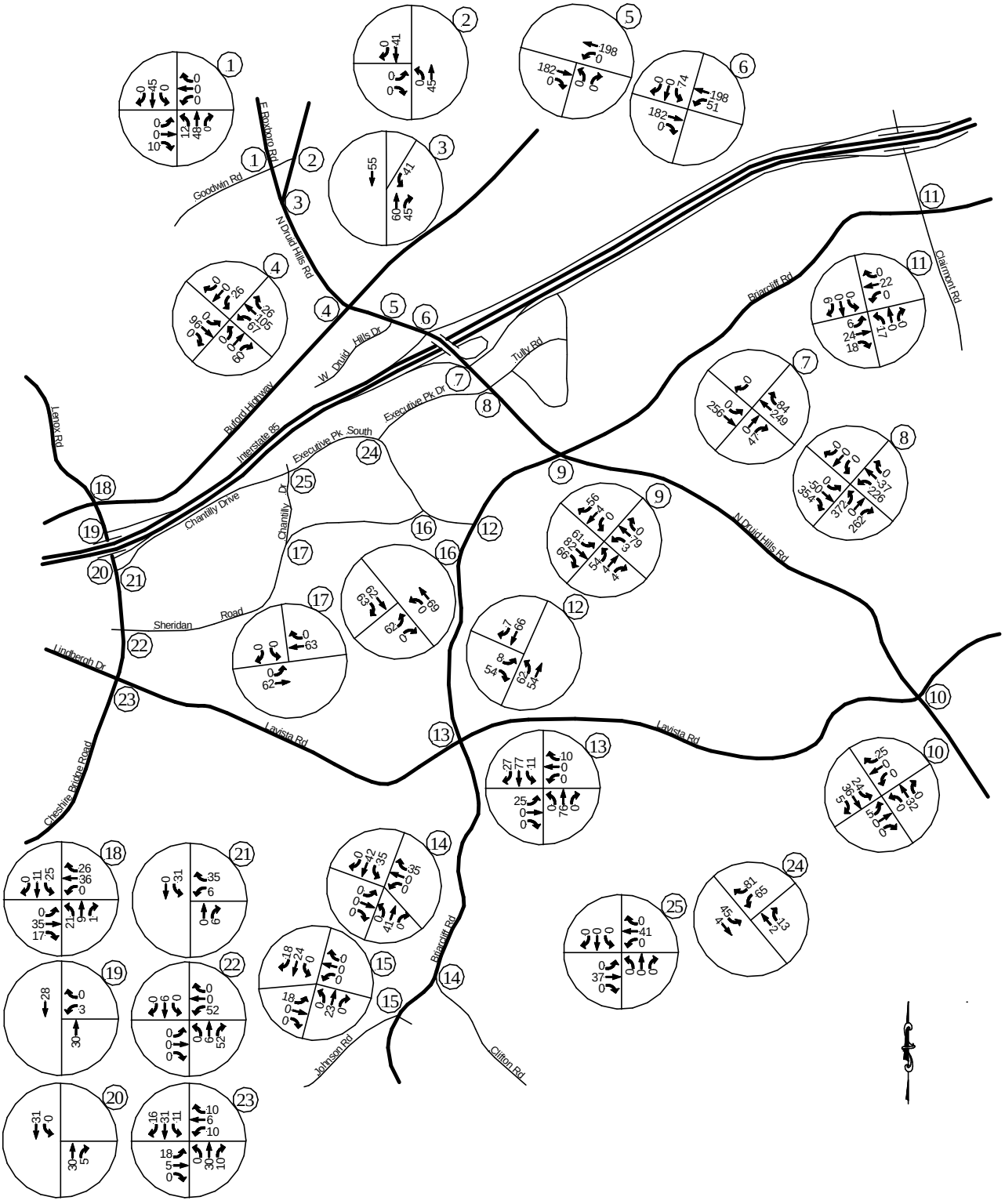


Figure 8 – The Park Druid Hills Phase I Site-Generated P.M. Peak Hour Trips

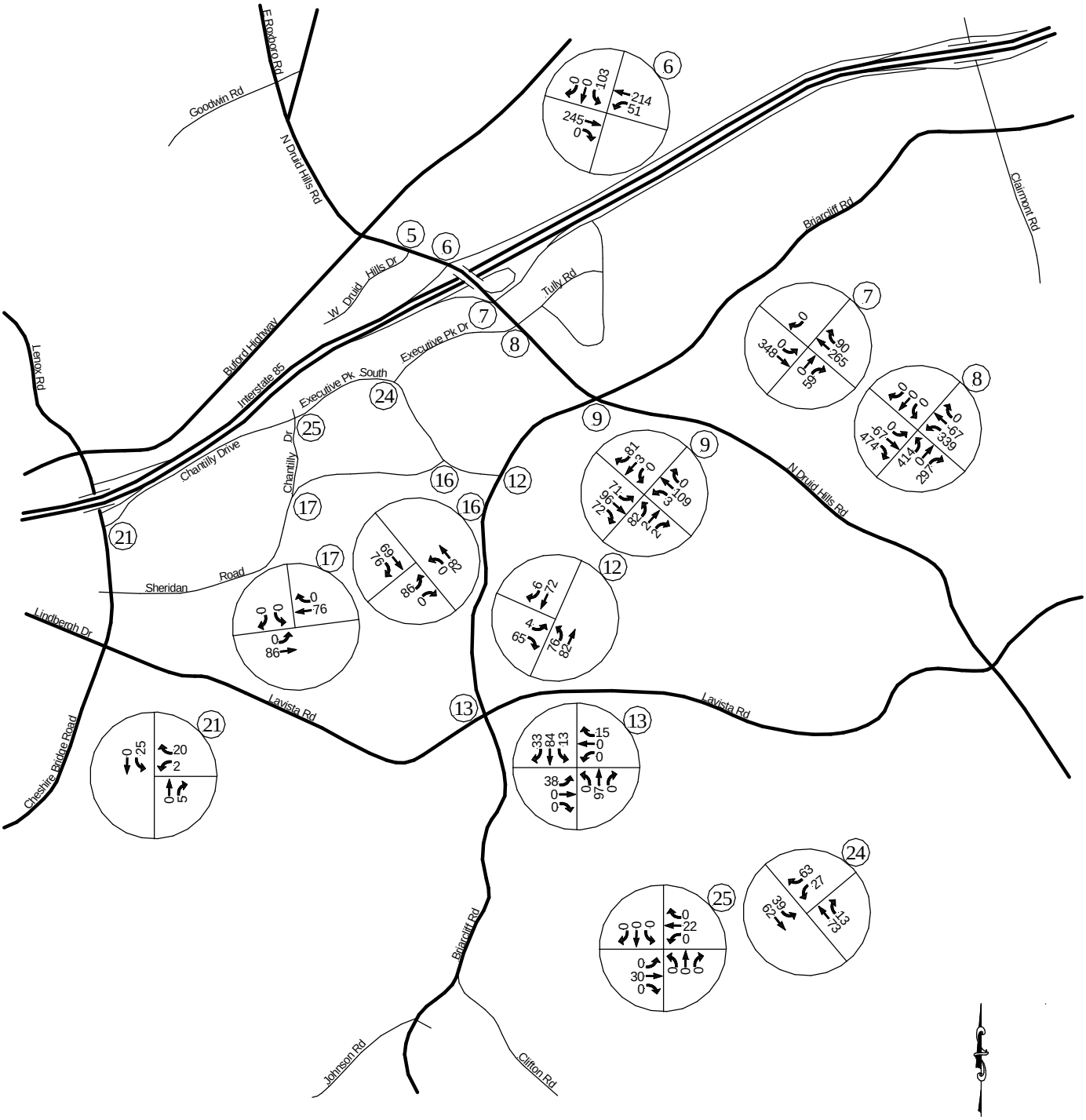


Figure 9 – The Park Druid Hills Phase I Site-Generated Saturday Peak Hour Trips

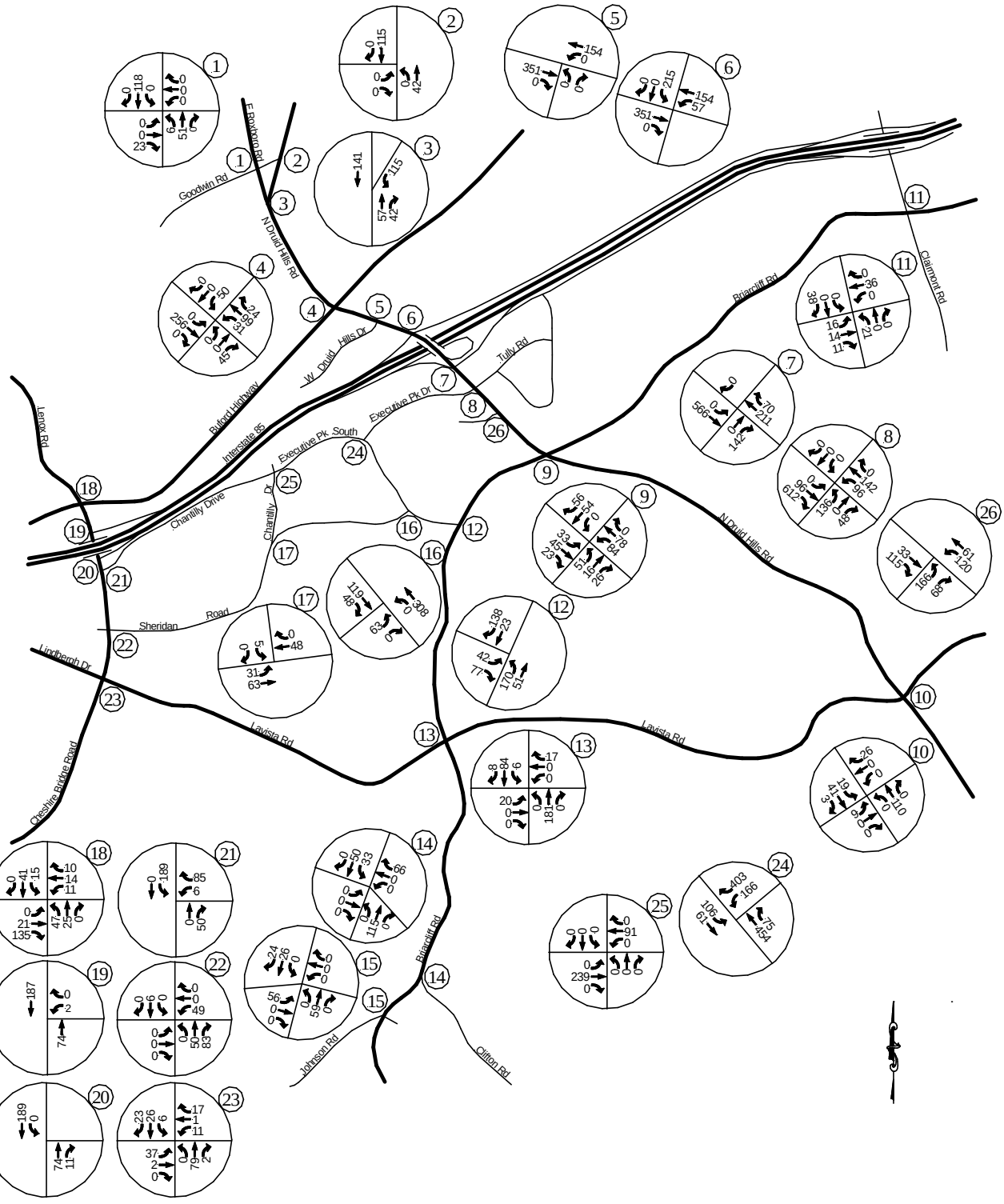


Figure 10 – The Park Druid Hills Full Build-Out Site-Generated A.M. Peak Hour Trips

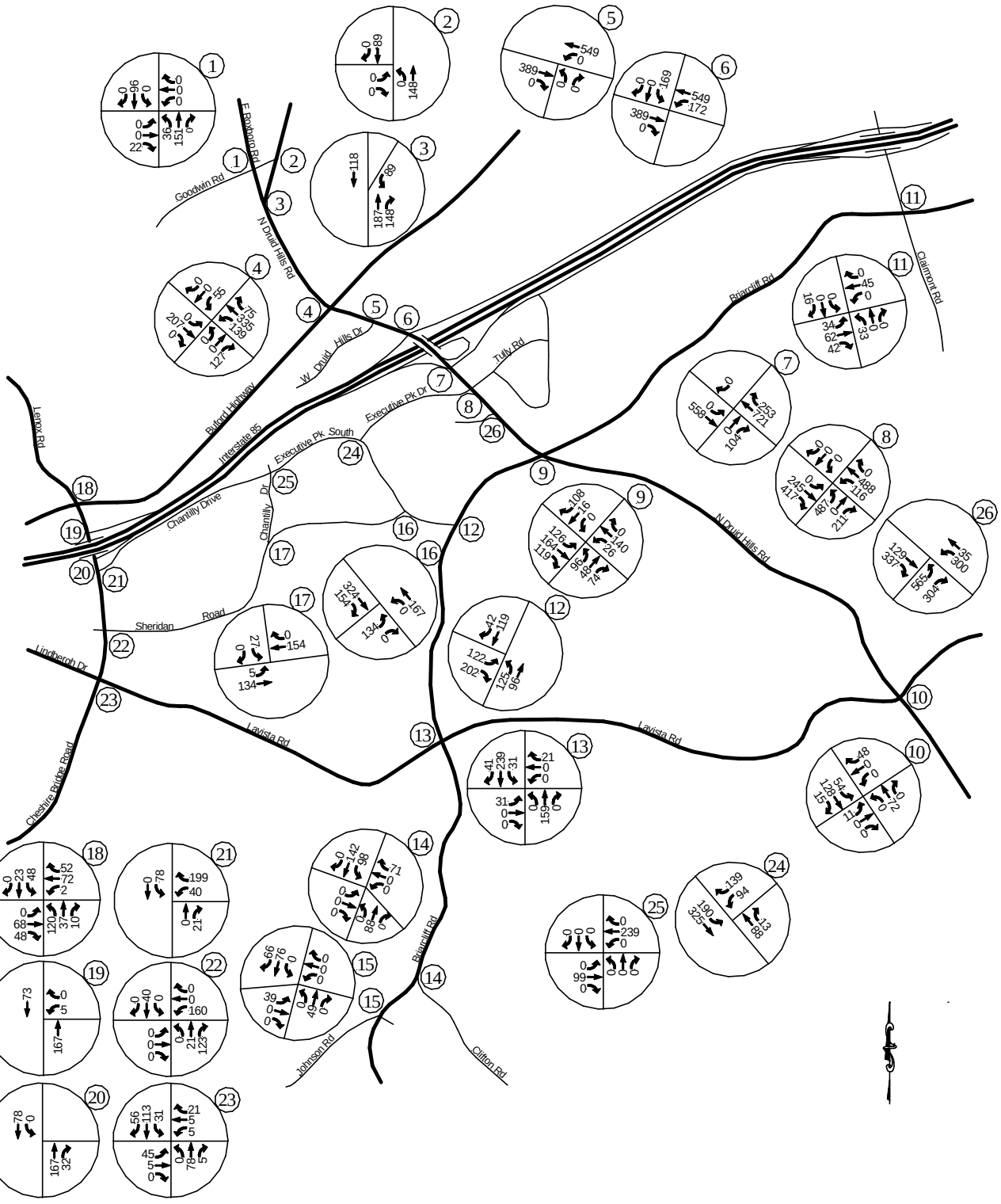


Figure 11 – The Park Druid Hills Full Build-Out Site-Generated P.M. Peak Hour Trips

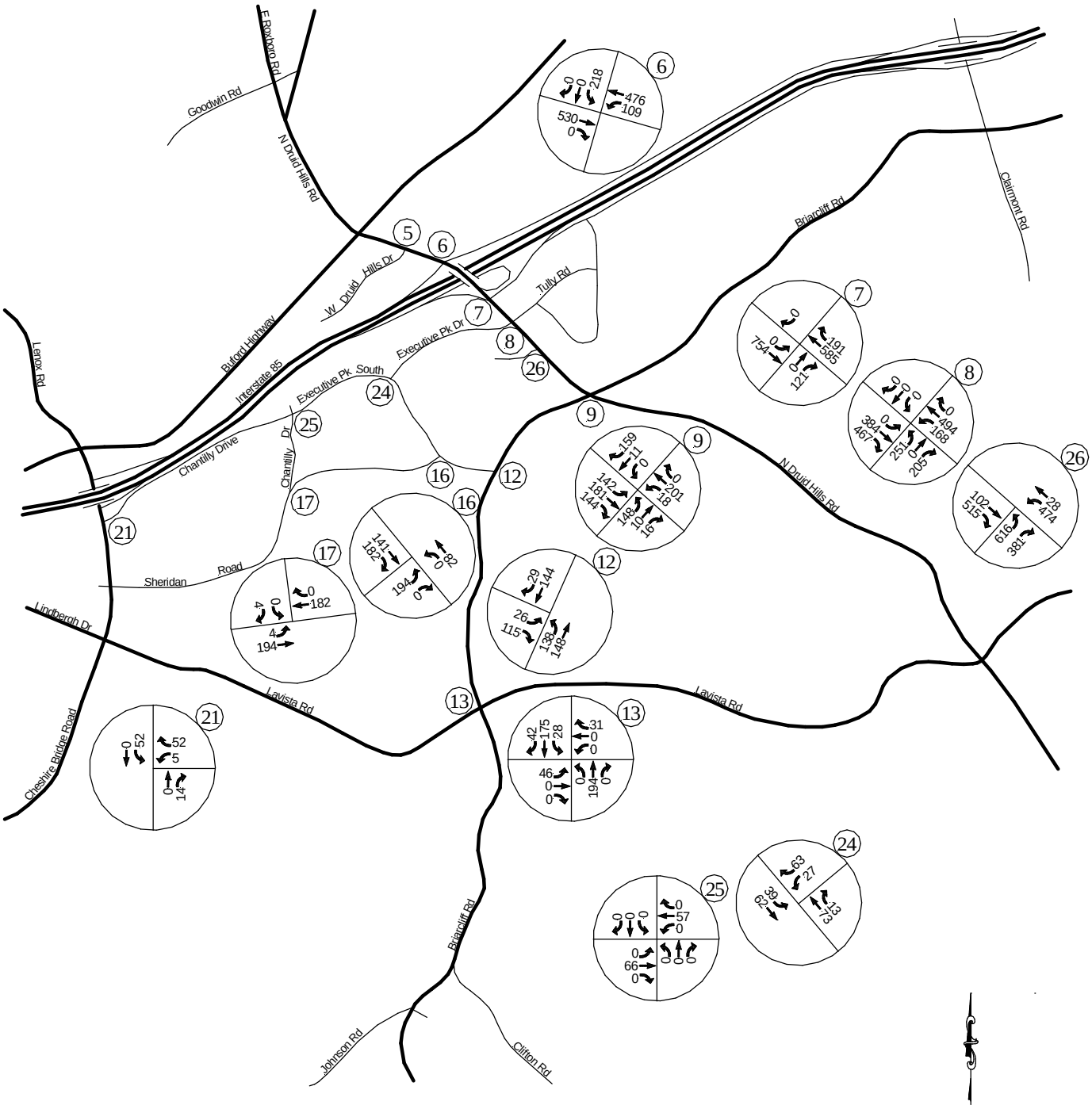


Figure 12 – The Park Druid Hills Full Build-Out Site-Generated Saturday Peak Hour Trips

5. Existing Traffic Analysis

This chapter presents the results of the capacity analysis and facilities needs analysis for the existing condition.

5.1 Existing Traffic Volumes

Traffic counts used in this study were collected during the weekday a.m. and p.m. peak periods, and, where applicable, the Saturday mid-day peak. All traffic counts were performed in the Spring of 2008 and local school calendars were reviewed (including DeKalb County and other metro Atlanta public schools, and Emory University) to ensure that schools were in regular session when the counts were collected. The morning counts were collected from 7:00 a.m. to 9:00 a.m., the evening counts were performed from 4:30 p.m. to 6:30 p.m., and the Saturday peak counts were collected from 11:00 a.m. to 1:00 p.m.. The peak hour during each count period was determined for use in the subsequent intersection analyses. All counts were performed by traffic data collection subconsultants and reviewed by Marc R. Acampora, PE, LLC. Appendix C presents all raw traffic count data. Appendix D provides summaries of the calculations of turning movement volumes at each intersection. The tables in Appendix D include the counted peak hour volumes as well as the day and date of each count. The existing a.m. peak hour volumes are presented in Figure 13, the p.m. peak hour volumes are shown in Figure 14, and the Saturday peak hour volumes are shown (where required) in Figure 15.

5.2 Existing Lane Configuration

A detailed description, along with photographs documenting the existing conditions, was provided previously in this report. Figure 16 presents the existing lane configuration at each study intersection and method of traffic control (signal or stop sign).

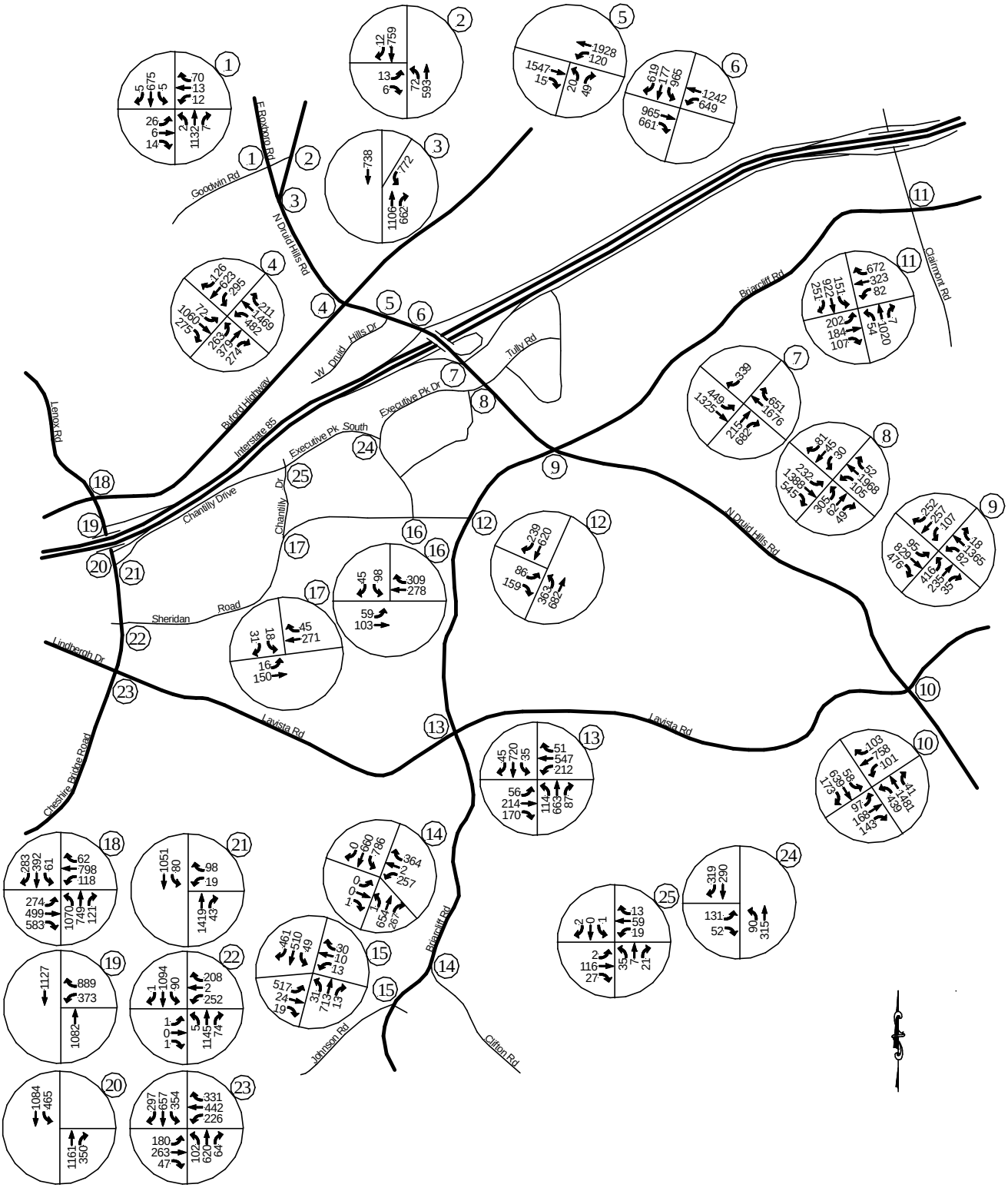


Figure 13 – Existing A.M. Peak Hour Traffic Volumes

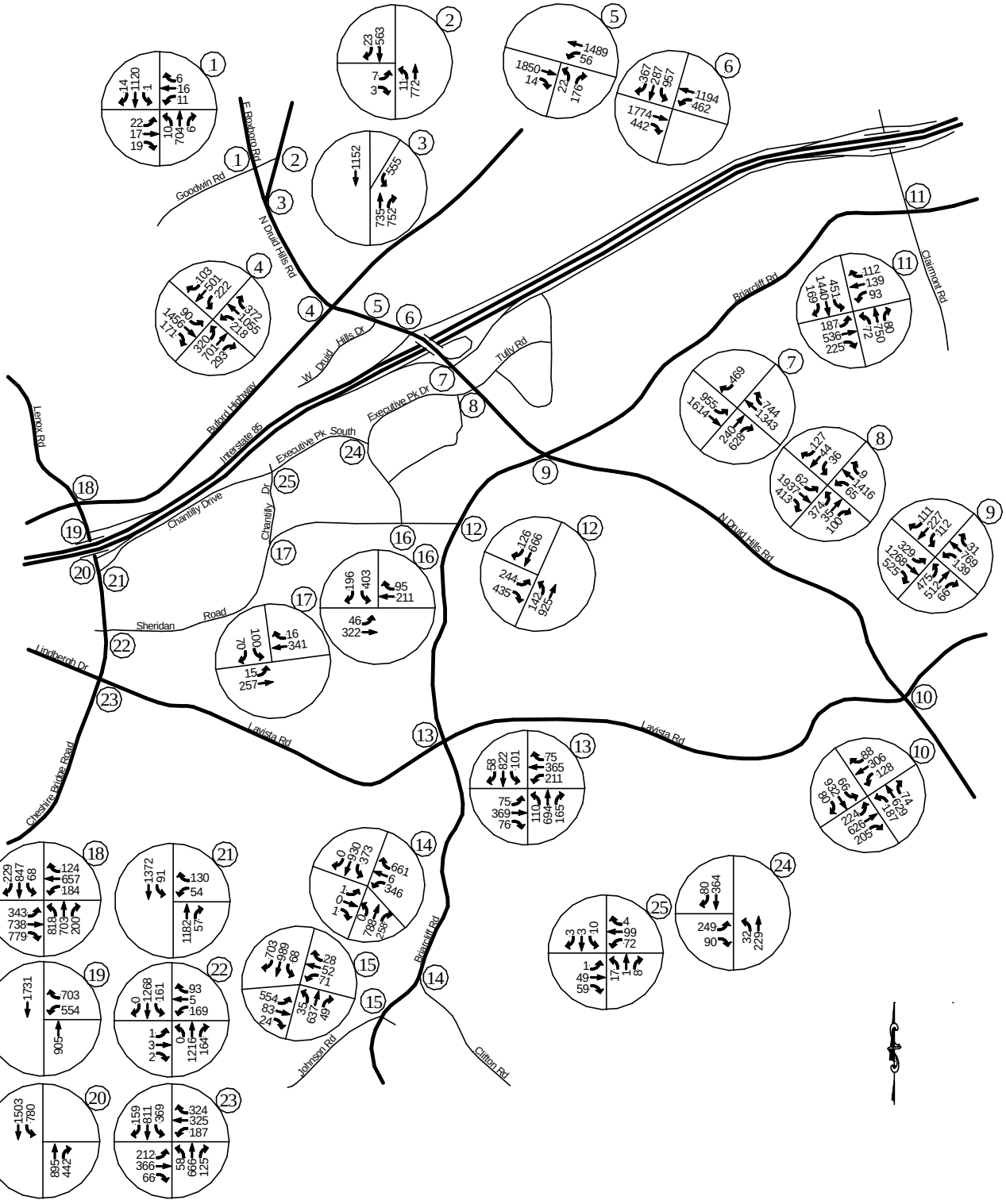


Figure 14 – Existing P.M. Peak Hour Traffic Volumes

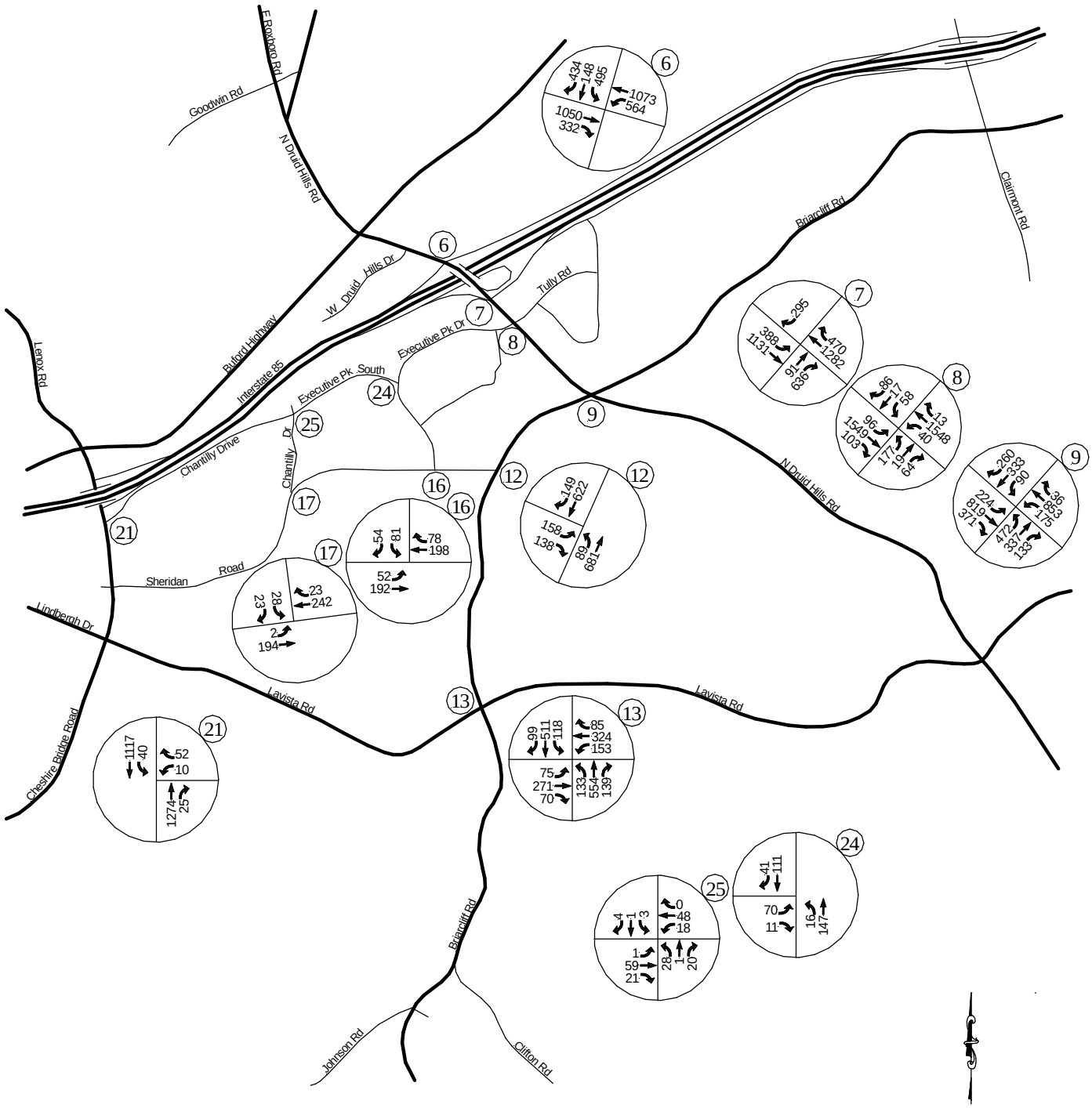


Figure 15 – Existing Saturday Peak Hour Traffic Volumes

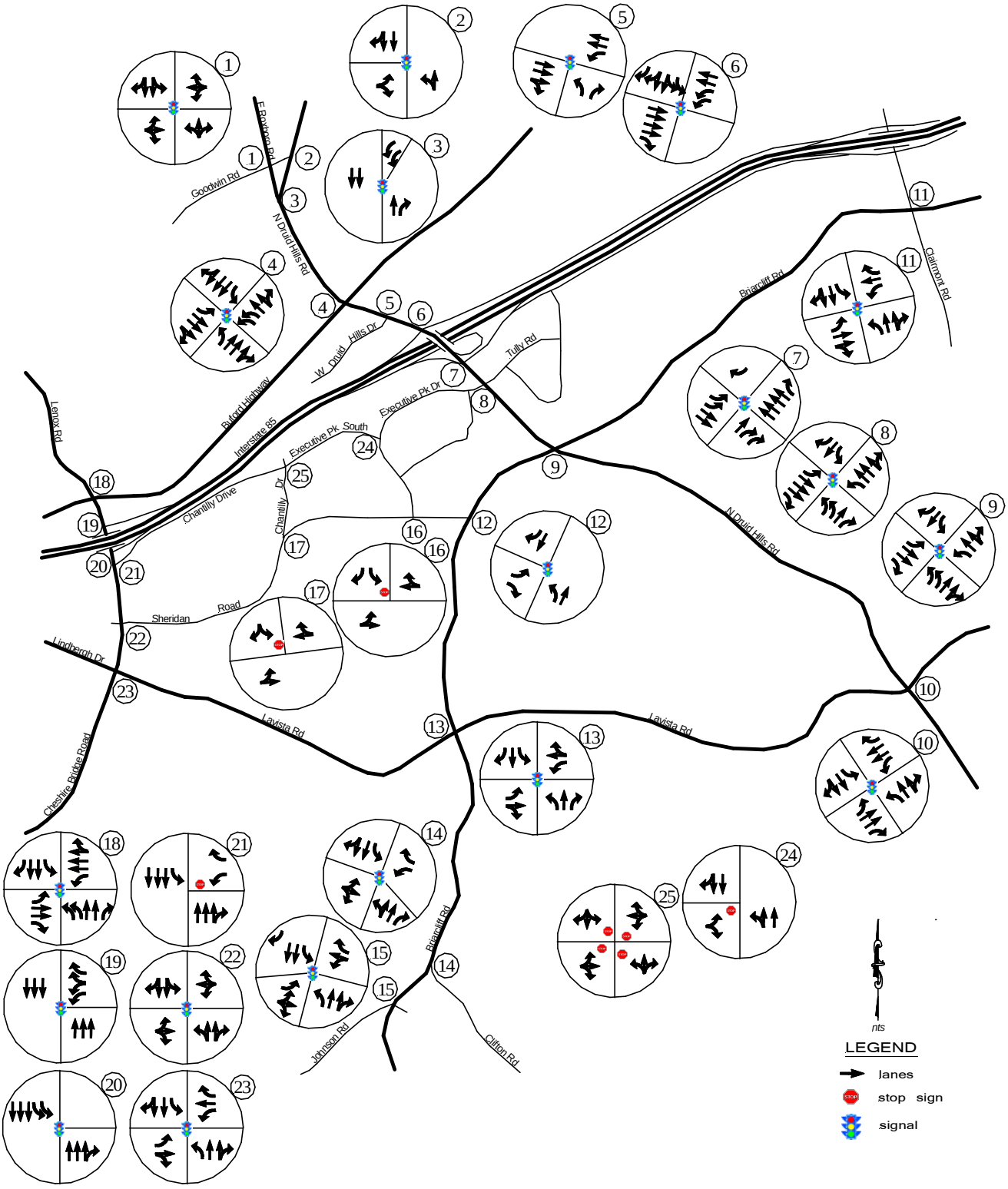


Figure 16 – Existing Lanes and Method of Traffic Control

5.3 Existing Intersection Operations

Analyses were performed for each study intersection, based on the counted traffic volumes, and existing lane configurations, method of traffic control, and signal operations. The results of the analyses are shown in Table 10. The Synchro computer printouts, which provide detailed analysis information, are included in Appendix E.

Table 10 – Existing Intersection Levels of Service

#	Description	A.M. Peak Hour	P.M. Peak Hour	Saturday Peak Hour
1	East Roxboro Road @ Goodwin Road	A	A	
2	North Druid Hills Road @ Goodwin Road	A	A	
3	North Druid Hills Road @ East Roxboro Road	C	B	
4	North Druid Hills Road @ Buford Highway	D	D	
5	North Druid Hills Road @ West Druid Hills Drive	A	B	
6	North Druid Hills Road @ I-85 Southbound Ramps	***E****	C	C
7	North Druid Hills Road @ I-85 Northbound Ramps	C	D	D
8	North Druid Hills Road @ Executive Park Drive / Tully Road	C	C	B
9	North Druid Hills Road @ Briarcliff Road	D	D	D
10	North Druid Hills Road @ Lavista Road	***E****	D	
11	Clairmont Road @ Briarcliff Road	D	D	
12	Briarcliff Road @ Sheridan Road	B	B	B
13	Briarcliff Road @ Lavista Road	***E****	***E****	D
14	Briarcliff Road @ Clifton Road	D	C	
15	Briarcliff Road @ Johnson Road	B	C	
16	Sheridan Road @ Executive Park Drive (unsignalized)	B	C	A
17	Sheridan Road @ Chantilly Drive (unsignalized)	A	A	A
18	Lenox Road @ Buford Highway	***E****	***E****	
19	Lenox Road @ I-85 Southbound Off-Ramp	C	C	
20	Lenox Road @ I-85 Northbound On-Ramp	B	B	
21	Cheshire Bridge Road @ Chantilly Drive (unsignalized)	A	A	A
22	Cheshire Bridge Road @ Sheridan Road	D	D	
23	Cheshire Bridge Road @ Lavista Road / Lindbergh Drive	D	D	
24	Executive Park Dr @ Executive Park South (unsignalized)	A	A	A
25	Executive Park South @ Chantilly Drive (unsignalized)	A	A	A

** LOS E becomes level of service standard for this location and time.*

5.4 Existing Facilities Needs Analysis

In the existing condition, the following locations do not meet the LOS D standard:

Intersection 6 – North Druid Hills Road at I-85 Southbound Ramps. This intersection operates at LOS E in the a.m. peak hour, and, therefore, LOS E becomes the standard at this location in the a.m. peak hour. The intersection meets the LOS D standard in the p.m. and Saturday peak hours and no mitigation is required.

Intersection 10 – North Druid Hills at Lavista Road. The intersection operates at LOS E in the a.m. peak hour. Therefore, LOS E becomes the standard for this location in the a.m. and no mitigation is required.

Intersection 13 – Briarcliff Road at Lavista Road. This location operates at LOS E in the a.m. and p.m. peak hours. Therefore, LOS E becomes the standard at this location in the a.m. and p.m. and no mitigation is required.

Intersection 18 – Lenox Road at Buford Highway. The existing a.m. and p.m. level of service is LOS E, and, therefore, that becomes the standard at this intersection during those time periods and no mitigation is required.

Five of the 25 study intersections are unsignalized and the results presented in Table 10 reveal that the intersection levels of service at all of these locations will meet the standards. It is noted, however, that at certain time periods, the side street stop sign controlled approaches at some of the intersections are below LOS D. Specifically, this occurs at the following locations:

- westbound left turn from Chantilly Drive to Cheshire Bridge Road (a.m. LOS F, p.m. LOS F, Sat. LOS F)
- eastbound approach of Executive Park South at Executive Park Drive (a.m. LOS E, p.m. LOS E)
- southbound left turn from Executive Park Drive to Sheridan Road (p.m. LOS F)

At the Chantilly Drive intersection with Cheshire Bridge Road, a signal would be required to eliminate the LOS F. This signal would benefit a minimal volume of side street traffic while introducing delays to the heavy volumes on Cheshire Bridge Road. Because the intersection overall operates acceptably, and considering the low number of vehicles that would benefit as compared with the new delays that would be introduced, and considering the proximity of the signal at the ramp to I-85 northbound, this signalization is not required by GRTA standards and is not recommended at this time. However as volumes increase on Chantilly Drive, in conjunction with The Park Druid Hills project, the need for mitigation at this location should be expected in the future.

The overall intersection of Executive Park Drive at Executive Park South operates acceptably and the side street approach operates at LOS E. Technically, according to GRTA standards, no mitigation is necessary and none is recommended at this time since this intersection will be reconfigured in conjunction with The Park Druid Hills project.

The southbound left turn from Executive Park Drive at Sheridan Road operates at LOS F in the p.m. In order to mitigate the delay for this movement, the intersection would require signalization. Since the overall intersection operates acceptably and due to the fact that this intersection is planned to be reconfigured as part of The Park Druid Hills, no mitigation is recommended at this time.

5.5 Other Recommendations For Existing Conditions

Exclusive of the GRTA requirements to satisfy the LOS D standard, other items that can be corrected, improved, or are noteworthy, are listed below:

1) It was observed that motorists traveling northbound on North Druid Hills Road toward the split with East Roxboro Road often changed lanes right at the intersection, suggesting they were not sufficiently informed of the choice posed by the fork in the road. Consideration should be given to providing additional advance signage further south than the existing signage located right at the decision point.

2) At the intersection of North Druid Hills Road at West Druid Hills Drive, the overhead street sign reads "West Druid Hills Road", while the street post sign and most maps indicate "West Druid Hills Drive". This study uses "Drive". It is recommended that the appropriate street sign(s) be corrected for consistency and accuracy.

3) The eastbound approach exiting Executive Park Drive at North Druid Hills Road is provided with insufficient greentime and consistently experiences phase failure during peak time periods. It is recognized that signal timing does, and should substantially favor the heavier flows on North Druid Hills Road, and that coordination along the North Druid Hills Road corridor should be preserved. It is suggested that there may be room for some improvement for Executive Park Drive, perhaps using some of the greentime currently allocated to the westbound approach (Tully Road) on the east/west split phasing. The volumes exiting Executive Park Drive are approximately double to triple those exiting Tully Road.

4) Additional storage capacity is needed for the exclusive turn lanes on the northbound, southbound, and eastbound approaches at the North Druid Hills Road / Briarcliff Road intersection. The northbound left turn lane on North Druid Hills is minimal, the southbound left turn lane is insufficient for the significant left turn volumes, especially in the p.m., and the southbound right turn lane and eastbound dual left turn lanes could all be extended. In addition, the signal timing may allow for some adjustment. At times observations revealed that too much greentime was being allocated to the through movements on Briarcliff, at the expense of other heavy movements.

5) The greentime allocated to North Druid Hills Road at Lavista Road appeared to be excessive, particularly in the p.m. peak. In addition, observations revealed that the long cycle length (in excess of three minutes) contributed to notable queuing at this intersection. Consideration should be given to shortening the cycle length to provide "snappier" operation, which could eliminate unused portions of greentime, especially in off-peaks, and reduce queues in the peaks.

6) At Clairmont Road / Briarcliff Road, operations would benefit from a southbound exclusive right turn lane on Clairmont (a.m. 251 right turn vehicles in the peak hour, p.m. 169 right turn vehicles). Additional southbound left turn capacity is also needed to serve the 451 p.m. peak hour left turners.

7) At the intersection of Briarcliff Road at Lavista Road, the left turn lanes, especially the one on the southbound approach, are of insufficient length. Right turn lanes on the eastbound and westbound approaches would also be beneficial, although it is recognized that there are constraints to widening,

especially the proximity of the church in the southwest corner, to the travelway. Shorter cycle lengths (now approximately two and one half minutes) may improve efficiency and reduce queuing.

8) The intersection of Briarcliff Road at Johnson Road and immediately adjacent Zonolite Road presents operational problems. The current use of stop signs is appropriate – the westbound flow from Briarcliff Road heading to southbound Johnson Road should not be (and is not) stop sign controlled so that vehicles coming through the signal are not all required to immediately stop at Zonolite Road. However, the total volume making this movement, which is comprised of northbound lefts from Briarcliff to Johnson, and westbound throughs from the shopping center to Johnson, are minor compared to the very heavy southbound right turns that split off from Briarcliff to head southbound on Johnson. These right turners are not controlled by the signal, but must all stop at the stop sign located where the right turn flare meets Johnson Road. Two options are suggested for this intersection. Option One would provide a signal for the southbound right turn, in place of the existing stop sign. The signal would provide a green arrow when the north/south through phases are green on Briarcliff (northbound left turns would be converted to protected only), and also when the eastbound phase from Johnson was green. Option Two would entirely eliminate the northbound left turn and westbound through movement, both of which have moderate volumes, thus leaving the southbound right turn as the only movement from Briarcliff to Johnson, and eliminating the need to ever stop that flow. The eastbound approach could be redesigned to better orient or "aim" the eastbound left turn movements from Johnson toward northbound Briarcliff, using the space that currently receives the northbound lefts and westbound throughs.

9) While the intersection just meets LOS D standards (LOS D in both a.m. and p.m.), the intersection of Cheshire Bridge Road at Sheridan Road would substantially benefit from a southbound exclusive left turn lane on Cheshire Bridge and a second westbound lane on Sheridan. Southbound left turners often block the through traffic, effectively reducing southbound Cheshire Bridge to one through lane. A second westbound lane would reduce the greentime necessary for Sheridan, which could then be reallocated to a protected left turn phase for the southbound left turners (in conjunction with a southbound exclusive left turn lane, with protected / permissive left turn phasing).

10) The Cheshire Bridge Road / Lavista Road / Lindbergh Drive intersection also just meets the LOS D standard (LOS D in both a.m. and p.m.). Queues at this intersection can be excessive during peak times, with peak eastbound queues on Lindbergh frequently extending to the vicinity of the I-85 underpass and southbound queues on Cheshire Bridge backing up through the signal at Sheridan. A southbound exclusive right turn lane on Cheshire Bridge would be very beneficial, as would lengthening the southbound left turn lane. The northbound left turn lane could be lengthened as well. The problem in this corridor is the combined detrimental effects to flow of narrow lanes, multiple driveways, small turn radii, and lack of exclusive turn lanes along the roadways.

11) As a general recommendation, the continuity of sidewalks and the condition of pedestrian facilities in the study area, including crosswalk striping, wheelchair ramps, and pedestrian signals, should be a priority for the County / Georgia DOT.

The recommendations provided above do not constitute mitigation required to meet the LOS D standard and, therefore, are not considered a product of the facilities needs analysis. No mitigation is required for the existing condition, according to GRTA requirements.

6. Base (No-Build) Traffic Analysis

Two base, or no-build, conditions were developed, one for the DRI's Phase I build-out year of 2011, and one for the full project build-out date of 2016. The no-build analysis provides a reference by which to measure the traffic impact of the proposed DRI.

6.1 2011 No-Build Traffic Volumes

The no-build conditions include background increases in traffic volumes that will occur whether or not The Park Druid Hills is built. Georgia Department of Transportation historic daily traffic volumes were researched in the area. The data was collected for five years from 2002 to 2006 (inclusive) and is presented in Table 11. 2006 was the last year for which data was available when the growth factors were being developed. The volumes did not suggest a definitive trend, with both positive and negative trends observed, depending on location and year.

Table 11 – Georgia DOT Historic AADT Data

Location	DOT TC #	2002	2003	%	2004	%	2005	%	2006	%	average %
N Druid Hills at Executive Pk	3136	49,639	na	na	58,408	na	48,310	-17.3%	52,110	7.9%	1.2%
N Druid Hills N of I-85	3138	49,540	na	na	46,726	na	39,600	-15.3%	31,790	-19.7%	-10.5%
Briarcliff S of Sheridan	3134	21,354	22,505	5.4%	23,035	2.4%	23,260	1.0%	21,460	-7.7%	0.1%
N Druid Hills S of Briarcliff	3689	34,949	na	na	34,609	na	32,740	-5.4%	31,240	-4.6%	-2.8%
N Druid Hills N of Buford Hwy	3658	36,279	34,943	-3.7%	37,020	5.9%	33,590	-9.3%	37,140	10.6%	0.6%
Buford Hwy S of N Druid Hills	3094	26,091	25,780	-1.2%	28,917	12.2%	22,190	-23.3%	25,160	13.4%	-0.9%
N Druid Hills S of Lavista	3694	31,775	29,513	-7.1%	29,371	-0.5%	28,010	-4.6%	26,840	-4.2%	-4.1%
Lenox Road S of Buford Hwy	5163	53,288	55,514	4.2%	56,407	1.6%	56,970	1.0%	49,680	-12.8%	-1.7%
Averages		*37,864*	*33,651*	*-11.1%*	*39,312*	*16.8%*	*35,584*	*-9.5%*	*34,428*	*-3.3%*	*-2.4%*

Based on discussions with GRTA, a general background growth factor of 2% per year was applied to the existing volumes on all roadways except North Druid Hills Road, which was increased by a 3% annual growth rate. This equates to an overall increase of 6.1% until 2011 on all roads except North Druid Hills, and 9.3% on North Druid Hills Road until 2011. In addition, specific trips were added for two projects – the Clifton Road Mixed-Use Development, DRI #1320 and The Gables, under construction at the northwest corner of Sheridan Road and Executive Park Drive. The Clifton Road project is planned for the east side of Clifton Road, southeast of Briarcliff Road. Trip data for that project was obtained from GRTA, as developed by another firm. The data was only provided for intersections evaluated in the traffic study for that project. Therefore, the data was extrapolated to each study intersection, using similar trip distribution percentages as those developed for The Park Druid Hills. The Gables site was under construction and nearing completion at the time of this study. The trips for these 320 apartments were calculated and added at the appropriate locations. The trips for DRI #1320 and The Gables are shown at each intersection in the traffic volume worksheets in Appendix D.

The counted traffic volumes at each intersection were increased by the appropriate growth factors. Then the trips from DRI #1320 and The Gables were added. The results are the 2011 no-build volumes. These are the trips that would be on the roadway network at the date of the completion of Phase I of The Park Druid Hills, but not including The Park Druid Hills trips. The 2011 no-build volumes are presented in Figures 17, 18, and 19 for the weekday a.m., p.m., and Saturday peak hours.

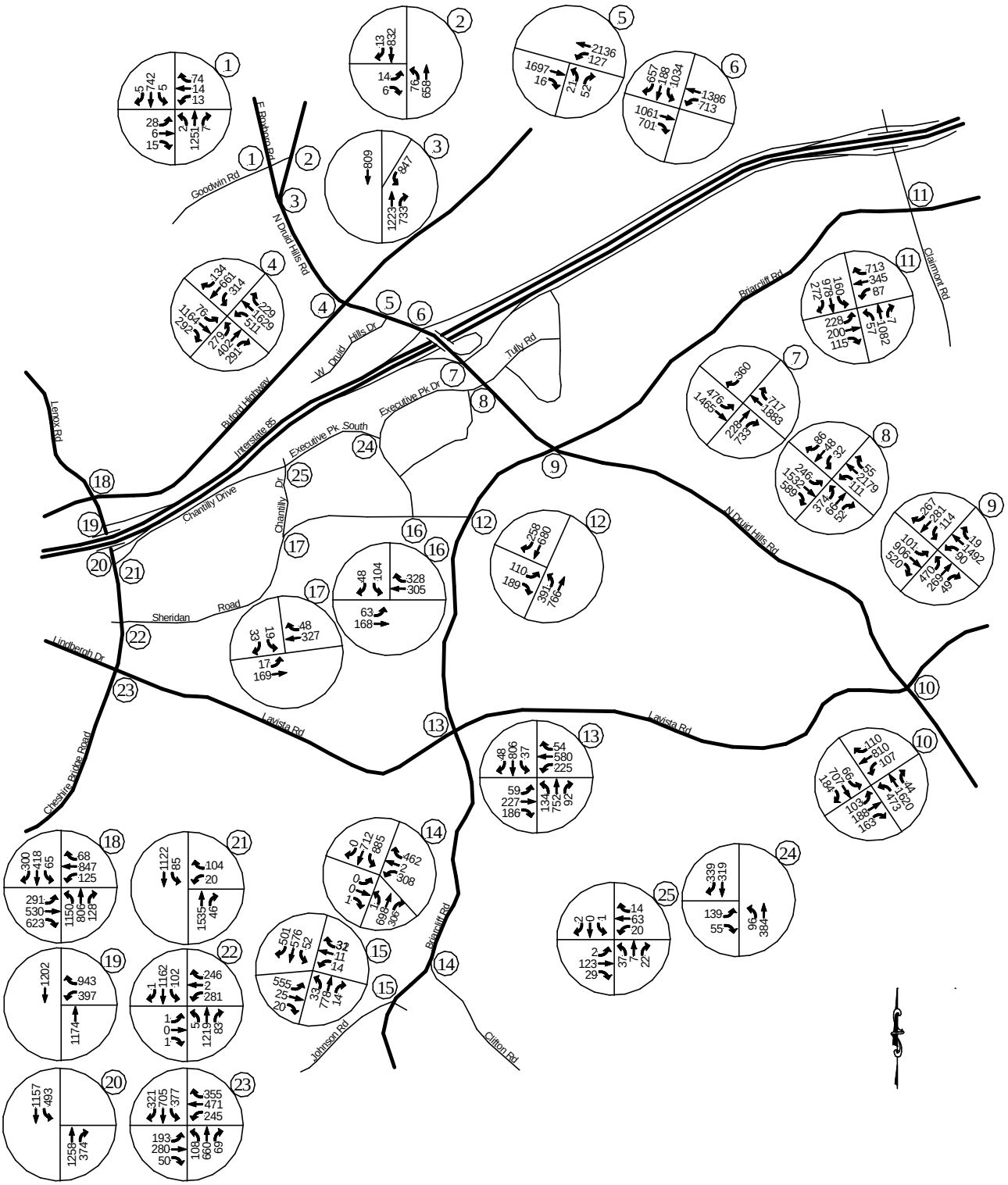


Figure 17 – 2011 No-Build A.M. Peak Hour Traffic Volumes

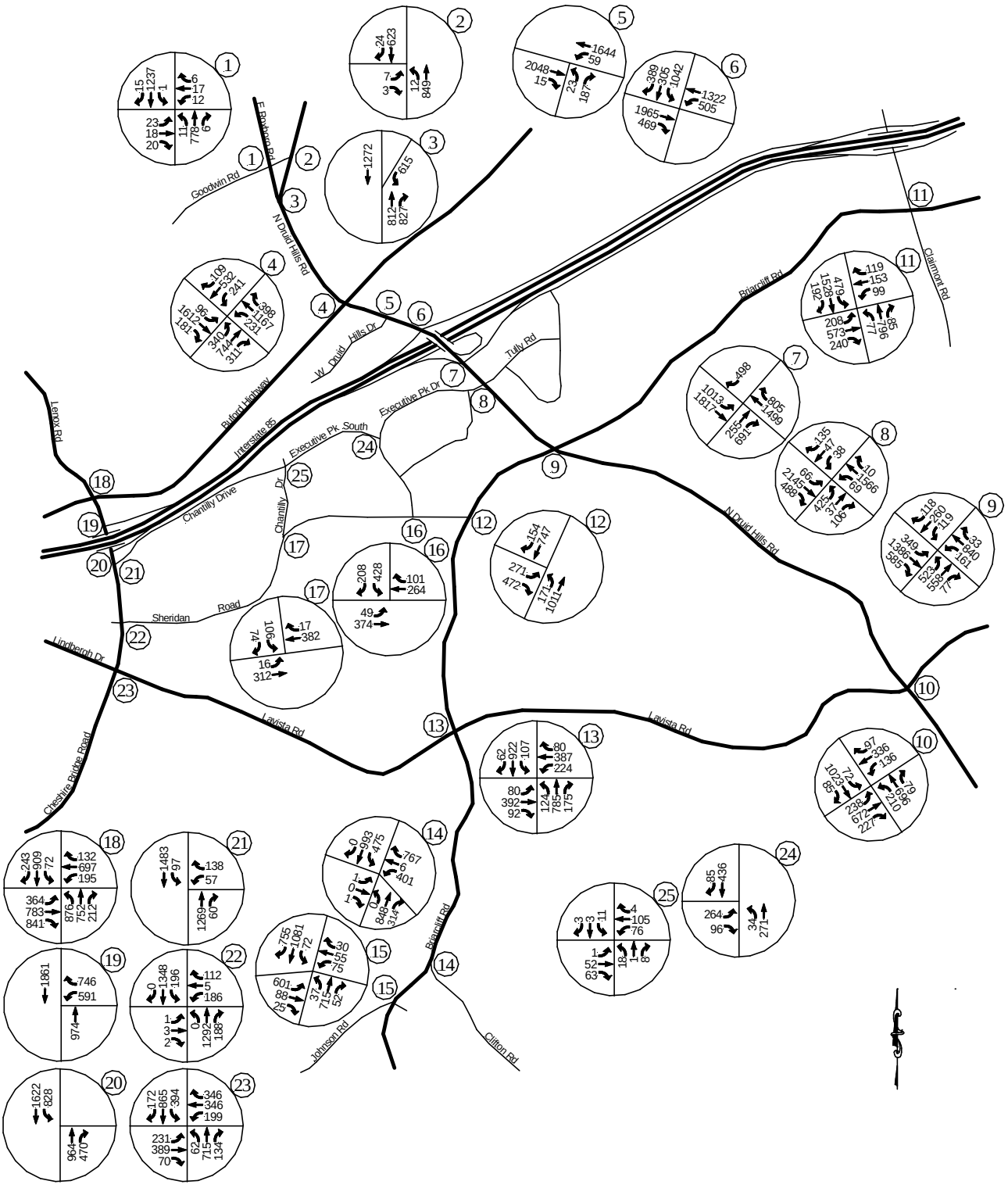


Figure 18 – 2011 No-Build P.M. Peak Hour Traffic Volumes

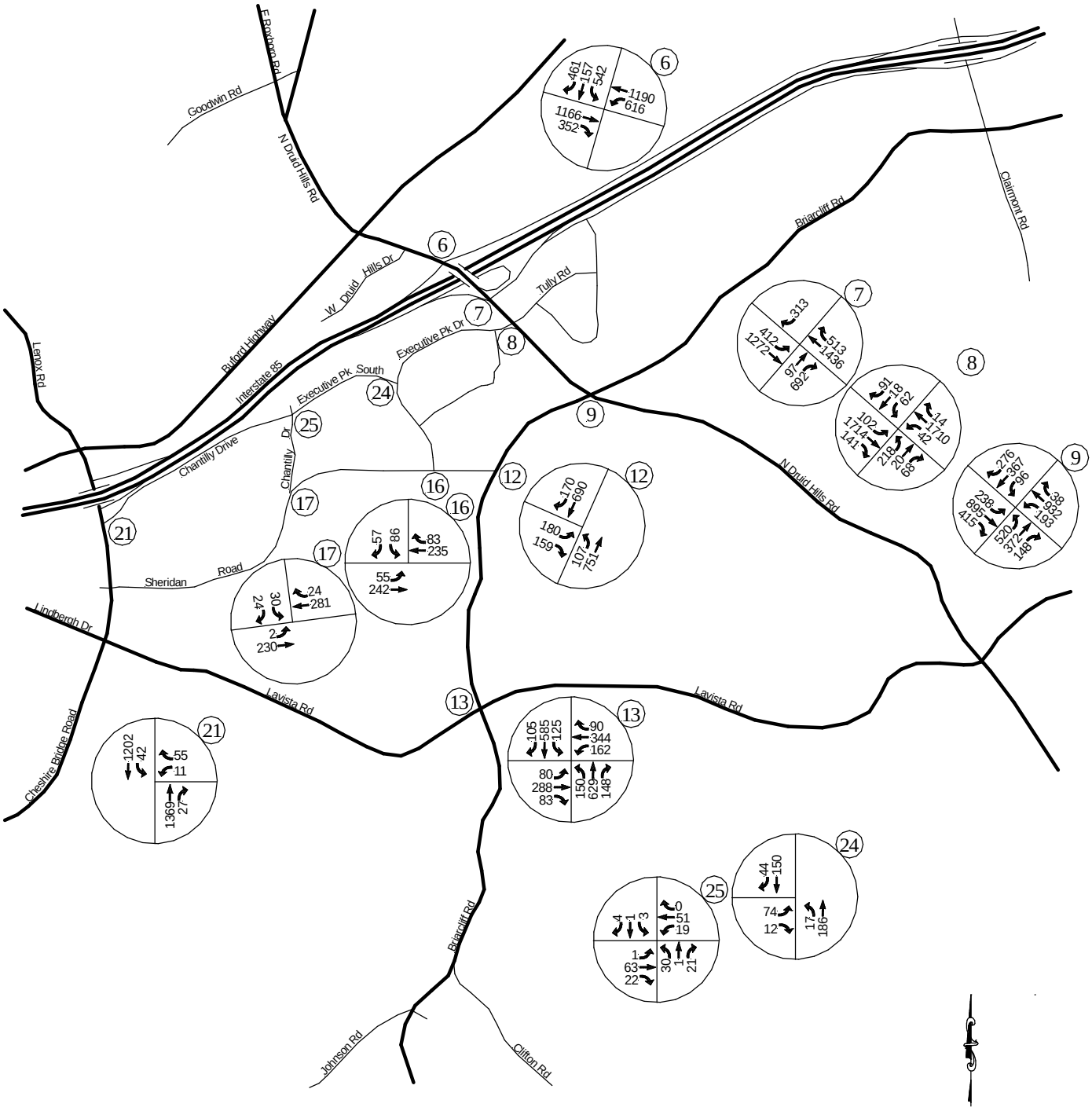


Figure 19 – 2011 No-Build Saturday Peak Hour Traffic Volumes

6.2 2011 No-Build Intersection Lane Configuration

No mitigation was identified as necessary to achieve the appropriate LOS standards for the existing condition. Therefore, for the 2011 no-build condition analysis, no changes were assumed in the intersection lane configurations or method of traffic control from the existing condition. It was assumed that signal phasing would also remain unchanged. However, signal timing for the 2011 no-build condition was optimized. This is not considered mitigation, but would be part of system maintenance to ensure that the signals operate appropriately as traffic demands change over time.

6.3 2011 No-Build Intersection Operations

Each study intersection was evaluated for the 2011 no-build condition. The 2011 no-build levels of service at each intersection are shown in Table 12. The Synchro computer printouts are included in Appendix F.

Table 12 – 2011 No-Build Intersection Levels of Service

#	Description	A.M. Peak Hour	P.M. Peak Hour	Saturday Peak Hour
1	East Roxboro Road @ Goodwin Road	A	A	
2	North Druid Hills Road @ Goodwin Road	A	A	
3	North Druid Hills Road @ East Roxboro Road	C	B	
4	North Druid Hills Road @ Buford Highway	D	D	
5	North Druid Hills Road @ West Druid Hills Drive	A	B	
6	North Druid Hills Road @ I-85 Southbound Ramps	D*	C	B
7	North Druid Hills Road @ I-85 Northbound Ramps	C	***E***	B
8	North Druid Hills Road @ Executive Park Drive / Tully Road	C	B	B
9	North Druid Hills Road @ Briarcliff Road	C	C	D
10	North Druid Hills Road @ Lavista Road	D*	C	
11	Clairmont Road @ Briarcliff Road	***E***	D	
12	Briarcliff Road @ Sheridan Road	B	C	B
13	Briarcliff Road @ Lavista Road	***E****	***E****	C
14	Briarcliff Road @ Clifton Road	***E***	D	
15	Briarcliff Road @ Johnson Road	B	C	
16	Sheridan Road @ Executive Park Drive (unsignalized)	C	D	A
17	Sheridan Road @ Chantilly Drive (unsignalized)	A	A	A
18	Lenox Road @ Buford Highway	D*	***E****	
19	Lenox Road @ I-85 Southbound Off-Ramp	B	B	
20	Lenox Road @ I-85 Northbound On-Ramp	A	A	
21	Cheshire Bridge Road @ Chantilly Drive (unsignalized)	A	A	A
22	Cheshire Bridge Road @ Sheridan Road	D	***F***	
23	Cheshire Bridge Road @ Lavista Road / Lindbergh Drive	D	D	
24	Executive Park Dr @ Executive Park South (unsignalized)	B	A	A
25	Executive Park South @ Chantilly Drive (unsignalized)	A	A	A

** LOS E is the standard for this location and time.*

6.4 2011 No-Build Facilities Needs Analysis

The following locations do not meet the LOS D standard (or LOS E, see existing analysis) in the 2011 no-build condition:

Intersection 7 – North Druid Hills Road at I-85 Northbound Ramps. The p.m. peak hour LOS drops to LOS E in the 2011 no-build condition. A substantial increase in capacity is needed for the northbound right turn from North Druid Hills Road to the I-85 northbound on-ramp. Currently a single right turn lane extends from Tully Road to the ramp. Then, after turning right, vehicles headed for the interstate must quickly weave to the left because the two right lanes feed the access road, while only a single lane serves the majority of the trips, which head to I-85 north. This northbound right turn volume will be 717 in the a.m. peak hour and 805 in the p.m., in the 2011 no-build. Re-configuring the on-ramp to provide dual right turn lanes that feed directly to the interstate, with a single lane splitting off to the right to feed the access road would substantially increase capacity and would allow the LOS standards to be met.

Intersection 11 – Clairmont Road at Briarcliff Road. The intersection will operate at LOS E in the a.m. peak hour. The addition of a southbound exclusive right turn lane on Clairmont Road will improve the a.m. LOS to LOS D and will also have notable benefits in the p.m. peak hour.

Intersection 13 – Briarcliff Road at Lavista Road. This location will continue to operate at LOS E in the a.m. and p.m. peak hours, which is the existing LOS. Therefore, LOS E is the standard at this location in the a.m. and p.m. and no mitigation is required in the 2011 no-build condition.

Intersection 14 – Briarcliff Road at Clifton Road. The a.m. peak hour LOS will drop to E. The addition of a second southbound left turn lane, creating dual left turn lanes, on Briarcliff Road would provide the most benefit. The benefit is so substantial that converting the inside through lane to the second left turn lane, and only having one southbound through travel lane would still improve operations without the need for widening. Making this change, without the widening, will improve the a.m. LOS to C, while the p.m. will remain at LOS D. The dual left turn lanes will require protected-only phasing on the signal.

Intersection 18 – Lenox Road at Buford Highway. The 2011 no-build p.m. LOS will be E. Since, the existing a.m. and p.m. level of service is LOS E, that is the standard at this intersection during those time periods and no mitigation is necessary.

Intersection 22 – Cheshire Bridge Road at Sheridan Road – The p.m. will operate at LOS F. This location would operate substantially better at all time periods if a southbound exclusive left turn lane was provided on Cheshire Bridge Road. The addition of just this left turn lane would improve the p.m. LOS from F to B.

As with the existing condition, unsignalized side street approaches and/or left turn movements at several locations will not meet the LOS standards. For the 2011 no-build condition, no mitigation is recommended at these locations for the reasons presented for the existing analysis.

It is noted that, at some locations, the 2011 no-build level of service actually improved slightly from the existing condition. It was noted above that the signal phasing was not changed from that which exists today, for the no-build analysis, but, that the signal timing was optimized so as to be more appropriate for the future volumes. This

optimization occasionally improved intersection efficiency to above the existing levels, and that is the primary reason for the slight improvements in LOS between the existing and 2011 no-build conditions.

The mitigation discussed above is shown graphically in Figure 20. The 2011 no-build analysis was re-run with this mitigation and the results are shown in Table 13.

Table 13 – 2011 No-Build Intersection Levels of Service with Mitigation

#	Description	A.M. Peak Hour	P.M. Peak Hour	Saturday Peak Hour
1	East Roxboro Road @ Goodwin Road	A	A	
2	North Druid Hills Road @ Goodwin Road	A	A	
3	North Druid Hills Road @ East Roxboro Road	C	B	
4	North Druid Hills Road @ Buford Highway	D	D	
5	North Druid Hills Road @ West Druid Hills Drive	A	A	
6	North Druid Hills Road @ I-85 Southbound Ramps	D*	C	B
7	North Druid Hills Road @ I-85 Northbound Ramps	C	C	B
8	North Druid Hills Road @ Executive Park Drive / Tully Road	C	B	B
9	North Druid Hills Road @ Briarcliff Road	C	C	D
10	North Druid Hills Road @ Lavista Road	D*	C	
11	Clairmont Road @ Briarcliff Road	D	C	
12	Briarcliff Road @ Sheridan Road	B	C	B
13	Briarcliff Road @ Lavista Road	***E****	***E****	C
14	Briarcliff Road @ Clifton Road	C	D	
15	Briarcliff Road @ Johnson Road	B	C	
16	Sheridan Road @ Executive Park Drive (unsignalized)	C	D	A
17	Sheridan Road @ Chantilly Drive (unsignalized)	A	A	A
18	Lenox Road @ Buford Highway	D*	***E****	
19	Lenox Road @ I-85 Southbound Off-Ramp	B	B	
20	Lenox Road @ I-85 Northbound On-Ramp	A	A	
21	Cheshire Bridge Road @ Chantilly Drive (unsignalized)	A	A	A
22	Cheshire Bridge Road @ Sheridan Road	C	B	
23	Cheshire Bridge Road @ Lavista Road / Lindbergh Drive	D	D	
24	Executive Park Dr @ Executive Park South (unsignalized)	B	A	A
25	Executive Park South @ Chantilly Drive (unsignalized)	A	A	A

** LOS E is the standard for this location and time.*

6.5 Summary of 2011 No-Build Mitigation

The following is a list summarizing the mitigation developed for the 2011 no-build condition:

1) Intersection 7 – Build a second northbound exclusive right turn lane on North Druid Hills Road at the I-85 Northbound On-Ramp. Re-configure the on-ramp so the dual right turn lanes feed directly to the interstate, with a single lane splitting off to the right to feed the access road.

2) Intersection 11 – Construct a southbound exclusive right turn lane on Clairmont Road at Briarcliff Road.

3) Intersection 14 – Convert the inside southbound through lane on Briarcliff Road at Clifton Road to a second exclusive left turn lane and change the phasing for that movement to protected-only.

4) Intersection 22 – Construct a southbound exclusive left turn lane on Cheshire Bridge Road at Sheridan Road.

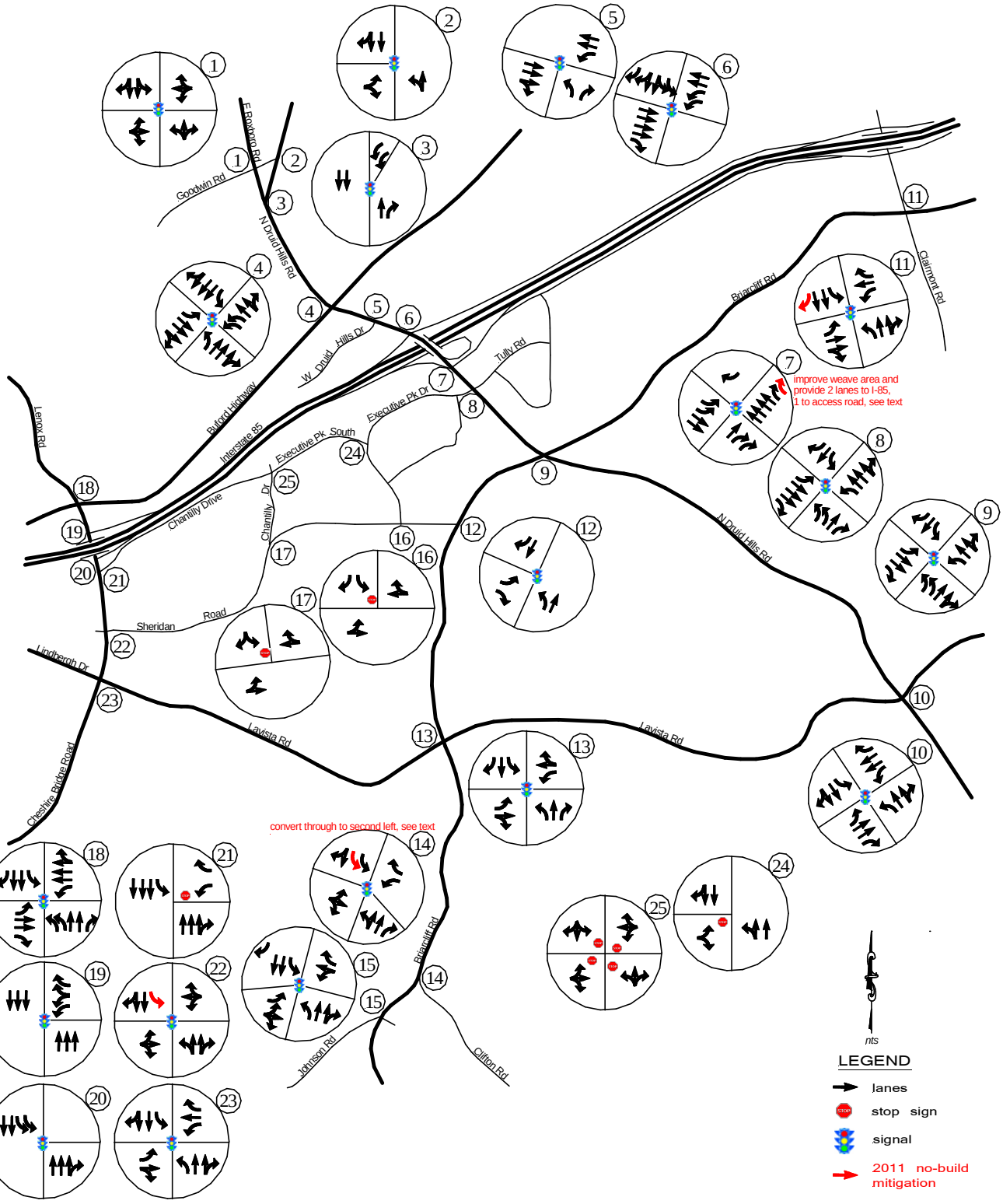


Figure 20 – 2011 No-Build Mitigation

6.6 2016 No-Build Traffic Volumes

As with the 2011 no-build condition, the counted volumes were increased at an annual rate of 2% per year except on North Druid Hills Road, which was increased at 3% per year. For the 2016 no-build condition, this equates to an overall increase 17.2% until 2016, and 26.7% on North Druid Hills Road until 2016. As with the 2011 no-build, specific trips were added for the Clifton Road Mixed-Use Development (DRI #1320) and The Gables. The trips for DRI #1320 and The Gables are shown at each intersection in the traffic volume worksheets in Appendix D. The counted traffic volumes at each intersection were increased by the appropriate growth factors. Then the trips from DRI #1320 and The Gables were added. The results are the 2016 no-build volumes. These are the trips that would be on the roadway network at the date of full build-out of The Park Druid Hills, but not including The Park Druid Hills trips. The 2016 no-build volumes are presented in Figures 21, 22, and 23 for the weekday a.m., p.m., and Saturday peak hours.

6.7 2016 No-Build Intersection Lane Configuration

The 2016 no-build analysis assumes the mitigation identified in the 2011 no-build analysis, as shown previously in Figure 20, will be in place.

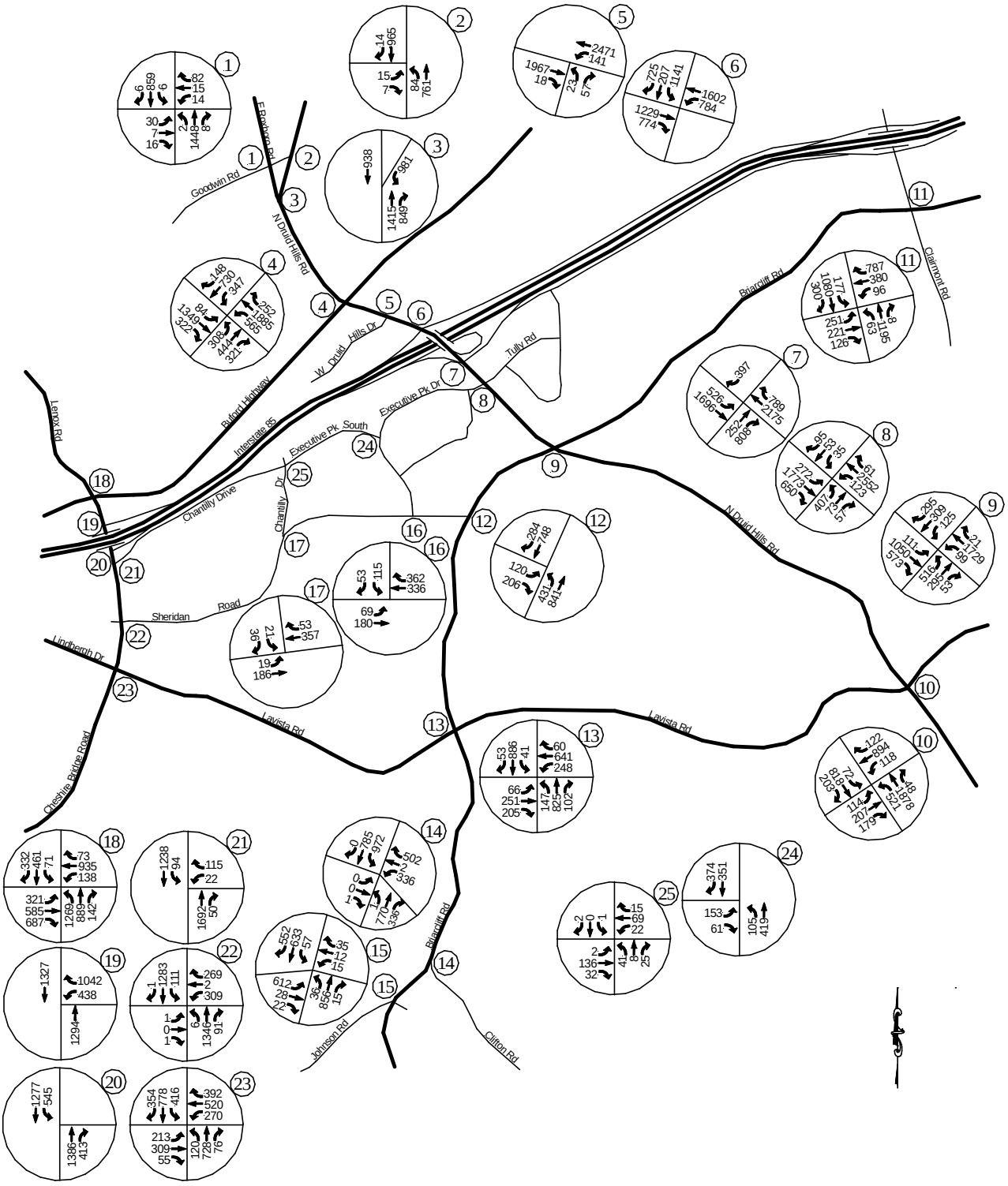


Figure 21 – 2016 No-Build A.M. Peak Hour Traffic Volumes

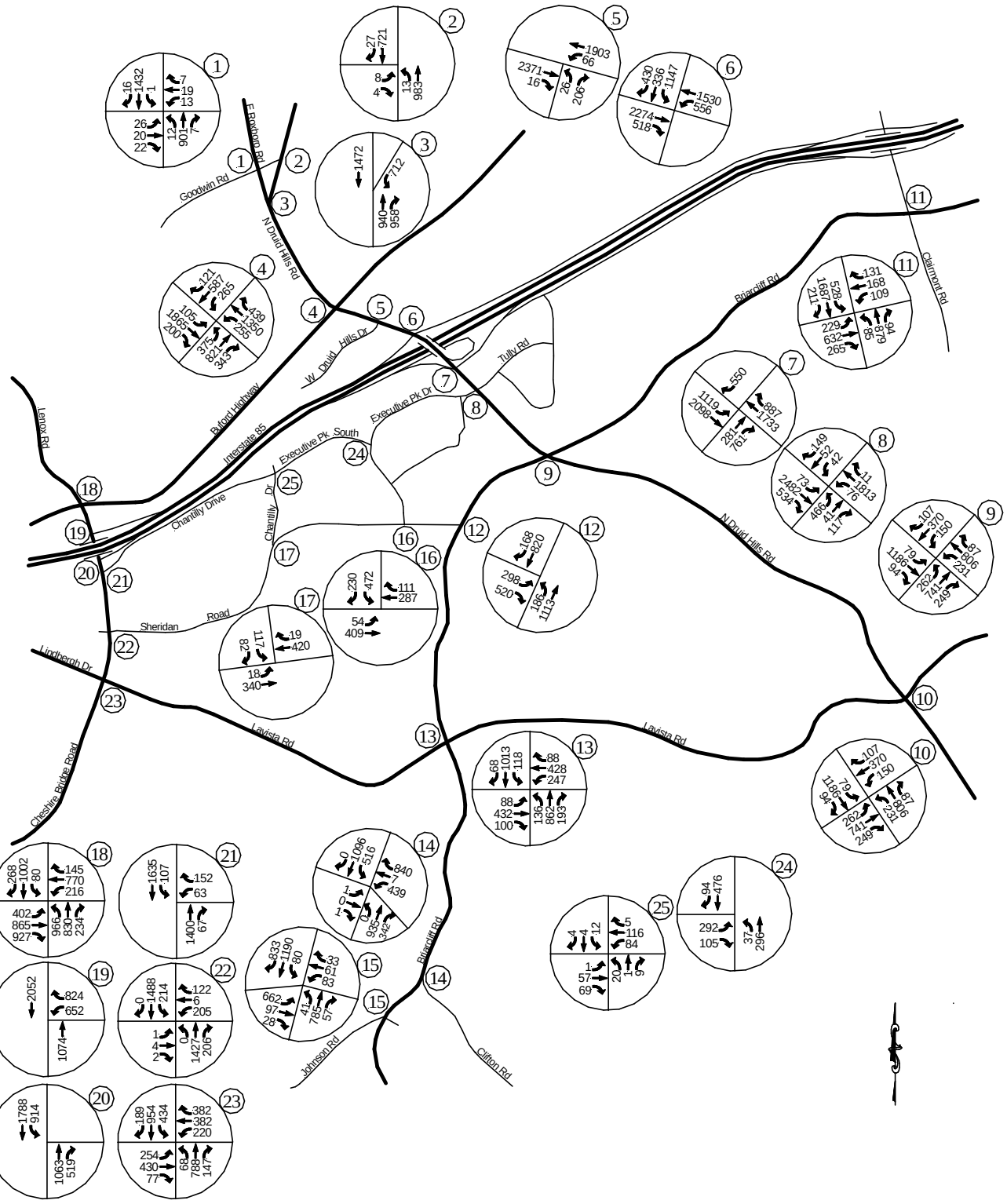


Figure 22 – 2016 No-Build P.M. Peak Hour Traffic Volumes

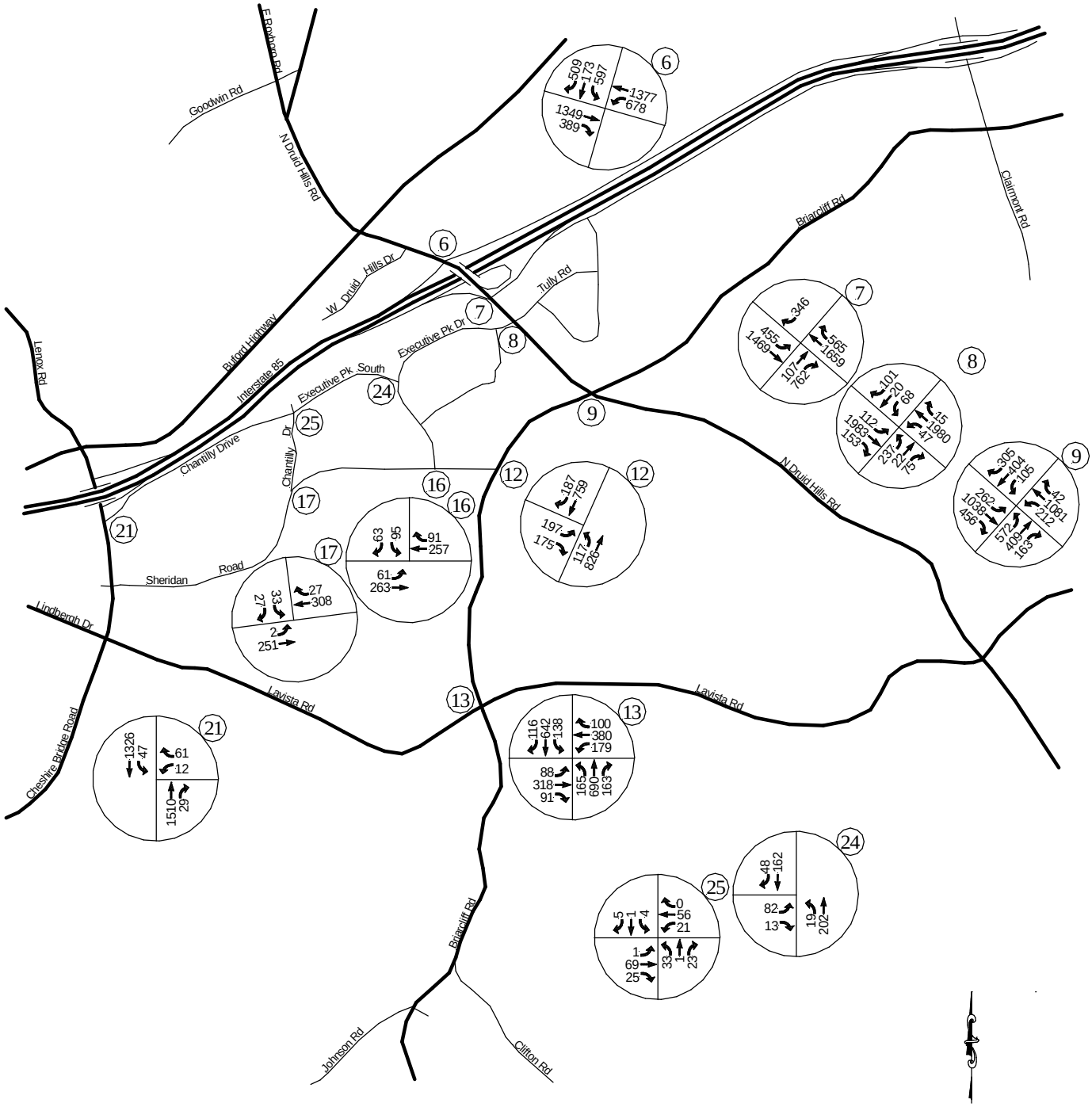


Figure 23 – 2016 No-Build Saturday Peak Hour Traffic Volumes

6.8 2016 No-Build Intersection Operations

Each study intersection was evaluated for the 2016 no-build condition. The 2016 no-build levels of service at each intersection are shown in Table 14. The Synchro computer printouts are included in Appendix G.

Table 14 – 2016 No-Build Intersection Levels of Service

#	Description	A.M. Peak Hour	P.M. Peak Hour	Saturday Peak Hour
1	East Roxboro Road @ Goodwin Road	A	A	
2	North Druid Hills Road @ Goodwin Road	A	A	
3	North Druid Hills Road @ East Roxboro Road	***E***	C	
4	North Druid Hills Road @ Buford Highway	***E***	***E***	
5	North Druid Hills Road @ West Druid Hills Drive	A	B	
6	North Druid Hills Road @ I-85 Southbound Ramps	***E****	D	C
7	North Druid Hills Road @ I-85 Northbound Ramps	C	D	C
8	North Druid Hills Road @ Executive Park Drive / Tully Road	D	C	B
9	North Druid Hills Road @ Briarcliff Road	D	D	D
10	North Druid Hills Road @ Lavista Road	***E****	C	
11	Clairmont Road @ Briarcliff Road	***E***	D	
12	Briarcliff Road @ Sheridan Road	C	C	B
13	Briarcliff Road @ Lavista Road	***F****	***F****	D
14	Briarcliff Road @ Clifton Road	D	***E***	
15	Briarcliff Road @ Johnson Road	B	C	
16	Sheridan Road @ Executive Park Drive (unsignalized)	C	***E***	A
17	Sheridan Road @ Chantilly Drive (unsignalized)	A	A	A
18	Lenox Road @ Buford Highway	***E****	***F****	
19	Lenox Road @ I-85 Southbound Off-Ramp	B	B	
20	Lenox Road @ I-85 Northbound On-Ramp	A	A	
21	Cheshire Bridge Road @ Chantilly Drive (unsignalized)	A	A	A
22	Cheshire Bridge Road @ Sheridan Road	C	C	
23	Cheshire Bridge Road @ Lavista Road / Lindbergh Drive	***E***	***E***	
24	Executive Park Dr @ Executive Park South (unsignalized)	B	B	A
25	Executive Park South @ Chantilly Drive (unsignalized)	A	A	A

** LOS E is the standard for this location and time.*

6.9 2016 No-Build Facilities Needs Analysis

The following locations do not meet the LOS D standard (or LOS E, see existing analysis) in the 2016 no-build condition:

Intersection 3 – North Druid Hills Road at East Roxboro Road. The LOS at this intersection drops to LOS E in the a.m. 2016 no-build condition. The volumes traveling north from North Druid Hills Road to East Roxboro

Road will be sufficient to justify creating two northbound through lanes (to East Roxboro Road) at the intersection and adding a second northbound through lane on East Roxboro Road for the segment from North Druid Hills Road to the recently widened section at West Roxboro Road / Lake Boulevard.

Intersection 4 – North Druid Hills Road at Buford Highway. This intersection will drop to LOS E in the a.m. and p.m. peak hours. Several improvements are needed at this intersection to achieve the LOS D standard. An exclusive right turn lane should be added on the northbound approach on North Druid Hills Road. On Buford Highway, a second exclusive left turn lane should be added on both the eastbound and westbound approaches, accompanied by protected-only phasing.

Intersection 6 – North Druid Hills Road at I-85 Southbound Ramps. The a.m. peak will operate at LOS E in the 2016 no-build. However, this is the LOS standard at this location and time period, so no mitigation is required.

Intersection 10 – North Druid Hills Road at Lavista Road. The a.m. peak hour LOS drops to LOS E in the 2016 no-build condition. However, LOS E is the standard at this location for this time period, so no mitigation is required.

Intersection 11 – Clairmont Road at Briarcliff Road. In 2016, this intersection will once again deteriorate to LOS E in the a.m. peak hour. The addition of a second westbound exclusive right turn lane on Briarcliff Road will improve the a.m. LOS to D.

Intersection 13 – Briarcliff Road at Lavista Road. This location will deteriorate to LOS F in both the a.m. and p.m. peak hours in 2016 no-build. Therefore, the intersection must be mitigated back to the LOS E standard. The addition of an eastbound exclusive right turn lane will provide some benefit and will improve the a.m. level of service to LOS E. However, this mitigation will not be sufficient to eliminate the p.m. LOS F, and may not be feasible due to the proximity of the church in the southwest corner of the intersection. By 2016, the northbound and southbound through volumes on Briarcliff will be sufficient to justify widening Briarcliff to two through lanes in each direction through this area. This widening would achieve the LOS standards and is therefore presented as mitigation for the 2016 no-build condition. However, due to the ramifications of a major road widening project such as this, it is recommended that the impacts of this widening on the Briarcliff Road corridor be assessed in greater detail before such a project is undertaken.

Intersection 14 – Briarcliff Road at Clifton Road. The p.m. peak hour LOS will drop to E in 2016 no-build. The addition of a second westbound right turn lane, creating dual right turn lanes, on Clifton Road should be added, along with an overlap phase that would provide a protected green arrow for these right turners concurrently with the southbound protected left turn phase.

Intersection 16 – Sheridan Road at Executive Park Drive. The overall intersection will deteriorate to LOS E in the p.m. due to excessive delays for the southbound left turners exiting Executive Park. Signalization of this intersection will be necessary in the 2016 no-build condition to mitigate these delays. The intersection is planned to be reconstructed as part of The Park Druid Hills project. Therefore, the signalization of this intersection in its current configuration may be precluded or obviated by the new intersection design, which will be discussed in the build analysis sections.

Intersection 18 – Lenox Road at Buford Highway. The 2016 no-build p.m. LOS will be F, and will require mitigation to achieve LOS E. Several improvements would reduce delays at this intersection. First, the

eastbound right turn from Buford Highway to southbound Lenox Road is already very heavy and experiences queuing. Dual right turn lanes, accompanied by an overlap protected green arrow which would run concurrently with the northbound protected left turn phase, would provide some benefit. Additionally, the eastbound left turn from Buford Highway to northbound Lenox Road frequently experiences phase failures and extensive queuing. Dual left turn lanes would be beneficial during the peak times. Protected-only left turn phasing would be required to served the dual left turn lanes.

Intersection 23 – Cheshire Bridge Road at Lindbergh Drive / Lavista Road – This intersection will drop to LOS E in the a.m. and p.m. peak hours in 2016 no-build. On Cheshire Bridge Road, the southbound approach, primarily, and the northbound approach, secondarily, need exclusive right turn lanes. The addition of both of these lanes will allow the LOS D standard to be achieved.

As with the existing and 2011 no-build conditions, unsignalized side street and/or left turn movements at several locations will not meet the LOS standards. As noted above, the overall unsignalized intersection of Sheridan Road at Executive Park Drive will operate below the LOS D standard, due primarily to side street delays at the stop sign. For the 2016 no-build condition, it is possible that signalization at some of the other signalized locations may be warranted. However, overall intersection operations at these other unsignalized locations will continue to be within the LOS standards. Therefore, no mitigation was developed at these locations for the 2016 no build condition.

The mitigation discussed above is shown graphically in Figure 24. The 2016 no-build analysis was re-run with this mitigation and the results are shown in Table 15.

Table 15 – 2016 No-Build Intersection Levels of Service with Mitigation

#	Description	A.M. Peak Hour	P.M. Peak Hour	Saturday Peak Hour
1	East Roxboro Road @ Goodwin Road	A	A	
2	North Druid Hills Road @ Goodwin Road	A	A	
3	North Druid Hills Road @ East Roxboro Road	B	C	
4	North Druid Hills Road @ Buford Highway	D	D	
5	North Druid Hills Road @ West Druid Hills Drive	A	B	
6	North Druid Hills Road @ I-85 Southbound Ramps	***E****	C	C
7	North Druid Hills Road @ I-85 Northbound Ramps	C	D	C
8	North Druid Hills Road @ Executive Park Drive / Tully Road	D	C	B
9	North Druid Hills Road @ Briarcliff Road	D	D	D
10	North Druid Hills Road @ Lavista Road	***E****	C	
11	Clairmont Road @ Briarcliff Road	D	D	
12	Briarcliff Road @ Sheridan Road	C	C	B
13	Briarcliff Road @ Lavista Road	D*	D*	C
14	Briarcliff Road @ Clifton Road	D	D	
15	Briarcliff Road @ Johnson Road	B	C	
16	Sheridan Road @ Executive Park Drive (with signal)	B	B	B
17	Sheridan Road @ Chantilly Drive (unsignalized)	A	A	A
18	Lenox Road @ Buford Highway	D*	***E****	
19	Lenox Road @ I-85 Southbound Off-Ramp	B	B	
20	Lenox Road @ I-85 Northbound On-Ramp	A	A	
21	Cheshire Bridge Road @ Chantilly Drive (unsignalized)	A	A	A
22	Cheshire Bridge Road @ Sheridan Road	D	C	
23	Cheshire Bridge Road @ Lavista Road / Lindbergh Drive	D	D	
24	Executive Park Dr @ Executive Park South (unsignalized)	B	B	A
25	Executive Park South @ Chantilly Drive (unsignalized)	A	A	A

** LOS E is the standard for this location and time.*

6.10 Summary of 2016 No-Build Mitigation

The following is a list summarizing the mitigation developed for the 2016 no-build condition:

1) Intersection 3 – Add a second northbound through lane from North Druid Hills Road to East Roxboro Road and widen East Roxboro Road to four lanes from North Druid Hills Road to the recently widened section north of West Roxboro Road.

2) Intersection 4 – An exclusive right turn lane should be added on the northbound approach on North Druid Hills Road at Buford Highway. On Buford Highway, a second exclusive left turn lane should be added on both the eastbound and westbound approaches, accompanied by protected-only phasing.

3) Intersection 11 – Add a second westbound exclusive right turn lane on Briarcliff Road at Clairmont Road.

4) Intersection 13 – By 2016, the northbound and southbound through volumes on Briarcliff at Lavista will be sufficient to justify widening Briarcliff to two through lanes in each direction through this area.

5) Intersection 14 – Add a second westbound right turn lane, creating dual right turn lanes, on Clifton Road at Briarcliff, along with an overlap phase that would provide a protected green arrow for these right turners concurrently with the southbound protected left turn phase.

6) Intersection 16 – Signalization of the intersection of Sheridan Road at Executive Park Drive will be necessary in the 2016 no-build condition to mitigate the delays to southbound left turners. The intersection may be reconstructed as part of The Park Druid Hills project.

7) Intersection 18 – Create eastbound dual right turn lanes (add one right turn lane) on eastbound Buford Highway at Lenox Road, accompanied by an overlap protected green arrow which would run concurrently with the northbound protected left turn phase. Additionally, add a second eastbound left turn lane from Buford Highway to northbound Lenox Road with protected-only phasing.

8) Intersection 23 – Add exclusive right turn lanes on both the southbound approach (most benefit) and the northbound approach on Cheshire Bridge Road at Lindbergh/Lavista.

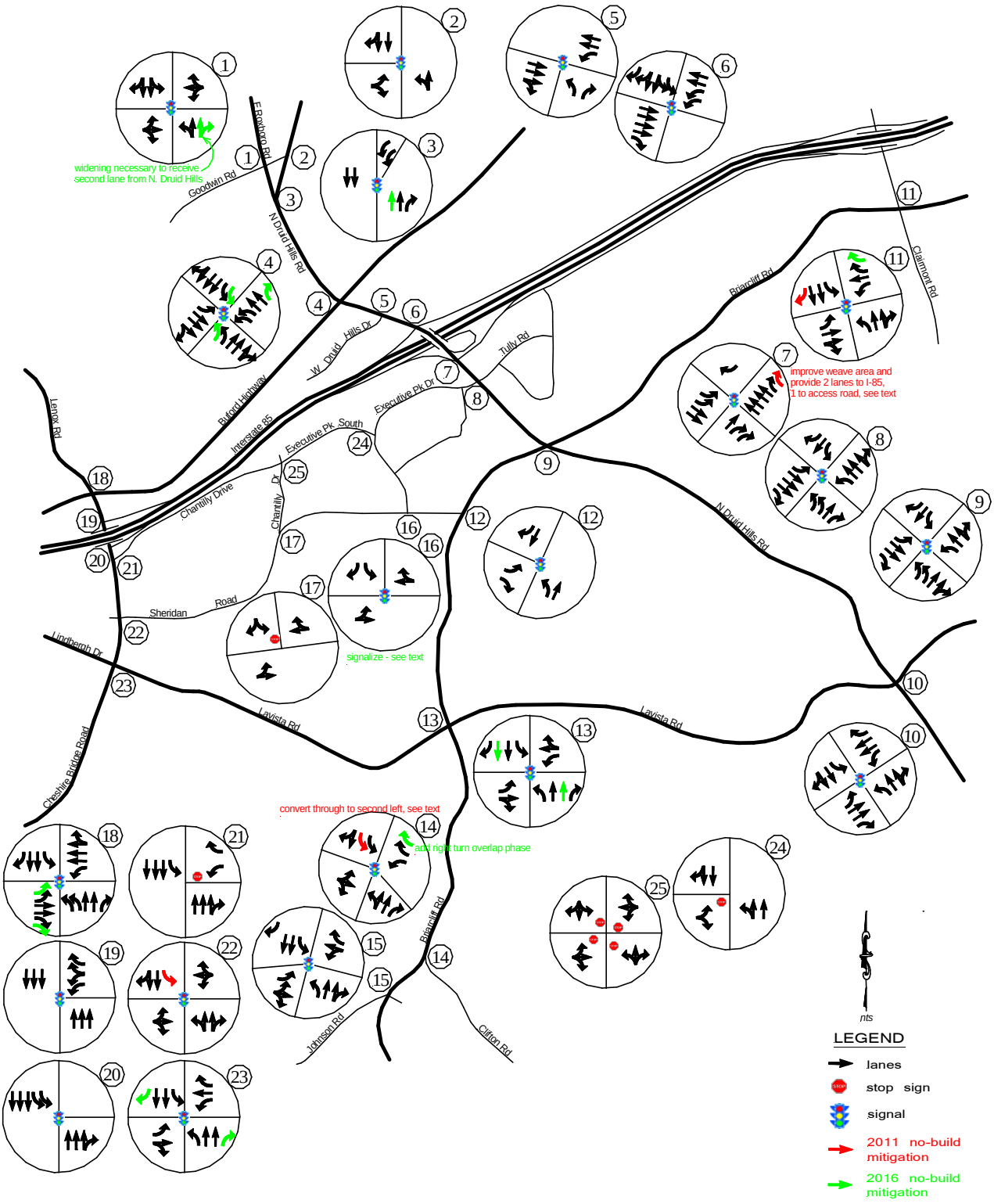


Figure 24 – 2016 No-Build Mitigation

7. Future (Build) Traffic Analysis

The analysis of the 2011 and 2016 build scenario identifies the traffic impact of Phase I and full build-out of The Park Druid Hills DRI, respectively. The build conditions include all traffic from the no-build scenarios, plus the specific traffic that will be added by The Park Druid Hills.

7.1 2011 Build Traffic Volumes

The 2011 build volumes are the combined volumes from Figures 17, 18, and 19 (the 2011 no-build volumes) and Figures 7, 8, and 9 (the Phase I DRI-generated trips). These build volumes are depicted at each intersection in Figure 25 for the 2011 build a.m. peak, Figure 26 for the p.m. peak, and Figure 27 for the Saturday peak. The spreadsheets showing the components of all intersection volumes, by movement, are located in Appendix D.

7.2 2011 Build Lane Configuration

The 2011 build analysis assumes that the mitigation identified for the 2011 no-build analysis will be in place. In addition, The Park Druid Hills plan calls for the following roadway infrastructure changes for Phase I:

1) A second southbound exclusive right turn lane will be provided into Executive Park Drive, which will feed directly from the I-85 northbound off-ramp at North Druid Hills Road.

2) Align Executive Park Drive at Sheridan Road with the eastern portion of Sheridan Road such that the main route of travel is directly between the eastern portion of Sheridan Road and Executive Park Drive. The western portion of Sheridan Road would "T" into this new main route and this new eastbound approach would be side street stop sign controlled.

3) Align Executive Park South with Executive Park Drive such that the main route of travel is directly between Executive Park South and the southern portion of Executive Park Drive. The northern portion of Executive Park Drive would "T" into this new main route and its new westbound approach would be side street stop sign controlled.

The 2011 build condition lane configuration, which includes both the 2011 no-build mitigation and the changes described above, are shown in Figure 28.

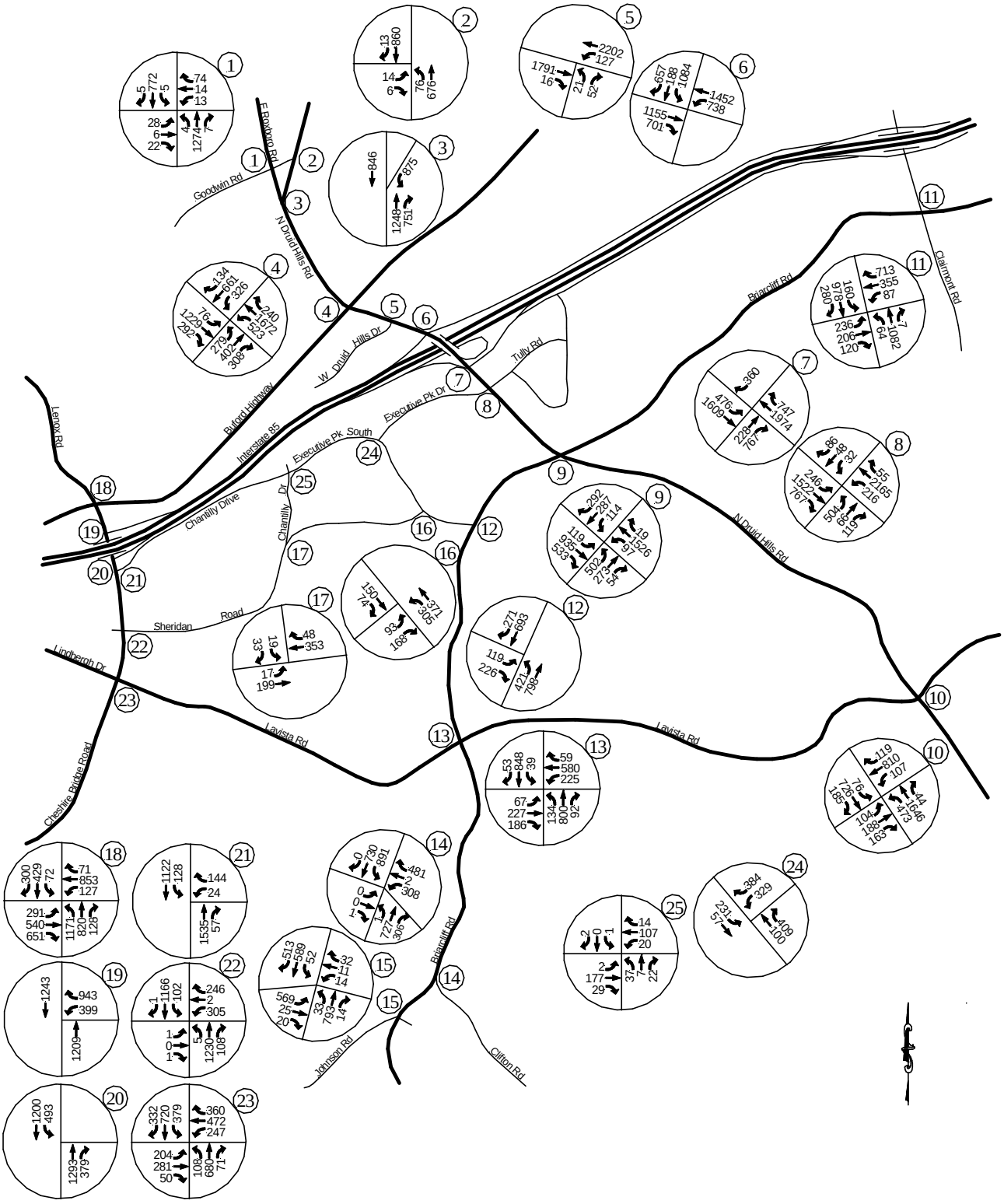


Figure 25 – 2011 Build A.M. Peak Hour Traffic Volumes

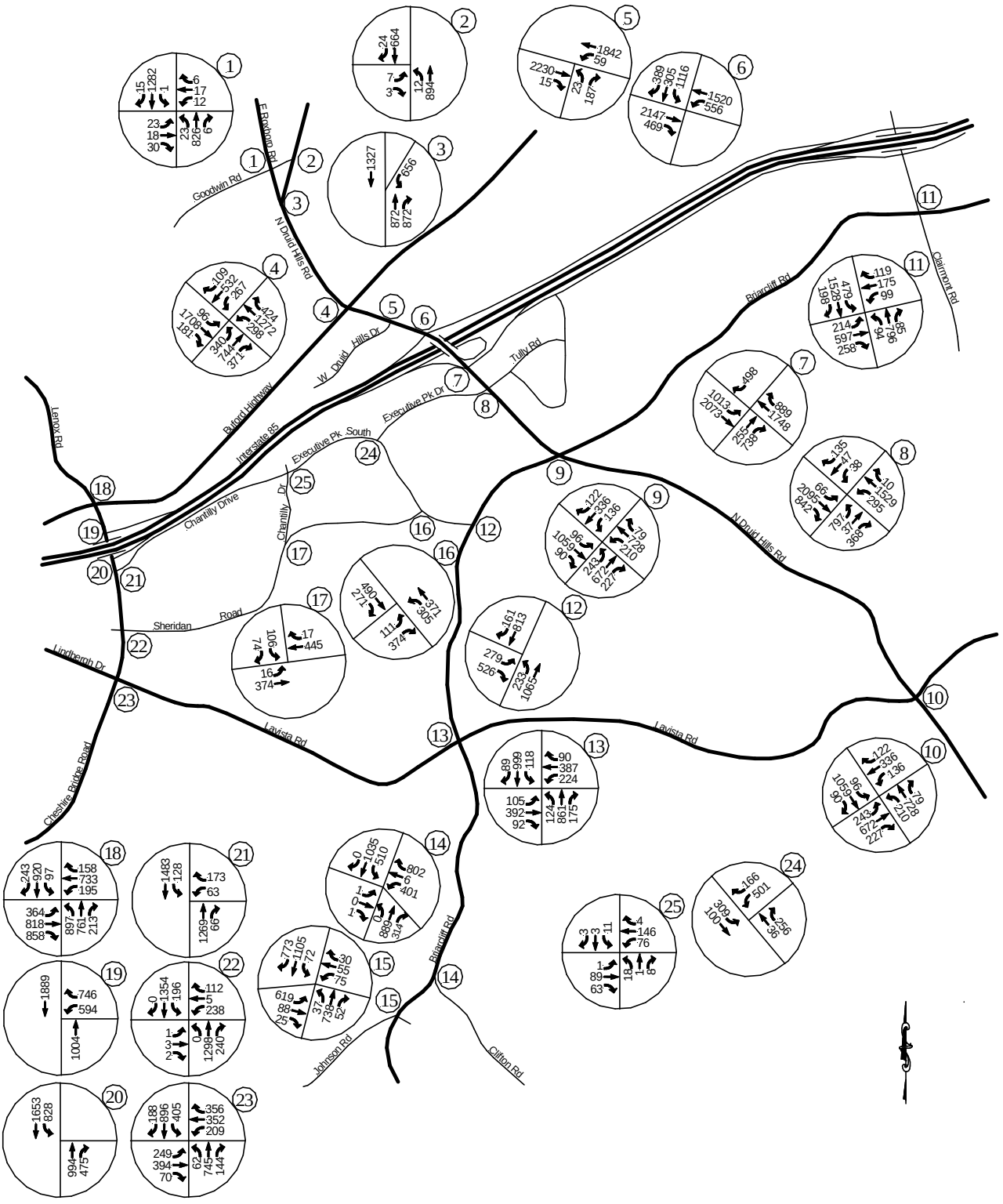


Figure 26 – 2011 Build P.M. Peak Hour Traffic Volumes

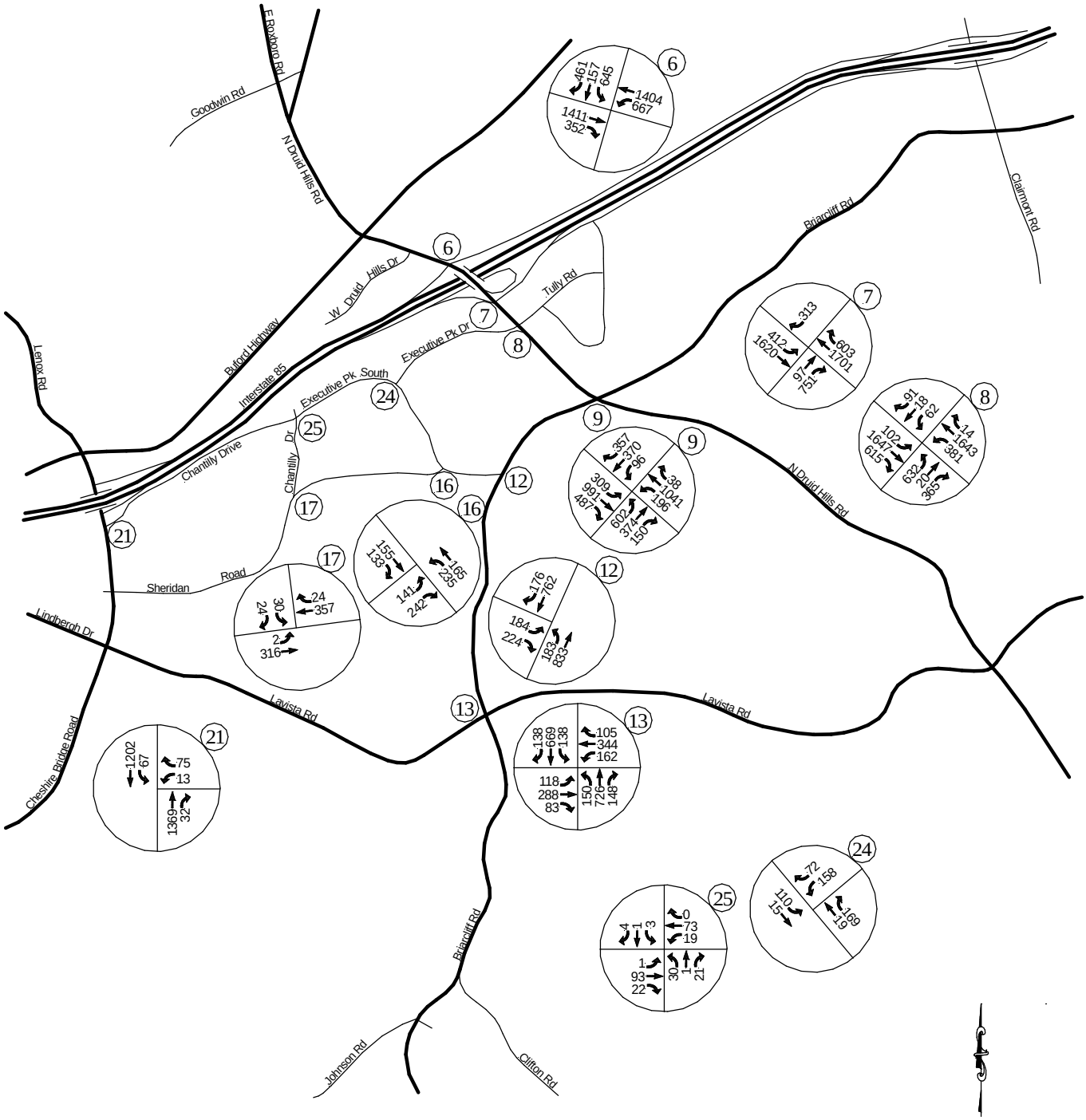


Figure 27 – 2011 Build Saturday Peak Hour Traffic Volumes

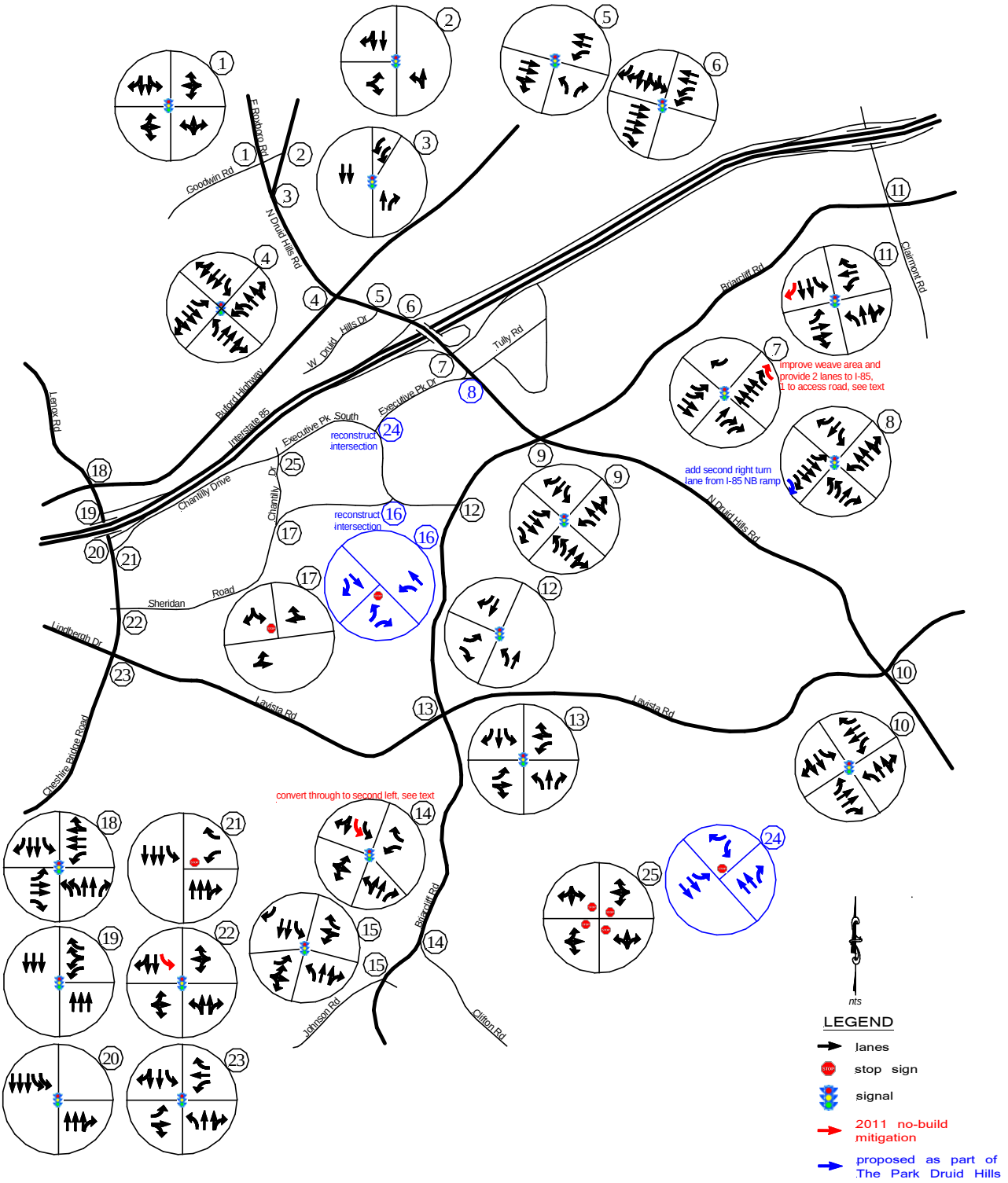


Figure 28 – 2011 Build Lanes and Method of Traffic Control

7.3 2011 Build Intersection Operations

Each study intersection was evaluated for the 2011 build condition. The 2011 build levels of service at each intersection are shown in Table 16. The Synchro computer printouts are included in Appendix H.

Table 16 – 2011 Build Intersection Levels of Service

#	Description	A.M. Peak Hour	P.M. Peak Hour	Saturday Peak Hour
1	East Roxboro Road @ Goodwin Road	A	A	
2	North Druid Hills Road @ Goodwin Road	A	A	
3	North Druid Hills Road @ East Roxboro Road	C	B	
4	North Druid Hills Road @ Buford Highway	D	***E***	
5	North Druid Hills Road @ West Druid Hills Drive	A	A	
6	North Druid Hills Road @ I-85 Southbound Ramps	D*	C	C
7	North Druid Hills Road @ I-85 Northbound Ramps	C	C	C
8	North Druid Hills Road @ Executive Park Dr	D	***E***	D
9	North Druid Hills Road @ Briarcliff Road	C	D	D
10	North Druid Hills Road @ Lavista Road	D*	C	
11	Clairmont Road @ Briarcliff Road	D	C	
12	Briarcliff Road @ Sheridan Road	B	C	B
13	Briarcliff Road @ Lavista Road	***E****	***F****	D
14	Briarcliff Road @ Clifton Road	C	D	
15	Briarcliff Road @ Johnson Road	B	C	
16	Sheridan Road @ Executive Park Drive (reconfigured, unsignalized)	A	B	A
17	Sheridan Road @ Chantilly Drive (unsignalized)	A	A	A
18	Lenox Road @ Buford Highway	D*	***E****	
19	Lenox Road @ I-85 Southbound Off-Ramp	B	B	
20	Lenox Road @ I-85 Northbound On-Ramp	A	A	
21	Cheshire Bridge Road @ Chantilly Drive (unsignalized)	A	A	A
22	Cheshire Bridge Road @ Sheridan Road	C	C	
23	Cheshire Bridge Road @ Lavista Road / Lindbergh Drive	D	D	
24	Executive Park Dr @ Executive Park South (unsignalized)	A	B	A
25	Executive Park South @ Chantilly Drive (unsignalized)	A	A	A

* *LOS E is the standard for this location and time.*

7.4 2011 Build Facilities Needs Analysis

The following locations do not meet the applicable LOS standard in the 2011 build condition:

Intersection 4 – North Druid Hills Road at Buford Highway. This intersection will operate at LOS E in the 2011 build p.m.. The addition of a northbound exclusive right turn lane on North Druid Hills Road at Buford Highway will allow the LOS D standard to be met in 2011 build.

Intersection 8 – North Druid Hills Road at Executive Park Drive. This intersection will operate at LOS E in the p.m. The proposed modifications to this intersection to accommodate The Park Druid Hills DRI include creation of a second exclusive right turn lane that will operate as a "slip ramp", feeding directly from the I-85 northbound ramp. There are some advantages, and some disadvantages to this configuration. The advantage is that traffic can flow freely into the site from the I-85 ramp, without the need to be controlled by the signals at the off-ramp and at Executive Park Drive. The disadvantage is that other vehicles traveling to the site on southbound North Druid Hills Road, not from the I-85 northbound ramp, will not have access to this second turn lane. The proportion of trips entering the site from the I-85 northbound ramp, as a percentage of all the trips coming into the site from the north on North Druid Hills is approximately 20%. Therefore, only about 20% of the entering southbound right turns at Executive Park Drive will have use of the slip ramp, while 80% will be required to use the remaining exclusive right turn lane. This somewhat offsets the benefits of the slip ramp design. The 2011 build analysis was re-run with two standard right turn lanes instead of the slip ramp design and the LOS D standard was achieved. It is recognized that the physical constraints at this location may not allow for two full exclusive right turn lanes will ample storage, in which case the results of the capacity analysis may overstate the benefits of two standard right turn lanes. The mitigation shown for this location is two standard right turn lanes. However, it is recommended that the final design take into consideration the geometric challenges at this intersection and the I-85 northbound ramp.

Intersection 13 – Briarcliff Road at Lavista Road. This location will drop to LOS F in the p.m. peak hour. LOS E is the a.m. and p.m. standard, so mitigation is required for the p.m. peak. As mentioned in the 2016 no-build section, the addition of an eastbound exclusive right turn lane would be beneficial, and, in the 2011 build, this would bring the level of service back to LOS E. As was noted in the 2016 no-build, the construction of this lane may be challenging due to the proximity of the church in the southwest corner of the intersection, to the roadway. The addition of a westbound right turn lane (instead of the eastbound right turn lane) would also achieve the LOS E standard in the p.m. peak, and this may be a bit more feasible. Therefore, while either lane would improve the level of service from LOS F to LOS E, the westbound right turn lane will be presented as the preferred mitigation.

Intersection 18 – Lenox Road at Buford Highway. The 2011 build p.m. LOS will be E, which is the standard at this intersection during the p.m.. Therefore, no mitigation is necessary.

As with the existing and 2011 no-build condition, unsignalized side street approaches and/or left turn movements at several locations will not meet the LOS standards. For the existing and 2011 no-build condition, no mitigation was recommended at these locations. However, with the addition of The Park Druid Hills traffic, some of these locations may justify signalization, as follows:

Intersection 16 – Executive Park Drive at Sheridan Road. This intersection will be rebuilt so that Executive Park Drive connects directly to the eastern portion of Sheridan Road and becomes the thoroughfare. Sheridan Road will form a T intersection at Executive Park Drive / Sheridan Road. It is recommended that two lanes be provided on eastbound Sheridan Road – a left turn lane and a right turn lane. It is recommended that an exclusive left turn lane be provided on northbound Sheridan Road at Sheridan Road and an exclusive right turn lane be built on southbound Executive Park Drive at Sheridan Road. The analysis assumes this configuration and reveals that, while the overall intersection will operate at LOS B, the eastbound left turn from Sheridan Road will operate at LOS F. In order to improve this LOS F, this intersection would require signalization. The mitigation for 2011 build includes this signal. However, it is recommended that a Signal Needs Study be performed to determine if and when such signalization may be appropriate according to the standards in the *Manual On Uniform Traffic Control Devices* (MUTCD).

Intersection 21 – Cheshire Bridge Road at Chantilly Drive. The westbound left turn from Chantilly Drive operates at LOS F currently, and will continue to do so into the future. This is due to the heavy volumes on Cheshire Bridge Road, even though the left turn volumes from Chantilly Drive are moderate. Signalization of this intersection would be required to improve the delays for the westbound left turn. However, there may be adverse consequences to this signalization including added delays to the heavy volumes on Cheshire Bridge Road. This signal would also be in very close proximity to the I-85 northbound on-ramp. As with intersection 16, the mitigation for 2011 build includes this signal, but, it is recommended that a Signal Needs Study be performed to determine if and when such signalization may be appropriate according to the standards in the MUTCD.

The mitigation discussed above is shown graphically in Figure 29. The 2011 build analysis was re-run with this mitigation and the results are shown in Table 17.

Table 17 – 2011 Build Intersection Levels of Service with Mitigation

#	Description	A.M. Peak Hour	P.M. Peak Hour	Saturday Peak Hour
1	East Roxboro Road @ Goodwin Road	A	A	
2	North Druid Hills Road @ Goodwin Road	A	A	
3	North Druid Hills Road @ East Roxboro Road	D	B	
4	North Druid Hills Road @ Buford Highway	D	D	
5	North Druid Hills Road @ West Druid Hills Drive	A	A	
6	North Druid Hills Road @ I-85 Southbound Ramps	D*	C	C
7	North Druid Hills Road @ I-85 Northbound Ramps	C	C	C
8	North Druid Hills Road @ Executive Park Dr	D	D	D
9	North Druid Hills Road @ Briarcliff Road	C	D	D
10	North Druid Hills Road @ Lavista Road	D*	C	
11	Clairmont Road @ Briarcliff Road	D	C	
12	Briarcliff Road @ Sheridan Road	B	C	B
13	Briarcliff Road @ Lavista Road	***E****	***E****	D
14	Briarcliff Road @ Clifton Road	C	D	
15	Briarcliff Road @ Johnson Road	B	C	
16	Sheridan Road @ Executive Park Drive (reconfigured, with signal)	B	B	B
17	Sheridan Road @ Chantilly Drive (unsignalized)	A	A	A
18	Lenox Road @ Buford Highway	D*	***E****	
19	Lenox Road @ I-85 Southbound Off-Ramp	B	B	
20	Lenox Road @ I-85 Northbound On-Ramp	A	A	
21	Cheshire Bridge Road @ Chantilly Drive (with signal)	A	A	A
22	Cheshire Bridge Road @ Sheridan Road	C	C	
23	Cheshire Bridge Road @ Lavista Road / Lindbergh Drive	D	D	
24	Executive Park Dr @ Executive Park South (unsignalized)	A	B	A
25	Executive Park South @ Chantilly Drive (unsignalized)	A	A	A

* *LOS E is the standard for this location and time.*

7.5 Summary of 2011 Build Mitigation

The following is a list summarizing the mitigation developed for the 2011 build condition:

1) Intersection 4 – Add a northbound exclusive right turn lane on North Druid Hills Road at Buford Highway.

2) Intersection 8 – Consider providing two standard right turn lanes on North Druid Hills Road at Executive Park Drive, rather than the proposed slip ramp configuration.

3) Intersection 13 – Add a westbound right turn lane on Lavista Road at Briarcliff Road.

4) Intersection 16 – Perform a Signal Needs Study to determine if and when the signalization of the reconfigured intersection of Executive Park Drive at Sheridan Road may be appropriate according to the standards in the *Manual On Uniform Traffic Control Devices* (MUTCD).

5) Intersection 21 – Perform a Signal Needs Study to determine if and when the signalization of the intersection of Cheshire Bridge Road at Chantilly Drive may be appropriate according to the standards in the MUTCD.

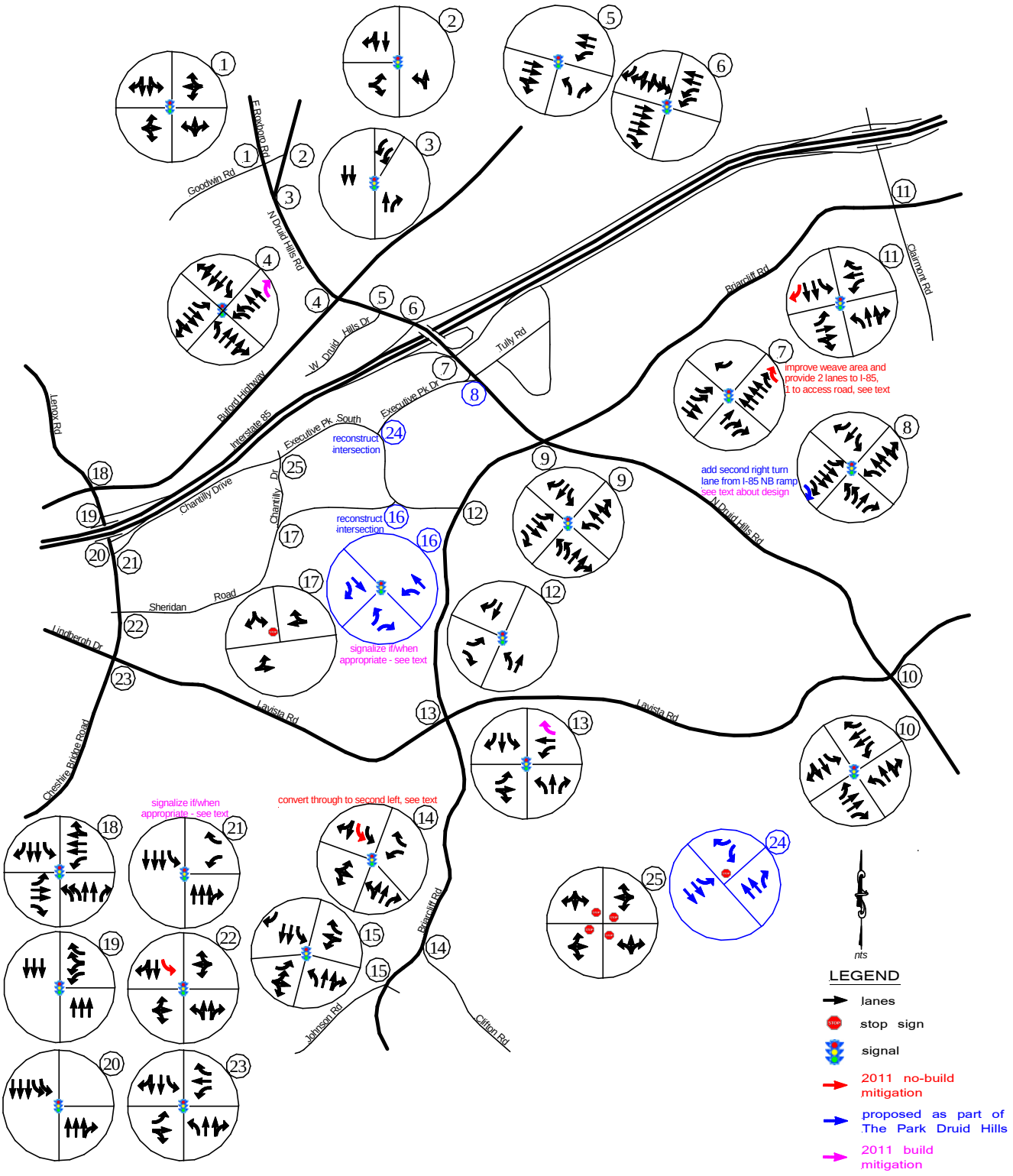


Figure 29 – 2011 Build Mitigation

7.6 2016 Build Traffic Volumes

The 2016 build volumes are the combined volumes from Figures 21, 22, and 23 (the 2016 no-build volumes) and Figures 10, 11, and 12 (the full build-out DRI-generated trips). These build volumes are depicted at each intersection in Figure 30 for the 2016 build a.m. peak, Figure 31 for the p.m. peak, and Figure 32 for the Saturday peak. The spreadsheets showing the components of all intersection volumes, by movement, are located in Appendix D.

7.7 2016 Build Lane Configuration

The 2016 build analysis assumes that all previously-identified mitigation will be in place – specifically, the 2011 no-build mitigation, the 2016 no-build mitigation, and the 2011 build mitigation. In addition, the infrastructure changes called for in The Park Druid Hills plan, as described in section 7.2 are assumed to be built. Most of those infrastructure changes will be completed for Phase I. Phase II will include the addition of a new full-movement access to North Druid Hills Road, south of Executive Park Drive, which is expected to be signalized. The 2016 build condition lane configuration and method of traffic control, are shown in Figure 33.

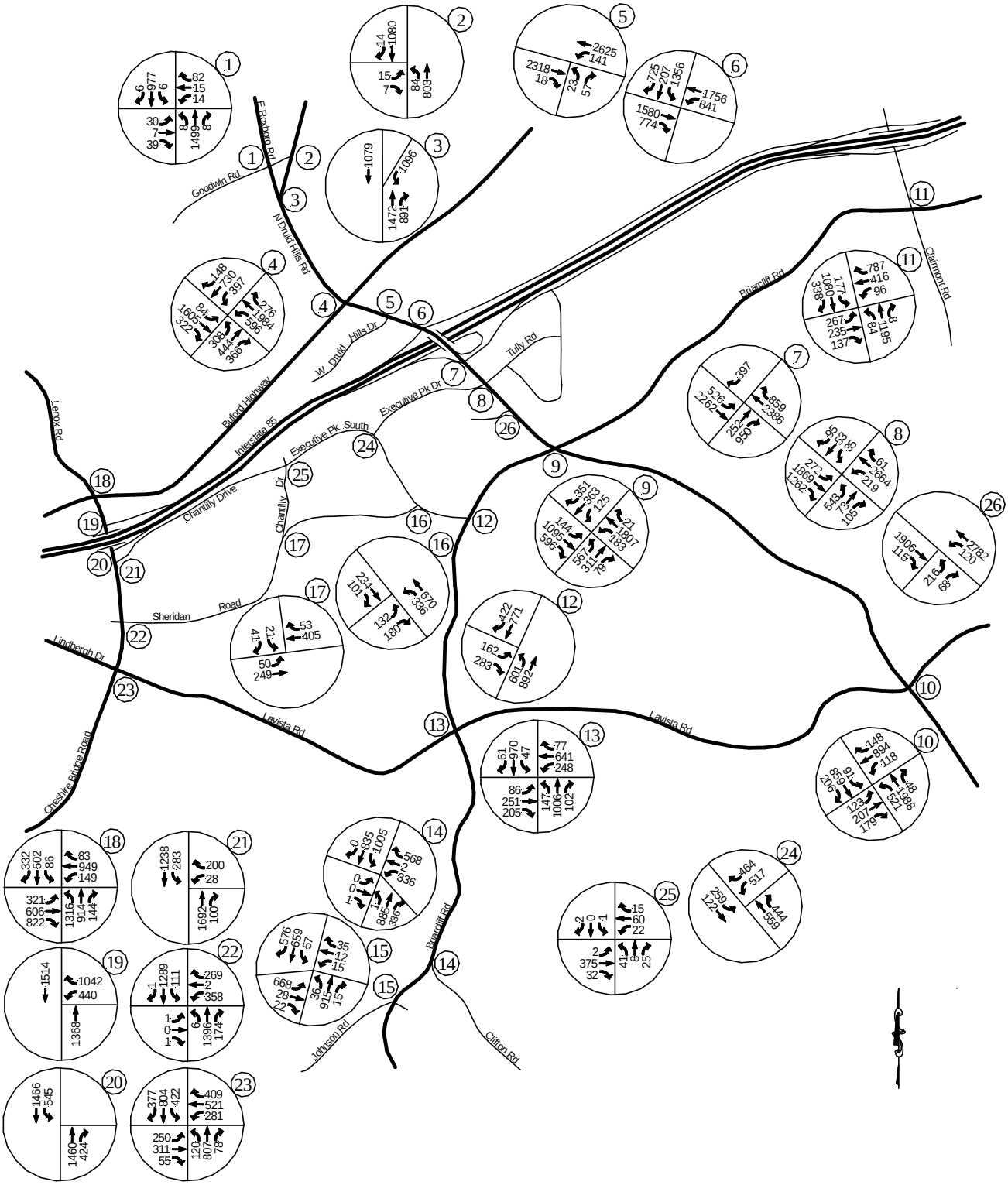


Figure 30 – 2016 Build A.M. Peak Hour Traffic Volumes

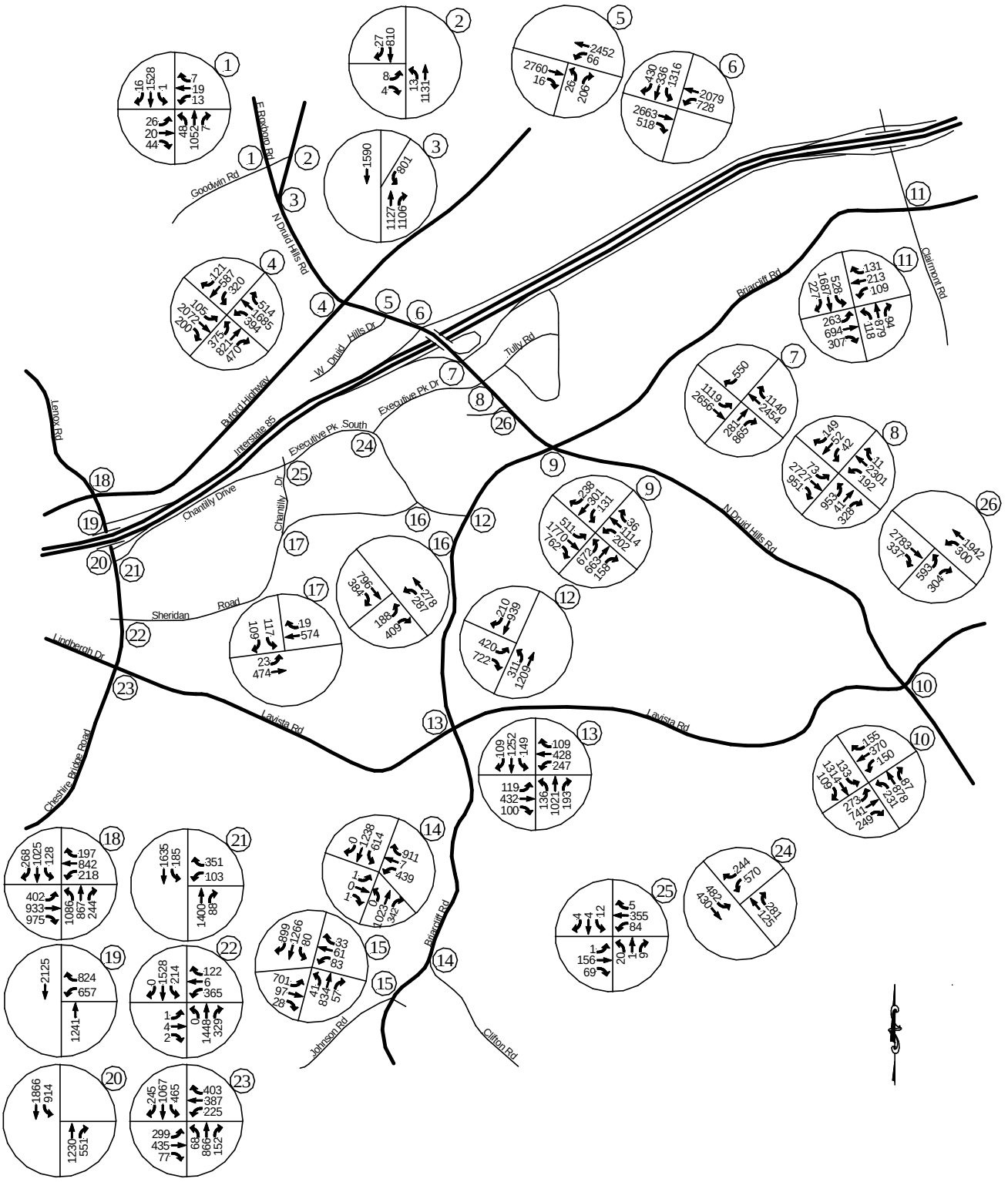


Figure 31 – 2016 Build P.M. Peak Hour Traffic Volumes

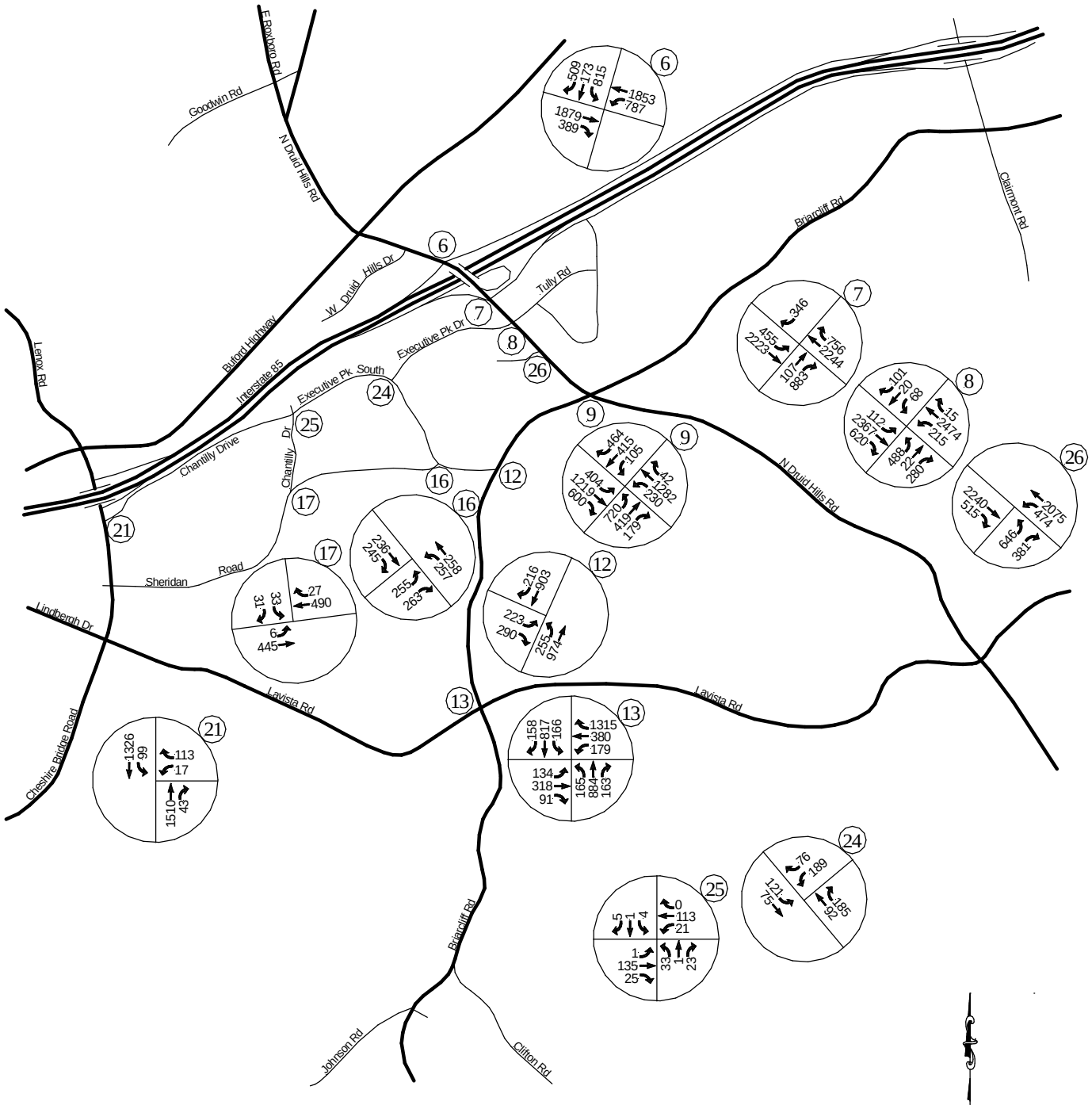


Figure 32 – 2016 Build Saturday Peak Hour Traffic Volumes

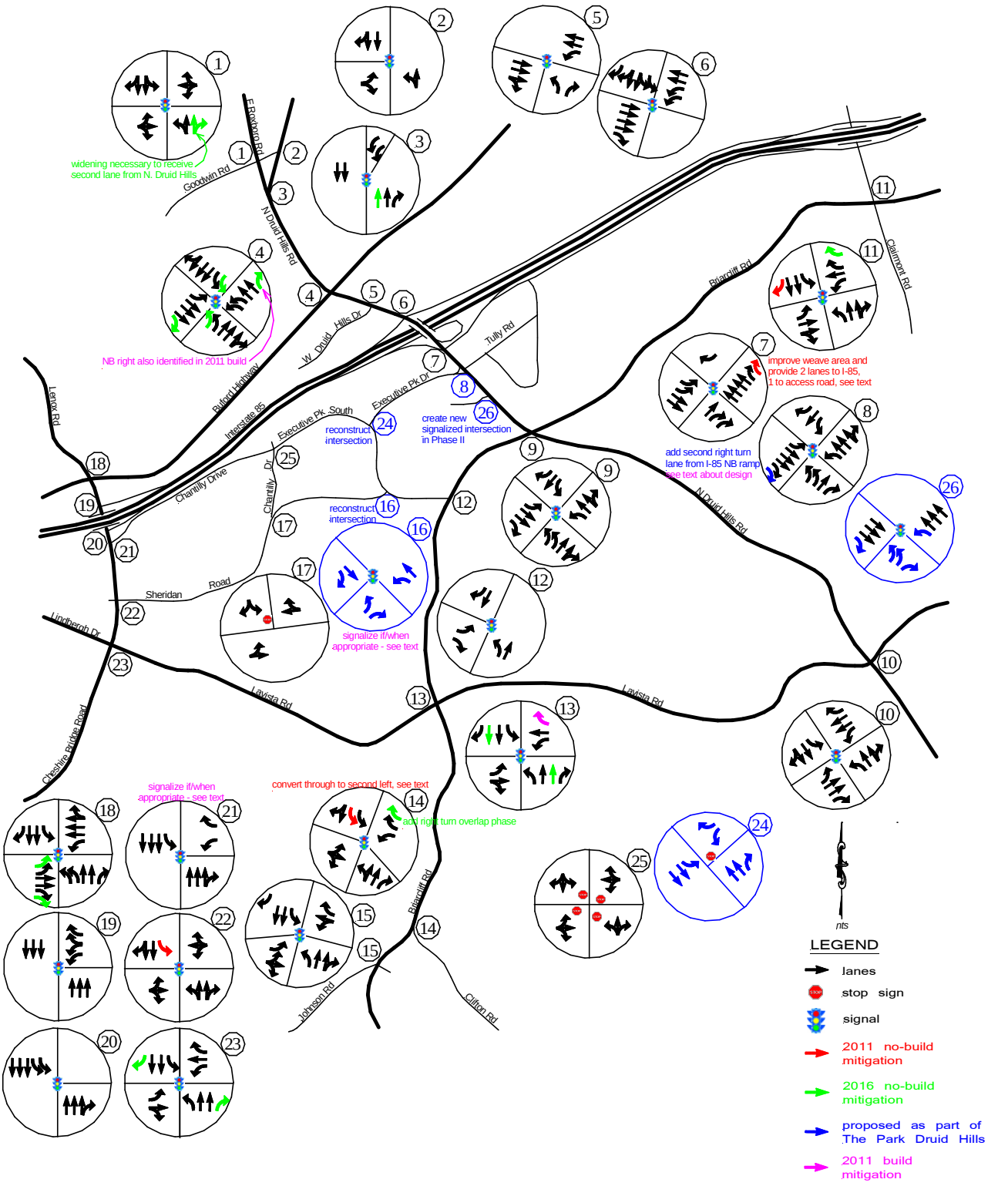


Figure 33 – 2016 Build Lanes and Method of Traffic Control

7.8 2016 Build Intersection Operations

Each study intersection was evaluated for the 2016 build condition. The 2016 build levels of service at each intersection are shown in Table 18. The Synchro computer printouts are included in Appendix I.

Table 18 – 2016 Build Intersection Levels of Service

#	Description	A.M. Peak Hour	P.M. Peak Hour	Saturday Peak Hour
1	East Roxboro Road @ Goodwin Road	A	A	
2	North Druid Hills Road @ Goodwin Road	A	A	
3	North Druid Hills Road @ East Roxboro Road	B	C	
4	North Druid Hills Road @ Buford Highway	D	***E***	
5	North Druid Hills Road @ West Druid Hills Drive	B	C	
6	North Druid Hills Road @ I-85 Southbound Ramps	***E****	***E***	C
7	North Druid Hills Road @ I-85 Northbound Ramps	D	***F***	C
8	North Druid Hills Road @ Executive Park Dr	***E***	***F***	C
26	North Druid Hills Road @ The Park Druid Hills Main Access	A	C	B
9	North Druid Hills Road @ Briarcliff Road	***E***	***E***	***F***
10	North Druid Hills Road @ Lavista Road	***E****	C	
11	Clairmont Road @ Briarcliff Road	D	D	
12	Briarcliff Road @ Sheridan Road	D	***F***	B
13	Briarcliff Road @ Lavista Road	C*	D*	C
14	Briarcliff Road @ Clifton Road	D	D	
15	Briarcliff Road @ Johnson Road	B	C	
16	Sheridan Road @ Executive Park Drive (reconfigured, signalized)	B	C	B
17	Sheridan Road @ Chantilly Drive (unsignalized)	A	B	A
18	Lenox Road @ Buford Highway	D*	***E****	
19	Lenox Road @ I-85 Southbound Off-Ramp	B	C	
20	Lenox Road @ I-85 Northbound On-Ramp	A	A	
21	Cheshire Bridge Road @ Chantilly Drive (signalized)	A	A	A
22	Cheshire Bridge Road @ Sheridan Road	D	***E***	
23	Cheshire Bridge Road @ Lavista Road / Lindbergh Drive	D	D	
24	Executive Park Dr @ Executive Park South (unsignalized)	***E***	D	A
25	Executive Park South @ Chantilly Drive (unsignalized)	A	A	A

* *LOS E is the standard for this location and time.*

7.9 2016 Build Facilities Needs Analysis

The following locations do not meet the applicable LOS standards in the 2016 build condition:

Intersection 4 – North Druid Hills Road at Buford Highway. This intersection will deteriorate to LOS E in the p.m. in the 2016 build scenario. Adding an eastbound right turn lane on Buford Highway at North Druid Hills Road will improve the a.m. level of service to LOS D.

Intersection 6 – North Druid Hills Road at I-85 Southbound Ramps. This intersection will operate at LOS E in the a.m. and p.m. peak hours. The a.m. LOS standard is E, but, LOS D is the standard for the p.m. and Saturday peak times and, therefore, mitigation is required in the p.m.. Several forms of mitigation were tested including widening the off-ramp, adding additional through lanes on North Druid Hills Road, and adding a second southbound exclusive right turn on North Druid Hills Road. Based on these tested changes, it is concluded that, in order to meet the LOS standards, a third through lane in each direction will be required along this section of North Druid Hills Road, including over I-85 (in addition to the dual left turn lanes on the bridge in each direction). The County has been considering modifications to this interchange and the construction of a new bridge over I-85 between Buford Highway and the vicinity of The Park Druid Hills site. The new bridge may remove enough through traffic from North Druid Hills Road to eliminate or delay the need to widen the existing overpass, and it is recommended that this option be investigated in greater detail.

Intersection 7 – North Druid Hills Road at I-85 Northbound Ramps. This ramp will deteriorate to LOS F in the p.m. peak hour. North Druid Hills has three southbound through lanes north of the interchange, and three through lanes in both directions, south of the interchange, but only two through lanes (plus dual left turn lanes) in each direction over the interstate. The through volumes on North Druid Hills Road are such that three through travel lanes per direction will be needed over the interstate and this is the mitigation suggested. However, it is noted that the LOS F will only occur in the p.m. peak hour, and that other times of day, operations will be acceptable. The expensive widening of the bridge over I-85 may not be justifiable just to achieve the GRTA LOS D requirement in the p.m. peak time. Additionally, the County is reviewing concepts to construct additional ramps at this interchange which may eliminate the northbound off-ramp signal. The elimination of the signal and the shiting of volumes to the new ramps may also reduce or preclude the need to widen North Druid Hills Road.

Intersection 8 – North Druid Hills Road at Executive Park Drive. By full build-out of The Park Druid Hills, this intersection will operate over capacity in the a.m. and p.m. peaks. The 2011 build mitigation discussed the design of the second southbound exclusive right turn lane from the I-85 northbound off-ramp into Executive Park Drive. The lane configuration will be somewhat maximized at this location, limiting the ability to add capacity through new pavement. However, it is noted that the new site access to the south will remove a notable volume of traffic from this intersection while still being expected to operate quite well. Vehicles entering and exiting the site will now have two options on North Druid Hills Road and, since the projections and analysis suggest that there will be remaining capacity at the new access, it is anticipated that some additional trips may shift from Executive Park Drive to the new access, effectively balancing the delays between these intersections. It is noted that, without mitigation at this intersection, Table 19, below, reveals that improved intersection operations will result simply as a function of the improved signal timing that will be achieved through the widening of North Druid Hills Road that was modeled at the I-85 interchange (see discussion above). The levels of service at this intersection will be D, E, and C, in the a.m., p.m., and Saturday peak hours, respectively.

Intersection 9 – North Druid Hills Road at Briarcliff Road. This intersection has not required any mitigation through the various scenarios of this study. However, by the 2016 build condition, the intersection will require mitigation in the a.m., p.m., and Saturday time periods. The intersection needs additional lane capacity to accommodate the heavy volumes, especially for the southbound left and right turns and the westbound right turn. Providing these lanes will eliminate the Saturday LOS F, but will not be sufficient to achieve the LOS D standard at any peak time period. Additional through capacity on North Druid Hills Road would improve operations, but may not be feasible. For this 2016 build facilities needs analysis, dual southbound left and right turn lanes, and dual westbound right turn lanes are included as mitigation, since they will provide substantial benefit, even though the LOS D standard is not achieved. Alternative options are being considered for this intersection, which are discussed in Chapter 9 of this report.

Intersection 12 – Briarcliff Road at Sheridan Road. This intersection will begin to operate poorly in the 2016 build p.m. peak hour. The through volumes on Briarcliff will become sufficient that consideration should be given to widening Briarcliff to four through travel lanes. This is consistent with the findings of the 2016 no-build analysis that identified the need to widen Briarcliff to four travel lanes at Lavista Road. Area programmed improvements, identified later in this report in Table 22, reveal that the County will be studying this corridor by 2010 and may identify the need to widen Briarcliff to four through lanes from North Druid Hills Road through Lavista Road by 2016.

Intersection 18 – Lenox Road at Buford Highway. The 2016 build p.m. LOS will be E, which is the standard at this intersection during the p.m.. Therefore, no mitigation is necessary.

Intersection 22 – Cheshire Bridge Road at Sheridan Road. This intersection will drop to LOS E in the 2016 build p.m.. The addition of a second lane on westbound Sheridan Road would improve the efficiency of this signal even in the existing condition, and will allow this intersection to achieve the LOS standard for 2016 build.

Intersection 24 – Executive Park Drive at Executive Park South. This intersection will experience high side street delays on the realigned stop-controlled westbound approach of Executive Park Drive. Signalization of this intersection will likely be necessary. It is recommended that a signal needs study be performed to determine if the MUTCD standards will be satisfied for this intersection.

Intersection 25 – Executive Park South at Chantilly Drive. This intersection operates well as an all-way stop and no mitigation is required to meet the LOS D standard. However, by 2016 build, the volumes on the east-west approaches will be notably higher than those on the north-south approaches. It would be appropriate to eliminate the stop control on the east-west approaches and preserve side street stop sign control. It is recognized that there is a traffic calming benefit to retaining the all-way stop. Therefore, this change is not listed as part of the recommended 2016 mitigation, but rather, is something that is offered as a suggestion that could be implemented as east-west volumes increase in the future.

The mitigation discussed above is shown graphically in Figure 34. The 2016 build analysis was re-run with this mitigation and the results are shown in Table 19.

Table 19 – 2016 Build Intersection Levels of Service With Mitigation

#	Description	A.M. Peak Hour	P.M. Peak Hour	Saturday Peak Hour
1	East Roxboro Road @ Goodwin Road	A	A	
2	North Druid Hills Road @ Goodwin Road	A	A	
3	North Druid Hills Road @ East Roxboro Road	B	B	
4	North Druid Hills Road @ Buford Highway	D	D	
5	North Druid Hills Road @ West Druid Hills Drive	A	B	
6	North Druid Hills Road @ I-85 Southbound Ramps	***E****	D	C
7	North Druid Hills Road @ I-85 Northbound Ramps	C	D	C
8	North Druid Hills Road @ Executive Park Dr	D	***E***	C
26	North Druid Hills Road @ The Park Druid Hills Main Access	B	B	B
9	North Druid Hills Road @ Briarcliff Road	D	***E***	***E***
10	North Druid Hills Road @ Lavista Road	***E****	C	
11	Clairmont Road @ Briarcliff Road	D	D	
12	Briarcliff Road @ Sheridan Road	C	C	B
13	Briarcliff Road @ Lavista Road	D*	D*	C
14	Briarcliff Road @ Clifton Road	D	D	
15	Briarcliff Road @ Johnson Road	B	C	
16	Sheridan Road @ Executive Park Drive (reconfigured, signalized)	B	C	B
17	Sheridan Road @ Chantilly Drive (unsignalized)	A	B	A
18	Lenox Road @ Buford Highway	D*	***E****	
19	Lenox Road @ I-85 Southbound Off-Ramp	B	C	
20	Lenox Road @ I-85 Northbound On-Ramp	A	A	
21	Cheshire Bridge Road @ Chantilly Drive (signalized)	A	A	A
22	Cheshire Bridge Road @ Sheridan Road	B	D	
23	Cheshire Bridge Road @ Lavista Road / Lindbergh Drive	D	D	
24	Executive Park Dr @ Executive Park South (with signal)	B	B	A
25	Executive Park South @ Chantilly Drive (unsignalized)	A	A	A

** LOS E is the standard for this location and time.*

7.10 Summary of 2016 Build Mitigation

The following is a list summarizing the mitigation developed for the 2016 build condition:

7) Intersection 4 – Add an eastbound right turn lane on Buford Highway at North Druid Hills Road.

8) Intersections 6 and 7 – Widen North Druid Hills Road to three through lanes in each direction (see text for qualifications about this recommedation).

9) Intersection 9 – Adding a second southbound left turn lane, a second southbound right turn lanes, and a second westbound right turn lane will provide substantial benefit, even though the LOS D standard is not

achieved. As noted above, a discussion of alternate options, which may include prohibiting left turns at this intersection, is documented in Chapter 9.

10) Intersection 12 – Consideration should be given to widening Briarcliff to four through travel lanes at Sheridan Road. This is consistent with the findings of the 2016 no-build analysis that identified the need to widen Briarcliff to four travel lanes at Lavista Road. The County and Georgia DOT should anticipate widening Briarcliff to four through lanes from North Druid Hills Road through Lavista Road by 2016.

11) Intersection 22 – Add a second lane on westbound Sheridan Road at Cheshire Bridge Road.

12) Intersection 24 – Perform a signal needs study to determine if the MUTCD standards will be satisfied for the signalization of the reconfigured Executive Park Drive at Executive Park South.

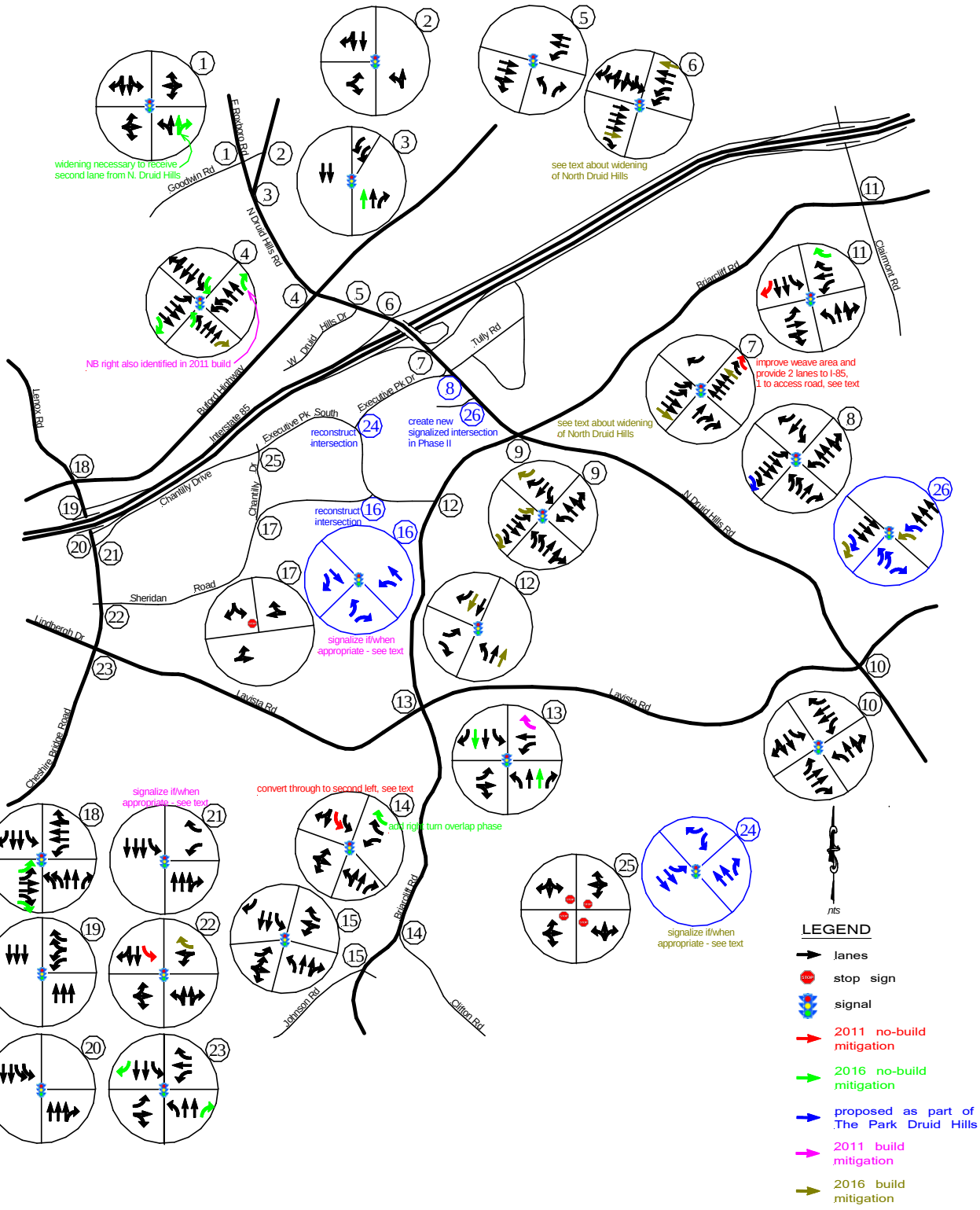


Figure 34 – 2016 Build Mitigation

8. Internal Site Analysis

The analyses of the 2011 and 2016 build conditions, presented previously, include the existing intersections, as well as the site accesses on North Druid Hills Road. This section focuses on the major site access points along Executive Park Drive and Executive Park South. The site plan calls for multiple access points along each roadway. This analysis includes five major accesses in the 2011 build condition and seven in the 2016 build condition. Figure 35 presents the driveway volumes for the 2011 build condition and Figure 36 presents the volumes for the 2016 build condition.

8.1 Site Access Assumptions

Driveway A was initially modeled at a four legged, side street stop controlled intersection. The north leg was assumed to carry all of the traffic for the A buildings. The analysis revealed that the intersection would be a good candidate for signalization, but there was concern about stopping flows on Executive Park Drive near North Druid Hills Road. Therefore, this intersection was redesigned as a roundabout. The volume projections remain in the left/through/right format on each approach to show the intended movements. There is a second access proposed for the A buildings, directly into the deck. Left turns exiting this location may be challenging and aligning this access with Street 7 is proving to be difficult due to property boundary constraints. For the analysis, Driveway B was assumed to not align with the A deck access; however, this is still recommended, if feasible. Driveways A, B, C, D, and F serve portions of the project that will be complete in Phase I, while Driveways E and G serve office tracts C and D, which will be redeveloped in Phase II. Therefore, Driveways Driveways A, B, C, D, and F are evaluated for both 2011 and 2016 build, while Driveways E and G are only evaluated for 2016 build.

Recommendations for the lanes and control at each analyzed driveway are presented in Figure 37, after the driveway analysis results.

8.2 Site Access Operations

The 2011 build levels of service at each site access are presented in Table 20 and the 2016 build levels of service are shown in Table 21. The Synchro computer printouts are included Appendix H for the 2011 analysis and Appendix I for the 2016 analysis.

Table 20 – 2011 Build Intersection Levels of Service

Intersection	A.M. Peak Hour	P.M. Peak Hour	Saturday Peak Hour
Driveway A*	A	C	A
northbound	***f***	c	b
southbound	***f***	***f***	b
eastbound left turn	c	a	a
westbound left turn	a	a	a
Driveway B	B	B	A
northbound	***e***	d	b
westbound left turn	a	a	a
Driveway C	B	B	A
northbound	***e***	***e***	b
westbound left turn	b	a	a
Driveway D	B	A	A
northbound	d	d	b
westbound left turn	b	a	a
Driveway F	A	A	A
northbound left turn	a	a	a
southbound left turn	a	a	a
eastbound	c	c	b
westbound	c	d	b

note: capital letters denote intersection LOS, lowercase letters denote approach or movement LOS
** Driveway A originally modeled as four-legged intersection. Converted to roundabout due to concern for proximity of needed signal to N. Druid Hills Road.*

Table 21 – 2016 Build Intersection Levels of Service

Intersection	A.M. Peak Hour	P.M. Peak Hour	Saturday Peak Hour
Driveway A	D	***E***	A
northbound	***f***	***f***	b
southbound	***f***	***f***	d
eastbound left turn	***e***	b	a
westbound left turn	a	b	a
Driveway B	***G*****	***F***	***H*****
northbound	***f***	***f***	***f***
westbound left turn	a	c	a
Driveway C	***F***	D	A
northbound	***f***	***f***	b
westbound left turn	b	b	a
Driveway D	***E***	***E***	A
northbound	***f***	***f***	b
westbound left turn	b	b	a
Driveway E	A	A	A
eastbound	a	b	a
Driveway F	A	C	A
northbound left turn	a	a	a
southbound left turn	b	a	a
eastbound	***f***	***f***	c
westbound	***f***	***f***	***e***
Driveway G	A	D	A
northbound	***f***	***f***	b
southbound	***f***	***f***	b
eastbound left turn	b	a	a
westbound left turn	b	a	a

note: capital letters denote intersection LOS, lowercase letters denote approach or movement LOS
** Driveway A originally modeled as four-legged intersection. Converted to roundabout due to concern for proximity of needed signal to N. Druid Hills Road.*
*** Synchro employs LOS G and LOS H, additional LOS below LOS F.*

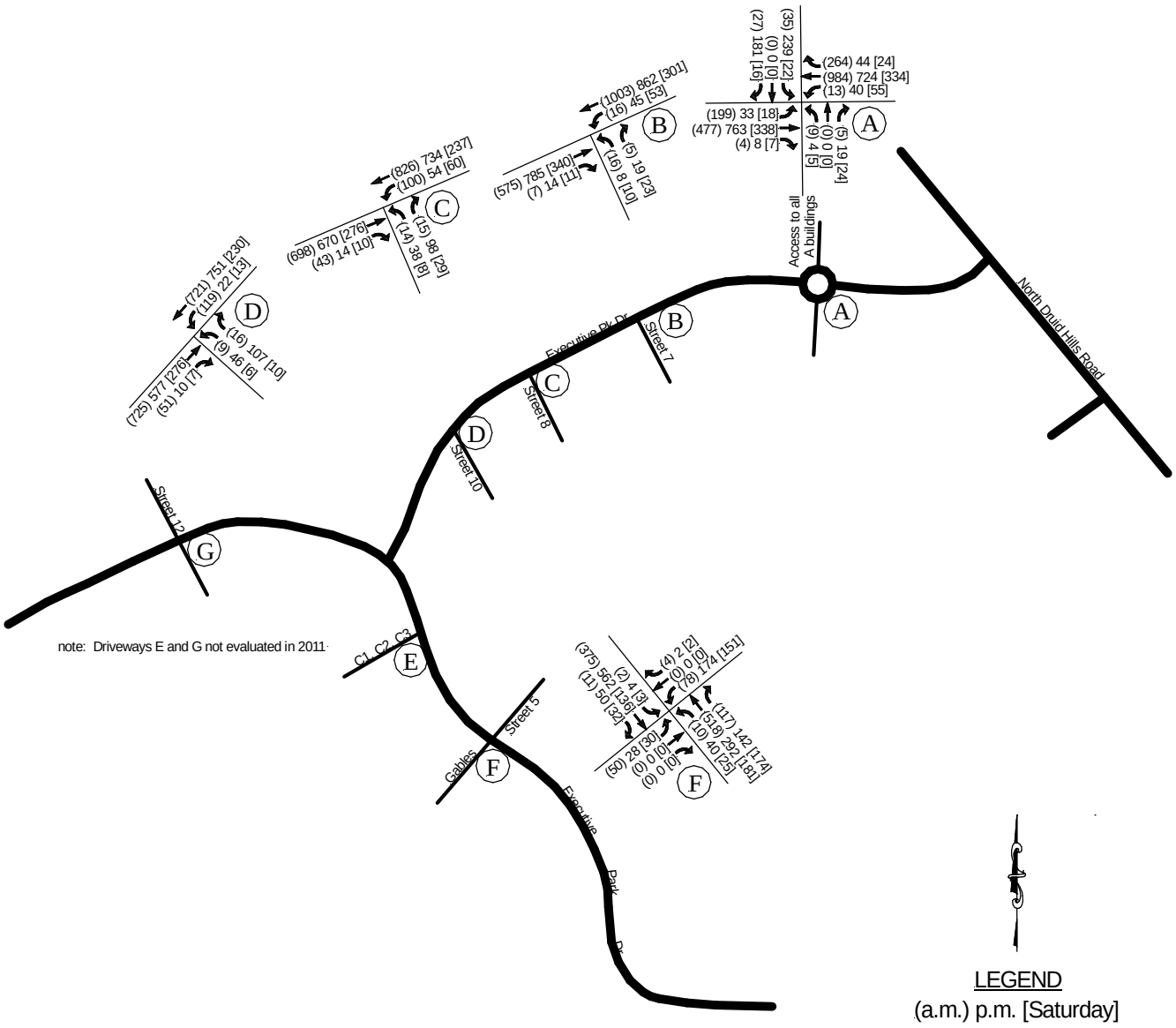


Figure 35 – 2011 Site Access Peak Hour Volumes

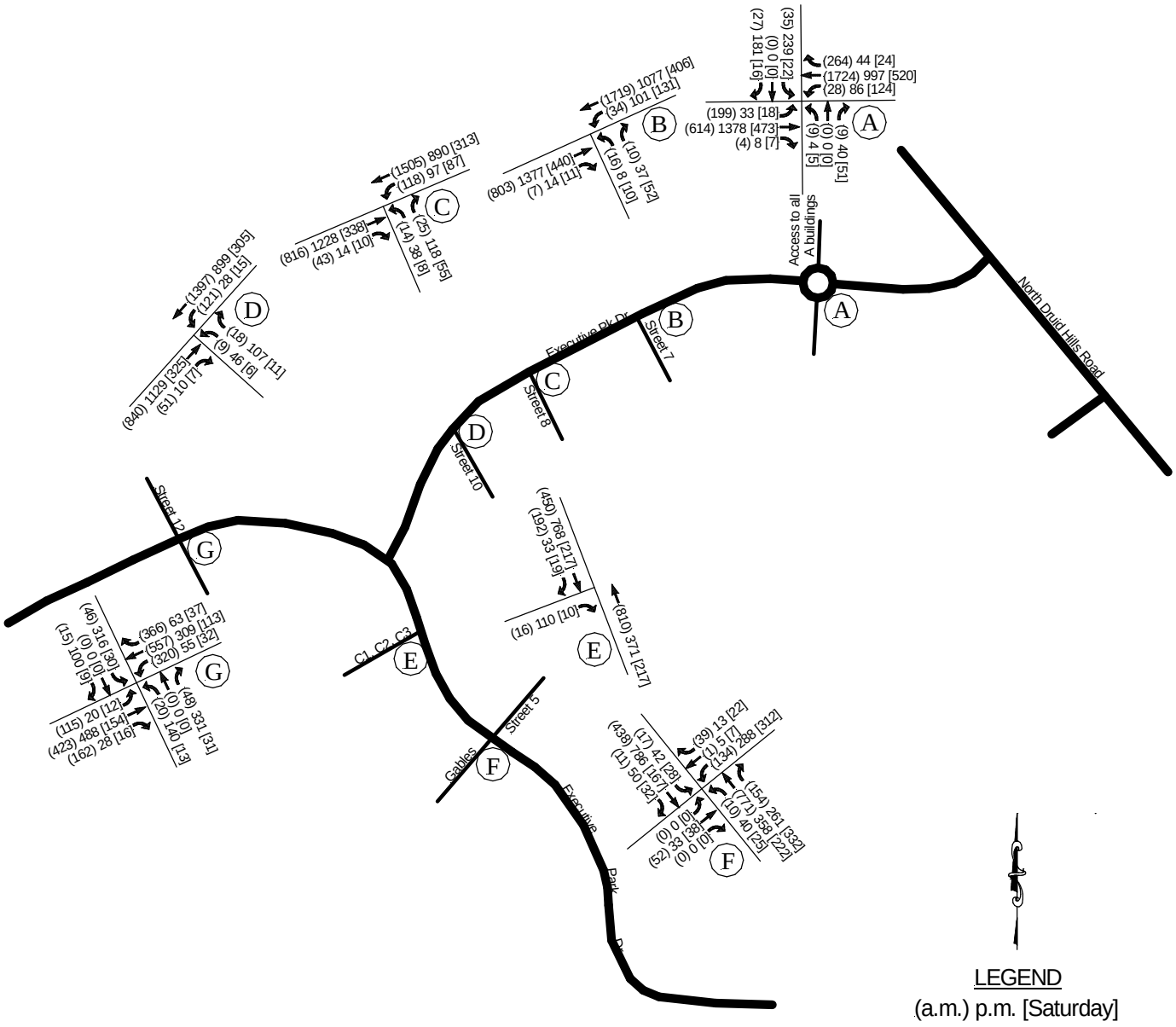


Figure 36 – 2016 Site Access Peak Hour Volumes

Table 20 reveals that most site driveways will work well in the 2011 build condition. Driveway A will be converted to a roundabout which will reduce the side street delays. Driveways B and C will experience some side street delays during weekday peak times. However, these delays are not unusual for side street stop controlled approaches at busy main streets such as Executive Park Drive.

Table 21 reveals that the side street approaches at most of the site driveways will experience notable delays at full project build-out. In order to bring these delays to acceptable levels, signals would be required. However, the signalization of all of these intersections is not feasible. The 2011 build intersection analysis identified the potential need to signalize Executive Park Drive at Sheridan Road (realigned per site plan) and the 2016 build analysis identified the potential need to signalize Executive Park Drive at Executive Park South (realigned per site plan). These signals will create some gaps in the flows on Executive Park Drive. Intersection F will likely be a good candidate for signalization, as this intersection will serve as a major "back door" access to the project for vehicles arriving from Briarcliff and Sheridan. It is recommended that a signal needs study be performed to determine if and when this location will meet the standards for signalization according to the MUTCD. Intersection G will also experience high side street delays. However, it is considered less likely that this intersection would be a good candidate for signalization due to the acute peaking characteristics of office traffic. There will be notable entering flows to the office buildings during the a.m. peak and heavy exiting flows during the p.m. peak. However, during most other times of day, and on the weekends, the volumes entering and exiting the C and D Tracts will be low.

The original concept for the site include reducing the size and capacity of Executive Park Drive between North Druid Hills Road and Executive Park South to two lanes. This was in conjunction with a concept to convert Executive Park Drive at North Druid Hills Road to right-in / right-out operations. However, subsequent analysis revealed that the left turn capacity entering and exiting Executive Park Drive at North Druid Hills Road was critical and the plan was revised to restore full movements to that intersection. With this change, the volumes will again be substantial on Executive Park Drive. Therefore, it is recommended that this facility be preserved with four lanes. The recommended lanes and control at each driveway are presented in Figure 37.

8.3 Pedestrian and Bicycle Access

This site is being developed with a grid of streets, with sidewalks on both sides of all streets. New sidewalks will connect to existing sidewalks on North Druid Hills Road and Sheridan Road and will be added along Executive Park Drive and Executive Park South. The site will also include a multi-purpose trail with a potential future connection to Kittredge Park. No specific bike lanes will be provided on-site, as these are usually most valuable along high capacity corridors, not on local urban streets. However, bicycle racks will be provided in front of retail and civic facilities.

8.4 Internal Circulation

The internal street system in The Park Druid Hills is designed to provide local vehicular mobility, while the reconfigured Executive Park Drive and Executive Park West are designed to provide access to the various portions of the site and some through-mobility. These facilities are not designed to be arterials to carry major through traffic, as this is not consistent with the character of this project. However, ultimately, it is recognized that infrastructure changes may be made that will increase the role of these through-routes in an effort to relieve volumes from the North Druid Hills Road corridor, particularly at its interchange with I-85. Changes being discussed include new ramps from I-85 that may feed directly to Executive Park Drive, and a new bridge over I-

85 that would connect the Chantilly Drive / Executive Park South intersection to Buford Highway. The design of the reconfiguration / realignment of Executive Park Drive anticipates and can accommodate these potential new roadway projects.

8.5 Access, Pedestrian, and Bicycle Recommendations

The following recommendations are made for The Park Druid Hills site:

1) Provide roundabout at Driveway A to minimize impedance to flows on Executive Park Drive.

2) If feasible, align the access to the A.1.A.2 deck with Street 7 at Driveway B.

3) Provide the lane configuration presented in Figure 37, including two through lanes in each direction on Executive Park Drive.

4) Perform a signal needs study to determine if/when signalization at Driveway F will be appropriate.

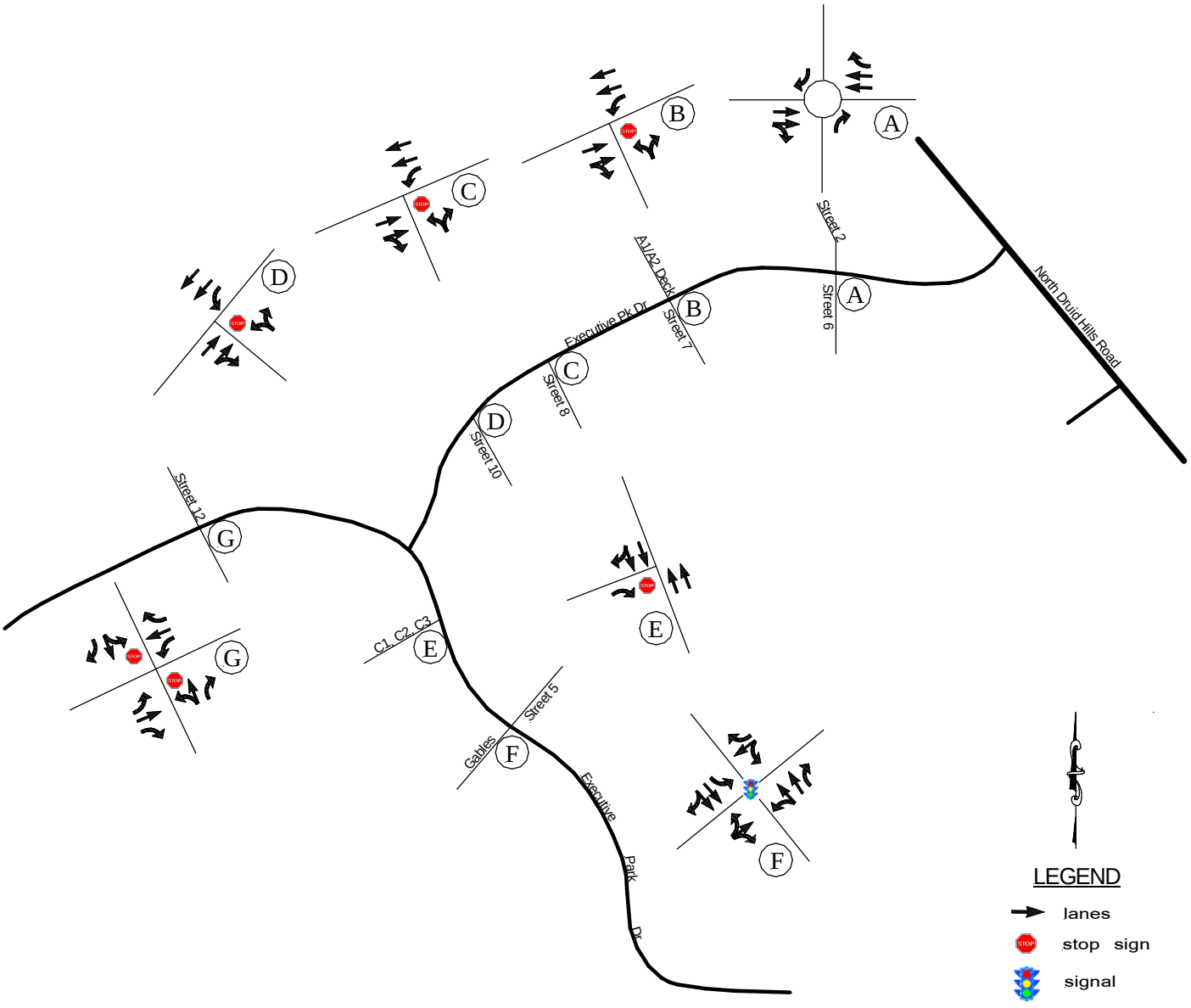


Figure 37 – Site Access Lane and Control Recommendations

9. Alternate Scenarios

GRTA, in collaboration with GDOT District 7, ARC, DeKalb County, and the Quad Study Technical Advisory Group discussed a variety of options that may be viable for improving access and mobility in the study area. Proposals that have been discussed include new street connections, a northbound I-85 slip ramp, and a boulevard cross-section design for North Druid Hills Road. Additionally, the concept of a loop road centered around the North Druid Hills / Briarcliff intersection is being considered. The following have been identified as "alternate scenarios" to analyze for purposes of meeting the LOS standards as required in the Letter of Understanding:

1) Boulevard section restricting mid-block left turns on North Druid Hills and Briarcliff Roads.

2) Removing all left turns from the Briarcliff / North Druid Hills intersection. The removed left turns can either be handled through a para-flow intersection design, or by reassigning left turns to existing roads and new roads that are part of either the Executive Park or Briarcliff developments.

9.1 Alternate Scenario 1 – Boulevard Cross-Sections

A boulevard cross-section has been discussed for North Druid Hills Road, and possibly for Briarcliff Road, in the vicinity of The Park Druid Hills DRI. A boulevard cross-section might include design characteristics such as a landscaped median, wide sidewalks, limited curb-cuts, and possibly bicycle lanes and narrower travel lanes. Often with this type of design, exclusive left and right turn lanes are not provided, even at full-movement accesses and intersections, so as to present an urban character, which may provide improved pedestrian experiences and traffic calming. Elimination of exiting left turns to and from minor mid-block driveways, which would result from the addition of a median, improves safety, as well as flow on the major street.

The analysis provided in this study does not include modeling of small, minor driveways along North Druid Hills Road or Briarcliff Road, such as at McDonald's or Loehmann's Plaza. Such an analysis would become tedious in a study of this magnitude, while yielding negligible value. However, the boulevard design concepts may have merit for this corridor and, as such, the advantages and disadvantages of these concepts, as they pertain to the subject roadways, are discussed here, and recommendations are provided.

Addition of a Landscaped Median / Turn Restrictions at Mid-Block Driveways – The addition of a landscaped median on North Druid Hills Road between I-85 and Briarcliff Road, and possibly along a section of Briarcliff Road, would have some advantages. In addition to having aesthetic value, the prohibition of mid-block left turns to and from minor driveways would eliminate difficult movements and thus reduce potential conflict points and friction to the major roadways. Elimination and/or consolidation of driveways could provide additional benefit, such as consolidating McDonald's and Picadilly's driveway at one point that could align with the proposed signal at the new Park Druid Hills access. Another benefit of a landscaped median would be to provide a refuge for crossing pedestrians. At major intersections, exclusive left turn lanes could be carved from the median without reduction of through lane capacity. However, the medians themselves would remove available roadway width now devoted to vehicle capacity. In these corridors, already constrained in width and operating with substantial volumes, any loss of through lane capacity would be ill-advised. *Therefore, the concept of broad landscaped medians in these corridors does not seem feasible.* However, restricting left turn movements at minor driveways and the elimination and/or consolidation of driveways would be beneficial, for the reasons already discussed. Much, if not all, of this restriction could be accomplished through design without

detriment to through lane capacity. It is beyond the purview of this study to specifically recommend restricting or eliminating access to other's private property, and such changes would be beyond the control of The Park Druid Hills project. However, the County or Georgia DOT may decide to pursue these options.

Exclusive Turn Lanes – A boulevard cross section often does not include exclusive left turn lanes or, more often, right turn lanes. However, at The Park Druid Hills accesses and at the major intersections, the elimination of previously-identified needed turn lanes could severly impede flows in these corridors. For the large volume of Park Druid Hills traffic coming from the south along North Druid Hills Road, there will only be three opportunities to turn left to access the site – first at Briarcliff, to get to the site via Sheridan, then at the new access to be added in Phase II, and, finally, at Executive Park Drive. The left turn demand at these three locations will be very high and not providing exclusive turn lanes would severly impede through flows on North Druid Hills Road. Entirely eliminating the left turns at North Druid Hills / Briarcliff is discussed under Alternate Scenario 2. The southbound right turns at these three locations have critically high demands which would be problematic should right turn lanes not be provided. Therefore, due to the magnitue of the turning volumes, and the limited opportunities to make those turns, it is not recommended that any of the turn lanes, exisiting or identified as necessary in this study, be eliminated.

Narrow Lane Widths – Boulevard cross sections often include reduction in lane widths. This can serve as traffic calming (narrower lanes tend to reduce speeds), reduces the distance required for pedestrian crosssing, and provides cross-section width for other design elements such as medians, bicycle lanes, or wider sidewalks. In the subject corridors, there may be some benefit to employing this design technique. However, Georgia DOT and DeKalb County standards notwithstanding, it is recommended that lane widths not be reduced below 11 feet so as to minimize constraints on vehicular capacity. In these corridors, congestion tends to be a more prominent issue than speeding, bicycle conflicts, or difficulty for crossing pedestians (it being recognized that there is pedestrian activity in this corridor, which will likely increase in the future).

9.2 Alternate Scenario 2 – Left Turn Prohibitions or Innovative Design Solutions at North Druid Hills / Briarcliff Intersection

This scenario involves two possibilities for the intersection of North Druid Hills Road at Briafcliff Road – the handling of left turns through innovative design techniques, or the prohibition of the left turn movements entirely.

Innovative Design Solutions

As an alternative to prohibiting left turn movements, there are various design solutions that may be employed to accommodate those turns at the intersection. Ideas that have been discussed include replacing the signalized intersection with a traffic circle or grade-separating North Druid Hills Road from Briarcliff Road. One design solution that may have merit is called a parallel flow intersection. This intersection design concept was developed by Gregory F. Parsons, PE, who holds a patent for the design. An article describing the intersection design and operation appeared in the *ITE Journal* in October 2007 and is presented in Appendix L of this report. The general concept is that left turners would not be prohibited, but instead, would cross the opposing through flow at additional signalized locations upstream of the main intersection. The left turners would now no longer need to cross the opposing approach through traffic at the main intersection and, therefore, the signal at the main intersection could be converted to a simple two phase operation. The left turners would turn left concurrently with the through movements, while the cross-street traffic is stopped. This design would require the addition of four traffic signals, one on each approach in advance of the main intersection. In addition, some widening would

be required to accommodate the by-pass lanes. A model to simulate this type of intersection accurately was not available for this study. However, the ITE article does provide estimates of delays for this type of intersection compared with other alternatives. In general, the article concludes that through movement delays should be decreased notably, but there could be increases in delays to the left turners.

Left Turn Prohibitions

The operational advantage of eliminating a left turn movement is the removal of a flow which conflicts with the opposing approach through movement. By eliminating these turns, through capacity is increased on the opposing approach. There would be operational benefits at this intersection to prohibiting the left turns. However, it must be recognized that those vehicles do not simply disappear, but would need to find alternate routes to reach their destinations. This could include shifting trips to other intersections or shifting trips to other movements at this intersection. Additionally, motorists who encounter the restriction unexpectedly could resort to U-Turns or cutting through parking lots or neighborhoods. The County is considering the possibility if building a loop road around this intersection. This loop road would be developed by connecting pieces of existing roadways and constructing new roadways, and would include segments through The Park Druid Hills site and other adjacent developments. A loop road could provide an opportunity to route all left turners away from the North Druid Hills / Briarcliff intersection. At the time of this study, an accurate modeling of this concept was not possible for several reasons. First, the actual location and alignment of the road is dependent on many variables and is unresolved. Second, the Briarcliff DRI, originally anticipated for property to the southeast of the intersection, was being redesigned. This and adjacent properties would provide a key component in this loop road concept. It is possible that a detailed model can be created based on the Synchro model used in this study, once the concept of the loop road is developed further. For now, the complete prohibition of left turns at this intersection has been reviewed, based on the implications for each approach's left turners.

Prohibiting Northbound Left Turns From North Druid Hills Road to Westbound Briarcliff Road – This prohibition would shift additional Park Druid Hills trips to the proposed new project access, and to Executive Park Drive. These left turns at the site entrances will already be substantial, and, during most times, higher than the left turns at North Druid Hills / Briarcliff. At the time of this study, the status of the anticipated Briarcliff DRI was uncertain. Therefore, projections of shifted left turns from North Druid Hills / Briarcliff to roads through that site would be speculative, since the road network that may be available is yet undetermined. Finally, some of this left turn traffic could shift to Lavista Road and the intersection of Briarcliff / Lavista, which has some of its own capacity limitations.

Prohibiting Southbound Left Turns From North Druid Hills Road to Eastbound Briarcliff Road – The demand for this left turn movement is substantial, especially during the p.m. peak. Much of this traffic is commuter trips returning to their residences from I-85 and Buckhead. The prohibition of this left turn would shift some trips to the I-85 / Clairmont Road interchange, which may not necessarily be undesirable. This interchange was not within the scope of this traffic study, so a definitive conclusion as to the available capacity at that interchange, and its ability to absorb re-routed trips, could not be made. It is likely that this prohibition could add vehicle miles of travel and inconvenience to some motorists, but could provide substantial reduction in delays at the subject intersection, and along North Druid Hills Road north of this intersection, as motorists find alternate routes away from this area.

Prohibiting Eastbound Left Turns From Briarcliff Road to Northbound North Druid Hills Road – This left turn movement is the heaviest of the four at this intersection and is currently served by dual left turn lanes. The

prohibition of this movement could have a major benefit to intersection operations; conversely, the shifting of this traffic to alternate routes could have the most severe unintended consequences. Some of this traffic would shift to the northbound through movement to continue along Briarcliff to Clairmont Road, and therefore, while some reduction in delays would be expected by eliminating the protected-only left turn phase, these trips would still be traveling through the intersection. Many of these trips would be diverted to turn left at Sheridan Road, some making their way to Cheshire Bridge Road and some proceding through The Park Druid Hills site and turning left from Executive Park Drive. Vehicles may avoid the area entirely, some possibly diverting to Lavista Road.

Prohibiting Westbound Left Turns From Briarcliff Road to Southbound North Druid Hills Road – This is generally the lowest volume of the four left turns at this intersection, meaning the least benefit would be derived, but the lowest impact of unintended consequences would result from its prohibition. Many of these trips would travel on Clairmont Road and avoid the North Druid Hills corridor entirely.

The general conclusions that are drawn from this review are as follows:

1) Prohibiting all left turns at this intersection would intuitively reduce delays at this location by removing some trips from the intersection and by reducing the number of competing phases on the signal.

2) Diverting left turns to a loop road, as being conceptualized by the County, can be a way to accommodate some of the prohibited left turners. However, it should be recognized that increases in delays are likely to result at the intersections to which the turns are re-routed.

3) Before a loop road is implemented, prohibiting left turns may have the benefit of detering some trips from even entering the area. However, unintended consequences may also result such as routing of trips through neighborhoods, parking lots, other over-capacity intersections, etc.

10. Programmed Infrastructure Projects

There are several infrastructure projects programmed in the study network, as shown in Table 22.

Table 22 – Programmed Infrastructure Projects

Project ID	Description	Sponsor	Completion Date
AR-910	Buford Highway Bus Rapid Transit from Pleasant Hill Road to MARTA Lindbergh Station	GRTA	2026
AT-049	Lenox Road widening from 2 to 4 lanes from Ferncliff to Canterbury	GDOT	2015
DK-076	East Roxboro Road widening from 2 to 4 lanes from Buford Highway to Rockhaven Circle	GDOT	2020
DK-269	Briarcliff Road Corridor Study – North Druid Hills Road to Clifton Road	DeKalb County	2010
DK-274	Lavista Road at Briarcliff Road intersection improvements	DeKalb County	2012
DK-320C	Add sidewalks along Briarcliff Road from Henderson Mill Road to North Druid Hills Road	DeKalb County	2013
DK-324C	Buford Highway streetscape and pedestrian improvements from North Druid Hills Road to Chamblee Tucker Road	DeKalb County	2010
DK-AR-BP055	Clairmont Road from North Druid Hills Road to Buford Highway add sidewalks and crosswalks	DeKalb County	2010
DK-AR-BP057	Lavista Road from Cheshire Bridge Road to Briarcliff Road add sidewalks and crosswalks	GDOT	2011
DK-AR-BP059	Briarcliff Road from North Druid Hills Road to Ponce de Leon Avenue add sidewalks and crosswalks	DeKalb County	2009

Note: data from Atlanta Region Mobility2030 Transportation Plan

The project data sheets for the programmed projects in Table 22, are located in Appendix J.

AR-910 will occur after full build-out of The Park Druid Hills. Ultimately, projects such as this will provide transportation options for this area. AT-049 is outside the study network but is close to the intersection of Buford Highway at Lenox Road. DK-076 is consistent with recommendations developed in this study for the 2016 no-build condition. Consideration should be given to moving this project forward a few years, if feasible. DK-269 is consistent with the recommendations in this study for Briarcliff at Lavista in the 2016 no-build condition and for Briarcliff at Sheridan in the 2016 build condition that indicate that additional northbound and southbound through lanes will be needed on Briarcliff. DK-274 confirms findings of this report that intersection improvements will be needed at the intersection of Briarcliff at Lavista. The remaining pedestrian and streetscape improvements are consistent with recommendation 11 in the section of this report (5.5) with additional recommendations for the existing transportation infrastructure.

11. Compliance With GRTA Criteria

The following sections address the compliance of The Park Druid Hills DRI #1583 with the eight criteria presented in Section 3-103 of *Procedures and Principles for GRTA Development of Regional Impact Review*.

1. The proposed DRI is likely to promote improved regional mobility in terms of the quality, character, convenience, and flexibility of transportation options;

The project includes a mix of land uses, a grid of streets interconnecting the uses, the potential for connection to adjacent uses, sidewalks with pedestrian-friendly character, minimal large surface parking lots, and proximity to transit facilities. These qualities tend to minimize vehicular impacts and improve regional mobility by concentrating activities in nodes that reduce automobile dependency. The uses provided at this site are expected to intercept trips that are presently being made from this area, and through this area to other areas, notably retail and office nodes in Buckhead. The project is located in an area served by several MARTA bus routes and a shuttle bus service to Emory University. The site is located immediately adjacent to I-85 ramps at North Druid Hills Road, and I-85 ramps to/from the north at Cheshire Bridge Road, which is quickly accessed from the site via Chantilly Drive, providing high levels of convenience for access by automobile. The project is being designed to encourage pedestrian activity, both through the comprehensive use of sidewalks and via a proposed multi-purpose trail that will ultimately connect to other greenspaces in the area. Bicycle racks will be provided at the entrances to retail and civic facilities. Innovative solutions, such as "Zipcar", will be encouraged on the site. This option would reduce the dependency on the automobile for commuters to the site (as well as residents), by providing access to automobiles during the day without the need to drive to/from the site during peak times. This list shows that The Park Druid Hills has the quality, character, convenience, and flexibility of transportation options that are expected to reduce dependency on automobile and, consequently improve regional mobility.

2. The proposed DRI is likely to promote improved regional mobility by reducing vehicle miles of travel;

The mix of uses in The Park Druid Hills will result in interaction between the uses, which will reduce vehicle miles when compared with similar levels of development built separately. Additionally, as mentioned above, the retail and office uses are expected to intercept trips from and through this area, particularly to Buckhead. This will have the effect of reducing vehicle miles of travel.

3. The proposed DRI is likely to promote improved regional mobility because it is located in an urban core, town center, an activity center previously designated by an RDC, a rail/transit station development, or is a part of a publicly sponsored redevelopment or infill initiative;

This DRI is located at a major crossroads in DeKalb County – the intersections of I-85 and Briarcliff Road with North Druid Hills Road. This area has been the focus of much recent attention from the County and from the development community. Its established roadway and transit infrastructure, proximity to major developed areas such as Midtown/Downtown, Buckhead, and Decatur, and its dated development styles of low density office and strip retail make this node a candidate for the type of

redevelopment that could improve regional mobility. Specifically, the subject DRI, in conjunction with other developments planned for the area, will provide some of the dollars and infrastructure updates that could allow area-wide plans to be implemented that would improve regional mobility. This study discusses some of the plans, including changes to the I-85/North Druid Hills Road interchange, a potential loop road around the North Druid Hills / Briarcliff intersection, a new bridge over I-85 between Buford Highway and The Park Druid Hills site, and corridor improvements on North Druid Hills and Briarcliff Roads. The densities and land uses of The Park Druid Hills, combined with other proposals for the area, may also provide the stimulus for increased or improved transit service to this area.

4. The proposed DRI is located sufficiently close to existing or planned transit facilities to indicate a likelihood of significant use of transit by residents, employees, and visitors of the proposed DRI;

As discussed in Section 3.6 of this report, there are several MARTA bus routes that run through Executive Park and the immediately adjacent streets. There is also the "Cliff" shuttle bus service between Executive Park and Emory University. These facilities will encourage and facilitate transit use from this DRI.

5. The proposed DRI is located within an established Transportation Management Area which creates a likelihood that the proposed DRI is reasonably anticipated to result in improved regional mobility as a result of the Transportation Management Area;

This DRI is not located in an established Transportation Management Area.

6. Offsite trip generation from the proposed DRI is reduced by at least fifteen percent (15%), or, in the event that a proposed DRI is unable to satisfy the trip reduction standard established in this subsection because of other conditions which are beyond the control of the developer or the affected local government, the proposed DRI implements all available trip reduction techniques which are reasonably practical.

Table 7 in this report summarizes the reductions that will occur in trip generation due to the multi-use design of the site and transit, for Phase I. Table 9 provides these percentage for full project build-out. For a 24-hour period, a 19% reduction in vehicle trips is projected due to the mix of uses and transit availability for Phase I. At full build-out, the 24-hour reduction will be 16%. Therefore, GRTA's goals are met for this project.

7. The proposed DRI:

a. Contains a mix of uses which are reasonably anticipated to contribute to a balancing of land uses such that it would be affordable for at least ten percent (10%) of the persons who are reasonably anticipated to be employed in the proposed DRI, to be reasonably anticipated to have an opportunity to reside within the DRI; or

b. Is located in an Area of Influence where the proposed DRI is reasonably anticipated to contribute to a balancing of land uses within the Area of Influence such that twenty-five percent (25%) of the persons who are reasonably anticipated to be employed in the proposed DRI have the opportunity to live within the Area of Influence; or

c. Is located in an Area of Influence with employment opportunities which are such that at least twenty-five percent (25%) of the persons who are reasonably anticipated to live in the proposed DRI and are reasonably

expected to be employed will have an opportunity to find employment appropriate to such persons' qualifications and experience within the Area of Influence.

The Area of Influence Study was performed by Joellen M. Wilson, Planning Consultant. Ms. Wilson concludes the following: In accordance with Section 3-103.A.7.a *Criteria for GRTA DRI Non- Expedited Review*, of the Procedure and Principles for GRTA DRI Review, the proposed DRI is analyzed with regard to on-site jobs/housing balance. The purpose of the analysis is to show "the proposed DRI contains a mix of uses which are reasonably anticipated to contribute to a balancing of land uses such that it would be affordable for at least ten percent (10%) of the persons who are reasonably anticipated to be employed in the proposed DRI, to be reasonably anticipated to have an opportunity to reside within the DRI."

Given a total 6,037 employment positions on site, a 10% minimum of 604 employees would be required to find affordable housing within the DRI in order to meet the GRTA jobs-housing balance criteria on site. In fact, the proposed DRI includes many job opportunities, which provide 80% of the potential employees the ability to live in the most affordable housing and an average of 72% of the employees with adequate salaries to afford the variety of housing within the DRI. This conclusion far exceeds the GRTA goal of 10% and therefore the proposed DRI supports the jobs-housing balance criteria.

8. The proposed DRI is not located in any area where the existing level of development and availability of infrastructure within the Area of Influence of the proposed DRI is such that the proposed DRI is reasonably anticipated to result in unplanned and poorly served development which would not otherwise occur until well-planned growth and development and adequate public facilities are available.

Answer provided by Joellen M. Wilson, Planning Consultant: "The proposed DRI is not located in an area where the existing level of development and availability of infrastructure within the Area of Influence of the proposed DRI is such that the proposed DRI is reasonably anticipated to result in unplanned and poorly served development which would not otherwise occur until well-planned growth and development and adequate public facilities are available." In fact, all public facilities, including water supply, wastewater treatment capacity, solid waste facilities, and schools are already in place to serve the existing office park development. Although the Park Druid Hills will require an update to DeKalb County Comprehensive Plan - Future Development Map to accommodate the mix of uses, the project is compatible with the DeKalb County Comprehensive Plan - Concept Map, which designates this site as part of a "*Major Employment Center*" adjacent to the "*Neighborhood Center*" at Briarcliff and North Druid Hills Road.

Appendix A
Traffic Analysis Methodologies

Traffic Analysis Methodologies and Assumptions

This section provides background information and does not contain findings of the analysis, and, so, it has been included in the appendix to serve as a reference, while simplifying the presentation of findings in the body of the report. The following sections provide information on the analysis methodologies employed in this study.

Traffic Data Collection and Peak Hour Determination

Traffic counts used in the analyses in this study were collected during the weekday a.m. and p.m. peak periods, and, where applicable, the Saturday mid-day peak. The morning counts were collected from 7:00 a.m. to 9:00 a.m., the evening counts were performed from 4:30 p.m. to 6:30 p.m., and the Saturday peak counts were collected from 11:00 a.m. to 1:00 p.m.. From the each set of count data, the highest four consecutive 15-minute interval volumes were determined. These volumes make up the typical peak hour traffic volumes at each intersection for each time period. All counts were performed by traffic data collection subconsultants and reviewed by Marc R. Acampora, PE, LLC.

Detailed Intersection Analysis

The methodology used for evaluating traffic operations at intersections is presented in the Transportation Research Board's Highway Capacity Manual, 2000 edition (HCM 2000). Synchro software, version 7, which emulates the HCM 2000 methodology, was used for the analysis. The following is an overview of the methodology employed for the analysis of stop-sign controlled (unsignalized) and signalized intersections.

Unsignalized Intersections

The operations at an unsignalized intersection are defined in terms of levels of service. Level of service (LOS) is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. Level of service for an unsignalized intersection is defined in terms of control delay per vehicle. Control delay is that portion of delay attributable to the control device and includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The delays at unsignalized intersections are based on gap acceptance theory, factoring in availability of gaps, usefulness of the gaps, and the priority of right-of-way given to each traffic stream.

Levels of service are assigned letters A through F. LOS A indicates operations with very low control delay while LOS F describes operations with high control delay. LOS F is considered to be unacceptable by most drivers, while LOS E is typically considered to be the limit of acceptable delay. In the HCM 2000 methodology, levels of service are defined for each minor (controlled) movement at a two-way stop-controlled intersection, but not for the intersection as a whole. However, Synchro software includes a method for calculating the overall intersection LOS. This provides a useful indicator of overall intersection sufficiency and is, therefore, reported in this study, along with the movement levels of service. The level of service criteria for unsignalized intersections are given in Table A.

Table A – Level of Service Criteria for Unsignalized Intersections

Level of Service	Control Delay (s/veh)
A	0 - 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

Source: Highway Capacity Manual 2000

Signalized Intersections

The criterion for evaluating signalized intersections according to GRTA standards is level of service (LOS). Level of service for a signalized intersection is defined in terms of control delay per vehicle. For signalized intersections, a composite intersection level of service is determined. The thresholds for each level of service are higher for signalized intersections than for unsignalized intersections. This is attributable to a variety of factors including expectation and acceptance of higher delays at signals, and the fact that drivers can relax when waiting at a signal as opposed to having to remain attentive as they proceed through the unsignalized intersection. The level of service criteria for signalized intersections are shown in the following table.

Table B – Level of Service Criteria for Signalized Intersections

Level of Service	Control Delay (s/veh)
A	≤10
B	>10 and ≤20
C	>20 and ≤35
D	>35 and ≤55
E	>55 and ≤80
F	>80

Source: Highway Capacity Manual 2000

Facilities Needs Analysis

A facilities needs analysis tests alternative combinations of roadway improvements that allow a facility to achieve the LOS D standard (see Level of Service Standards section of the Study Network Chapter). Facilities needs analyses are performed for the existing, no-build, and build conditions, where necessary. The existing facilities needs analysis identifies existing deficiencies, and the mitigation required to achieve the applicable LOS standard. The future no-build analyses allow for the identification of projects necessary to bring the roadways up to the proscribed LOS standard, after the inclusion of other planned levels of development, but before the introduction of project-generated traffic. The future build analyses identify those additional facilities improvements that will be necessitated by the subject DRI. Later in the study, programmed transportation improvements are identified, and those improvements are compared with the results of the facilities needs analysis, where appropriate.

Trip Generation

Vehicle trip estimates are determined through a process called trip generation. Rates or equations are applied to size of the proposed land use to estimate the number of entering and exiting trips during specific time intervals. The standard rates and equations were employed from the 7th edition of the Institute of Transportation Engineers (ITE) *Trip Generation*. The trip generation is summarized in the Project Traffic Characteristics chapter of the report.

Multi-Use Trip Adjustments

Multi-use trip adjustments reflect the benefit that is realized by the sharing of compatible trips between land uses. The sharing of uses can occur in two ways. Trips between immediately adjacent uses which are interconnected will occur by either automobile or by foot or bicycle. These trips remain within the development and never appear in the analysis of intersections or site driveways. Other multi-use trips may occur between non-contiguous uses. These trips are likely to be made by automobile and may enter and exit site driveways and travel through some study intersections. The multi-use adjustments presented in the report are based on the *Trip Generation Handbook* and the GRTA methodologies.

Transit Adjustment

Transit adjustments are made to account for the reduction in automobile trip generation that is expected to be made due to the availability of transit. For The Park Druid Hills DRI, a transit/alternate mode reduction of 5% was taken.

Pass By Adjustments

The retail/restaurant trip generation is adjusted to account for the effect of pass-by trips. These are trips that are already on the adjacent roadways and will divert into the site for shopping purposes enroute to their final destination. Pass-by percentages for the proposed amount of retail were calculated using the ITE *Trip Generation Handbook*. For The Park Druid Hills DRI retail / restaurants, a 15% pass-by adjustment was applied.

Appendix B
Study Network Determination

Study Network Determination

The study network for this project was determined in an analysis performed according to the GRTA Technical Guidelines, Section 4-109. The methodology employed in that analysis included the following steps:

- The twenty-four gross trip generation (unadjusted for mix of land uses, mode split, or pass-by trips) was determined for the DRI, and assigned to the major roadways in the vicinity of the site.
- Adjusted, two-way generalized roadway service volumes were determined according to GRTA requirements at the appropriate level of service standard for DeKalb County (LOS D).
- The DRI trips were compared with the roadway service volumes. Where the total trips generated by the proposed DRI exceeded 7% of the roadway service volumes, that segment, and the major included and adjacent intersections, were identified for inclusion in the study network.

Using the results of that analysis, GRTA and Marc R. Acampora, PE, LLC, with input from DeKalb County and Georgia DOT, identified the intersections that would be analyzed in this study. The following sections document the study network determination process for The Park Druid Hills.

Gross Trip Generation

Standard ITE trip equations and rates were used to determine the site-generated 24-hour two-way trips. According to GRTA requirements, no adjustments were made to the gross trip numbers for the purpose of determining the scope of the study network. Table 5 presents the gross, unadjusted 24-hour trip generation for the DRI that was used in the network determination analysis.

Table C – Twenty-Four Hour Gross Trips Used for Study Network Determination

Land Use	**ITE Code**	**Size**	**24-Hour 2-Way**
Shopping Center	820	720,850 ft²	24,520
Office Park	750	1,506,000 ft²	16,102
Apartments	220	650 units	4,056
Existing Office to be Removed (currently 62% occupied)	750	365,000 ft² (226,300 ft² occupied)	2,768
Project Unadjusted Totals			44,678
Project Unadjusted Totals with Old Office Removed			41,910

Note: This table shows the uses as proposed at the time of the study network determination. Only the study network determination employed these numbers, and the final proposed levels of development were reviewed and compared with the results of that analysis when developing the network to be evaluated. All calculations presented in this Transportation Analysis, subsequent to the network determination, were based on the site plan shown in Figure 3 and the uses and sizes shown in Tables 1, 2, and 3, and NOT the numbers shown above in Table C.

Twenty-four hour two-way unadjusted volumes of 24,520 retail, 16,102 office, and 4,056 residential trips were used for study network determination. The totals do not include any reduction for the office to be removed. However, in the Transportation Analysis, the existing office trips will be subtracted so as to not overestimate future site trip generation.

Trip Distribution and Assignment

Trip distribution percentages were developed, to determine where project traffic would travel. Two distributions were developed for the study network determination, one for the retail and office uses and one for the residential uses. The directional trip distribution to and from the site was developed based primarily on the following:

the location and distance of surrounding residential areas for the retail and office distributions
the location and distance of employment opportunities, schools, and retail nodes for the residential distribution
the location of major highways and interstates
current travel patterns on the area roadways
the proposed project access locations

For the Transportation Analysis, it was decided to separate the retail from the office distribution, and all three distributions (office, retail/civic, and residential/hotel) were fine-tuned based on a more thorough review of field conditions. Figures depicting the trip distribution percentages for each land uses are presented in the body of the report. Table D, below, includes the spreadsheet used for the original study network determination calculations, based on the very similar distributions developed initially. The percentages of project traffic assigned to each roadway segment in the network determination analysis can be found in that spreadsheet.

Study Network Determination

Field review was performed to ascertain the existing lane configurations and other infrastructure in the vicinity of the proposed DRI. This data was used, in conjunction with level of service tables developed by the Florida Department of Transportation, to determine the service volume of each major roadway segment in the area, according to GRTA requirements. The gross 24-hour trip generation of the proposed DRI was assigned, by the trip distribution percentages discussed above, in order to obtain site-generated volumes on each major roadway segment in the vicinity of the project. The site traffic was compared with the service volumes on each roadway segment. Those segments on which the proposed DRI will add 7% or more trips to the service volume, must be included in the study network. Appendix B of this report includes the spreadsheet used to perform the study network calculations and a graphic depicting the limits of the study network. The following sections of this report present the components of the study network, as determined through the above-described process, and agreed upon with GRTA. *It is noted that the study network components presented below and included in this analysis were agreed upon with GRTA and do not necessarily exactly match those components identified in the network determination analysis. Some intersections were added and removed from the original study network, based on discussions with GRTA.*

Table D – The Park Druid Hills Study Network Determination Calculations

Facility	Segment		LOS D Service Volume	Adj	Adj Srvce Vol	Site Retail %	Site Retail Trips	Site Office %	Site Office Trips	Site Resid %	Site Resid Trips	Total Site Trips	% Srvce Vol Used	>7%?
	From	To												
N. Druid Hills	Exec Park Dr	I-85	43,300	-5%	41,135	43%	10,544	45%	7,246	42%	1,704	19,493	47.4%	Yes
N. Druid Hills	I-85	Buford Hwy	35,550	-5%	33,773	26%	6,375	20%	3,220	24%	973	10,569	31.3%	Yes
N. Druid Hills	Buford Hwy	E. Roxboro Rd	32,500	-5%	30,875	15%	3,678	18%	2,898	19%	771	7,347	23.8%	Yes
N. Druid Hills	E. Roxboro Rd	Peachtree Rd	14,600	-5%	13,870	6%	1,471	8%	1,288	7%	284	3,043	21.9%	Yes
E. Roxboro Rd	N. Druid Hills	East Paces Fy	14,600	-5%	13,870	6%	1,471	8%	1,288	12%	487	3,246	23.4%	Yes
Roxboro Rd	East Paces Fy	Peachtree Rd	32,500	0%	32,500	6%	1,471	7%	1,127	6%	243	2,842	8.7%	Yes
Buford Hwy	N. Druid Hills	Lenox Road	52,500	-5%	49,875	7%	1,716	0%	0	0%	0	1,716	3.4%	No
Buford Hwy	Lenox Road	Buford Hwy Conn.	35,550	0%	35,550	7%	1,716	11%	1,771	15%	608	4,096	11.5%	Yes
Buford Hwy	N. Druid Hills	Briarwood Rd	48,900	0%	48,900	4%	981	2%	322	5%	203	1,506	3.1%	No
Buford Hwy	Briarwood Rd	Clairmont Rd	48,900	0%	48,900	2%	490	1%	161	4%	162	814	1.7%	No
N. Druid Hills	Exec Park Dr	Briarcliff Rd	35,500	-5%	33,725	34%	8,337	7%	1,127	7%	284	9,748	28.9%	Yes
N. Druid Hills	Briarcliff Rd	Lavista Rd	32,500	-25%	24,375	15%	3,678	13%	2,093	10%	406	6,177	25.3%	Yes
N. Druid Hills	Lavista Rd	Clairmont Rd	32,500	0%	32,500	7%	1,716	9%	1,449	10%	406	3,571	11.0%	Yes
N. Druid Hills	Clairmont Rd	east	32,500	-5%	30,875	3%	736	4%	644	4%	162	1,542	5.0%	No
Briarcliff Rd	N. Druid Hills	Clairmont Rd	14,600	0%	14,600	13%	3,188	7%	1,127	4%	162	4,477	30.7%	Yes
Briarcliff Rd	Clairmont Rd	Shallowford Rd	14,600	0%	14,600	4%	981	2%	322	0%	0	1,303	8.9%	Yes
Briarcliff Rd	Shallowford Rd	east	14,600	0%	14,600	2%	490	2%	322	0%	0	812	5.6%	No
Briarcliff Rd	N. Druid Hills	Sheridan Rd	14,600	0%	14,600	6%	1,471	13%	2,093	7%	284	3,848	26.4%	Yes
Briarcliff Rd	Sheridan Rd	Lavista Rd	14,600	-20%	11,680	12%	2,942	14%	2,254	17%	690	5,886	50.4%	Yes
Briarcliff Rd	Lavista Rd	Clifton Rd	14,600	-20%	11,680	7%	1,716	12%	1,932	17%	690	4,338	37.1%	Yes
Briarcliff Rd	Clifton Rd	Johnson Rd	14,600	0%	14,600	5%	1,226	8%	1,288	6%	243	2,758	18.9%	Yes
Briarcliff Rd	Johnson Rd	The By Way	14,600	-20%	11,680	3%	736	4%	644	4%	162	1,542	13.2%	Yes
Briarcliff Rd	The By Way	south	31,700	-25%	23,775	3%	736	4%	644	4%	162	1,542	6.5%	No
Johnson Rd	Briarcliff Rd	E Rock Spr Rd	14,600	-20%	11,680	2%	490	4%	644	2%	81	1,216	10.4%	Yes
N Highland Rd	E Rock Spr Rd	south	14,600	-20%	11,680	2%	490	1%	161	1%	41	692	5.9%	No
Lenox Rd	Chantilly Ln	I-85	39,750	-5%	37,763	6%	1,471	13%	2,093	15%	608	4,173	11.1%	Yes
Lenox Rd	I-85	Buford Hwy	39,750	-5%	37,763	6%	1,471	13%	2,093	15%	608	4,173	11.1%	Yes

Lenox Rd	Buford Hwy	E Paces Fy	14,600	0%	14,600	5%	1,226	2%	322	0%	0	1,548	10.6%	Yes
Lenox Rd	E Paces Fy	Peachtree Rd	31,700	-5%	30,115	5%	1,226	2%	322	0%	0	1,548	5.1%	No
Cheshire Br Rd	Chantilly Ln	Sheridan Rd	31,700	-25%	23,775	4%	981	4%	644	8%	324	1,949	8.2%	Yes
Cheshire Br Rd	Sheridan Rd	Lavista Rd	31,700	-25%	23,775	9%	2,207	8%	1,288	12%	487	3,982	16.7%	Yes
Cheshire Br Rd	Lavista Rd	Piedmont Ave	31,700	-25%	23,775	4%	981	6%	966	8%	324	2,271	9.6%	Yes
Piedmont Ave	Cheshire Br Rd	south	32,500	-5%	30,875	4%	981	4%	644	8%	324	1,949	6.3%	No
Lavista Rd	Briarcliff Rd	Cheshire Br Rd	14,600	0%	14,600	2%	490	1%	161	0%	0	651	4.5%	No
Lindbergh Dr	Cheshire Br Rd	I-85 HOV ramp	14,600	0%	14,600	3%	736	2%	322	4%	162	1,220	8.4%	Yes
Lindbergh Dr	I-85 HOV Ramp	Piedmont Rd	31,700	-5%	30,115	3%	736	2%	322	4%	162	1,220	4.1%	No
Lavista Rd	Briarcliff Rd	N. Druid Hills	14,600	0%	14,600	2%	490	1%	161	0%	0	651	4.5%	No
Sheridan Rd	Briarcliff Rd	Exec Park Dr	14,600	0%	14,600	6%	1,471	27%	4,348	24%	973	6,792	46.5%	Yes
Sheridan Rd	Exec Park Dr	Cheshire Br Rd	14,600	0%	14,600	7%	1,716	4%	644	20%	811	3,172	21.7%	Yes

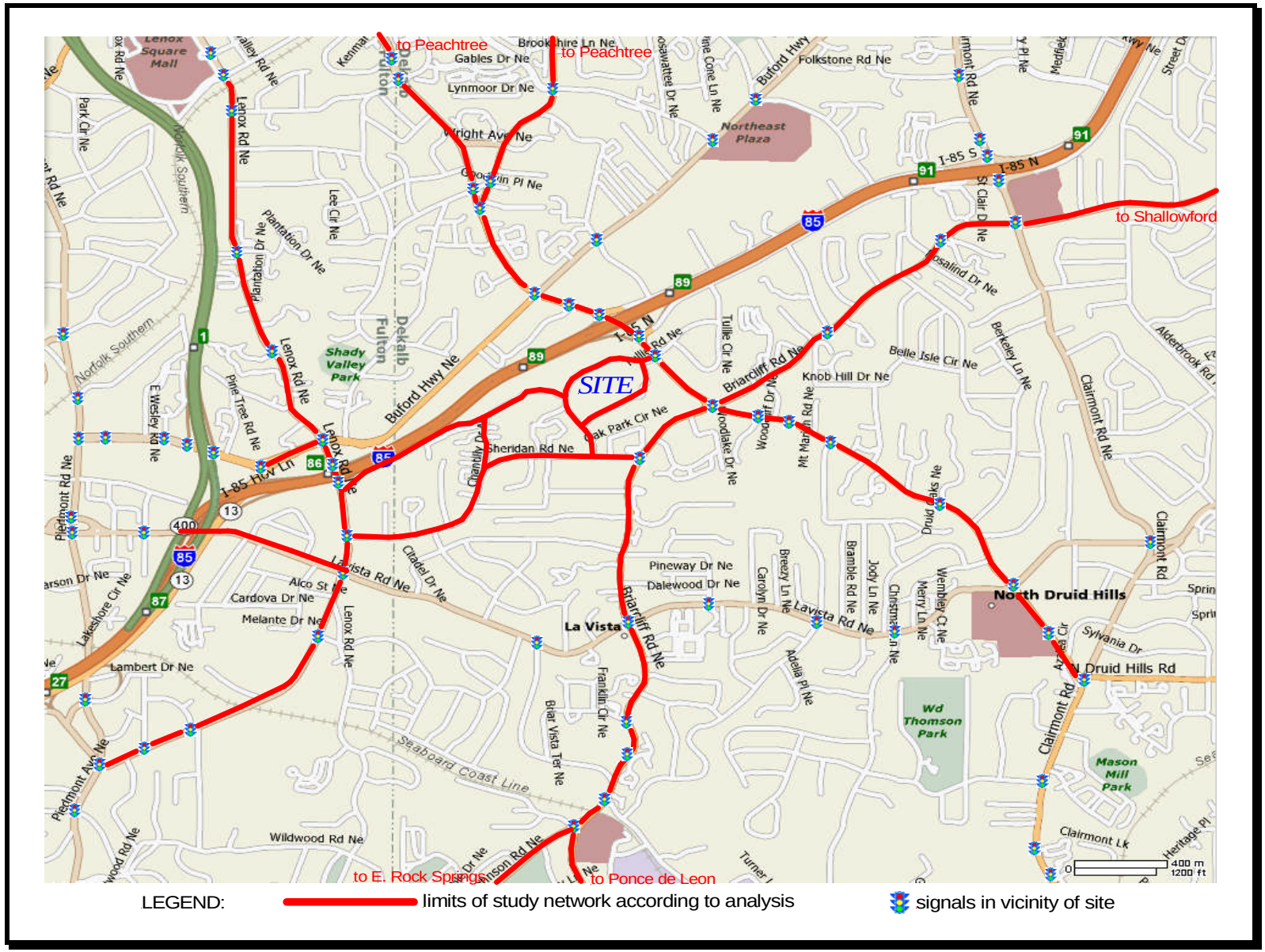


Figure A – The Park Druid Hills Study Network According to the Analysis

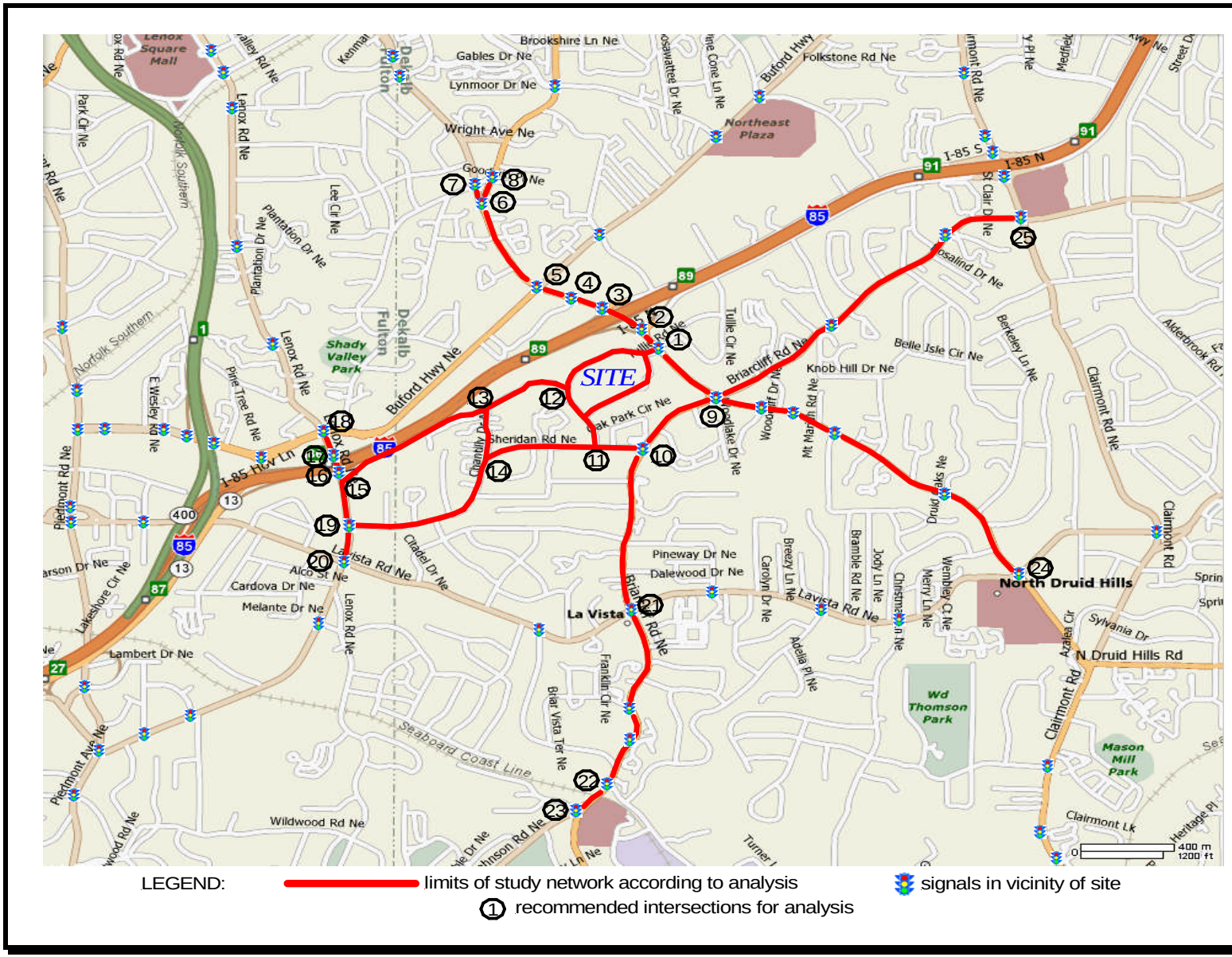


Figure B – The Park Druid Hills Study Network Recommended in Pre-Application Conference

Appendix C
Raw Traffic Count Data

Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780001
Site Code : 24780001
Start Date : 1/31/2008
Page No : 1

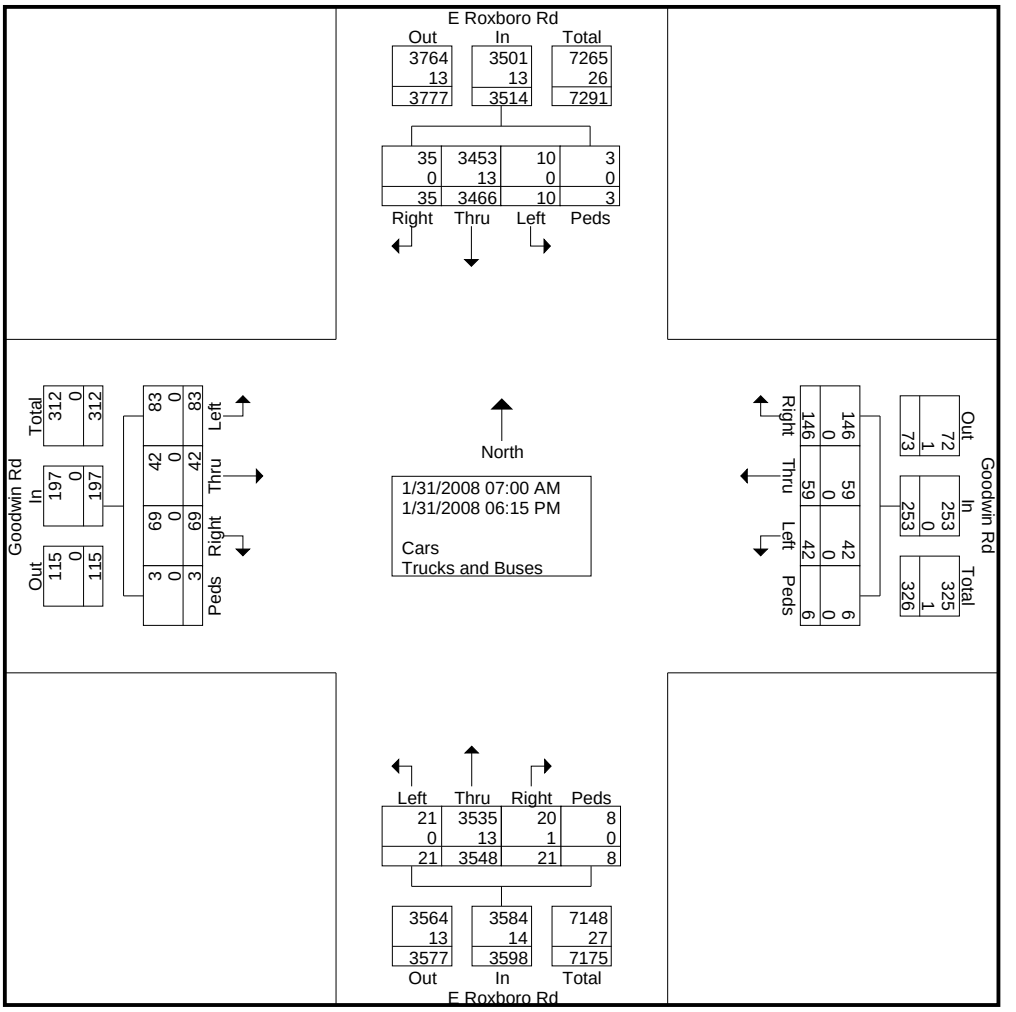
Groups Printed- Cars - Trucks and Buses

	E Roxboro Rd Northbound					E Roxboro Rd Southbound					Goodwin Rd Eastbound					Goodwin Rd Westbound					
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
07:00 AM	0	235	0	0	235	0	147	1	0	148	3	3	3	0	9	2	2	11	0	15	407
07:15 AM	0	248	1	0	249	1	154	0	0	155	5	1	5	0	11	5	4	13	0	22	437
07:30 AM	0	255	0	1	256	0	168	2	0	170	6	2	7	0	15	3	3	16	0	22	463
07:45 AM	2	292	2	0	296	1	154	0	1	156	8	2	4	0	14	4	5	15	0	24	490
Total	2	1030	3	1	1036	2	623	3	1	629	22	8	19	0	49	14	14	55	0	83	1797
08:00 AM	0	287	2	0	289	2	178	1	0	181	8	1	5	0	14	3	4	18	1	26	510
08:15 AM	0	273	1	1	275	1	184	3	0	188	5	2	2	0	9	2	2	16	0	20	492
08:30 AM	0	280	2	1	283	1	159	1	0	161	5	1	3	0	9	3	2	21	1	27	480
08:45 AM	0	270	1	0	271	0	153	1	0	154	7	4	2	0	13	1	3	23	0	27	465
Total	0	1110	6	2	1118	4	674	6	0	684	25	8	12	0	45	9	11	78	2	100	1947
*** BREAK ***																					
04:30 PM	2	157	1	0	160	0	276	2	0	278	4	3	3	0	10	3	3	2	0	8	456
04:45 PM	4	165	2	1	172	0	288	3	0	291	6	5	4	0	15	3	5	2	1	11	489
Total	6	322	3	1	332	0	564	5	0	569	10	8	7	0	25	6	8	4	1	19	945
05:00 PM	3	172	1	0	176	1	285	5	1	292	5	5	4	1	15	4	3	1	0	8	491
05:15 PM	1	168	2	2	173	0	275	4	0	279	5	3	6	0	14	1	4	0	2	7	473
05:30 PM	2	199	1	1	203	0	272	2	0	274	6	4	5	1	16	3	4	3	0	10	503
05:45 PM	3	185	3	0	191	1	268	6	1	276	3	2	3	0	8	1	2	2	1	6	481
Total	9	724	7	3	743	2	1100	17	2	1121	19	14	18	2	53	9	13	6	3	31	1948
06:00 PM	2	179	0	1	182	1	251	3	0	255	3	2	6	1	12	2	7	1	0	10	459
06:15 PM	2	183	2	0	187	1	254	1	0	256	4	2	7	0	13	2	6	2	0	10	466
Grand Total	21	3548	21	8	3598	10	3466	35	3	3514	83	42	69	3	197	42	59	146	6	253	7562
Apprch %	0.6	98.6	0.6	0.2		0.3	98.6	1	0.1		42.1	21.3	35	1.5		16.6	23.3	57.7	2.4		
Total %	0.3	46.9	0.3	0.1	47.6	0.1	45.8	0.5	0	46.5	1.1	0.6	0.9	0	2.6	0.6	0.8	1.9	0.1	3.3	
Cars	21	3535	20	8	3584	10	3453	35	3	3501	83	42	69	3	197	42	59	146	6	253	7535
% Cars	100	99.6	95.2	100	99.6	100	99.6	100	100	99.6	100	100	100	100	100	100	100	100	100	100	99.6
Trucks and Buses	0	13	1	0	14	0	13	0	0	13	0	0	0	0	0	0	0	0	0	0	27
% Trucks and Buses	0	0.4	4.8	0	0.4	0	0.4	0	0	0.4	0	0	0	0	0	0	0	0	0	0	0.4

Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780001
Site Code : 24780001
Start Date : 1/31/2008
Page No : 2

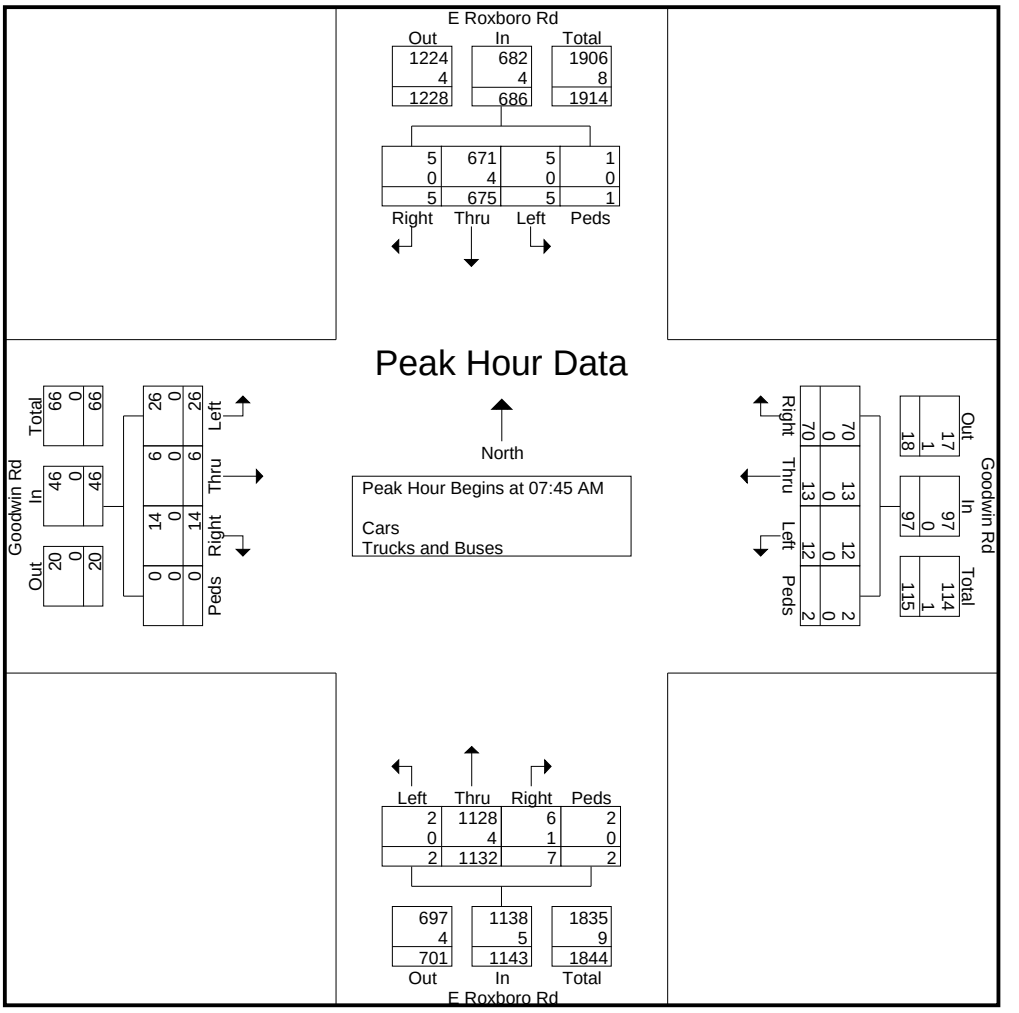


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780001
Site Code : 24780001
Start Date : 1/31/2008
Page No : 3

	E Roxboro Rd Northbound					E Roxboro Rd Southbound					Goodwin Rd Eastbound					Goodwin Rd Westbound					
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 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	2	292	2	0	296	1	154	0	1	156	8	2	4	0	14	4	5	15	0	24	490
08:00 AM	0	287	2	0	289	2	178	1	0	181	8	1	5	0	14	3	4	18	1	26	510
08:15 AM	0	273	1	1	275	1	184	3	0	188	5	2	2	0	9	2	2	16	0	20	492
08:30 AM	0	280	2	1	283	1	159	1	0	161	5	1	3	0	9	3	2	21	1	27	480
Total Volume	2	1132	7	2	1143	5	675	5	1	686	26	6	14	0	46	12	13	70	2	97	1972
% App. Total	0.2	99	0.6	0.2		0.7	98.4	0.7	0.1		56.5	13	30.4	0		12.4	13.4	72.2	2.1		
PHF	.250	.969	.875	.500	.965	.625	.917	.417	.250	.912	.813	.750	.700	.000	.821	.750	.650	.833	.500	.898	.967
Cars	2	1128	6	2	1138	5	671	5	1	682	26	6	14	0	46	12	13	70	2	97	1963
% Cars	100	99.6	85.7	100	99.6	100	99.4	100	100	99.4	100	100	100	0	100	100	100	100	100	100	99.5
Trucks and Buses	0	4	1	0	5	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	9
% Trucks and Buses	0	0.4	14.3	0	0.4	0	0.6	0	0	0.6	0	0	0	0	0	0	0	0	0	0	0.5

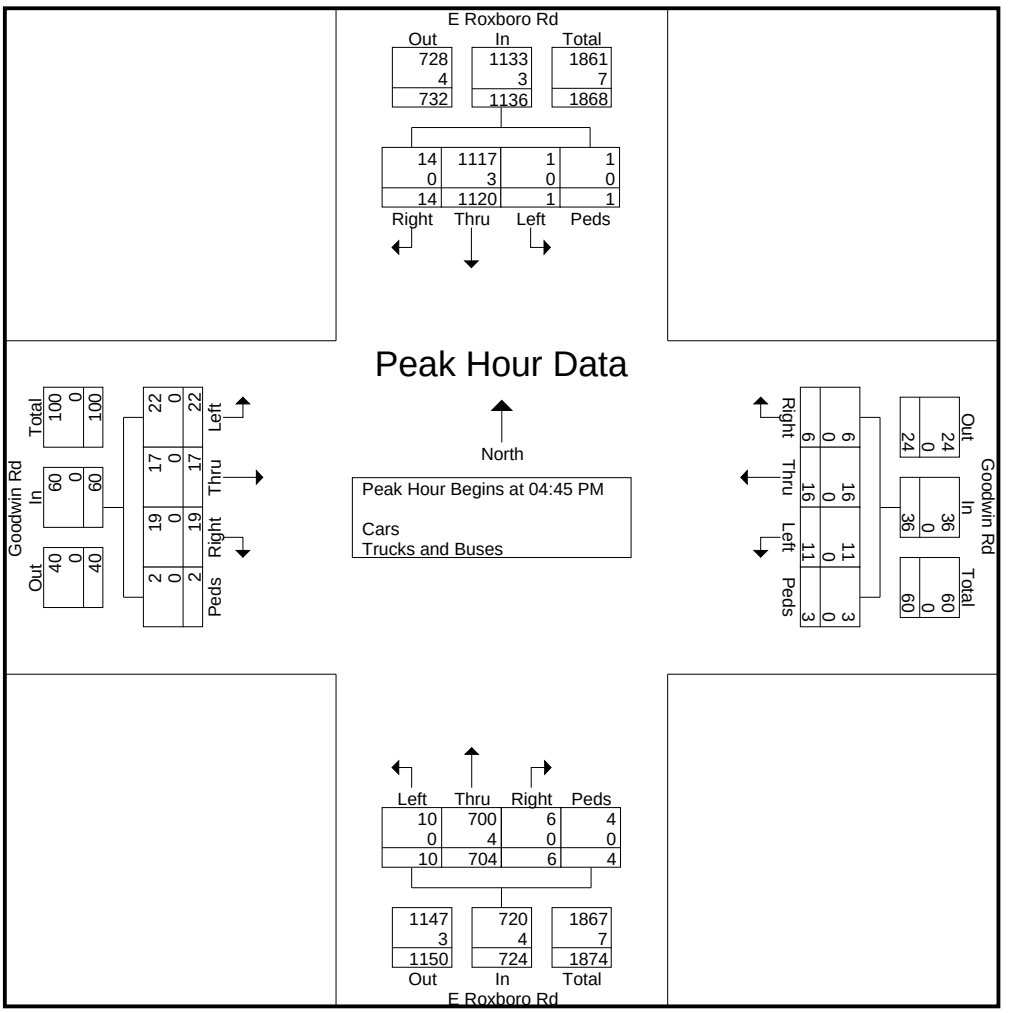


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780001
Site Code : 24780001
Start Date : 1/31/2008
Page No : 4

	E Roxboro Rd Northbound					E Roxboro Rd Southbound					Goodwin Rd Eastbound					Goodwin Rd Westbound					
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 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	4	165	2	1	172	0	288	3	0	291	6	5	4	0	15	3	5	2	1	11	489
05:00 PM	3	172	1	0	176	1	285	5	1	292	5	5	4	1	15	4	3	1	0	8	491
05:15 PM	1	168	2	2	173	0	275	4	0	279	5	3	6	0	14	1	4	0	2	7	473
05:30 PM	2	199	1	1	203	0	272	2	0	274	6	4	5	1	16	3	4	3	0	10	503
Total Volume	10	704	6	4	724	1	1120	14	1	1136	22	17	19	2	60	11	16	6	3	36	1956
% App. Total	1.4	97.2	0.8	0.6		0.1	98.6	1.2	0.1		36.7	28.3	31.7	3.3		30.6	44.4	16.7	8.3		
PHF	.625	.884	.750	.500	.892	.250	.972	.700	.250	.973	.917	.850	.792	.500	.938	.688	.800	.500	.375	.818	.972
Cars	10	700	6	4	720	1	1117	14	1	1133	22	17	19	2	60	11	16	6	3	36	1949
% Cars	100	99.4	100	100	99.4	100	99.7	100	100	99.7	100	100	100	100	100	100	100	100	100	100	99.6
Trucks and Buses	0	4	0	0	4	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	7
% Trucks and Buses	0	0.6	0	0	0.6	0	0.3	0	0	0.3	0	0	0	0	0	0	0	0	0	0	0.4



Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780002
Site Code : 24780002
Start Date : 1/31/2008
Page No : 1

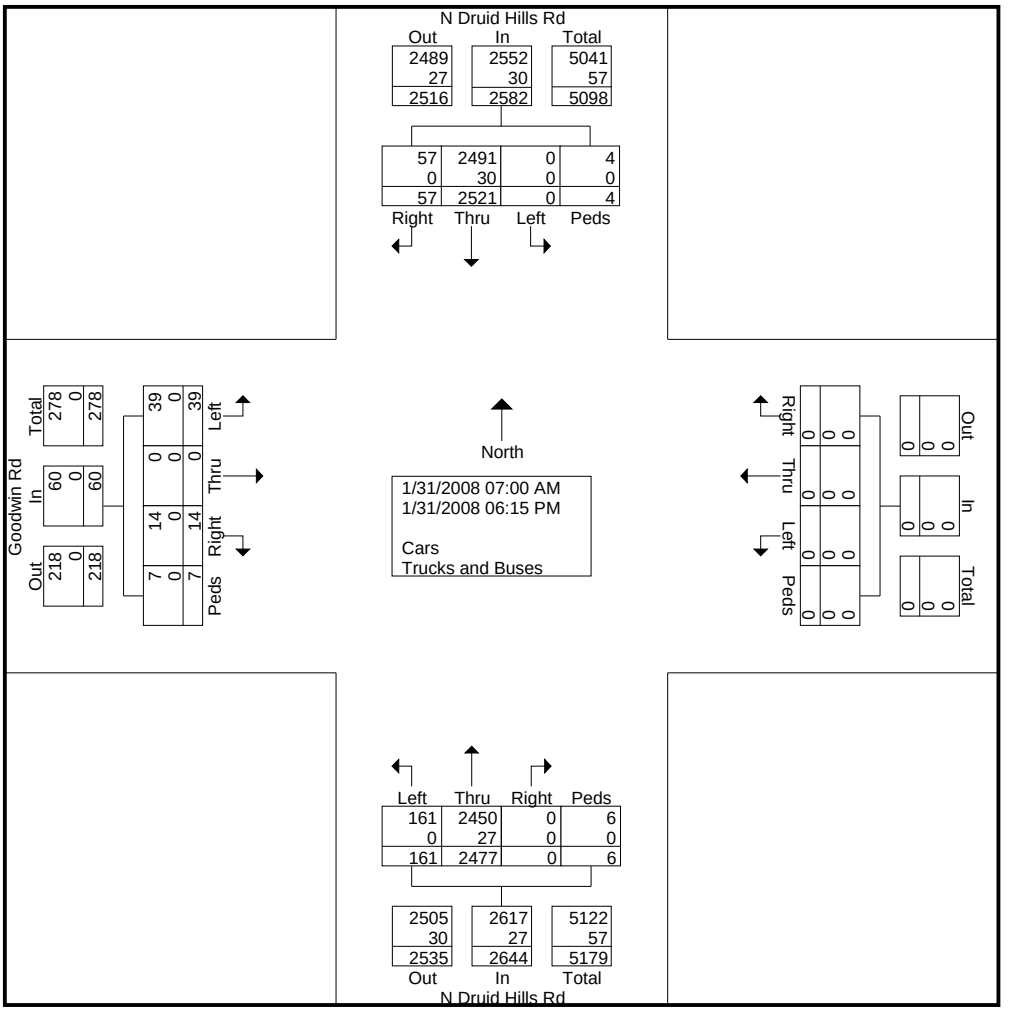
Groups Printed- Cars - Trucks and Buses

	N Druid Hills Rd Northbound					N Druid Hills Rd Southbound					Goodwin Rd Eastbound					Westbound					
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
07:00 AM	13	143	0	0	156	0	169	2	0	171	1	0	1	0	2	0	0	0	0	0	329
07:15 AM	15	151	0	0	166	0	181	4	0	185	2	0	0	0	2	0	0	0	0	0	353
07:30 AM	17	148	0	0	165	0	194	5	0	199	2	0	1	0	3	0	0	0	0	0	367
07:45 AM	16	156	0	0	172	0	185	3	0	188	3	0	2	1	6	0	0	0	0	0	366
Total	61	598	0	0	659	0	729	14	0	743	8	0	4	1	13	0	0	0	0	0	1415
08:00 AM	18	148	0	1	167	0	195	3	0	198	6	0	1	0	7	0	0	0	0	0	372
08:15 AM	21	141	0	0	162	0	185	1	1	187	2	0	2	1	5	0	0	0	0	0	354
08:30 AM	22	138	0	2	162	0	181	2	0	183	4	0	0	1	5	0	0	0	0	0	350
08:45 AM	20	136	0	0	156	0	174	2	0	176	2	0	1	0	3	0	0	0	0	0	335
Total	81	563	0	3	647	0	735	8	1	744	14	0	4	2	20	0	0	0	0	0	1411
*** BREAK ***																					
04:30 PM	2	128	0	0	130	0	120	2	0	122	2	0	1	0	3	0	0	0	0	0	255
04:45 PM	3	120	0	0	123	0	124	4	0	128	3	0	0	0	3	0	0	0	0	0	254
Total	5	248	0	0	253	0	244	6	0	250	5	0	1	0	6	0	0	0	0	0	509
05:00 PM	1	137	0	0	138	0	121	3	1	125	2	0	2	2	6	0	0	0	0	0	269
05:15 PM	2	159	0	1	162	0	129	3	0	132	3	0	0	0	3	0	0	0	0	0	297
05:30 PM	4	189	0	0	193	0	150	6	1	157	1	0	1	1	3	0	0	0	0	0	353
05:45 PM	3	194	0	1	198	0	136	3	0	139	1	0	1	0	2	0	0	0	0	0	339
Total	10	679	0	2	691	0	536	15	2	553	7	0	4	3	14	0	0	0	0	0	1258
06:00 PM	1	201	0	1	203	0	129	9	1	139	3	0	0	1	4	0	0	0	0	0	346
06:15 PM	3	188	0	0	191	0	148	5	0	153	2	0	1	0	3	0	0	0	0	0	347
Grand Total	161	2477	0	6	2644	0	2521	57	4	2582	39	0	14	7	60	0	0	0	0	0	5286
Apprch %	6.1	93.7	0	0.2		0	97.6	2.2	0.2		65	0	23.3	11.7		0	0	0	0		
Total %	3	46.9	0	0.1	50	0	47.7	1.1	0.1	48.8	0.7	0	0.3	0.1	1.1	0	0	0	0	0	
Cars	161	2450	0	6	2617	0	2491	57	4	2552	39	0	14	7	60	0	0	0	0	0	5229
% Cars	100	98.9	0	100	99	0	98.8	100	100	98.8	100	0	100	100	100	0	0	0	0	0	98.9
Trucks and Buses	0	27	0	0	27	0	30	0	0	30	0	0	0	0	0	0	0	0	0	0	57
% Trucks and Buses	0	1.1	0	0	1	0	1.2	0	0	1.2	0	0	0	0	0	0	0	0	0	0	1.1

Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780002
Site Code : 24780002
Start Date : 1/31/2008
Page No : 2

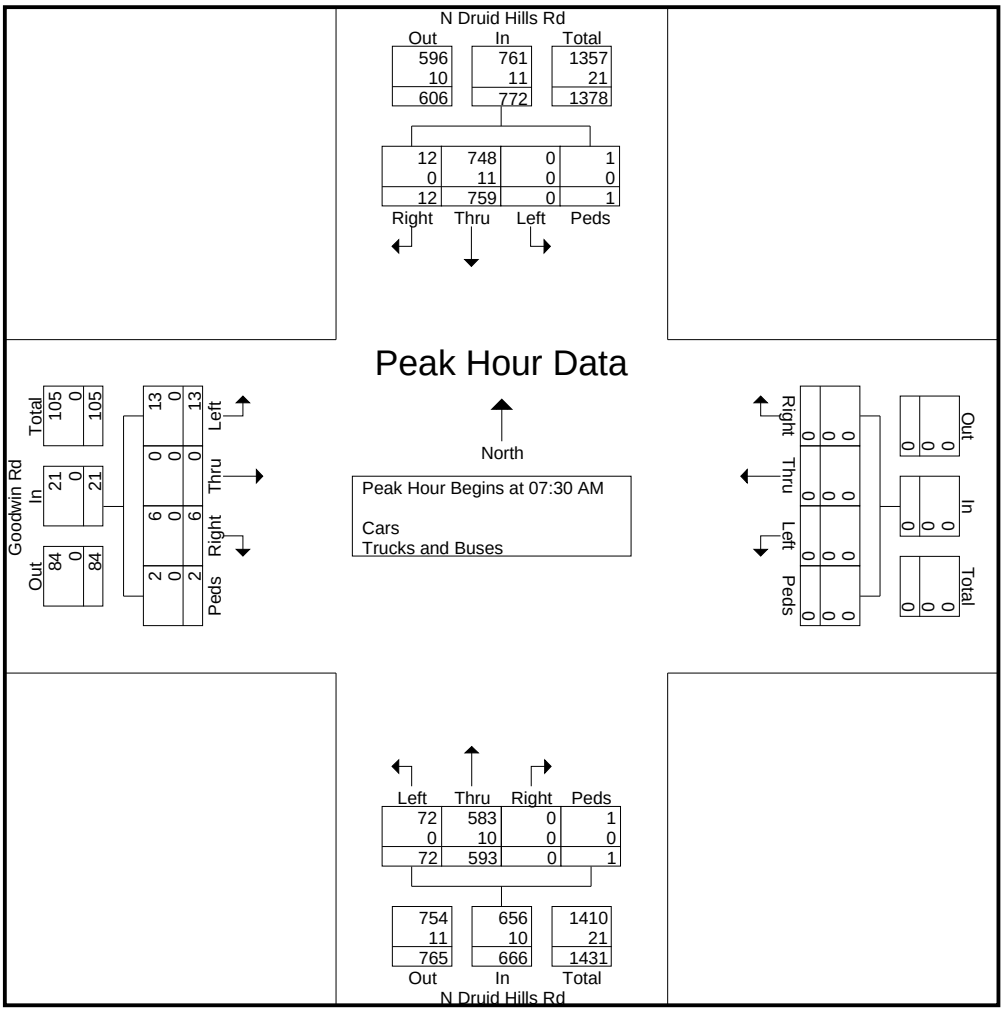


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780002
Site Code : 24780002
Start Date : 1/31/2008
Page No : 3

	N Druid Hills Rd Northbound					N Druid Hills Rd Southbound					Goodwin Rd Eastbound					Westbound					
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 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	17	148	0	0	165	0	194	5	0	199	2	0	1	0	3	0	0	0	0	0	367
07:45 AM	16	156	0	0	172	0	185	3	0	188	3	0	2	1	6	0	0	0	0	0	366
08:00 AM	18	148	0	1	167	0	195	3	0	198	6	0	1	0	7	0	0	0	0	0	372
08:15 AM	21	141	0	0	162	0	185	1	1	187	2	0	2	1	5	0	0	0	0	0	354
Total Volume	72	593	0	1	666	0	759	12	1	772	13	0	6	2	21	0	0	0	0	0	1459
% App. Total	10.8	89	0	0.2		0	98.3	1.6	0.1		61.9	0	28.6	9.5		0	0	0	0		
PHF	.857	.950	.000	.250	.968	.000	.973	.600	.250	.970	.542	.000	.750	.500	.750	.000	.000	.000	.000	.000	.981
Cars	72	583	0	1	656	0	748	12	1	761	13	0	6	2	21	0	0	0	0	0	1438
% Cars	100	98.3	0	100	98.5	0	98.6	100	100	98.6	100	0	100	100	100	0	0	0	0	0	98.6
Trucks and Buses	0	10	0	0	10	0	11	0	0	11	0	0	0	0	0	0	0	0	0	0	21
% Trucks and Buses	0	1.7	0	0	1.5	0	1.4	0	0	1.4	0	0	0	0	0	0	0	0	0	0	1.4

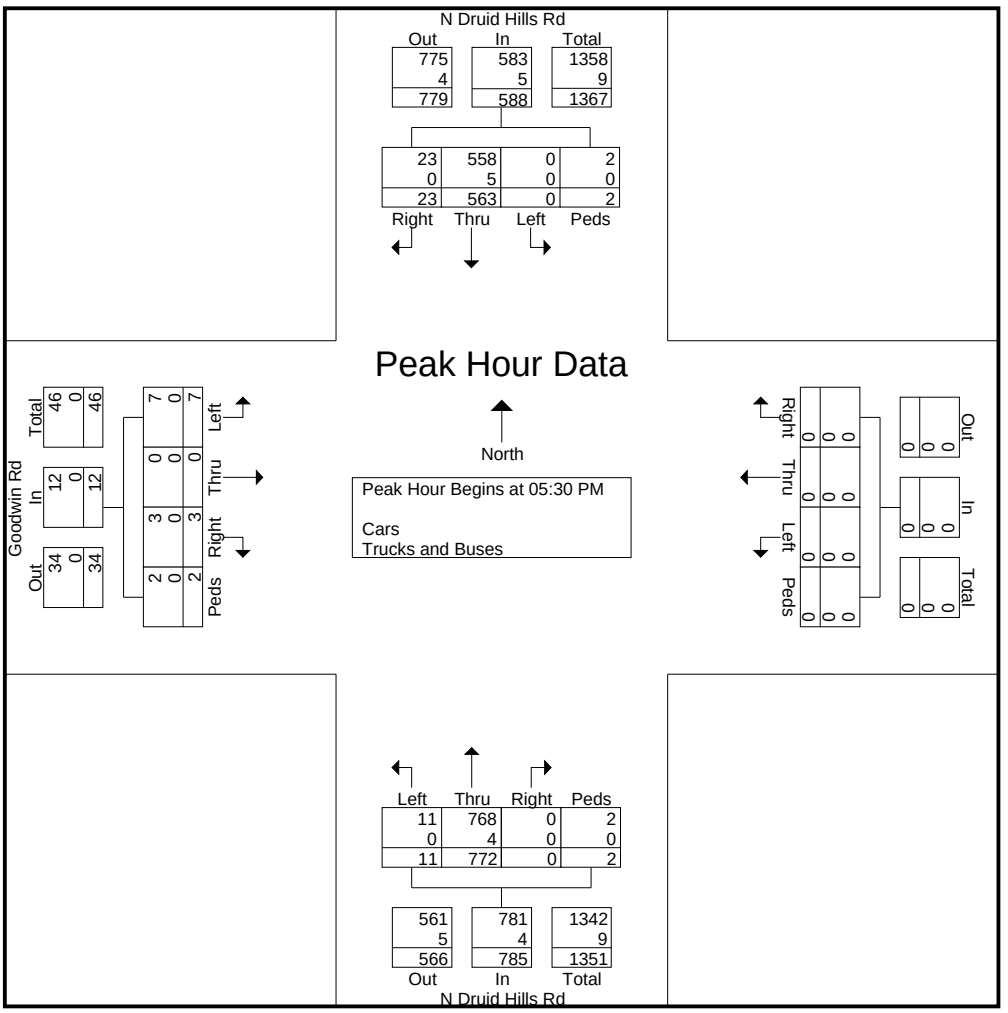


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780002
Site Code : 24780002
Start Date : 1/31/2008
Page No : 4

	N Druid Hills Rd Northbound					N Druid Hills Rd Southbound					Goodwin Rd Eastbound					Westbound					
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 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:30 PM																					
05:30 PM	4	189	0	0	193	0	150	6	1	157	1	0	1	1	3	0	0	0	0	0	353
05:45 PM	3	194	0	1	198	0	136	3	0	139	1	0	1	0	2	0	0	0	0	0	339
06:00 PM	1	201	0	1	203	0	129	9	1	139	3	0	0	1	4	0	0	0	0	0	346
06:15 PM	3	188	0	0	191	0	148	5	0	153	2	0	1	0	3	0	0	0	0	0	347
Total Volume	11	772	0	2	785	0	563	23	2	588	7	0	3	2	12	0	0	0	0	0	1385
% App. Total	1.4	98.3	0	0.3		0	95.7	3.9	0.3		58.3	0	25	16.7		0	0	0	0		
PHF	.688	.960	.000	.500	.967	.000	.938	.639	.500	.936	.583	.000	.750	.500	.750	.000	.000	.000	.000	.000	.981
Cars	11	768	0	2	781	0	558	23	2	583	7	0	3	2	12	0	0	0	0	0	1376
% Cars	100	99.5	0	100	99.5	0	99.1	100	100	99.1	100	0	100	100	100	0	0	0	0	0	99.4
Trucks and Buses	0	4	0	0	4	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	9
% Trucks and Buses	0	0.5	0	0	0.5	0	0.9	0	0	0.9	0	0	0	0	0	0	0	0	0	0	0.6



Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780003
Site Code : 24780003
Start Date : 1/31/2008
Page No : 1

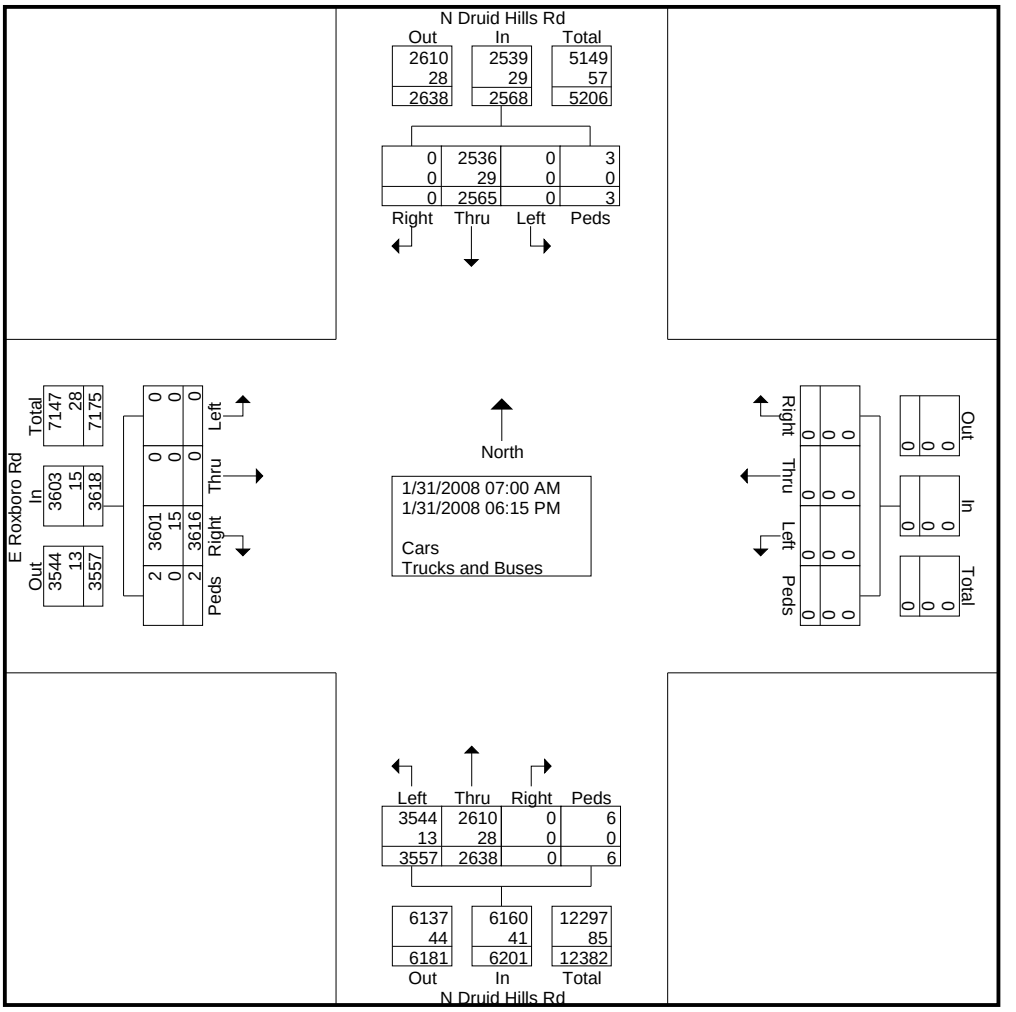
Groups Printed- Cars - Trucks and Buses

	N Druid Hills Rd Northbound					N Druid Hills Rd Southbound					E Roxboro Rd Eastbound					Westbound					
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
07:00 AM	243	154	0	0	397	0	173	0	0	173	0	0	152	0	152	0	0	0	0	0	722
07:15 AM	255	161	0	0	416	0	185	0	0	185	0	0	155	0	155	0	0	0	0	0	756
07:30 AM	262	165	0	1	428	0	196	0	0	196	0	0	182	0	182	0	0	0	0	0	806
07:45 AM	279	166	0	0	445	0	190	0	0	190	0	0	175	0	175	0	0	0	0	0	810
Total	1039	646	0	1	1686	0	744	0	0	744	0	0	664	0	664	0	0	0	0	0	3094
08:00 AM	287	168	0	0	455	0	198	0	0	198	0	0	195	0	195	0	0	0	0	0	848
08:15 AM	278	163	0	0	441	0	188	0	0	188	0	0	186	0	186	0	0	0	0	0	815
08:30 AM	270	158	0	0	428	0	183	0	0	183	0	0	162	0	162	0	0	0	0	0	773
08:45 AM	265	154	0	1	420	0	179	0	0	179	0	0	157	0	157	0	0	0	0	0	756
Total	1100	643	0	1	1744	0	748	0	0	748	0	0	700	0	700	0	0	0	0	0	3192
*** BREAK ***																					
04:30 PM	155	130	0	0	285	0	122	0	1	123	0	0	269	0	269	0	0	0	0	0	677
04:45 PM	168	125	0	2	295	0	129	0	0	129	0	0	288	1	289	0	0	0	0	0	713
Total	323	255	0	2	580	0	251	0	1	252	0	0	557	1	558	0	0	0	0	0	1390
05:00 PM	172	150	0	0	322	0	120	0	0	120	0	0	295	0	295	0	0	0	0	0	737
05:15 PM	169	162	0	1	332	0	133	0	0	133	0	0	315	0	315	0	0	0	0	0	780
05:30 PM	183	195	0	0	378	0	149	0	0	149	0	0	292	1	293	0	0	0	0	0	820
05:45 PM	188	197	0	1	386	0	139	0	1	140	0	0	279	0	279	0	0	0	0	0	805
Total	712	704	0	2	1418	0	541	0	1	542	0	0	1181	1	1182	0	0	0	0	0	3142
06:00 PM	195	198	0	0	393	0	134	0	0	134	0	0	266	0	266	0	0	0	0	0	793
06:15 PM	188	192	0	0	380	0	147	0	1	148	0	0	248	0	248	0	0	0	0	0	776
Grand Total	3557	2638	0	6	6201	0	2565	0	3	2568	0	0	3616	2	3618	0	0	0	0	0	12387
Apprch %	57.4	42.5	0	0.1		0	99.9	0	0.1		0	0	99.9	0.1		0	0	0	0		
Total %	28.7	21.3	0	0	50.1	0	20.7	0	0	20.7	0	0	29.2	0	29.2	0	0	0	0	0	
Cars	3544	2610	0	6	6160	0	2536	0	3	2539	0	0	3601	2	3603	0	0	0	0	0	12302
% Cars	99.6	98.9	0	100	99.3	0	98.9	0	100	98.9	0	0	99.6	100	99.6	0	0	0	0	0	99.3
Trucks and Buses	13	28	0	0	41	0	29	0	0	29	0	0	15	0	15	0	0	0	0	0	85
% Trucks and Buses	0.4	1.1	0	0	0.7	0	1.1	0	0	1.1	0	0	0.4	0	0.4	0	0	0	0	0	0.7

Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780003
Site Code : 24780003
Start Date : 1/31/2008
Page No : 2

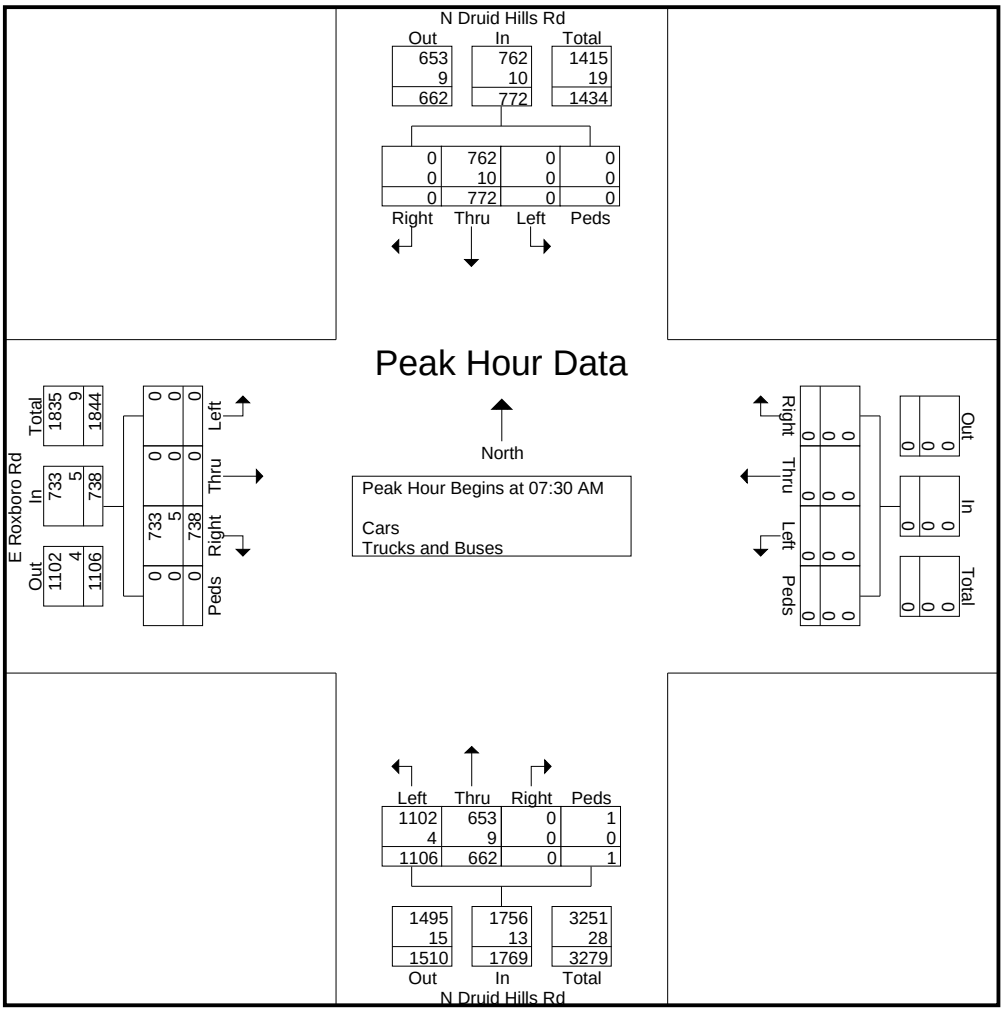


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780003
Site Code : 24780003
Start Date : 1/31/2008
Page No : 3

	N Druid Hills Rd Northbound					N Druid Hills Rd Southbound					E Roxboro Rd Eastbound					Westbound					
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 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	262	165	0	1	428	0	196	0	0	196	0	0	182	0	182	0	0	0	0	0	806
07:45 AM	279	166	0	0	445	0	190	0	0	190	0	0	175	0	175	0	0	0	0	0	810
08:00 AM	287	168	0	0	455	0	198	0	0	198	0	0	195	0	195	0	0	0	0	0	848
08:15 AM	278	163	0	0	441	0	188	0	0	188	0	0	186	0	186	0	0	0	0	0	815
Total Volume	1106	662	0	1	1769	0	772	0	0	772	0	0	738	0	738	0	0	0	0	0	3279
% App. Total	62.5	37.4	0	0.1		0	100	0	0		0	0	100	0		0	0	0	0		
PHF	.963	.985	.000	.250	.972	.000	.975	.000	.000	.975	.000	.000	.946	.000	.946	.000	.000	.000	.000	.000	.967
Cars	1102	653	0	1	1756	0	762	0	0	762	0	0	733	0	733	0	0	0	0	0	3251
% Cars	99.6	98.6	0	100	99.3	0	98.7	0	0	98.7	0	0	99.3	0	99.3	0	0	0	0	0	99.1
Trucks and Buses	4	9	0	0	13	0	10	0	0	10	0	0	5	0	5	0	0	0	0	0	28
% Trucks and Buses	0.4	1.4	0	0	0.7	0	1.3	0	0	1.3	0	0	0.7	0	0.7	0	0	0	0	0	0.9

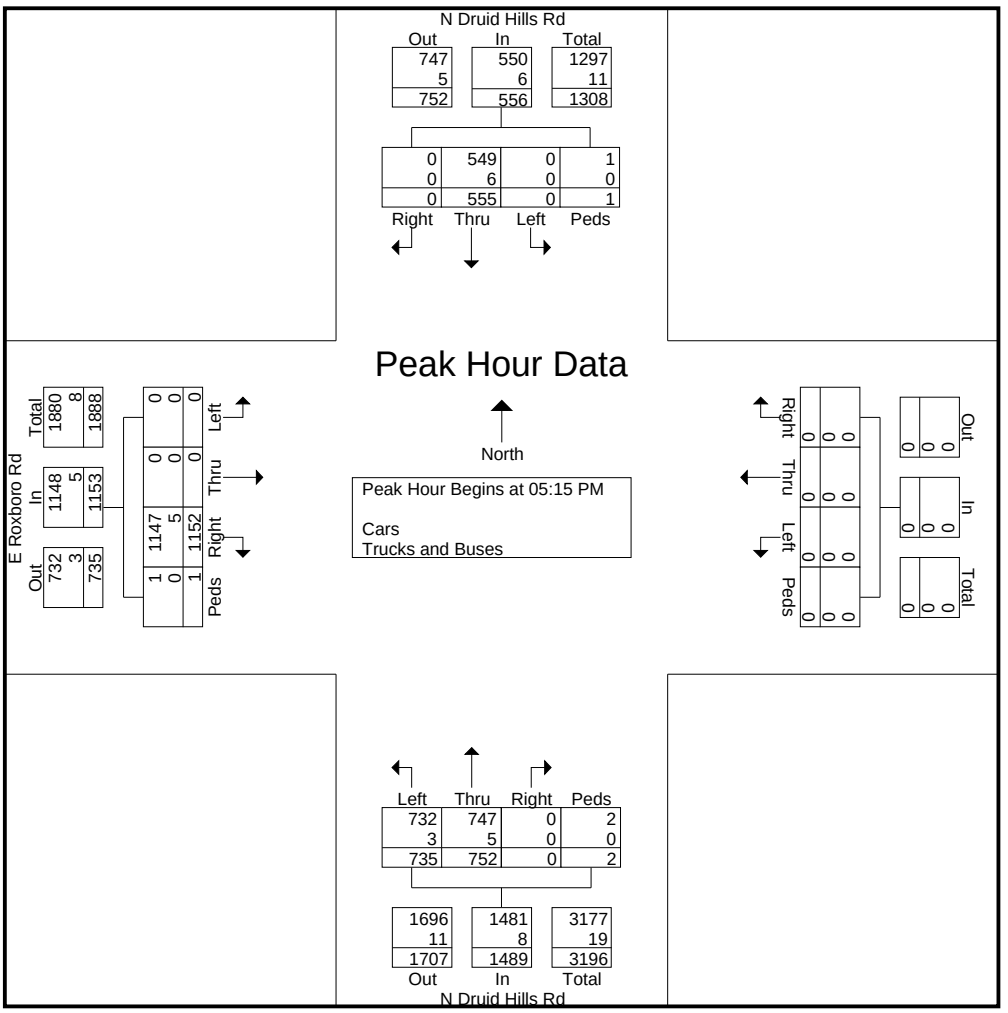


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780003
Site Code : 24780003
Start Date : 1/31/2008
Page No : 4

	N Druid Hills Rd Northbound					N Druid Hills Rd Southbound					E Roxboro Rd Eastbound					Westbound					
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 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:15 PM																					
05:15 PM	169	162	0	1	332	0	133	0	0	133	0	0	315	0	315	0	0	0	0	0	780
05:30 PM	183	195	0	0	378	0	149	0	0	149	0	0	292	1	293	0	0	0	0	0	820
05:45 PM	188	197	0	1	386	0	139	0	1	140	0	0	279	0	279	0	0	0	0	0	805
06:00 PM	195	198	0	0	393	0	134	0	0	134	0	0	266	0	266	0	0	0	0	0	793
Total Volume	735	752	0	2	1489	0	555	0	1	556	0	0	1152	1	1153	0	0	0	0	0	3198
% App. Total	49.4	50.5	0	0.1		0	99.8	0	0.2		0	0	99.9	0.1		0	0	0	0		
PHF	.942	.949	.000	.500	.947	.000	.931	.000	.250	.933	.000	.000	.914	.250	.915	.000	.000	.000	.000	.000	.975
Cars	732	747	0	2	1481	0	549	0	1	550	0	0	1147	1	1148	0	0	0	0	0	3179
% Cars	99.6	99.3	0	100	99.5	0	98.9	0	100	98.9	0	0	99.6	100	99.6	0	0	0	0	0	99.4
Trucks and Buses	3	5	0	0	8	0	6	0	0	6	0	0	5	0	5	0	0	0	0	0	19
% Trucks and Buses	0.4	0.7	0	0	0.5	0	1.1	0	0	1.1	0	0	0.4	0	0.4	0	0	0	0	0	0.6



Traffic Data Collection, Inc.

Atlanta - Hilton Head

www.trafficdatacollection.com

Counter: 1935/1934
Counted By: JRM/BLR
Weather: Mild
Other: MRA

File Name : 08505-01
Site Code : 00850501
Start Date : 2/20/2008
Page No : 1

Groups Printed- Cars - Trucks & Buses

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					Buford Hwy Eastbound					Buford Hwy Westbound					
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
07:00 AM	48	269	53	0	370	10	175	31	1	217	21	47	32	0	100	74	101	3	9	187	874
07:15 AM	61	318	51	0	430	9	209	41	1	260	20	63	32	3	118	73	129	15	2	219	1027
07:30 AM	102	332	47	0	481	7	277	64	1	349	35	66	34	2	137	77	147	14	4	242	1209
07:45 AM	95	403	56	0	554	12	304	55	2	373	63	85	47	5	200	70	169	17	7	263	1390
Total	306	1322	207	0	1835	38	965	191	5	1199	139	261	145	10	555	294	546	49	22	911	4500
08:00 AM	107	332	56	0	495	18	296	48	2	364	51	101	53	0	205	70	161	22	7	260	1324
08:15 AM	122	387	65	0	574	13	284	66	0	363	73	83	71	0	227	70	143	35	14	262	1426
08:30 AM	119	376	39	1	535	15	249	88	0	352	74	93	79	2	248	77	164	32	0	273	1408
08:45 AM	134	374	51	0	559	26	231	73	0	330	65	102	71	0	238	78	155	37	0	270	1397
Total	482	1469	211	1	2163	72	1060	275	2	1409	263	379	274	2	918	295	623	126	21	1065	5555
Break																					
04:30 PM	69	224	72	0	365	18	352	36	1	407	53	146	78	2	279	53	132	29	6	220	1271
04:45 PM	71	211	97	0	379	36	350	29	0	415	77	140	75	0	292	49	138	20	4	211	1297
Total	140	435	169	0	744	54	702	65	1	822	130	286	153	2	571	102	270	49	10	431	2568
05:00 PM	64	278	94	4	440	34	321	38	2	395	60	164	85	2	311	59	141	25	0	225	1371
05:15 PM	54	240	81	0	375	26	331	40	2	399	73	147	96	1	317	54	130	26	3	213	1304
05:30 PM	59	271	87	0	417	23	389	47	0	459	77	173	94	1	345	50	128	33	3	214	1435
05:45 PM	48	271	93	1	413	27	383	29	0	439	67	186	69	8	330	57	153	19	3	232	1414
Total	225	1060	355	5	1645	110	1424	154	4	1692	277	670	344	12	1303	220	552	103	9	884	5524
06:00 PM	51	261	92	0	404	18	346	49	0	413	84	178	64	2	328	54	110	26	0	190	1335
06:15 PM	60	252	100	0	412	22	338	46	1	407	92	164	66	8	330	61	110	25	6	202	1351
Grand Total	1264	4799	1134	6	7203	314	4835	780	13	5942	985	1938	1046	36	4005	1026	2211	378	68	3683	20833
Apprch %	17.5	66.6	15.7	0.1		5.3	81.4	13.1	0.2		24.6	48.4	26.1	0.9		27.9	60	10.3	1.8		
Total %	6.1	23	5.4	0	34.6	1.5	23.2	3.7	0.1	28.5	4.7	9.3	5	0.2	19.2	4.9	10.6	1.8	0.3	17.7	
Cars	1255	4770	1125	5	7155	311	4773	776	12	5872	983	1906	1041	36	3966	1004	2125	371	68	3568	20561
% Cars	99.3	99.4	99.2	83.3	99.3	99	98.7	99.5	92.3	98.8	99.8	98.3	99.5	100	99	97.9	96.1	98.1	100	96.9	98.7
Trucks & Buses	9	29	9	1	48	3	62	4	1	70	2	32	5	0	39	22	86	7	0	115	272
% Trucks & Buses	0.7	0.6	0.8	16.7	0.7	1	1.3	0.5	7.7	1.2	0.2	1.7	0.5	0	1	2.1	3.9	1.9	0	3.1	1.3

Note: Pedestrian data shown for each approach is crossing the approach from either direction combined.

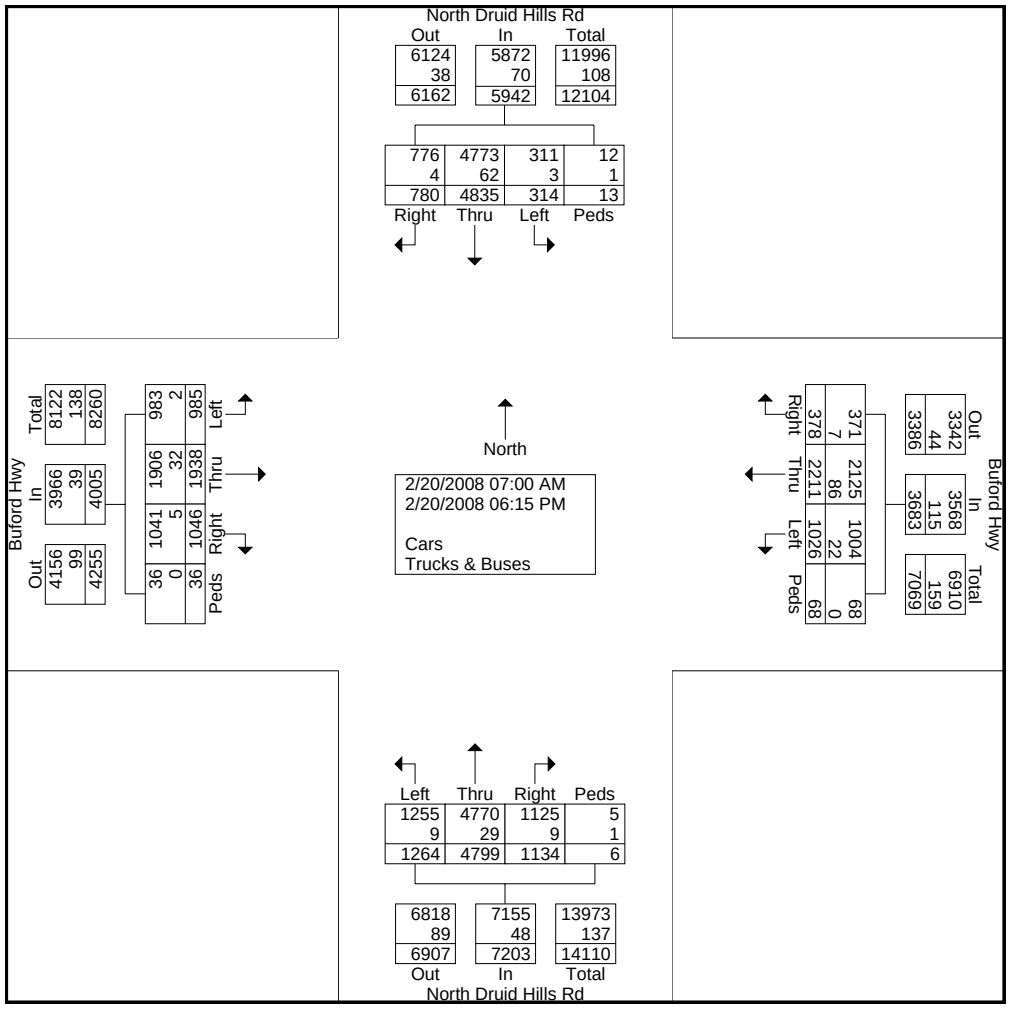
Traffic Data Collection, Inc.

Atlanta - Hilton Head

www.trafficdatacollection.com

Counter: 1935/1934
Counted By: JRM/BLR
Weather: Mild
Other: MRA

File Name : 08505-01
Site Code : 00850501
Start Date : 2/20/2008
Page No : 2



TRAFFIC DATA COLLECTION, INC.

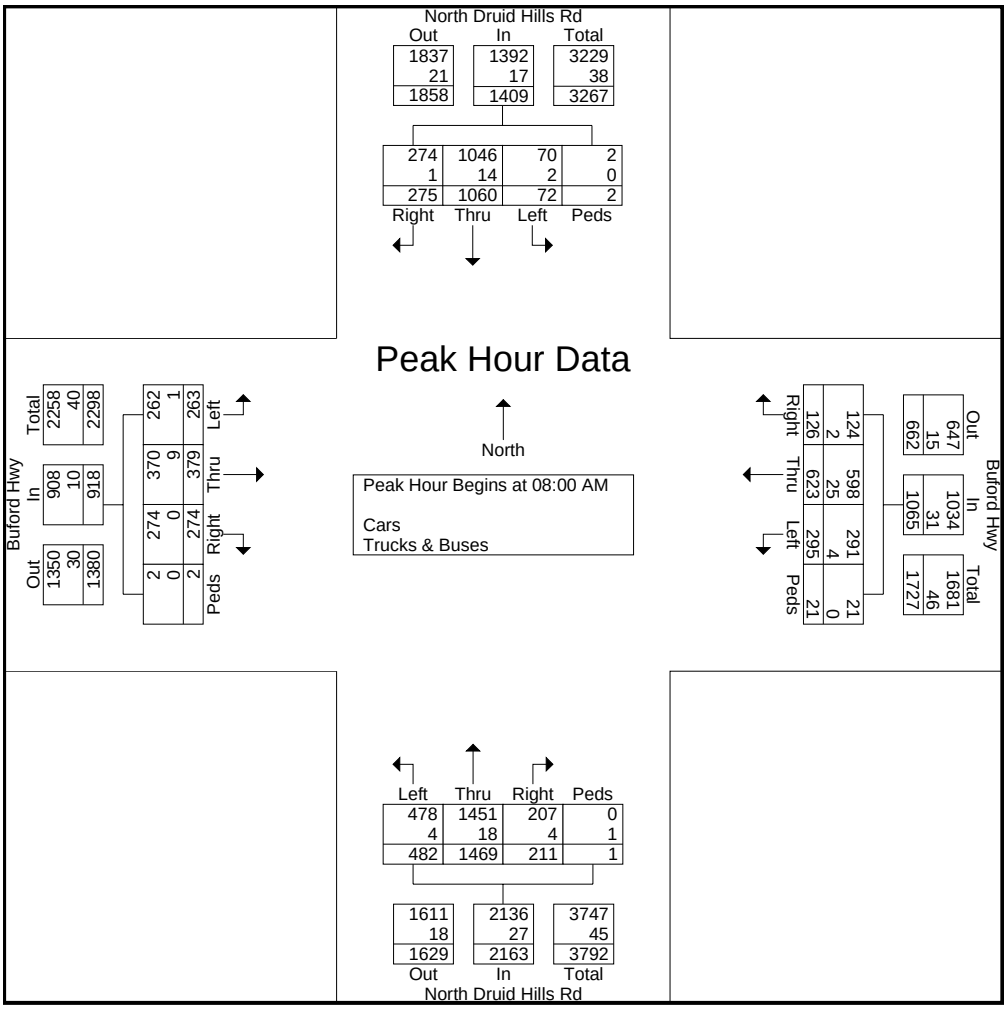
Atlanta - Hilton Head

www.trafficdatacollection.com

Counter: 1935/1934
Counted By: JRM/BLR
Weather: Mild
Other: MRA

File Name : 08505-01
Site Code : 00850501
Start Date : 2/20/2008
Page No : 3

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					Buford Hwy Eastbound					Buford Hwy Westbound					
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 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	107	332	56	0	495	18	296	48	2	364	51	101	53	0	205	70	161	22	7	260	1324
08:15 AM	122	387	65	0	574	13	284	66	0	363	73	83	71	0	227	70	143	35	14	262	1426
08:30 AM	119	376	39	1	535	15	249	88	0	352	74	93	79	2	248	77	164	32	0	273	1408
08:45 AM	134	374	51	0	559	26	231	73	0	330	65	102	71	0	238	78	155	37	0	270	1397
Total Volume	482	1469	211	1	2163	72	1060	275	2	1409	263	379	274	2	918	295	623	126	21	1065	5555
% App. Total	22.3	67.9	9.8	0		5.1	75.2	19.5	0.1		28.6	41.3	29.8	0.2		27.7	58.5	11.8	2		
PHF	.899	.949	.812	.250	.942	.692	.895	.781	.250	.968	.889	.929	.867	.250	.925	.946	.950	.851	.375	.975	.974
Cars	478	1451					1046														
% Cars	99.2	98.8	98.1	0	98.8	97.2	98.7	99.6	100	98.8	99.6	97.6	100	100	98.9	98.6	96.0	98.4	100	97.1	98.5
Trucks & Buses	4	18	4	1	27	2	14	1	0	17	1	9	0	0	10	4	25	2	0	31	85
% Trucks & Buses	0.8	1.2	1.9	100	1.2	2.8	1.3	0.4	0	1.2	0.4	2.4	0	0	1.1	1.4	4.0	1.6	0	2.9	1.5



Traffic Data Collection, Inc.

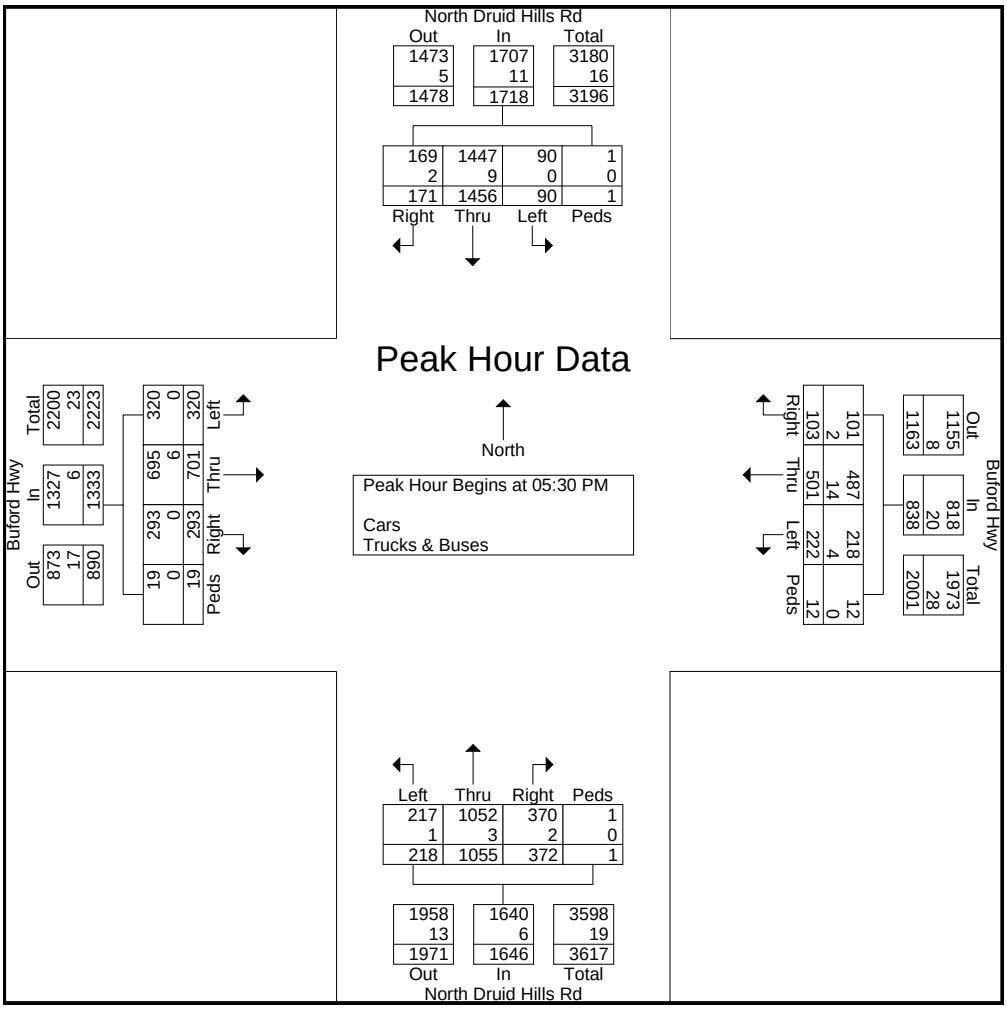
Atlanta - Hilton Head

www.trafficdatacollection.com

Counter: 1935/1934
Counted By: JRM/BLR
Weather: Mild
Other: MRA

File Name : 08505-01
Site Code : 00850501
Start Date : 2/20/2008
Page No : 4

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					Buford Hwy Eastbound					Buford Hwy Westbound					
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 12:00 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:30 PM																					
05:30 PM	59	271	87	0	417	23	389	47	0	459	77	173	94	1	345	50	128	33	3	214	1435
05:45 PM	48	271	93	1	413	27	383	29	0	439	67	186	69	8	330	57	153	19	3	232	1414
06:00 PM	51	261	92	0	404	18	346	49	0	413	84	178	64	2	328	54	110	26	0	190	1335
06:15 PM	60	252	100	0	412	22	338	46	1	407	92	164	66	8	330	61	110	25	6	202	1351
Total Volume	218	1055	372	1	1646	90	1456	171	1	1718	320	701	293	19	1333	222	501	103	12	838	5535
% App. Total	13.2	64.1	22.6	0.1		5.2	84.7	10	0.1		24	52.6	22	1.4		26.5	59.8	12.3	1.4		
PHF	.908	.973	.930	.250	.987	.833	.936	.872	.250	.936	.870	.942	.779	.594	.966	.910	.819	.780	.500	.903	.964
Cars	217	1052					1447														
% Cars	99.5	99.7	99.5	100	99.6	100	99.4	98.8	100	99.4	100	99.1	100	100	99.5	98.2	97.2	98.1	100	97.6	99.2
Trucks & Buses	1	3	2	0	6	0	9	2	0	11	0	6	0	0	6	4	14	2	0	20	43
% Trucks & Buses	0.5	0.3	0.5	0	0.4	0	0.6	1.2	0	0.6	0	0.9	0	0	0.5	1.8	2.8	1.9	0	2.4	0.8



Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780004
Site Code : 24780004
Start Date : 1/31/2008
Page No : 1

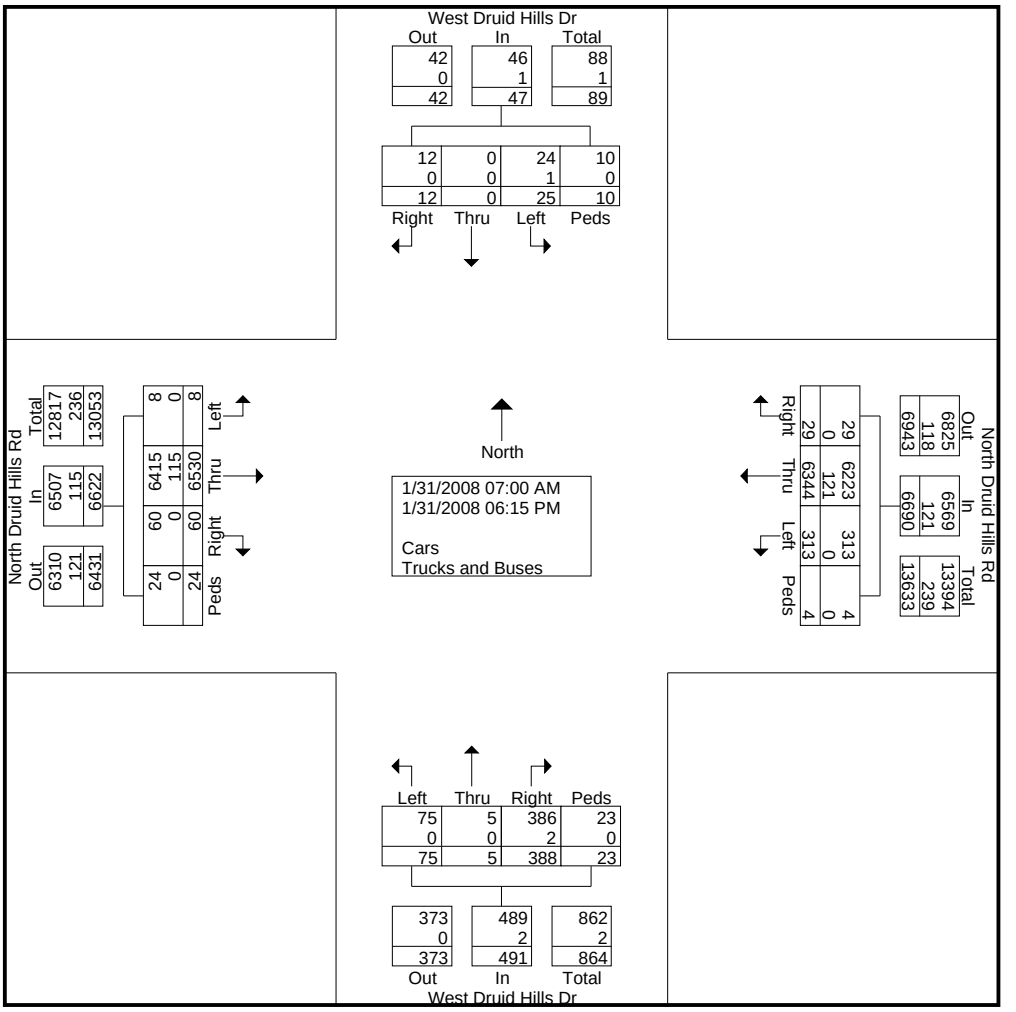
Groups Printed- Cars - Trucks and Buses

	West Druid Hills Dr Northbound					West Druid Hills Dr Southbound					North Druid Hills Rd Eastbound					North Druid Hills Rd Westbound					
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
07:00 AM	1	0	8	0	9	1	0	1	0	2	1	284	3	0	288	13	375	1	0	389	688
07:15 AM	4	0	9	0	13	0	0	0	0	0	0	321	3	0	324	18	385	2	0	405	742
07:30 AM	5	1	12	1	19	2	0	0	0	2	0	372	5	0	377	21	465	4	0	490	888
07:45 AM	3	0	18	2	23	0	0	1	0	1	0	393	3	0	396	26	475	2	0	503	923
Total	13	1	47	3	64	3	0	2	0	5	1	1370	14	0	1385	78	1700	9	0	1787	3241
08:00 AM	7	2	12	0	21	1	0	1	0	2	1	407	4	0	412	32	499	3	0	534	969
08:15 AM	2	0	7	4	13	0	0	0	1	1	0	374	3	6	383	41	479	1	1	522	919
08:30 AM	1	0	8	2	11	0	0	2	1	3	0	354	7	2	363	32	434	2	0	468	845
08:45 AM	3	0	10	2	15	1	0	1	2	4	1	331	9	3	344	29	394	1	1	425	788
Total	13	2	37	8	60	2	0	4	4	10	2	1466	23	11	1502	134	1806	7	2	1949	3521
*** BREAK ***																					
04:30 PM	3	0	29	2	34	3	0	2	0	5	1	453	1	1	456	10	361	1	0	372	867
04:45 PM	8	0	68	4	80	1	0	1	0	2	0	471	5	3	479	13	376	2	1	392	953
Total	11	0	97	6	114	4	0	3	0	7	1	924	6	4	935	23	737	3	1	764	1820
05:00 PM	2	0	41	1	44	2	0	0	2	4	1	459	7	1	468	17	367	3	0	387	903
05:15 PM	4	1	40	0	45	7	0	1	0	8	0	443	1	1	445	12	382	1	0	395	893
05:30 PM	7	0	27	2	36	2	0	1	2	5	0	476	1	1	478	14	356	2	0	372	891
05:45 PM	10	1	30	1	42	1	0	0	0	1	2	462	1	3	468	10	349	2	1	362	873
Total	23	2	138	4	167	12	0	2	4	18	3	1840	10	6	1859	53	1454	8	1	1516	3560
06:00 PM	8	0	42	0	50	2	0	0	0	2	0	473	6	2	481	11	331	1	0	343	876
06:15 PM	7	0	27	2	36	2	0	1	2	5	1	457	1	1	460	14	316	1	0	331	832
Grand Total	75	5	388	23	491	25	0	12	10	47	8	6530	60	24	6622	313	6344	29	4	6690	13850
Apprch %	15.3	1	79	4.7		53.2	0	25.5	21.3		0.1	98.6	0.9	0.4		4.7	94.8	0.4	0.1		
Total %	0.5	0	2.8	0.2	3.5	0.2	0	0.1	0.1	0.3	0.1	47.1	0.4	0.2	47.8	2.3	45.8	0.2	0	48.3	
Cars	75	5	386	23	489	24	0	12	10	46	8	6415	60	24	6507	313	6223	29	4	6569	13611
% Cars	100	100	99.5	100	99.6	96	0	100	100	97.9	100	98.2	100	100	98.3	100	98.1	100	100	98.2	98.3
Trucks and Buses	0	0	2	0	2	1	0	0	0	1	0	115	0	0	115	0	121	0	0	121	239
% Trucks and Buses	0	0	0.5	0	0.4	4	0	0	0	2.1	0	1.8	0	0	1.7	0	1.9	0	0	1.8	1.7

Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780004
Site Code : 24780004
Start Date : 1/31/2008
Page No : 2

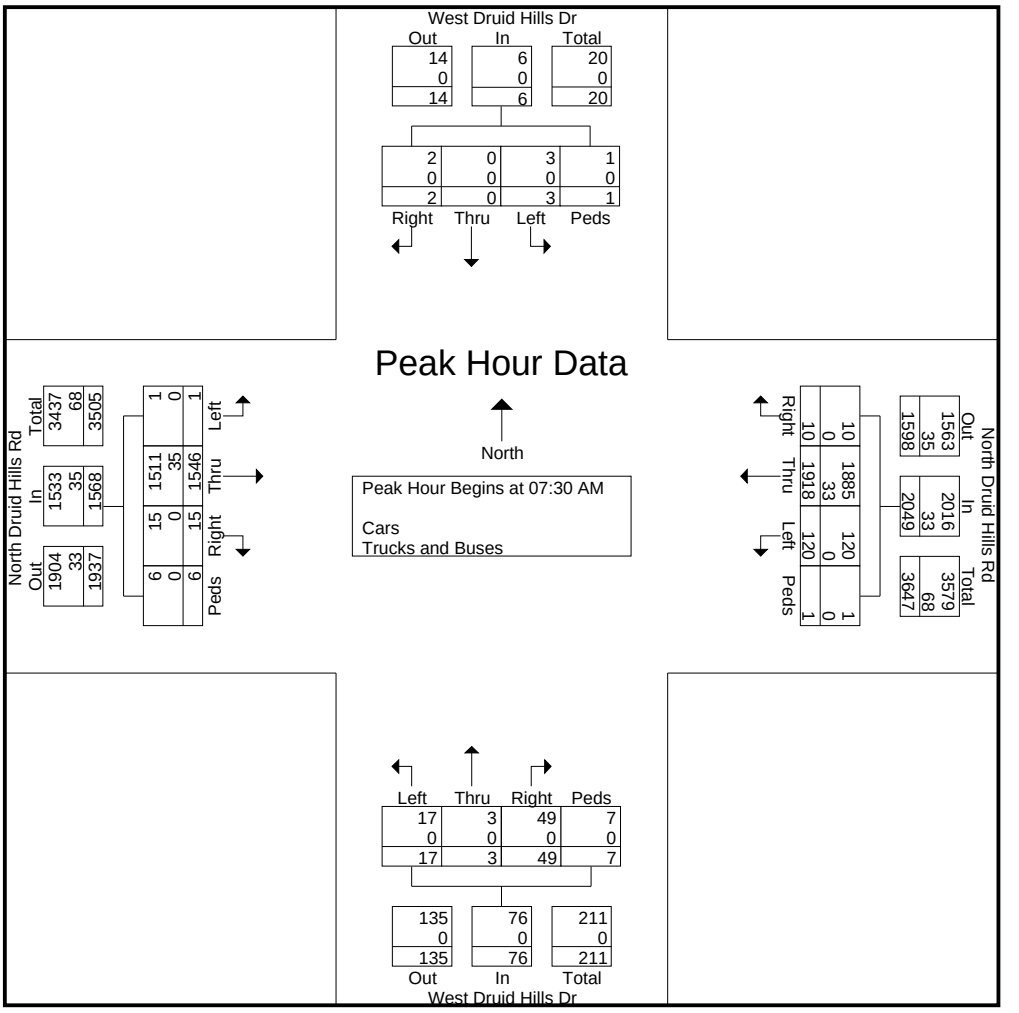


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780004
Site Code : 24780004
Start Date : 1/31/2008
Page No : 3

	West Druid Hills Dr Northbound					West Druid Hills Dr Southbound					North Druid Hills Rd Eastbound					North Druid Hills Rd Westbound					
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 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	5	1	12	1	19	2	0	0	0	2	0	372	5	0	377	21	465	4	0	490	888
07:45 AM	3	0	18	2	23	0	0	1	0	1	0	393	3	0	396	26	475	2	0	503	923
08:00 AM	7	2	12	0	21	1	0	1	0	2	1	407	4	0	412	32	499	3	0	534	969
08:15 AM	2	0	7	4	13	0	0	0	1	1	0	374	3	6	383	41	479	1	1	522	919
Total Volume	17	3	49	7	76	3	0	2	1	6	1	1546	15	6	1568	120	1918	10	1	2049	3699
% App. Total	22.4	3.9	64.5	9.2		50	0	33.3	16.7		0.1	98.6	1	0.4		5.9	93.6	0.5	0		
PHF	.607	.375	.681	.438	.826	.375	.000	.500	.250	.750	.250	.950	.750	.250	.951	.732	.961	.625	.250	.959	.954
Cars	17	3	49	7	76	3	0	2	1	6	1	1511	15	6	1533	120	1885	10	1	2016	3631
% Cars	100	100	100	100	100	100	0	100	100	100	100	97.7	100	100	97.8	100	98.3	100	100	98.4	98.2
Trucks and Buses	0	0	0	0	0	0	0	0	0	0	0	35	0	0	35	0	33	0	0	33	68
% Trucks and Buses	0	0	0	0	0	0	0	0	0	0	0	2.3	0	0	2.2	0	1.7	0	0	1.6	1.8

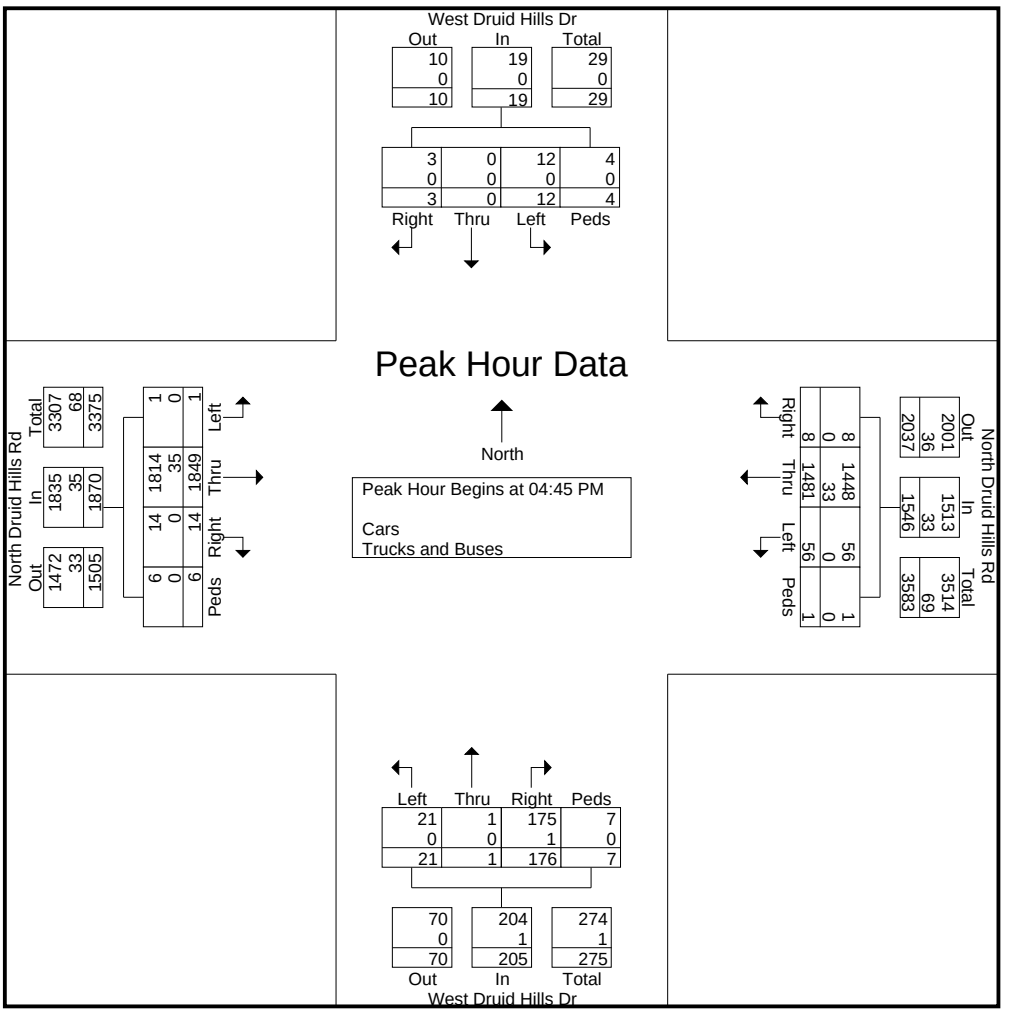


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780004
Site Code : 24780004
Start Date : 1/31/2008
Page No : 4

	West Druid Hills Dr Northbound					West Druid Hills Dr Southbound					North Druid Hills Rd Eastbound					North Druid Hills Rd Westbound					
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 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	8	0	68	4	80	1	0	1	0	2	0	471	5	3	479	13	376	2	1	392	953
05:00 PM	2	0	41	1	44	2	0	0	2	4	1	459	7	1	468	17	367	3	0	387	903
05:15 PM	4	1	40	0	45	7	0	1	0	8	0	443	1	1	445	12	382	1	0	395	893
05:30 PM	7	0	27	2	36	2	0	1	2	5	0	476	1	1	478	14	356	2	0	372	891
Total Volume	21	1	176	7	205	12	0	3	4	19	1	1849	14	6	1870	56	1481	8	1	1546	3640
% App. Total	10.2	0.5	85.9	3.4		63.2	0	15.8	21.1		0.1	98.9	0.7	0.3		3.6	95.8	0.5	0.1		
PHF	.656	.250	.647	.438	.641	.429	.000	.750	.500	.594	.250	.971	.500	.500	.976	.824	.969	.667	.250	.978	.955
Cars	21	1	175	7	204	12	0	3	4	19	1	1814	14	6	1835	56	1448	8	1	1513	3571
% Cars	100	100	99.4	100	99.5	100	0	100	100	100	100	98.1	100	100	98.1	100	97.8	100	100	97.9	98.1
Trucks and Buses	0	0	1	0	1	0	0	0	0	0	0	35	0	0	35	0	33	0	0	33	69
% Trucks and Buses	0	0	0.6	0	0.5	0	0	0	0	0	0	1.9	0	0	1.9	0	2.2	0	0	2.1	1.9



TRAFFIC DATA COLLECTION, INC.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1499/2447
Counted By: EH/JFU
Weather: Mild
Other: MRA

File Name : 08505-02a
Site Code : 00850502
Start Date : 2/13/2008
Page No : 1

Groups Printed- Cars - Trucks & Buses

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					I-85 SB Ramps Eastbound					I-85 SB Ramps Westbound					
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
07:00 AM	142	237	1	0	380	0	146	112	2	260	0	0	0	0	0	146	31	114	0	291	931
07:15 AM	125	279	5	0	409	0	144	133	0	277	0	0	0	0	0	181	47	120	0	348	1034
07:30 AM	168	332	0	0	500	0	137	132	0	269	0	0	0	0	0	281	52	142	0	475	1244
07:45 AM	154	294	0	0	448	0	200	140	0	340	0	0	0	0	0	278	56	173	2	509	1297
Total	589	1142	6	0	1737	0	627	517	2	1146	0	0	0	0	0	886	186	549	2	1623	4506
08:00 AM	159	298	0	0	457	0	348	247	0	595	0	0	0	0	0	202	42	145	0	389	1441
08:15 AM	168	318	0	1	487	0	280	142	1	423	0	0	0	0	0	204	27	159	0	390	1300
08:30 AM	146	279	0	0	425	0	230	142	7	379	0	0	0	0	0	184	37	128	0	349	1153
08:45 AM	102	312	0	0	414	0	242	100	2	344	0	0	0	0	0	204	17	147	0	368	1126
Total	575	1207	0	1	1783	0	1100	631	10	1741	0	0	0	0	0	794	123	579	0	1496	5020
Break																					
04:30 PM	175	280	0	0	455	0	385	131	0	516	0	0	0	0	0	232	105	49	0	386	1357
04:45 PM	134	260	0	0	394	0	414	121	0	535	0	0	0	0	0	252	73	105	0	430	1359
Total	309	540	0	0	849	0	799	252	0	1051	0	0	0	0	0	484	178	154	0	816	2716
05:00 PM	119	262	0	0	381	0	423	132	0	555	0	0	0	0	0	258	82	74	1	415	1351
05:15 PM	113	306	0	0	419	0	454	114	0	568	0	0	0	0	0	227	87	93	1	408	1395
05:30 PM	110	296	0	0	406	0	420	116	0	536	0	0	0	0	0	240	61	91	0	392	1334
05:45 PM	120	330	0	0	450	0	477	80	0	557	0	0	0	0	0	232	57	109	0	398	1405
Total	462	1194	0	0	1656	0	1774	442	0	2216	0	0	0	0	0	957	287	367	2	1613	5485
06:00 PM	142	269	0	0	411	0	428	102	0	530	0	0	0	0	0	189	59	85	0	333	1274
06:15 PM	116	276	0	0	392	0	359	96	0	455	0	0	0	0	0	195	49	89	0	333	1180
Grand Total	2193	4628	6	1	6828	0	5087	2040	12	7139	0	0	0	0	0	3505	882	1823	4	6214	20181
Apprch %	32.1	67.8	0.1	0		0	71.3	28.6	0.2		0	0	0	0		56.4	14.2	29.3	0.1		
Total %	10.9	22.9	0	0	33.8	0	25.2	10.1	0.1	35.4	0	0	0	0	0	17.4	4.4	9	0	30.8	
Cars	2159	4597	6	1	6763	0	5016	2020	12	7048	0	0	0	0	0	3474	874	1802	4	6154	19965
% Cars	98.4	99.3	100	100	99	0	98.6	99	100	98.7	0	0	0	0	0	99.1	99.1	98.8	100	99	98.9
Trucks & Buses	34	31	0	0	65	0	71	20	0	91	0	0	0	0	0	31	8	21	0	60	216
% Trucks & Buses	1.6	0.7	0	0	1	0	1.4	1	0	1.3	0	0	0	0	0	0.9	0.9	1.2	0	1	1.1

Note: Pedestrian data shown for each approach is crossing the approach from either direction combined.

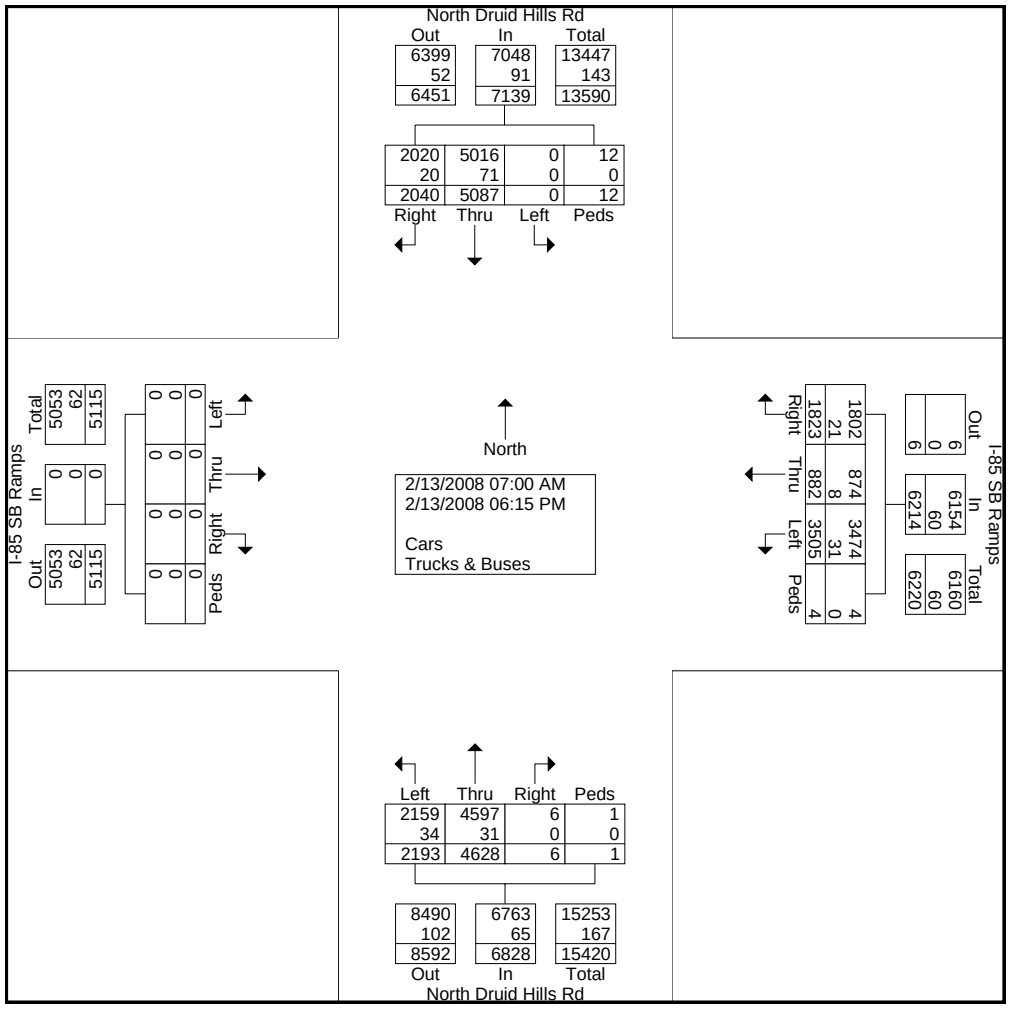
Traffic Data Collection, Inc.

Atlanta - Hilton Head

www.trafficdatacollection.com

Counter: 1499/2447
Counted By: EH/JFU
Weather: Mild
Other: MRA

File Name : 08505-02a
Site Code : 00850502
Start Date : 2/13/2008
Page No : 2



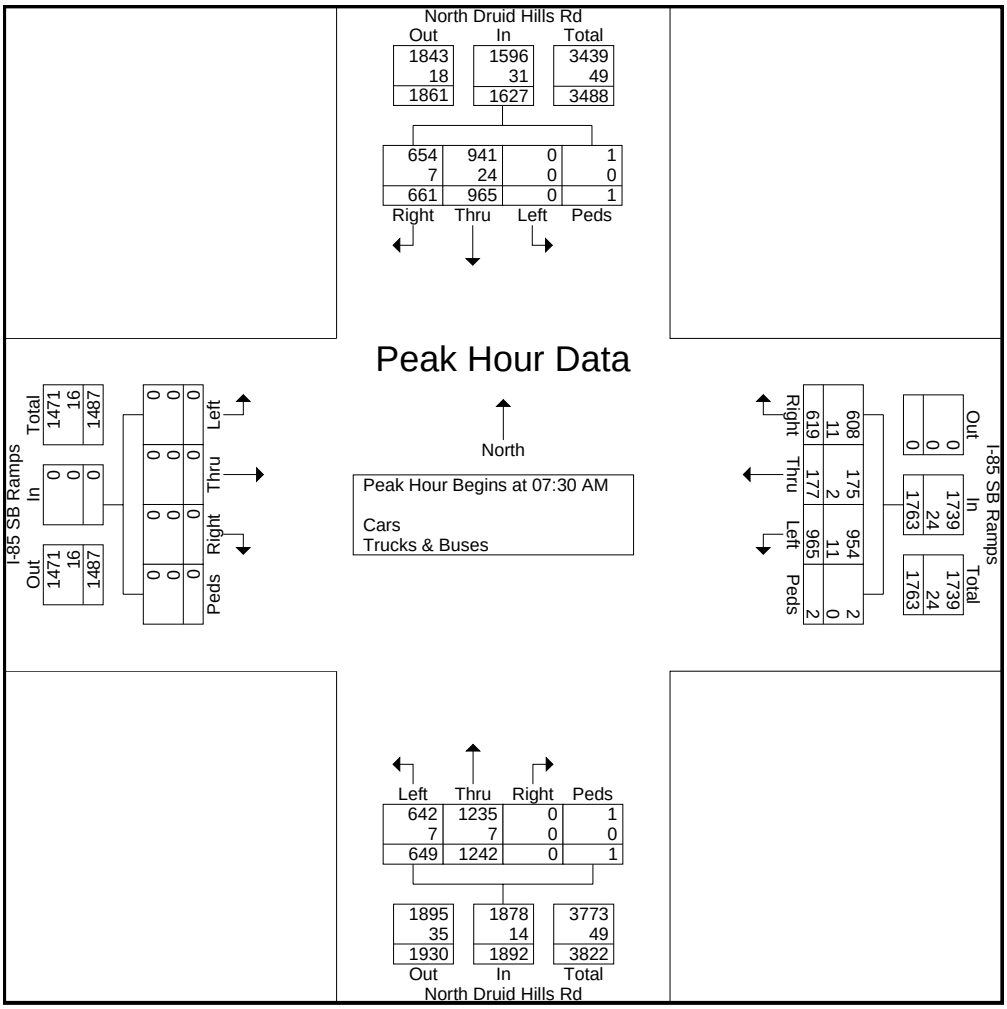
Traffic Data Collection, Inc.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1499/2447
Counted By: EH/JFU
Weather: Mild
Other: MRA

File Name : 08505-02a
Site Code : 00850502
Start Date : 2/13/2008
Page No : 3

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					I-85 SB Ramps Eastbound					I-85 SB Ramps Westbound					
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 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	168	332	0	0	500	0	137	132	0	269	0	0	0	0	0	281	52	142	0	475	1244
07:45 AM	154	294	0	0	448	0	200	140	0	340	0	0	0	0	0	278	56	173	2	509	1297
08:00 AM	159	298	0	0	457	0	348	247	0	595	0	0	0	0	0	202	42	145	0	389	1441
08:15 AM	168	318	0	1	487	0	280	142	1	423	0	0	0	0	0	204	27	159	0	390	1300
Total Volume	649	1242	0	1	1892	0	965	661	1	1627	0	0	0	0	0	965	177	619	2	1763	5282
% App. Total	34.3	65.6	0	0.1		0	59.3	40.6	0.1		0	0	0	0		54.7	10	35.1	0.1		
PHF	.966	.935	.000	.250	.946	.000	.693	.669	.250	.684	.000	.000	.000	.000	.000	.859	.790	.895	.250	.866	.916
Cars	642	1235																			
% Cars	98.9	99.4	0	100	99.3	0	97.5	98.9	100	98.1	0	0	0	0	0	98.9	98.9	98.2	100	98.6	98.7
Trucks & Buses	7	7	0	0	14	0	24	7	0	31	0	0	0	0	0	11	2	11	0	24	69
% Trucks & Buses	1.1	0.6	0	0	0.7	0	2.5	1.1	0	1.9	0	0	0	0	0	1.1	1.1	1.8	0	1.4	1.3



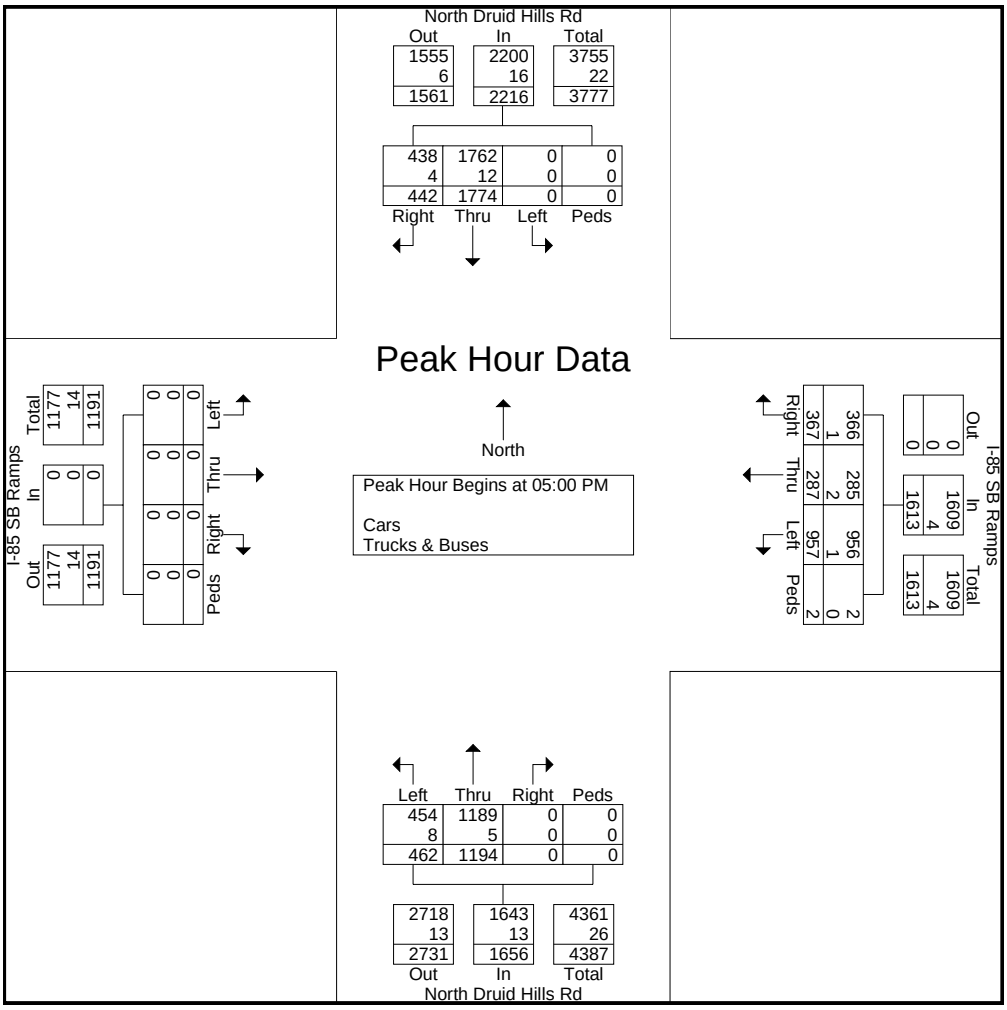
Traffic Data Collection, Inc.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1499/2447
Counted By: EH/JFU
Weather: Mild
Other: MRA

File Name : 08505-02a
Site Code : 00850502
Start Date : 2/13/2008
Page No : 4

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					I-85 SB Ramps Eastbound					I-85 SB Ramps Westbound					
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 12:00 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	119	262	0	0	381	0	423	132	0	555	0	0	0	0	0	258	82	74	1	415	1351
05:15 PM	113	306	0	0	419	0	454	114	0	568	0	0	0	0	0	227	87	93	1	408	1395
05:30 PM	110	296	0	0	406	0	420	116	0	536	0	0	0	0	0	240	61	91	0	392	1334
05:45 PM	120	330	0	0	450	0	477	80	0	557	0	0	0	0	0	232	57	109	0	398	1405
Total Volume	462	1194	0	0	1656	0	1774	442	0	2216	0	0	0	0	0	957	287	367	2	1613	5485
% App. Total	27.9	72.1	0	0		0	80.1	19.9	0		0	0	0	0		59.3	17.8	22.8	0.1		
PHF	.963	.905	.000	.000	.920	.000	.930	.837	.000	.975	.000	.000	.000	.000	.000	.927	.825	.842	.500	.972	.976
Cars	454	1189					1762														
% Cars	98.3	99.6	0	0	99.2	0	99.3	99.1	0	99.3	0	0	0	0	0	99.9	99.3	99.7	100	99.8	99.4
Trucks & Buses	8	5	0	0	13	0	12	4	0	16	0	0	0	0	0	1	2	1	0	4	33
% Trucks & Buses	1.7	0.4	0	0	0.8	0	0.7	0.9	0	0.7	0	0	0	0	0	0.1	0.7	0.3	0	0.2	0.6



TRAFFIC DATA COLLECTION, INC.

Atlanta - Hilton Head
www.trafficdatacollection.com

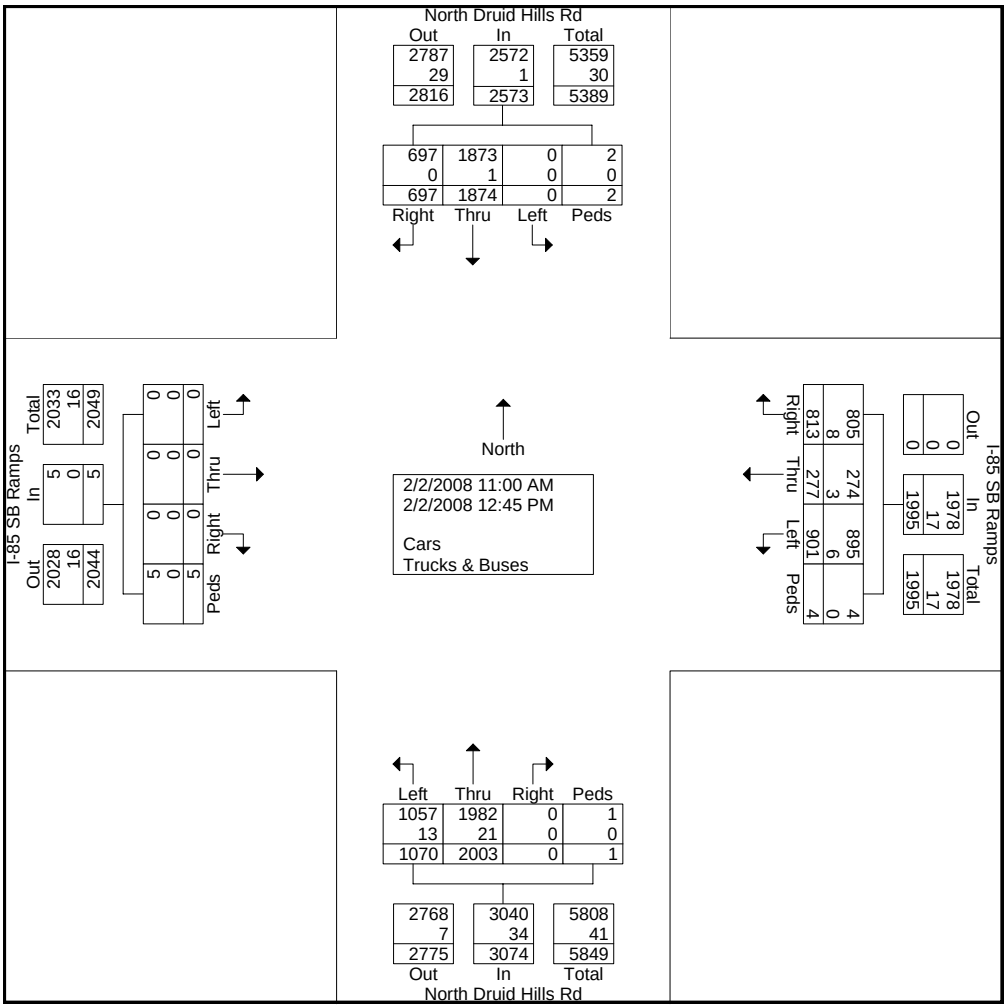
Counter: 1328
Counted By: BLE/JFU
Weather: Mild
Other: MRA

File Name : 08505-02b
Site Code : 00850502
Start Date : 2/2/2008
Page No : 1

Groups Printed- Cars - Trucks & Buses

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					I-85 SB Ramps Eastbound					I-85 SB Ramps Westbound					
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
11:00 AM	106	208	0	1	315	0	143	71	0	214	0	0	0	0	0	85	30	96	0	211	740
11:15 AM	139	221	0	0	360	0	212	86	0	298	0	0	0	0	0	107	32	102	1	242	900
11:30 AM	128	227	0	0	355	0	251	103	0	354	0	0	0	1	1	103	34	91	0	228	938
11:45 AM	133	274	0	0	407	0	218	105	0	323	0	0	0	2	2	111	33	90	1	235	967
Total	506	930	0	1	1437	0	824	365	0	1189	0	0	0	3	3	406	129	379	2	916	3545
12:00 PM	142	255	0	0	397	0	255	92	0	347	0	0	0	0	0	121	28	91	0	240	984
12:15 PM	156	266	0	0	422	0	279	82	1	362	0	0	0	0	0	114	40	101	1	256	1040
12:30 PM	133	282	0	0	415	0	271	73	0	344	0	0	0	1	1	122	45	97	0	264	1024
12:45 PM	133	270	0	0	403	0	245	85	1	331	0	0	0	1	1	138	35	145	1	319	1054
Total	564	1073	0	0	1637	0	1050	332	2	1384	0	0	0	2	2	495	148	434	2	1079	4102
Grand Total	1070	2003	0	1	3074	0	1874	697	2	2573	0	0	0	5	5	901	277	813	4	1995	7647
Apprch %	34.8	65.2	0	0		0	72.8	27.1	0.1		0	0	0	100		45.2	13.9	40.8	0.2		
Total %	14	26.2	0	0	40.2	0	24.5	9.1	0	33.6	0	0	0	0.1	0.1	11.8	3.6	10.6	0.1	26.1	
Cars	1057	1982	0	1	3040	0	1873	697	2	2572	0	0	0	5	5	895	274	805	4	1978	7595
% Cars	98.8	99	0	100	98.9	0	99.9	100	100	100	0	0	0	100	100	99.3	98.9	99	100	99.1	99.3
Trucks & Buses	13	21	0	0	34	0	1	0	0	1	0	0	0	0	0	6	3	8	0	17	52
% Trucks & Buses	1.2	1	0	0	1.1	0	0.1	0	0	0	0	0	0	0	0	0.7	1.1	1	0	0.9	0.7

Note: Pedestrian data shown for each approach is crossing the approach from either direction combined.



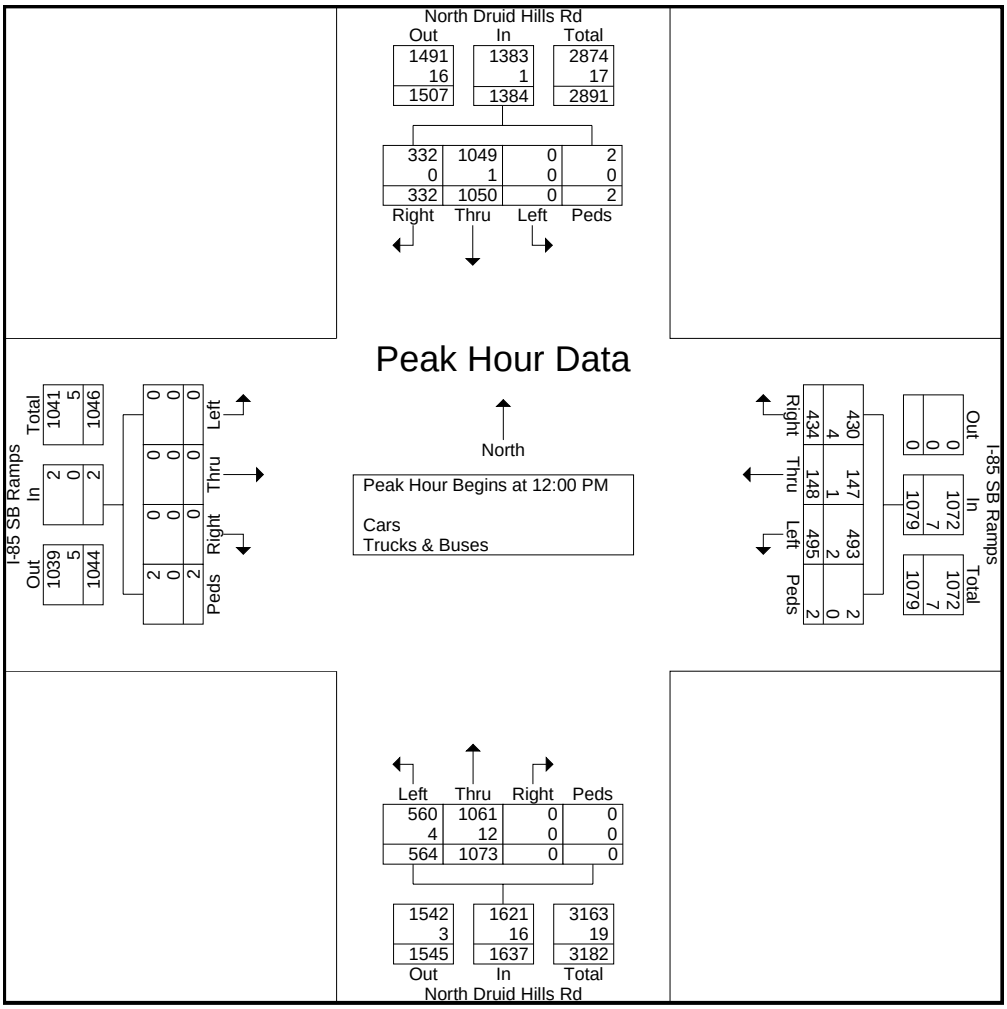
Traffic Data Collection, Inc.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1328
Counted By: BLE/JFU
Weather: Mild
Other: MRA

File Name : 08505-02b
Site Code : 00850502
Start Date : 2/2/2008
Page No : 2

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					I-85 SB Ramps Eastbound					I-85 SB Ramps Westbound					
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 11:00 AM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	142	255	0	0	397	0	255	92	0	347	0	0	0	0	0	121	28	91	0	240	984
12:15 PM	156	266	0	0	422	0	279	82	1	362	0	0	0	0	0	114	40	101	1	256	1040
12:30 PM	133	282	0	0	415	0	271	73	0	344	0	0	0	1	1	122	45	97	0	264	1024
12:45 PM	133	270	0	0	403	0	245	85	1	331	0	0	0	1	1	138	35	145	1	319	1054
Total Volume	564	1073	0	0	1637	0	1050	332	2	1384	0	0	0	2	2	495	148	434	2	1079	4102
% App. Total	34.5	65.5	0	0		0	75.9	24	0.1		0	0	0	100		45.9	13.7	40.2	0.2		
PHF	.904	.951	.000	.000	.970	.000	.941	.902	.500	.956	.000	.000	.000	.500	.500	.897	.822	.748	.500	.846	.973
Cars	560	1061					1049														
% Cars	99.3	98.9	0	0	99.0	0	99.9	100	100	99.9	0	0	0	100	100	99.6	99.3	99.1	100	99.4	99.4
Trucks & Buses	4	12	0	0	16	0	1	0	0	1	0	0	0	0	0	2	1	4	0	7	24
% Trucks & Buses	0.7	1.1	0	0	1.0	0	0.1	0	0	0.1	0	0	0	0	0	0.4	0.7	0.9	0	0.6	0.6



Traffic Data Collection, Inc.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1935/1328
Counted By: BLR/JRM
Weather: Mild
Other: MRA

File Name : 08505-03A
Site Code : 00850503
Start Date : 2/13/2008
Page No : 1

Groups Printed- Cars - Trucks & Buses

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					I-85 NB Ramps Eastbound					I-85 NB Ramps Westbound					
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
07:00 AM	0	309	103	2	414	60	226	0	0	286	3	42	158	1	204	0	0	68	1	69	973
07:15 AM	0	320	113	0	433	65	276	0	0	341	3	48	159	1	211	0	0	80	0	80	1065
07:30 AM	0	370	143	0	513	57	301	0	0	358	2	33	125	0	160	0	0	56	1	57	1088
07:45 AM	0	424	160	2	586	98	298	0	0	396	2	65	186	1	254	0	0	95	0	95	1331
Total	0	1423	519	4	1946	280	1101	0	0	1381	10	188	628	3	829	0	0	299	2	301	4457
08:00 AM	0	404	157	0	561	131	389	0	1	521	1	38	166	0	205	0	0	88	0	88	1375
08:15 AM	0	458	174	0	632	113	332	0	0	445	1	58	179	0	238	0	0	96	2	98	1413
08:30 AM	0	390	160	0	550	107	306	0	2	415	3	47	151	2	203	0	0	60	6	66	1234
08:45 AM	0	392	166	0	558	106	333	0	0	439	14	60	158	1	233	0	0	84	2	86	1316
Total	0	1644	657	0	2301	457	1360	0	3	1820	19	203	654	3	879	0	0	328	10	338	5338
Break																					
04:30 PM	0	389	210	1	600	251	361	0	0	612	2	39	147	0	188	0	0	92	1	93	1493
04:45 PM	0	362	159	0	521	238	422	0	0	660	4	53	142	0	199	0	0	109	0	109	1489
Total	0	751	369	1	1121	489	783	0	0	1272	6	92	289	0	387	0	0	201	1	202	2982
05:00 PM	0	330	198	0	528	235	413	0	0	648	5	50	162	0	217	0	0	99	1	100	1493
05:15 PM	0	347	183	0	530	257	373	0	1	631	3	61	172	0	236	0	0	121	0	121	1518
05:30 PM	0	304	204	0	508	225	405	1	0	631	4	60	152	1	217	0	0	140	0	140	1496
05:45 PM	0	303	145	0	448	222	429	0	1	652	4	60	153	1	218	0	0	124	0	124	1442
Total	0	1284	730	0	2014	939	1620	1	2	2562	16	231	639	2	888	0	0	484	1	485	5949
06:00 PM	0	305	185	0	490	202	406	0	0	608	2	55	147	0	204	0	0	121	0	121	1423
06:15 PM	0	299	157	0	456	165	375	0	1	541	1	43	144	0	188	0	0	111	0	111	1296
Grand Total	0	5706	2617	5	8328	2532	5645	1	6	8184	54	812	2501	8	3375	0	0	1544	14	1558	21445
Apprch %	0	68.5	31.4	0.1		30.9	69	0	0.1		1.6	24.1	74.1	0.2		0	0	99.1	0.9		
Total %	0	26.6	12.2	0	38.8	11.8	26.3	0	0	38.2	0.3	3.8	11.7	0	15.7	0	0	7.2	0.1	7.3	
Cars	0	5688	2599	5	8292	2507	5565	1	6	8079	54	805	2458	8	3325	0	0	1539	14	1553	21249
% Cars	0	99.7	99.3	100	99.6	99	98.6	100	100	98.7	100	99.1	98.3	100	98.5	0	0	99.7	100	99.7	99.1
Trucks & Buses	0	18	18	0	36	25	80	0	0	105	0	7	43	0	50	0	0	5	0	5	196
% Trucks & Buses	0	0.3	0.7	0	0.4	1	1.4	0	0	1.3	0	0.9	1.7	0	1.5	0	0	0.3	0	0.3	0.9

Note: Pedestrian data shown for each approach is crossing the approach from either direction combined.

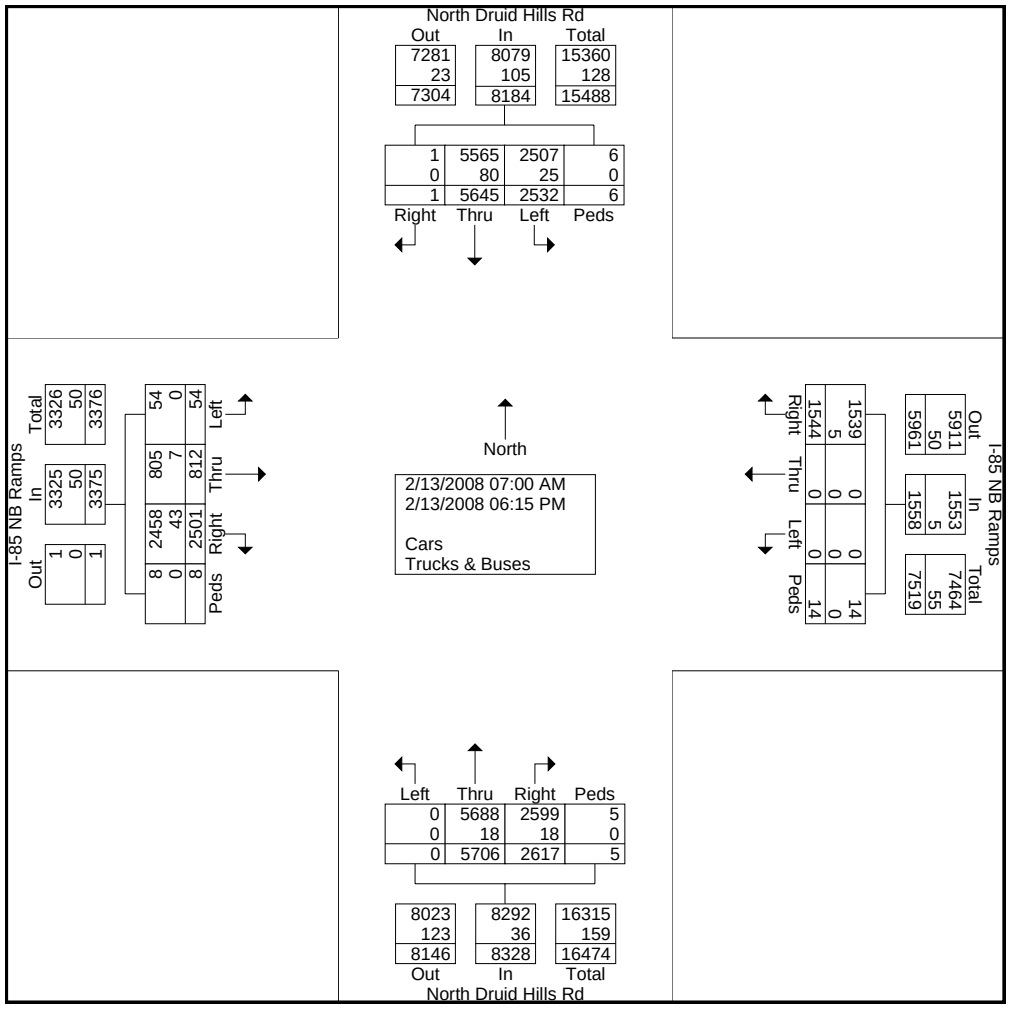
Traffic Data Collection, Inc.

Atlanta - Hilton Head

www.trafficdatacollection.com

Counter: 1935/1328
Counted By: BLR/JRM
Weather: Mild
Other: MRA

File Name : 08505-03A
Site Code : 00850503
Start Date : 2/13/2008
Page No : 2



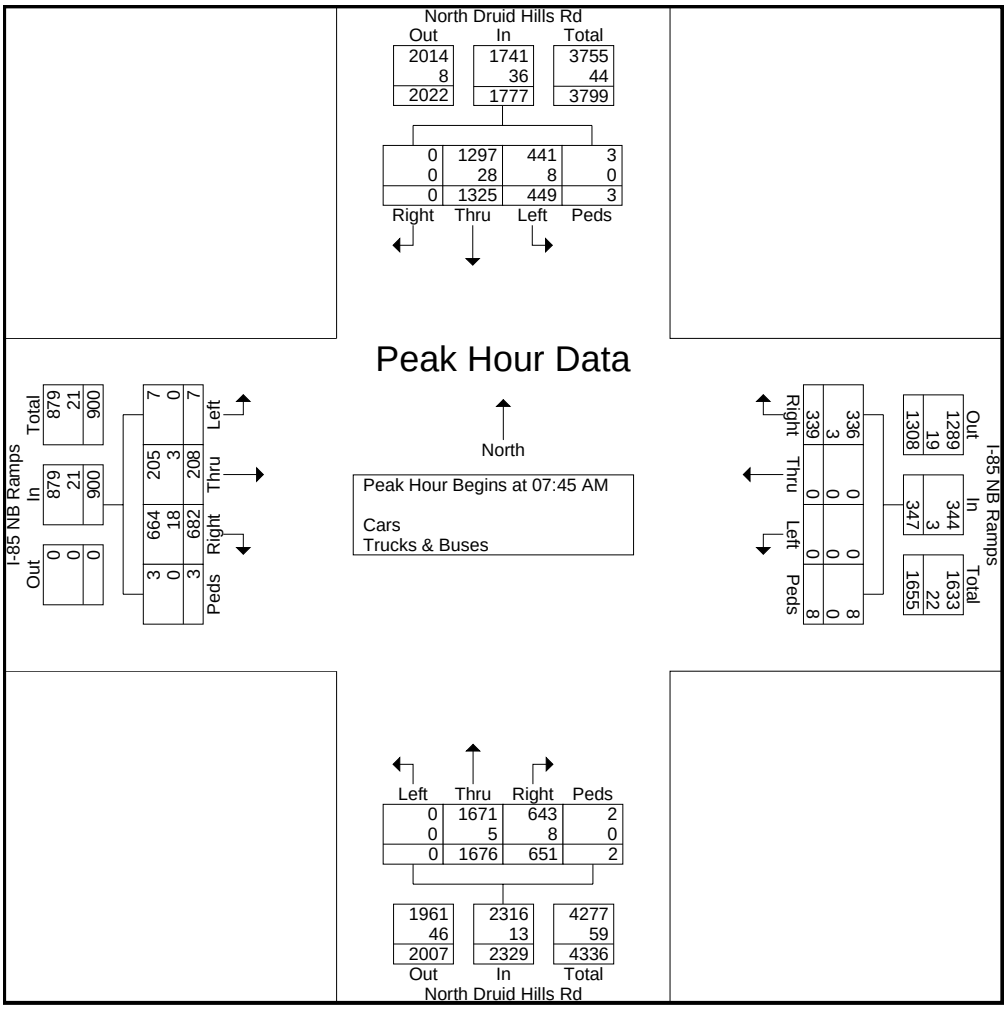
Traffic Data Collection, Inc.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1935/1328
Counted By: BLR/JRM
Weather: Mild
Other: MRA

File Name : 08505-03A
Site Code : 00850503
Start Date : 2/13/2008
Page No : 3

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					I-85 NB Ramps Eastbound					I-85 NB Ramps Westbound					
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 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	424	160	2	586	98	298	0	0	396	2	65	186	1	254	0	0	95	0	95	1331
08:00 AM	0	404	157	0	561	131	389	0	1	521	1	38	166	0	205	0	0	88	0	88	1375
08:15 AM	0	458	174	0	632	113	332	0	0	445	1	58	179	0	238	0	0	96	2	98	1413
08:30 AM	0	390	160	0	550	107	306	0	2	415	3	47	151	2	203	0	0	60	6	66	1234
Total Volume	0	1676	651	2	2329	449	1325	0	3	1777	7	208	682	3	900	0	0	339	8	347	5353
% App. Total	0	72	28	0.1		25.3	74.6	0	0.2		0.8	23.1	75.8	0.3		0	0	97.7	2.3		
PHF	.000	.915	.935	.250	.921	.857	.852	.000	.375	.853	.583	.800	.917	.375	.886	.000	.000	.883	.333	.885	.947
Cars	0	1671					1297														
% Cars	0	99.7	98.8	100	99.4	98.2	97.9	0	100	98.0	100	98.6	97.4	100	97.7	0	0	99.1	100	99.1	98.6
Trucks & Buses	0	5	8	0	13	8	28	0	0	36	0	3	18	0	21	0	0	3	0	3	73
% Trucks & Buses	0	0.3	1.2	0	0.6	1.8	2.1	0	0	2.0	0	1.4	2.6	0	2.3	0	0	0.9	0	0.9	1.4



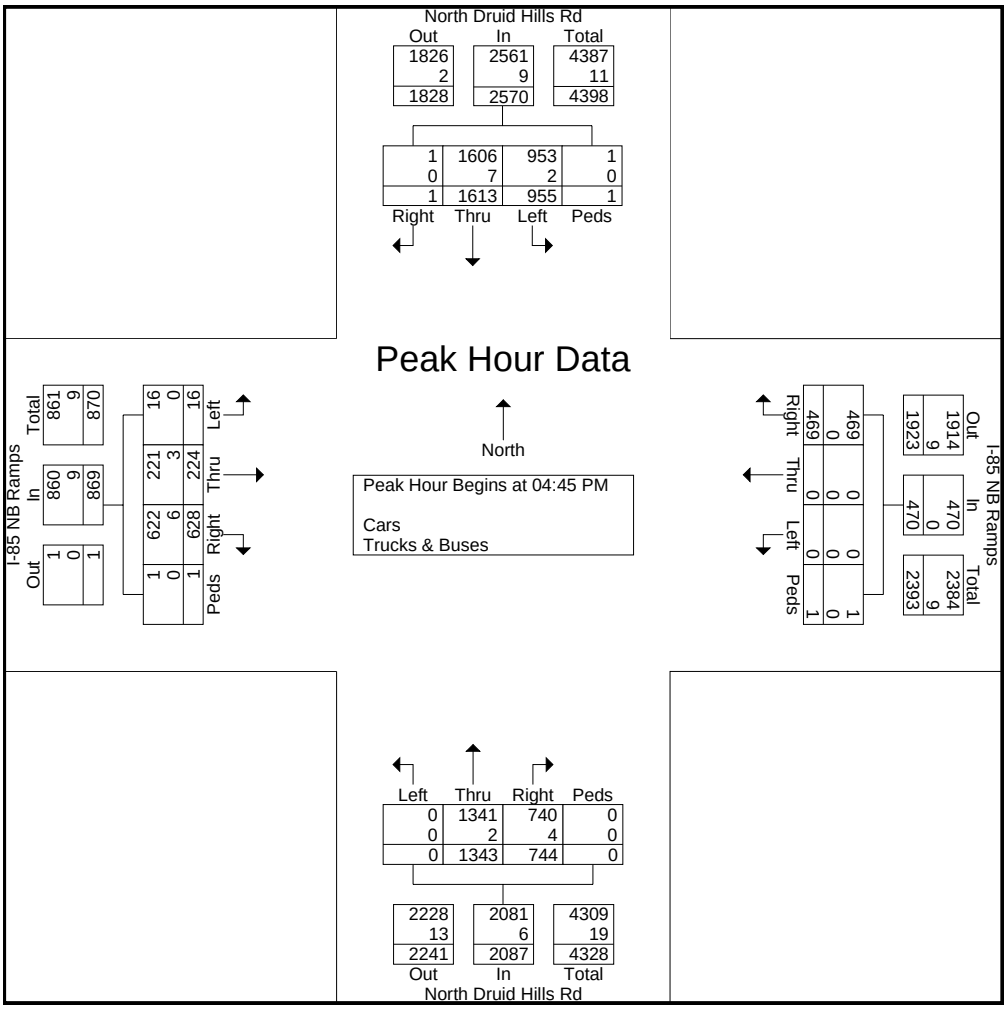
Traffic Data Collection, Inc.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1935/1328
Counted By: BLR/JRM
Weather: Mild
Other: MRA

File Name : 08505-03A
Site Code : 00850503
Start Date : 2/13/2008
Page No : 4

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					I-85 NB Ramps Eastbound					I-85 NB Ramps Westbound					
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 12:00 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	362	159	0	521	238	422	0	0	660	4	53	142	0	199	0	0	109	0	109	1489
05:00 PM	0	330	198	0	528	235	413	0	0	648	5	50	162	0	217	0	0	99	1	100	1493
05:15 PM	0	347	183	0	530	257	373	0	1	631	3	61	172	0	236	0	0	121	0	121	1518
05:30 PM	0	304	204	0	508	225	405	1	0	631	4	60	152	1	217	0	0	140	0	140	1496
Total Volume	0	1343	744	0	2087	955	1613	1	1	2570	16	224	628	1	869	0	0	469	1	470	5996
% App. Total	0	64.4	35.6	0		37.2	62.8	0	0		1.8	25.8	72.3	0.1		0	0	99.8	0.2		
PHF	.000	.927	.912	.000	.984	.929	.956	.250	.250	.973	.800	.918	.913	.250	.921	.000	.000	.838	.250	.839	.987
Cars	0	1341					1606														
% Cars	0	99.9	99.5	0	99.7	99.8	99.6	100	100	99.6	100	98.7	99.0	100	99.0	0	0	100	100	100	99.6
Trucks & Buses	0	2	4	0	6	2	7	0	0	9	0	3	6	0	9	0	0	0	0	0	24
% Trucks & Buses	0	0.1	0.5	0	0.3	0.2	0.4	0	0	0.4	0	1.3	1.0	0	1.0	0	0	0	0	0	0.4



TRAFFIC DATA COLLECTION, INC.

Atlanta - Hilton Head
www.trafficdatacollection.com

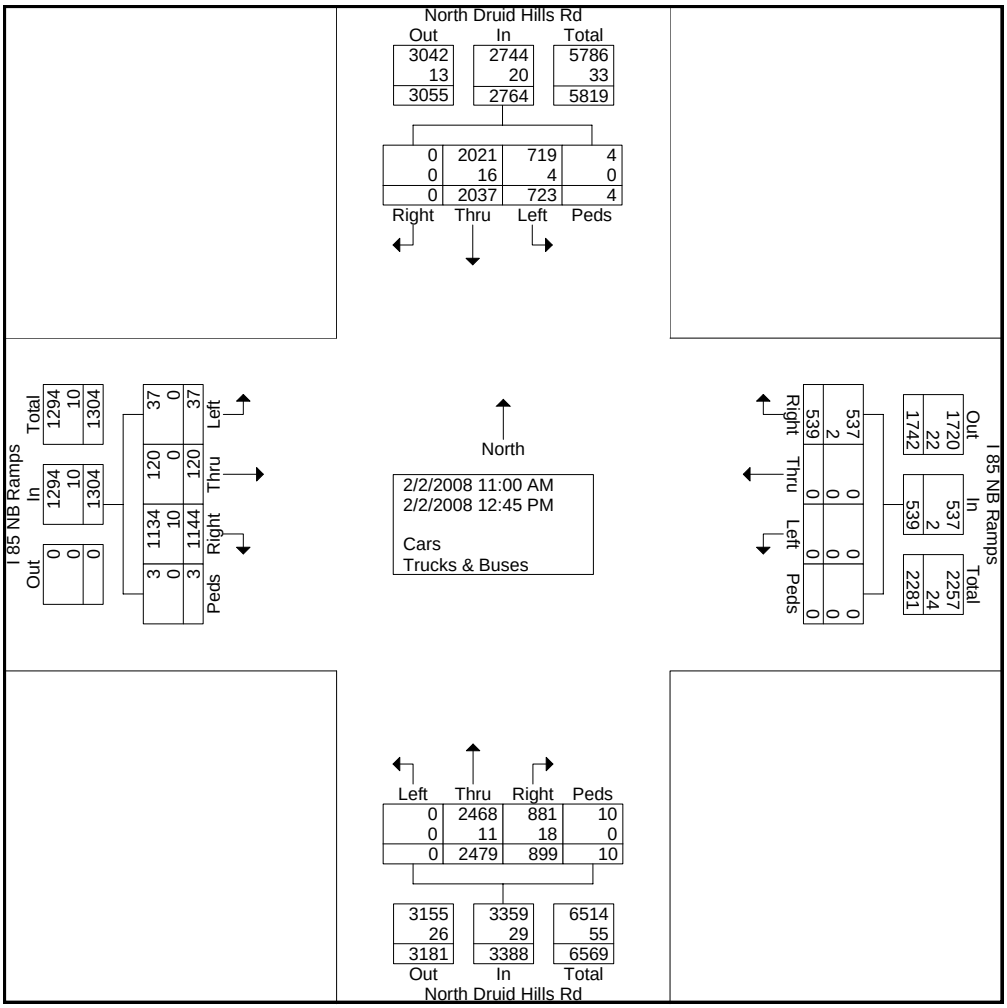
Counter: 2447/1935
Counted By: JRM/BLR
Weather: Mild
Other: MRA

File Name : 08505-03B
Site Code : 00850503
Start Date : 2/2/2008
Page No : 1

Groups Printed- Cars - Trucks & Buses

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					I 85 NB Ramps Eastbound					I 85 NB Ramps Westbound					
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
11:00 AM	0	248	95	0	343	61	211	0	1	273	3	14	105	0	122	0	0	56	0	56	794
11:15 AM	0	306	95	10	411	94	227	0	0	321	4	8	137	0	149	0	0	52	0	52	933
11:30 AM	0	311	119	0	430	90	224	0	0	314	9	11	124	0	144	0	0	62	0	62	950
11:45 AM	0	332	120	0	452	90	244	0	0	334	0	17	142	2	161	0	0	74	0	74	1021
Total	0	1197	429	10	1636	335	906	0	1	1242	16	50	508	2	576	0	0	244	0	244	3698
12:00 PM	0	319	128	0	447	92	265	0	0	357	7	11	157	0	175	0	0	71	0	71	1050
12:15 PM	0	295	125	0	420	96	293	0	0	389	4	20	156	0	180	0	0	80	0	80	1069
12:30 PM	0	340	100	0	440	105	275	0	2	382	4	23	167	1	195	0	0	67	0	67	1084
12:45 PM	0	328	117	0	445	95	298	0	1	394	6	16	156	0	178	0	0	77	0	77	1094
Total	0	1282	470	0	1752	388	1131	0	3	1522	21	70	636	1	728	0	0	295	0	295	4297
Grand Total	0	2479	899	10	3388	723	2037	0	4	2764	37	120	1144	3	1304	0	0	539	0	539	7995
Apprch %	0	73.2	26.5	0.3		26.2	73.7	0	0.1		2.8	9.2	87.7	0.2		0	0	100	0		
Total %	0	31	11.2	0.1	42.4	9	25.5	0	0.1	34.6	0.5	1.5	14.3	0	16.3	0	0	6.7	0	6.7	
Cars	0	2468	881	10	3359	719	2021	0	4	2744	37	120	1134	3	1294	0	0	537	0	537	7934
% Cars	0	99.6	98	100	99.1	99.4	99.2	0	100	99.3	100	100	99.1	100	99.2	0	0	99.6	0	99.6	99.2
Trucks & Buses	0	11	18	0	29	4	16	0	0	20	0	0	10	0	10	0	0	2	0	2	61
% Trucks & Buses	0	0.4	2	0	0.9	0.6	0.8	0	0	0.7	0	0	0.9	0	0.8	0	0	0.4	0	0.4	0.8

Note: Pedestrian data shown for each approach is crossing the approach from either direction combined.



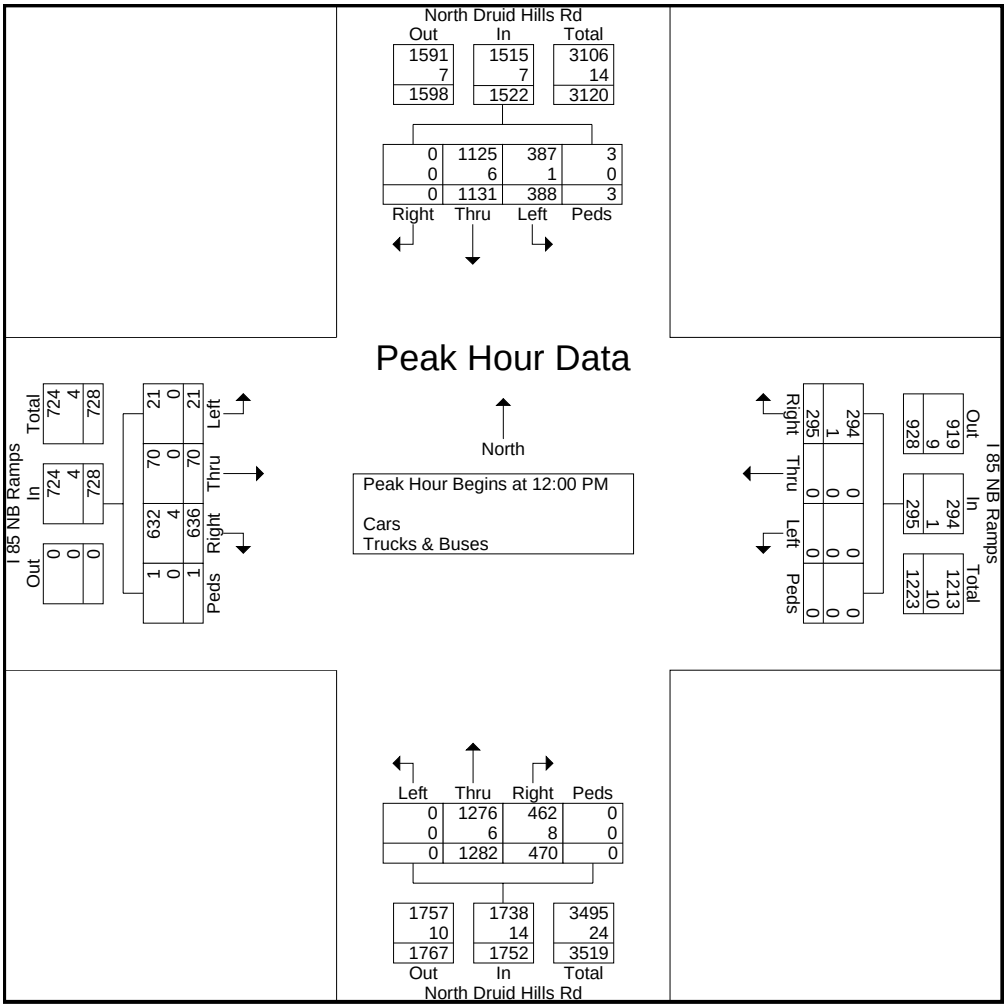
Traffic Data Collection, Inc.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 2447/1935
Counted By: JRM/BLR
Weather: Mild
Other: MRA

File Name : 08505-03B
Site Code : 00850503
Start Date : 2/2/2008
Page No : 2

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					I 85 NB Ramps Eastbound					I 85 NB Ramps Westbound					
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 11:00 AM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	0	319	128	0	447	92	265	0	0	357	7	11	157	0	175	0	0	71	0	71	1050
12:15 PM	0	295	125	0	420	96	293	0	0	389	4	20	156	0	180	0	0	80	0	80	1069
12:30 PM	0	340	100	0	440	105	275	0	2	382	4	23	167	1	195	0	0	67	0	67	1084
12:45 PM	0	328	117	0	445	95	298	0	1	394	6	16	156	0	178	0	0	77	0	77	1094
Total Volume	0	1282	470	0	1752	388	1131	0	3	1522	21	70	636	1	728	0	0	295	0	295	4297
% App. Total	0	73.2	26.8	0		25.5	74.3	0	0.2		2.9	9.6	87.4	0.1		0	0	100	0		
PHF	.000	.943	.918	.000	.980	.924	.949	.000	.375	.966	.750	.761	.952	.250	.933	.000	.000	.922	.000	.922	.982
Cars	0	1276					1125														
% Cars	0	99.5	98.3	0	99.2	99.7	99.5	0	100	99.5	100	100	99.4	100	99.5	0	0	99.7	0	99.7	99.4
Trucks & Buses	0	6	8	0	14	1	6	0	0	7	0	0	4	0	4	0	0	1	0	1	26
% Trucks & Buses	0	0.5	1.7	0	0.8	0.3	0.5	0	0	0.5	0	0	0.6	0	0.5	0	0	0.3	0	0.3	0.6



Traffic Data Collection, Inc.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1935/1328
Counted By: BLR/JRM
Weather: Mild
Other: MRA

File Name : 08505-04a
Site Code : 00850504
Start Date : 2/12/2008
Page No : 1

Groups Printed- Cars - Trucks & Buses

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					Tillie Rd Westbound					Executive Park Dr 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
07:00 AM	20	360	14	0	394	36	275	83	0	394	6	5	19	0	30	36	10	5	1	52	870
07:15 AM	22	402	14	0	438	49	351	101	4	505	10	5	28	0	43	47	2	4	0	53	1039
07:30 AM	26	483	7	0	516	43	385	106	1	535	5	6	11	0	22	58	5	9	1	73	1146
07:45 AM	24	516	15	0	555	60	381	156	0	597	8	10	15	4	37	67	16	12	1	96	1285
Total	92	1761	50	0	1903	188	1392	446	5	2031	29	26	73	4	132	208	33	30	3	274	4340
08:00 AM	27	491	13	0	531	69	331	137	0	537	5	11	18	0	34	70	10	8	0	88	1190
08:15 AM	23	482	14	0	519	61	350	124	0	535	8	11	33	1	53	87	20	17	4	128	1235
08:30 AM	31	479	10	2	522	42	326	128	3	499	9	13	15	1	38	81	16	12	2	111	1170
08:45 AM	46	454	12	0	512	65	314	135	2	516	15	5	21	4	45	59	22	21	0	102	1175
Total	127	1906	49	2	2084	237	1321	524	5	2087	37	40	87	6	170	297	68	58	6	429	4770
Break																					
04:30 PM	12	377	2	0	391	20	452	82	0	554	17	8	56	2	83	108	7	39	1	155	1183
04:45 PM	7	354	2	0	363	19	379	67	0	465	15	4	40	1	60	88	67	24	0	179	1067
Total	19	731	4	0	754	39	831	149	0	1019	32	12	96	3	143	196	74	63	1	334	2250
05:00 PM	13	366	0	0	379	24	392	92	0	508	13	9	57	0	79	87	24	29	3	143	1109
05:15 PM	21	372	1	1	395	8	452	119	0	579	15	11	44	1	71	102	11	22	3	138	1183
05:30 PM	17	338	2	0	357	18	493	127	2	640	8	12	28	0	48	79	12	25	1	117	1162
05:45 PM	16	344	4	4	368	14	485	81	1	581	7	9	29	0	45	105	4	28	1	138	1132
Total	67	1420	7	5	1499	64	1822	419	3	2308	43	41	158	1	243	373	51	104	8	536	4586
06:00 PM	11	362	2	0	375	22	507	86	1	616	6	12	26	0	44	88	8	25	0	121	1156
06:15 PM	12	307	3	1	323	13	508	70	1	592	10	5	28	0	43	61	1	18	1	81	1039
Grand Total	328	6487	115	8	6938	563	6381	1694	15	8653	157	136	468	14	775	1223	235	298	19	1775	18141
Apprch %	4.7	93.5	1.7	0.1		6.5	73.7	19.6	0.2		20.3	17.5	60.4	1.8		68.9	13.2	16.8	1.1		
Total %	1.8	35.8	0.6	0	38.2	3.1	35.2	9.3	0.1	47.7	0.9	0.7	2.6	0.1	4.3	6.7	1.3	1.6	0.1	9.8	
Cars	328	6473	114	8	6923	550	6240	1675	15	8480	157	136	468	14	775	1202	229	282	19	1732	17910
% Cars	100	99.8	99.1	100	99.8	97.7	97.8	98.9	100	98	100	100	100	100	100	98.3	97.4	94.6	100	97.6	98.7
Trucks & Buses	0	14	1	0	15	13	141	19	0	173	0	0	0	0	0	21	6	16	0	43	231
% Trucks & Buses	0	0.2	0.9	0	0.2	2.3	2.2	1.1	0	2	0	0	0	0	0	1.7	2.6	5.4	0	2.4	1.3

Note: Pedestrian data shown for each approach is crossing the approach from either direction combined.

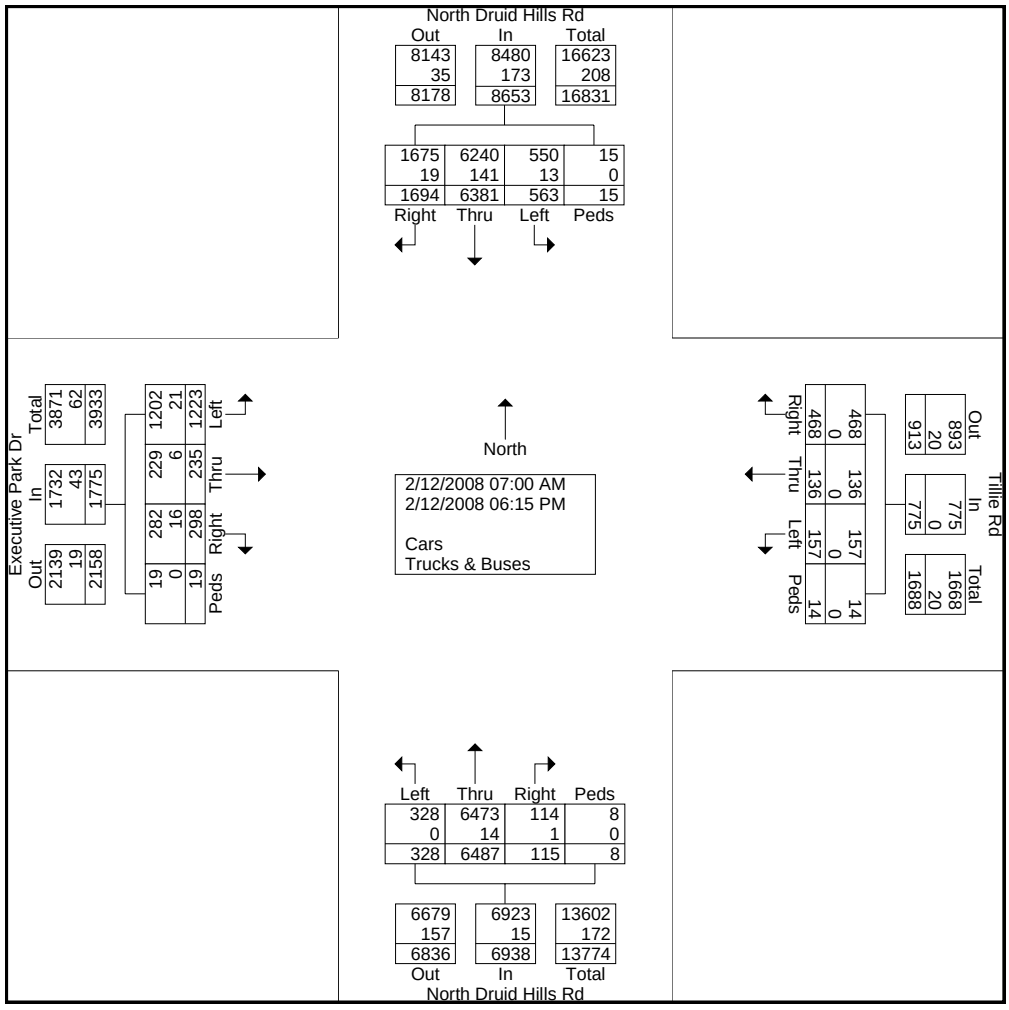
Traffic Data Collection, Inc.

Atlanta - Hilton Head

www.trafficdatacollection.com

Counter: 1935/1328
Counted By: BLR/JRM
Weather: Mild
Other: MRA

File Name : 08505-04a
Site Code : 00850504
Start Date : 2/12/2008
Page No : 2



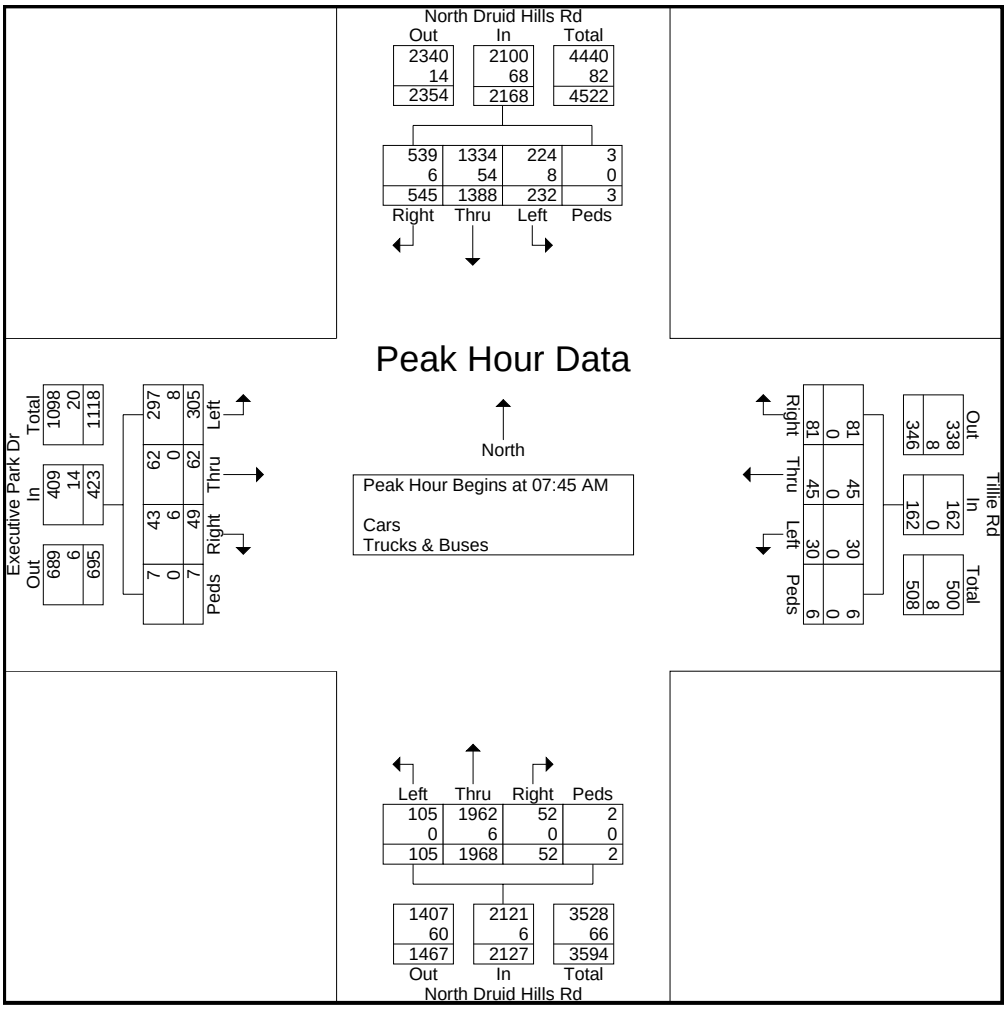
Traffic Data Collection, Inc.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1935/1328
Counted By: BLR/JRM
Weather: Mild
Other: MRA

File Name : 08505-04a
Site Code : 00850504
Start Date : 2/12/2008
Page No : 3

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					Tillie Rd Westbound					Executive Park Dr 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 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	24	516	15	0	555	60	381	156	0	597	8	10	15	4	37	67	16	12	1	96	1285
08:00 AM	27	491	13	0	531	69	331	137	0	537	5	11	18	0	34	70	10	8	0	88	1190
08:15 AM	23	482	14	0	519	61	350	124	0	535	8	11	33	1	53	87	20	17	4	128	1235
08:30 AM	31	479	10	2	522	42	326	128	3	499	9	13	15	1	38	81	16	12	2	111	1170
Total Volume	105	1968	52	2	2127	232	1388	545	3	2168	30	45	81	6	162	305	62	49	7	423	4880
% App. Total	4.9	92.5	2.4	0.1		10.7	64	25.1	0.1		18.5	27.8	50	3.7		72.1	14.7	11.6	1.7		
PHF	.847	.953	.867	.250	.958	.841	.911	.873	.250	.908	.833	.865	.614	.375	.764	.876	.775	.721	.438	.826	.949
Cars	105	1962					1334														
% Cars	100	99.7	100	100	99.7	96.6	96.1	98.9	100	96.9	100	100	100	100	100	97.4	100	87.8	100	96.7	98.2
Trucks & Buses	0	6	0	0	6	8	54	6	0	68	0	0	0	0	0	8	0	6	0	14	88
% Trucks & Buses	0	0.3	0	0	0.3	3.4	3.9	1.1	0	3.1	0	0	0	0	0	2.6	0	12.2	0	3.3	1.8



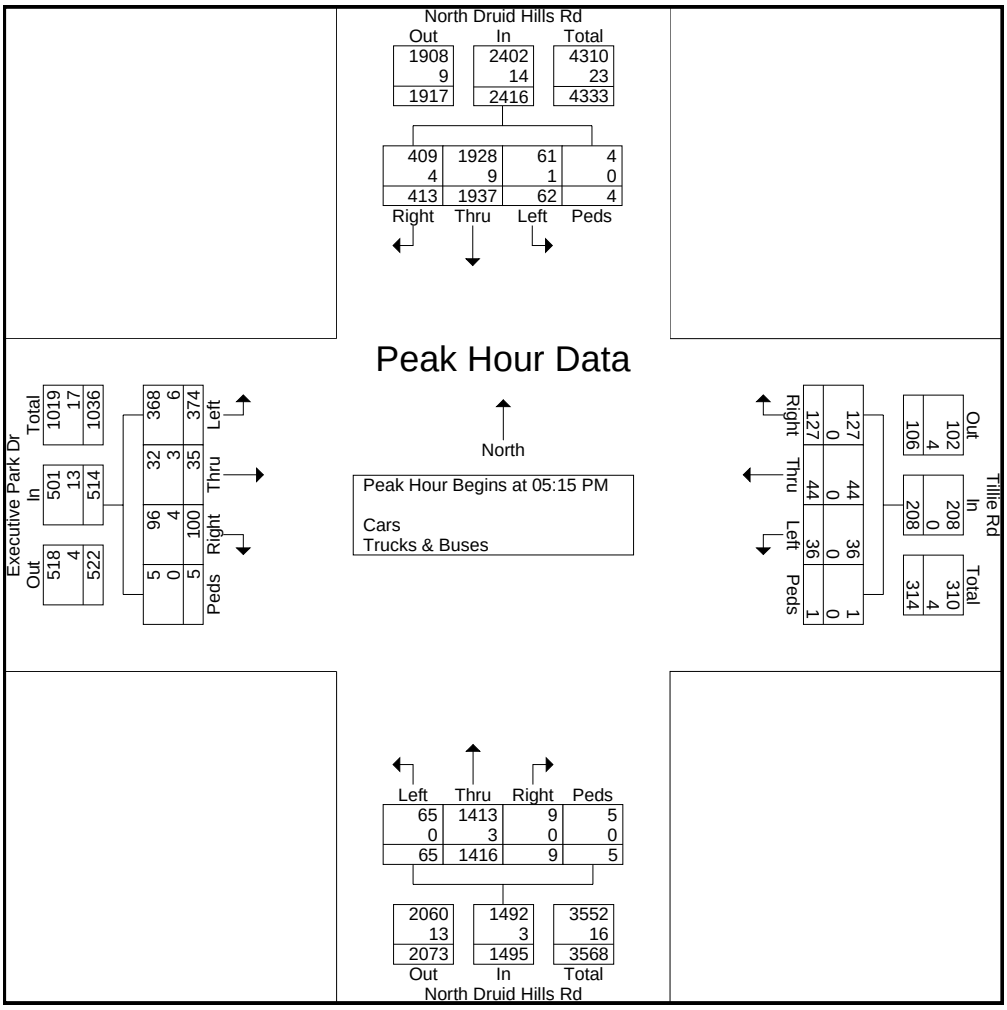
Traffic Data Collection, Inc.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1935/1328
Counted By: BLR/JRM
Weather: Mild
Other: MRA

File Name : 08505-04a
Site Code : 00850504
Start Date : 2/12/2008
Page No : 4

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					Tillie Rd Westbound					Executive Park Dr 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 12:00 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:15 PM																					
05:15 PM	21	372	1	1	395	8	452	119	0	579	15	11	44	1	71	102	11	22	3	138	1183
05:30 PM	17	338	2	0	357	18	493	127	2	640	8	12	28	0	48	79	12	25	1	117	1162
05:45 PM	16	344	4	4	368	14	485	81	1	581	7	9	29	0	45	105	4	28	1	138	1132
06:00 PM	11	362	2	0	375	22	507	86	1	616	6	12	26	0	44	88	8	25	0	121	1156
Total Volume	65	1416	9	5	1495	62	1937	413	4	2416	36	44	127	1	208	374	35	100	5	514	4633
% App. Total	4.3	94.7	0.6	0.3		2.6	80.2	17.1	0.2		17.3	21.2	61.1	0.5		72.8	6.8	19.5	1		
PHF	.774	.952	.563	.313	.946	.705	.955	.813	.500	.944	.600	.917	.722	.250	.732	.890	.729	.893	.417	.931	.979
Cars	65	1413					1928														
% Cars	100	99.8	100	100	99.8	98.4	99.5	99.0	100	99.4	100	100	100	100	100	98.4	91.4	96.0	100	97.5	99.4
Trucks & Buses	0	3	0	0	3	1	9	4	0	14	0	0	0	0	0	6	3	4	0	13	30
% Trucks & Buses	0	0.2	0	0	0.2	1.6	0.5	1.0	0	0.6	0	0	0	0	0	1.6	8.6	4.0	0	2.5	0.6



TRAFFIC DATA COLLECTION, INC.

Atlanta - Hilton Head

www.trafficdatacollection.com

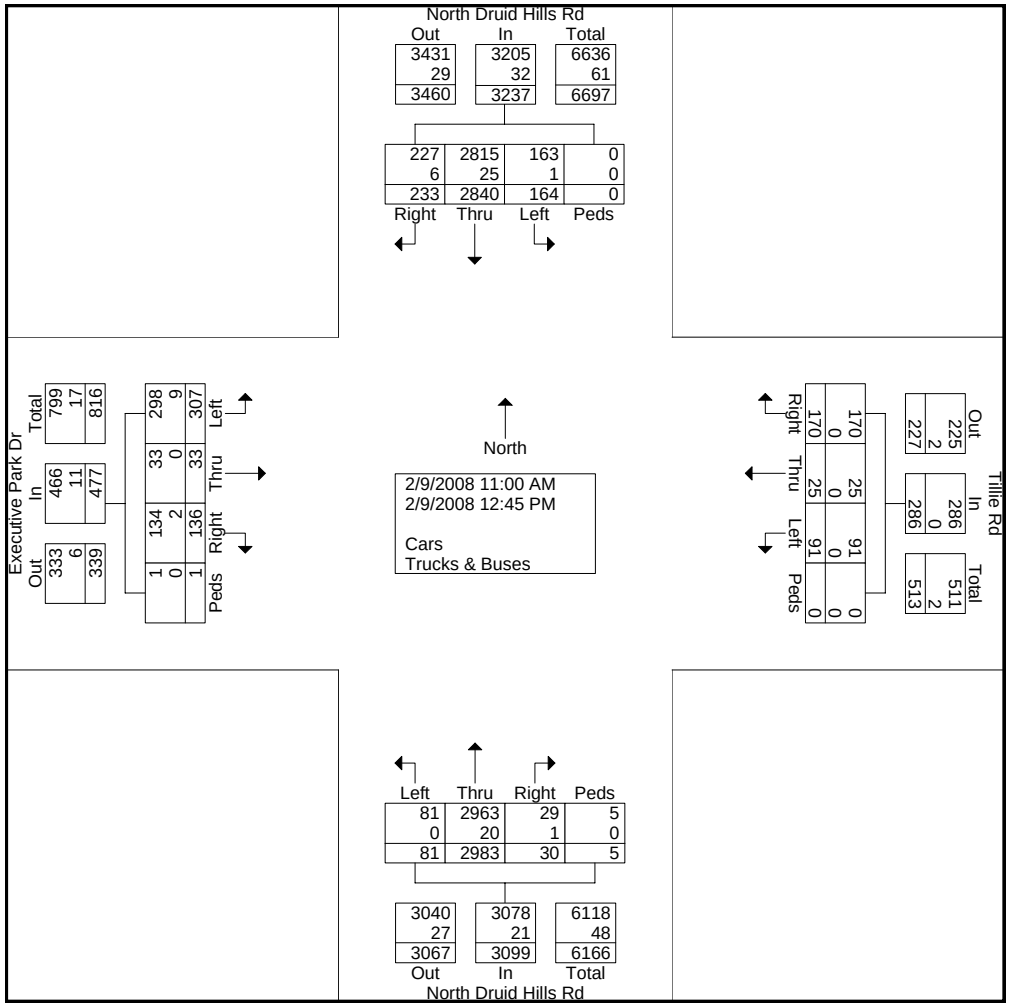
Counter: 2447/1842
Counted By: JRM/JFU
Weather: Mild
Other: MRA

File Name : 08505-04b
Site Code : 00850504
Start Date : 2/9/2008
Page No : 1

Groups Printed- Cars - Trucks & Buses

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					Executive Park Dr Eastbound					Tillie Rd Westbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
11:00 AM	3	358	13	0	374	37	304	24	0	365	16	1	31	0	48	29	2	5	0	36	823
11:15 AM	7	328	5	0	340	43	265	14	0	322	14	4	32	0	50	16	2	12	0	30	742
11:30 AM	4	365	10	0	379	24	343	15	0	382	20	7	38	0	65	15	2	8	0	25	851
11:45 AM	3	384	13	2	402	26	379	15	0	420	22	2	29	0	53	24	2	8	0	34	909
Total	17	1435	41	2	1495	130	1291	68	0	1489	72	14	130	0	216	84	8	33	0	125	3325
12:00 PM	4	367	4	0	375	29	356	28	0	413	14	7	48	1	70	23	2	15	0	40	898
12:15 PM	2	417	12	2	433	23	384	26	0	433	11	3	47	0	61	20	3	15	0	38	965
12:30 PM	2	353	12	1	368	26	388	23	0	437	26	4	41	0	71	24	6	13	0	43	919
12:45 PM	5	411	12	0	428	25	421	19	0	465	13	5	41	0	59	19	6	15	0	40	992
Total	13	1548	40	3	1604	103	1549	96	0	1748	64	19	177	1	261	86	17	58	0	161	3774
Grand Total	30	2983	81	5	3099	233	2840	164	0	3237	136	33	307	1	477	170	25	91	0	286	7099
Apprch %	1	96.3	2.6	0.2		7.2	87.7	5.1	0		28.5	6.9	64.4	0.2		59.4	8.7	31.8	0		
Total %	0.4	42	1.1	0.1	43.7	3.3	40	2.3	0	45.6	1.9	0.5	4.3	0	6.7	2.4	0.4	1.3	0	4	
Cars	29	2963	81	5	3078	227	2815	163	0	3205	134	33	298	1	466	170	25	91	0	286	7035
% Cars	96.7	99.3	100	100	99.3	97.4	99.1	99.4	0	99	98.5	100	97.1	100	97.7	100	100	100	0	100	99.1
Trucks & Buses	1	20	0	0	21	6	25	1	0	32	2	0	9	0	11	0	0	0	0	0	64
% Trucks & Buses	3.3	0.7	0	0	0.7	2.6	0.9	0.6	0	1	1.5	0	2.9	0	2.3	0	0	0	0	0	0.9

Note: Pedestrian data shown for each approach is crossing the approach from either direction combined.



Traffic Data Collection, Inc.

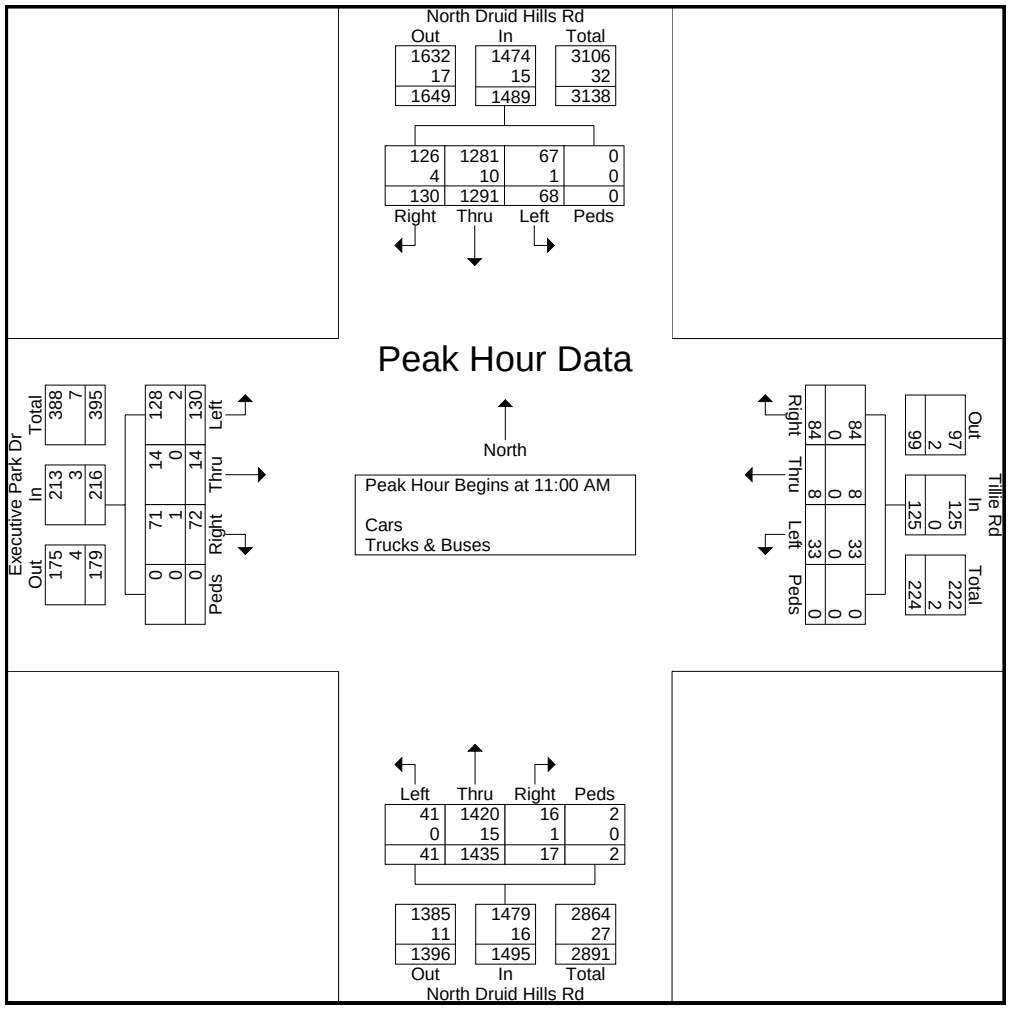
Atlanta - Hilton Head

www.trafficdatacollection.com

Counter: 2447/1842
Counted By: JRM/JFU
Weather: Mild
Other: MRA

File Name : 08505-04b
Site Code : 00850504
Start Date : 2/9/2008
Page No : 2

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					Executive Park Dr Eastbound					Tillie Rd Westbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:00 AM																					
11:00 AM	3	358	13	0	374	37	304	24	0	365	16	1	31	0	48	29	2	5	0	36	823
11:15 AM	7	328	5	0	340	43	265	14	0	322	14	4	32	0	50	16	2	12	0	30	742
11:30 AM	4	365	10	0	379	24	343	15	0	382	20	7	38	0	65	15	2	8	0	25	851
11:45 AM	3	384	13	2	402	26	379	15	0	420	22	2	29	0	53	24	2	8	0	34	909
Total Volume	17	1435	41	2	1495	130	1291	68	0	1489	72	14	130	0	216	84	8	33	0	125	3325
% App. Total	1.1	96	2.7	0.1		8.7	86.7	4.6	0		33.3	6.5	60.2	0		67.2	6.4	26.4	0		
PHF	.607	.934	.788	.250	.930	.756	.852	.708	.000	.886	.818	.500	.855	.000	.831	.724	1.000				
Cars	16	1420	41	2	1479	126	1281	67	0	1474	71	14	128	0	213	84	8	33	0	125	3291
% Cars	94.1	99.0	100	100	98.9	96.9	99.2	98.5	0	99.0	98.6	100	98.5	0	98.6	100	100	100	0	100	99.0
Trucks & Buses	1	15	0	0	16	4	10	1	0	15	1	0	2	0	3	0	0	0	0	0	34
% Trucks & Buses	5.9	1.0	0	0	1.1	3.1	0.8	1.5	0	1.0	1.4	0	1.5	0	1.4	0	0	0	0	0	1.0



Traffic Data Collection, Inc.

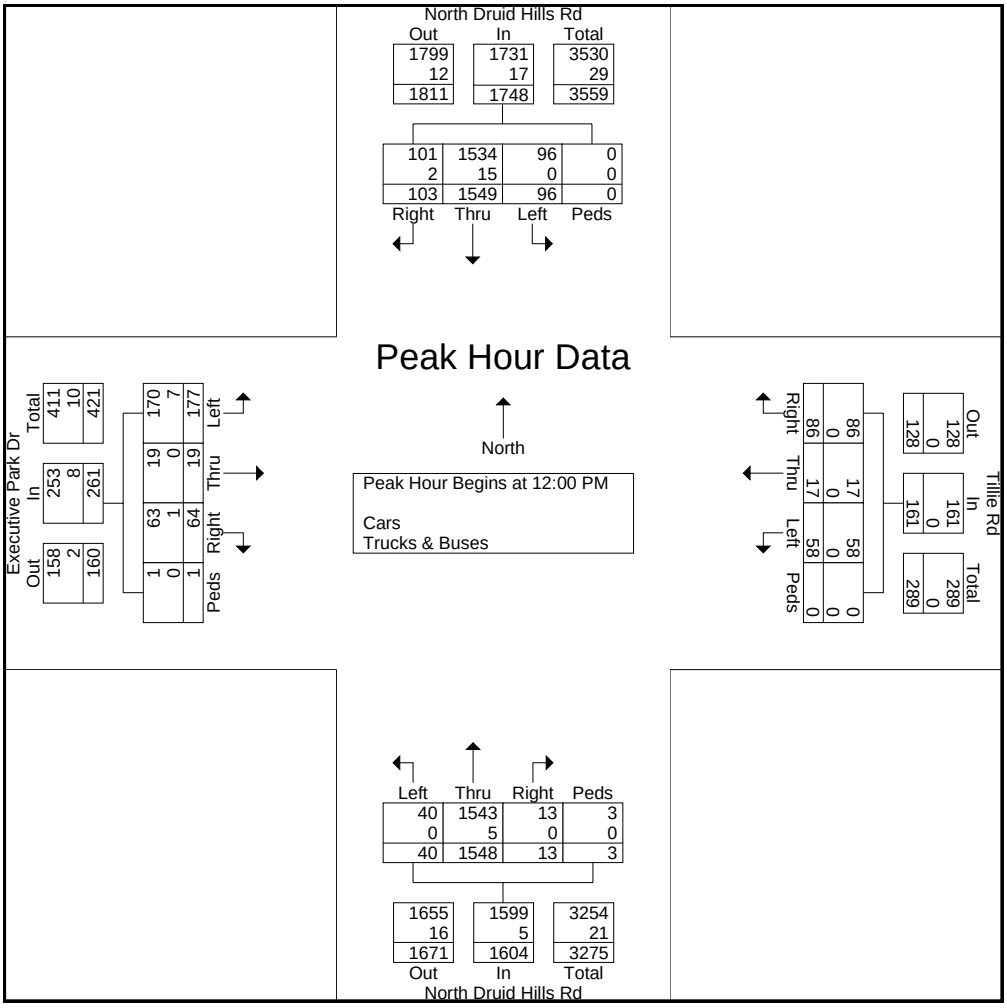
Atlanta - Hilton Head

www.trafficdatacollection.com

Counter: 2447/1842
Counted By: JRM/JFU
Weather: Mild
Other: MRA

File Name : 08505-04b
Site Code : 00850504
Start Date : 2/9/2008
Page No : 3

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					Executive Park Dr Eastbound					Tillie Rd Westbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	4	367	4	0	375	29	356	28	0	413	14	7	48	1	70	23	2	15	0	40	898
12:15 PM	2	417	12	2	433	23	384	26	0	433	11	3	47	0	61	20	3	15	0	38	965
12:30 PM	2	353	12	1	368	26	388	23	0	437	26	4	41	0	71	24	6	13	0	43	919
12:45 PM	5	411	12	0	428	25	421	19	0	465	13	5	41	0	59	19	6	15	0	40	992
Total Volume	13	1548	40	3	1604	103	1549	96	0	1748	64	19	177	1	261	86	17	58	0	161	3774
% App. Total	0.8	96.5	2.5	0.2		5.9	88.6	5.5	0		24.5	7.3	67.8	0.4		53.4	10.6	36	0		
PHF	.650	.928	.833	.375	.926	.888	.920	.857	.000	.940	.615	.679	.922	.250	.919	.896	.708	.967	.000	.936	.951
Cars	13	1543					1534														
% Cars	100	99.7	100	100	99.7	98.1	99.0	100	0	99.0	98.4	100	96.0	100	96.9	100	100	100	0	100	99.2
Trucks & Buses	0	5	0	0	5	2	15	0	0	17	1	0	7	0	8	0	0	0	0	0	30
% Trucks & Buses	0	0.3	0	0	0.3	1.9	1.0	0	0	1.0	1.6	0	4.0	0	3.1	0	0	0	0	0	0.8



Traffic Data Collection, Inc.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1499/2447
Counted By: CW/JFU
Weather: Mild
Other: MRA

File Name : 08505-05A
Site Code : 08505005
Start Date : 2/12/2008
Page No : 1

Groups Printed- Cars - Trucks & Buses

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					Briarcliff Rd Eastbound					Briarcliff Rd Westbound					
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
07:00 AM	42	232	4	0	278	15	151	101	1	268	56	41	3	0	100	10	37	30	0	77	723
07:15 AM	38	253	0	0	291	22	205	118	0	345	92	46	2	0	140	37	64	35	0	136	912
07:30 AM	17	307	7	0	331	9	233	108	0	350	104	59	15	0	178	50	68	52	0	170	1029
07:45 AM	24	350	3	0	377	30	219	118	0	367	127	49	6	0	182	18	55	69	0	142	1068
Total	121	1142	14	0	1277	76	808	445	1	1330	379	195	26	0	600	115	224	186	0	525	3732
08:00 AM	24	345	3	0	372	26	192	118	0	336	85	58	10	0	153	19	64	72	0	155	1016
08:15 AM	17	363	5	1	386	30	185	132	0	347	100	69	4	0	173	20	70	59	0	149	1055
08:30 AM	20	351	1	0	372	20	152	120	0	292	100	96	9	2	207	13	65	44	0	122	993
08:45 AM	22	319	3	1	345	21	158	138	0	317	100	51	10	2	163	20	53	51	0	124	949
Total	83	1378	12	2	1475	97	687	508	0	1292	385	274	33	4	696	72	252	226	0	550	4013
Break																					
04:30 PM	13	198	5	0	216	58	298	115	0	471	156	144	9	1	310	31	63	27	0	121	1118
04:45 PM	33	193	5	0	231	69	317	104	0	490	126	89	9	0	224	18	67	27	0	112	1057
Total	46	391	10	0	447	127	615	219	0	961	282	233	18	1	534	49	130	54	0	233	2175
05:00 PM	35	179	9	0	223	66	335	98	0	499	134	126	9	1	270	11	55	31	0	97	1089
05:15 PM	30	168	2	0	200	61	345	108	0	514	144	118	6	0	268	27	63	39	0	129	1111
05:30 PM	31	188	9	0	228	70	310	129	0	509	113	124	10	0	247	30	56	38	0	124	1108
05:45 PM	39	214	4	0	257	93	296	131	0	520	105	162	9	1	277	23	57	22	0	102	1156
Total	135	749	24	0	908	290	1286	466	0	2042	496	530	34	2	1062	91	231	130	0	452	4464
06:00 PM	40	191	9	0	240	74	329	122	0	525	127	111	26	0	264	20	59	32	0	111	1140
06:15 PM	29	176	9	0	214	92	333	143	0	568	130	115	21	1	267	39	55	19	0	113	1162
Grand Total	454	4027	78	2	4561	756	4058	1903	1	6718	1799	1458	158	8	3423	386	951	647	0	1984	16686
Apprch %	10	88.3	1.7	0		11.3	60.4	28.3	0		52.6	42.6	4.6	0.2		19.5	47.9	32.6	0		
Total %	2.7	24.1	0.5	0	27.3	4.5	24.3	11.4	0	40.3	10.8	8.7	0.9	0	20.5	2.3	5.7	3.9	0	11.9	
Cars	444	3981	76	2	4503	729	4004	1815	1	6549	1753	1433	143	8	3337	379	935	637	0	1951	16340
% Cars	97.8	98.9	97.4	100	98.7	96.4	98.7	95.4	100	97.5	97.4	98.3	90.5	100	97.5	98.2	98.3	98.5	0	98.3	97.9
Trucks & Buses	10	46	2	0	58	27	54	88	0	169	46	25	15	0	86	7	16	10	0	33	346
% Trucks & Buses	2.2	1.1	2.6	0	1.3	3.6	1.3	4.6	0	2.5	2.6	1.7	9.5	0	2.5	1.8	1.7	1.5	0	1.7	2.1

Note: Pedestrian data shown for each approach is crossing the approach from either direction combined.

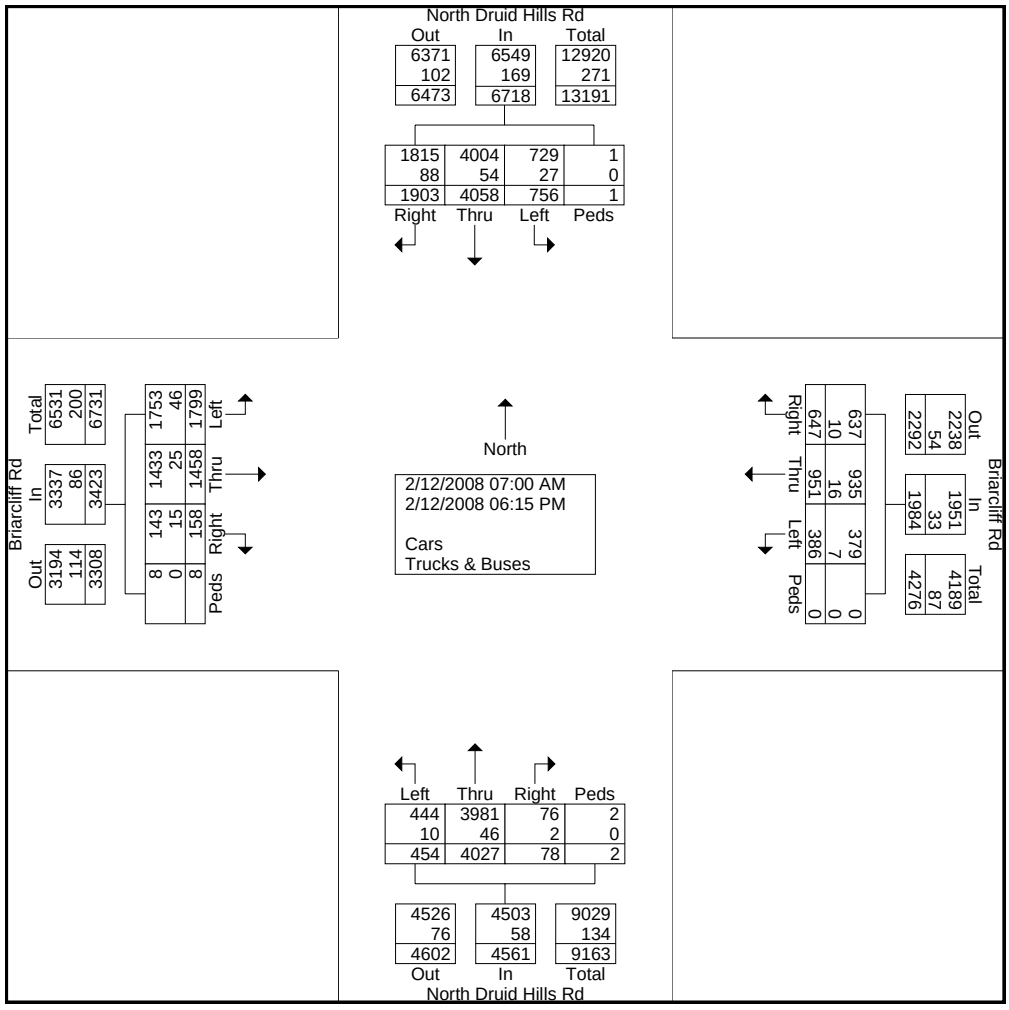
Traffic Data Collection, Inc.

Atlanta - Hilton Head

www.trafficdatacollection.com

Counter: 1499/2447
Counted By: CW/JFU
Weather: Mild
Other: MRA

File Name : 08505-05A
Site Code : 08505005
Start Date : 2/12/2008
Page No : 2



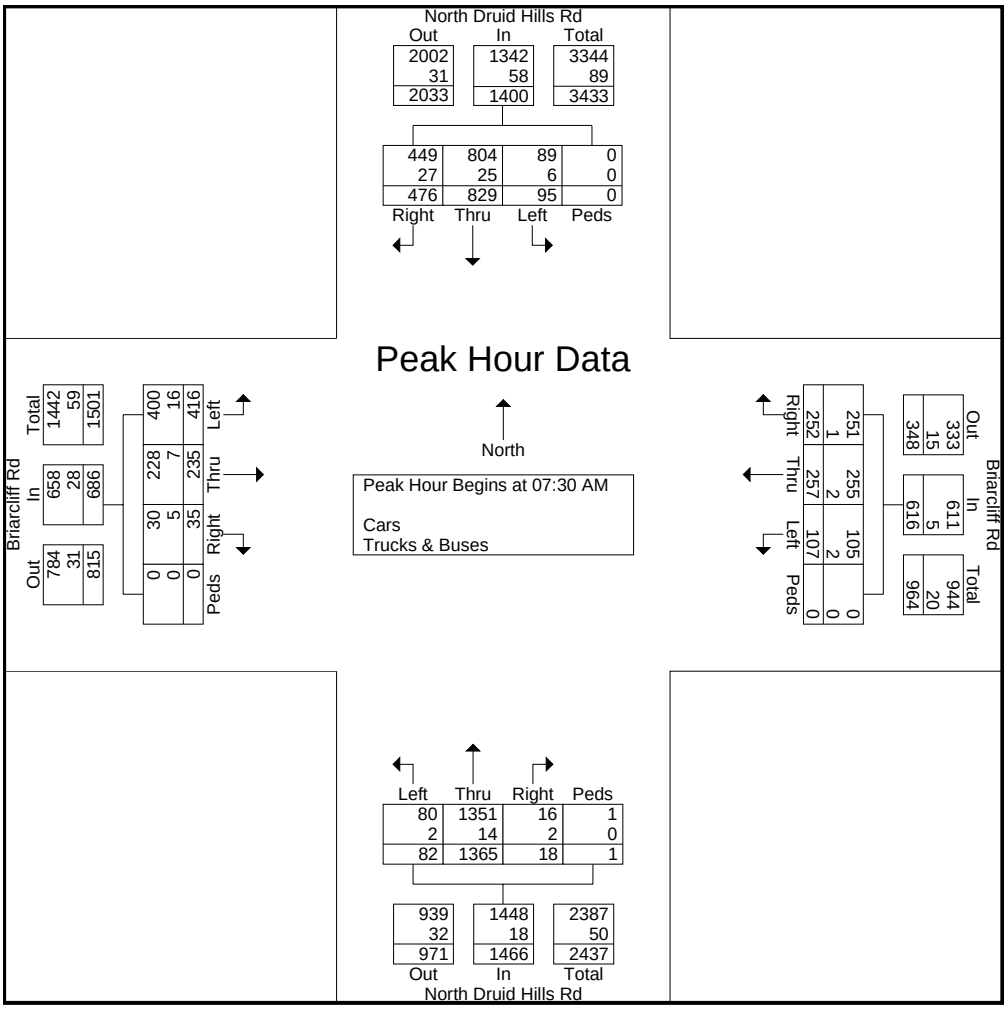
Traffic Data Collection, Inc.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1499/2447
Counted By: CW/JFU
Weather: Mild
Other: MRA

File Name : 08505-05A
Site Code : 08505005
Start Date : 2/12/2008
Page No : 3

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					Briarcliff Rd Eastbound					Briarcliff Rd Westbound					
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 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	17	307	7	0	331	9	233	108	0	350	104	59	15	0	178	50	68	52	0	170	1029
07:45 AM	24	350	3	0	377	30	219	118	0	367	127	49	6	0	182	18	55	69	0	142	1068
08:00 AM	24	345	3	0	372	26	192	118	0	336	85	58	10	0	153	19	64	72	0	155	1016
08:15 AM	17	363	5	1	386	30	185	132	0	347	100	69	4	0	173	20	70	59	0	149	1055
Total Volume	82	1365	18	1	1466	95	829	476	0	1400	416	235	35	0	686	107	257	252	0	616	4168
% App. Total	5.6	93.1	1.2	0.1		6.8	59.2	34	0		60.6	34.3	5.1	0		17.4	41.7	40.9	0		
PHF	.854	.940	.643	.250	.949	.792	.889	.902	.000	.954	.819	.851	.583	.000	.942	.535	.918	.875	.000	.906	.976
Cars	80	1351																			
% Cars	97.6	99.0	88.9	100	98.8	93.7	97.0	94.3	0	95.9	96.2	97.0	85.7	0	95.9	98.1	99.2	99.6	0	99.2	97.4
Trucks & Buses	2	14	2	0	18	6	25	27	0	58	16	7	5	0	28	2	2	1	0	5	109
% Trucks & Buses	2.4	1.0	11.1	0	1.2	6.3	3.0	5.7	0	4.1	3.8	3.0	14.3	0	4.1	1.9	0.8	0.4	0	0.8	2.6



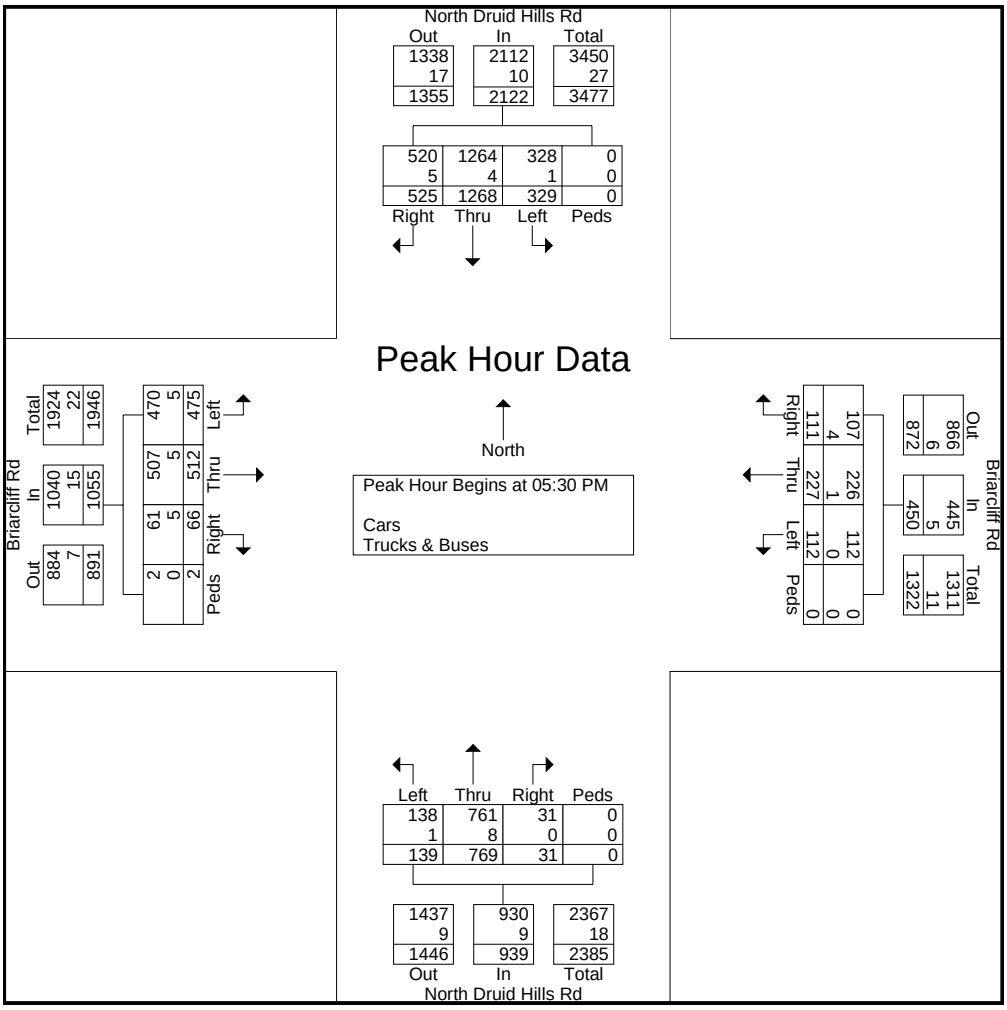
TRAFFIC DATA COLLECTION, INC.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1499/2447
Counted By: CW/JFU
Weather: Mild
Other: MRA

File Name : 08505-05A
Site Code : 08505005
Start Date : 2/12/2008
Page No : 4

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					Briarcliff Rd Eastbound					Briarcliff Rd Westbound					
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 12:00 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:30 PM																					
05:30 PM	31	188	9	0	228	70	310	129	0	509	113	124	10	0	247	30	56	38	0	124	1108
05:45 PM	39	214	4	0	257	93	296	131	0	520	105	162	9	1	277	23	57	22	0	102	1156
06:00 PM	40	191	9	0	240	74	329	122	0	525	127	111	26	0	264	20	59	32	0	111	1140
06:15 PM	29	176	9	0	214	92	333	143	0	568	130	115	21	1	267	39	55	19	0	113	1162
Total Volume	139	769	31	0	939	329	1268	525	0	2122	475	512	66	2	1055	112	227	111	0	450	4566
% App. Total	14.8	81.9	3.3	0		15.5	59.8	24.7	0		45	48.5	6.3	0.2		24.9	50.4	24.7	0		
PHF	.869	.898	.861	.000	.913	.884	.952	.918	.000	.934	.913	.790	.635	.500	.952	.718	.962	.730	.000	.907	.982
Cars	138	761	31	0	930	328	1264														
% Cars	99.3	99.0	100	0	99.0	99.7	99.7	99.0	0	99.5	98.9	99.0	92.4	100	98.6	100	99.6	96.4	0	98.9	99.1
Trucks & Buses	1	8	0	0	9	1	4	5	0	10	5	5	5	0	15	0	1	4	0	5	39
% Trucks & Buses	0.7	1.0	0	0	1.0	0.3	0.3	1.0	0	0.5	1.1	1.0	7.6	0	1.4	0	0.4	3.6	0	1.1	0.9



TRAFFIC DATA COLLECTION, INC.

Atlanta - Hilton Head
www.trafficdatacollection.com

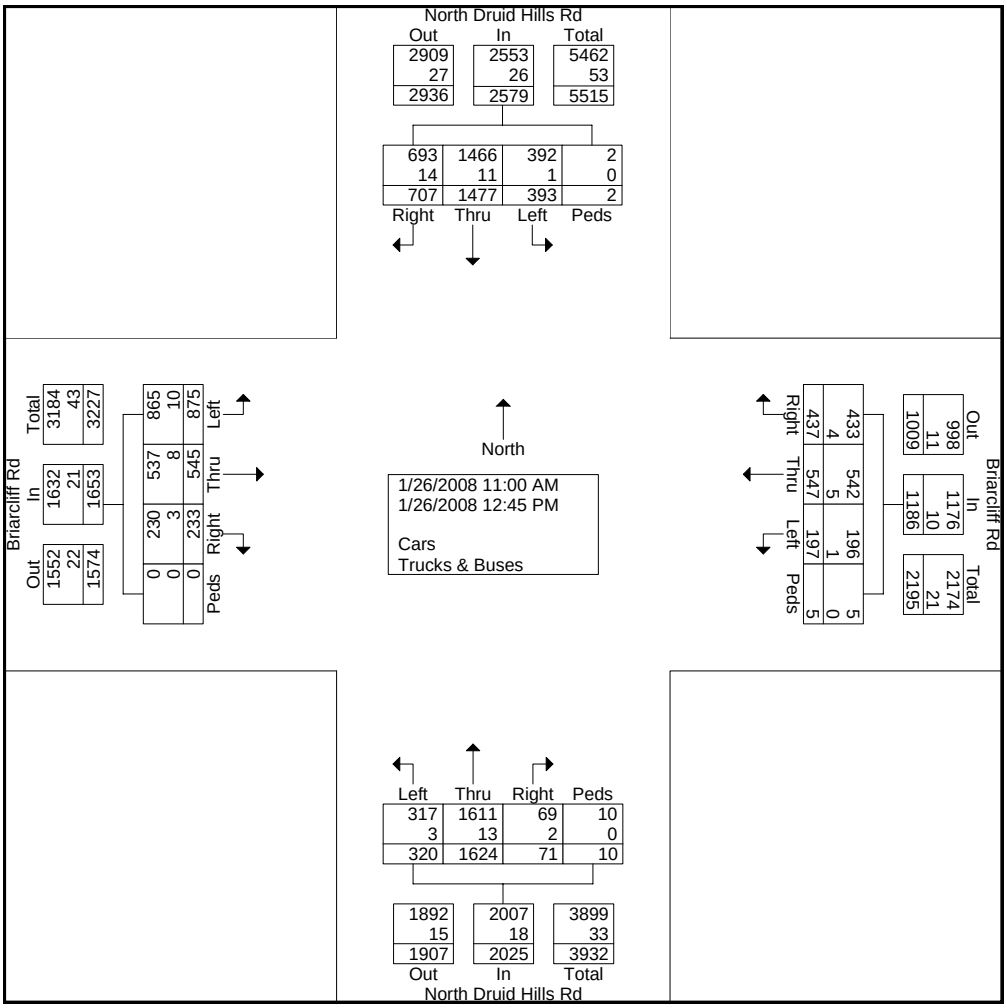
Counter: 1934/1842
Counted By: CP/JFU
Weather: Mild
Other: MRA

File Name : 08505-05b
Site Code : 00850505
Start Date : 1/26/2008
Page No : 1

Groups Printed- Cars - Trucks & Buses

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					Briarcliff Rd Eastbound					Briarcliff Rd Westbound					
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
11:00 AM	32	180	9	1	222	39	151	72	0	262	87	46	23	0	156	24	56	53	0	133	773
11:15 AM	40	183	8	2	233	37	158	79	0	274	94	47	15	0	156	24	43	39	1	107	770
11:30 AM	32	202	7	1	242	43	168	99	0	310	117	62	25	0	204	22	59	35	4	120	876
11:45 AM	41	206	11	3	261	50	181	86	0	317	105	53	37	0	195	37	56	50	0	143	916
Total	145	771	35	7	958	169	658	336	0	1163	403	208	100	0	711	107	214	177	5	503	3335
12:00 PM	50	197	6	1	254	55	171	85	0	311	113	77	27	0	217	23	68	73	0	164	946
12:15 PM	40	213	15	1	269	52	200	103	0	355	116	75	41	0	232	24	82	51	0	157	1013
12:30 PM	32	217	9	1	259	56	227	80	2	365	113	93	26	0	232	18	106	63	0	187	1043
12:45 PM	53	226	6	0	285	61	221	103	0	385	130	92	39	0	261	25	77	73	0	175	1106
Total	175	853	36	3	1067	224	819	371	2	1416	472	337	133	0	942	90	333	260	0	683	4108
Grand Total	320	1624	71	10	2025	393	1477	707	2	2579	875	545	233	0	1653	197	547	437	5	1186	7443
Apprch %	15.8	80.2	3.5	0.5		15.2	57.3	27.4	0.1		52.9	33	14.1	0		16.6	46.1	36.8	0.4		
Total %	4.3	21.8	1	0.1	27.2	5.3	19.8	9.5	0	34.7	11.8	7.3	3.1	0	22.2	2.6	7.3	5.9	0.1	15.9	
Cars	317	1611	69	10	2007	392	1466	693	2	2553	865	537	230	0	1632	196	542	433	5	1176	7368
% Cars	99.1	99.2	97.2	100	99.1	99.7	99.3	98	100	99	98.9	98.5	98.7	0	98.7	99.5	99.1	99.1	100	99.2	99
Trucks & Buses	3	13	2	0	18	1	11	14	0	26	10	8	3	0	21	1	5	4	0	10	75
% Trucks & Buses	0.9	0.8	2.8	0	0.9	0.3	0.7	2	0	1	1.1	1.5	1.3	0	1.3	0.5	0.9	0.9	0	0.8	1

Note: Pedestrian data shown for each approach is crossing the approach from either direction combined.



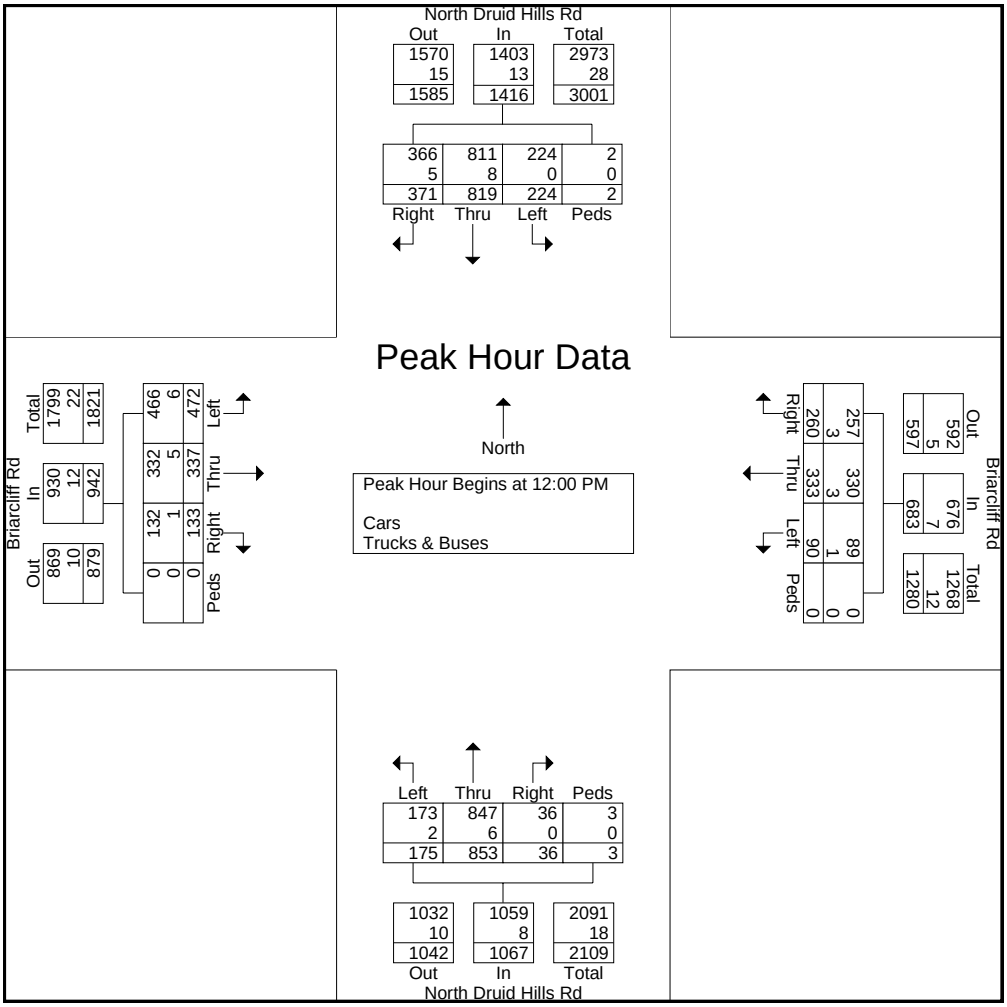
Traffic Data Collection, Inc.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1934/1842
Counted By: CP/JFU
Weather: Mild
Other: MRA

File Name : 08505-05b
Site Code : 00850505
Start Date : 1/26/2008
Page No : 2

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					Briarcliff Rd Eastbound					Briarcliff Rd Westbound					
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 11:00 AM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	50	197	6	1	254	55	171	85	0	311	113	77	27	0	217	23	68	73	0	164	946
12:15 PM	40	213	15	1	269	52	200	103	0	355	116	75	41	0	232	24	82	51	0	157	1013
12:30 PM	32	217	9	1	259	56	227	80	2	365	113	93	26	0	232	18	106	63	0	187	1043
12:45 PM	53	226	6	0	285	61	221	103	0	385	130	92	39	0	261	25	77	73	0	175	1106
Total Volume	175	853	36	3	1067	224	819	371	2	1416	472	337	133	0	942	90	333	260	0	683	4108
% App. Total	16.4	79.9	3.4	0.3		15.8	57.8	26.2	0.1		50.1	35.8	14.1	0		13.2	48.8	38.1	0		
PHF	.825	.944	.600	.750	.936	.918	.902	.900	.250	.919	.908	.906	.811	.000	.902	.900	.785	.890	.000	.913	.929
Cars	173	847	36	3	1059	224	811	366	2	1403	466	332	132	0	930	89	330	257	0	676	4068
% Cars	98.9	99.3	100	100	99.3	100	99.0	98.7	100	99.1	98.7	98.5	99.2	0	98.7	98.9	99.1	98.8	0	99.0	99.0
Trucks & Buses																					
% Trucks & Buses	1.1	0.7	0	0	0.7	0	1.0	1.3	0	0.9	1.3	1.5	0.8	0	1.3	1.1	0.9	1.2	0	1.0	1.0



TRAFFIC DATA COLLECTION, INC.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 2447/1499
Counted By: JFU/EH
Weather: Mild
Other: MRA

File Name : 08505-06a
Site Code : 08050506
Start Date : 2/20/2008
Page No : 1

Groups Printed- Cars - Trucks & Buses

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					Lavista Rd Eastbound					Lavista Rd Westbound					
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
07:00 AM	74	327	3	0	404	7	112	21	0	140	11	20	18	0	49	13	99	38	0	150	743
07:15 AM	103	350	1	0	454	7	132	30	0	169	21	50	14	0	85	17	146	22	0	185	893
07:30 AM	96	331	1	0	428	15	133	33	0	181	12	34	23	0	69	20	162	25	0	207	885
07:45 AM	109	342	28	0	479	12	177	48	0	237	16	42	26	0	84	21	174	19	4	218	1018
Total	382	1350	33	0	1765	41	554	132	0	727	60	146	81	0	287	71	581	104	4	760	3539
08:00 AM	91	346	4	0	441	22	153	33	0	208	26	35	42	0	103	28	206	29	0	263	1015
08:15 AM	114	418	6	0	538	12	175	47	0	234	34	57	36	0	127	22	191	17	0	230	1129
08:30 AM	125	375	3	0	503	12	134	45	0	191	21	34	39	0	94	30	187	38	0	255	1043
08:45 AM	90	307	8	0	405	14	193	39	0	246	21	49	40	0	110	32	165	18	0	215	976
Total	420	1446	21	0	1887	60	655	164	0	879	102	175	157	0	434	112	749	102	0	963	4163
Break																					
04:30 PM	41	160	22	0	223	8	231	11	0	250	48	118	46	0	212	15	74	16	0	105	790
04:45 PM	40	135	12	0	187	17	235	12	0	264	46	130	80	0	256	26	96	26	0	148	855
Total	81	295	34	0	410	25	466	23	0	514	94	248	126	0	468	41	170	42	0	253	1645
05:00 PM	53	172	13	0	238	22	213	15	0	250	37	136	64	0	237	29	80	24	0	133	858
05:15 PM	44	176	11	0	231	12	262	20	0	294	72	160	37	0	269	22	77	20	0	119	913
05:30 PM	51	151	28	0	230	13	217	23	0	253	51	163	50	0	264	43	75	23	0	141	888
05:45 PM	43	141	20	0	204	21	233	19	0	273	51	140	56	0	247	33	82	27	0	142	866
Total	191	640	72	0	903	68	925	77	0	1070	211	599	207	0	1017	127	314	94	0	535	3525
06:00 PM	49	161	15	0	225	20	220	18	0	258	50	163	62	0	275	30	72	18	0	120	878
06:15 PM	52	148	19	0	219	25	228	21	0	274	50	150	57	0	257	42	82	21	0	145	895
Grand Total	1175	4040	194	0	5409	239	3048	435	0	3722	567	1481	690	0	2738	423	1968	381	4	2776	14645
Apprch %	21.7	74.7	3.6	0		6.4	81.9	11.7	0		20.7	54.1	25.2	0		15.2	70.9	13.7	0.1		
Total %	8	27.6	1.3	0	36.9	1.6	20.8	3	0	25.4	3.9	10.1	4.7	0	18.7	2.9	13.4	2.6	0	19	
Cars	1157	3972	193	0	5322	231	3003	427	0	3661	565	1470	681	0	2716	418	1949	372	1	2740	14439
% Cars	98.5	98.3	99.5	0	98.4	96.7	98.5	98.2	0	98.4	99.6	99.3	98.7	0	99.2	98.8	99	97.6	25	98.7	98.6
Trucks & Buses	18	68	1	0	87	8	45	8	0	61	2	11	9	0	22	5	19	9	3	36	206
% Trucks & Buses	1.5	1.7	0.5	0	1.6	3.3	1.5	1.8	0	1.6	0.4	0.7	1.3	0	0.8	1.2	1	2.4	75	1.3	1.4

Note: Pedestrian data shown for each approach is crossing the approach from either direction combined.

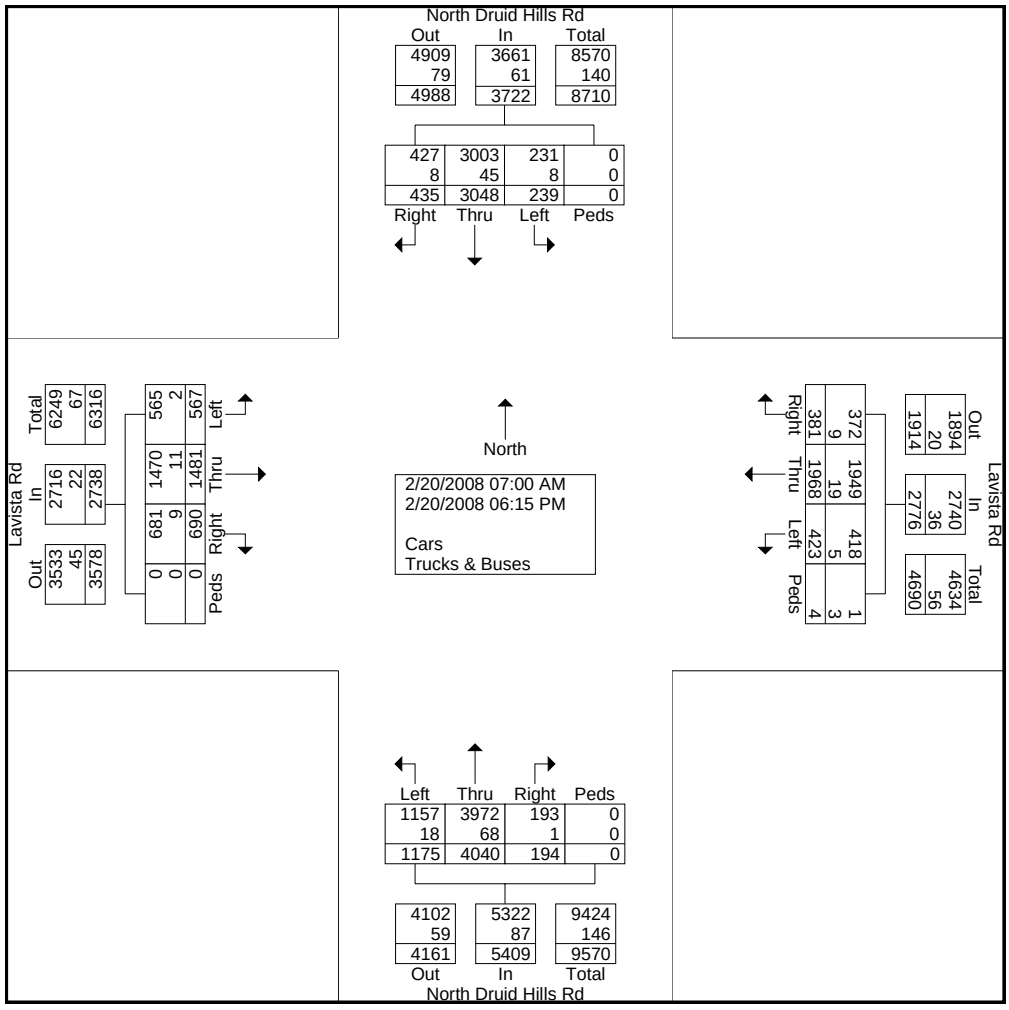
Traffic Data Collection, Inc.

Atlanta - Hilton Head

www.trafficdatacollection.com

Counter: 2447/1499
Counted By: JFU/EH
Weather: Mild
Other: MRA

File Name : 08505-06a
Site Code : 08050506
Start Date : 2/20/2008
Page No : 2



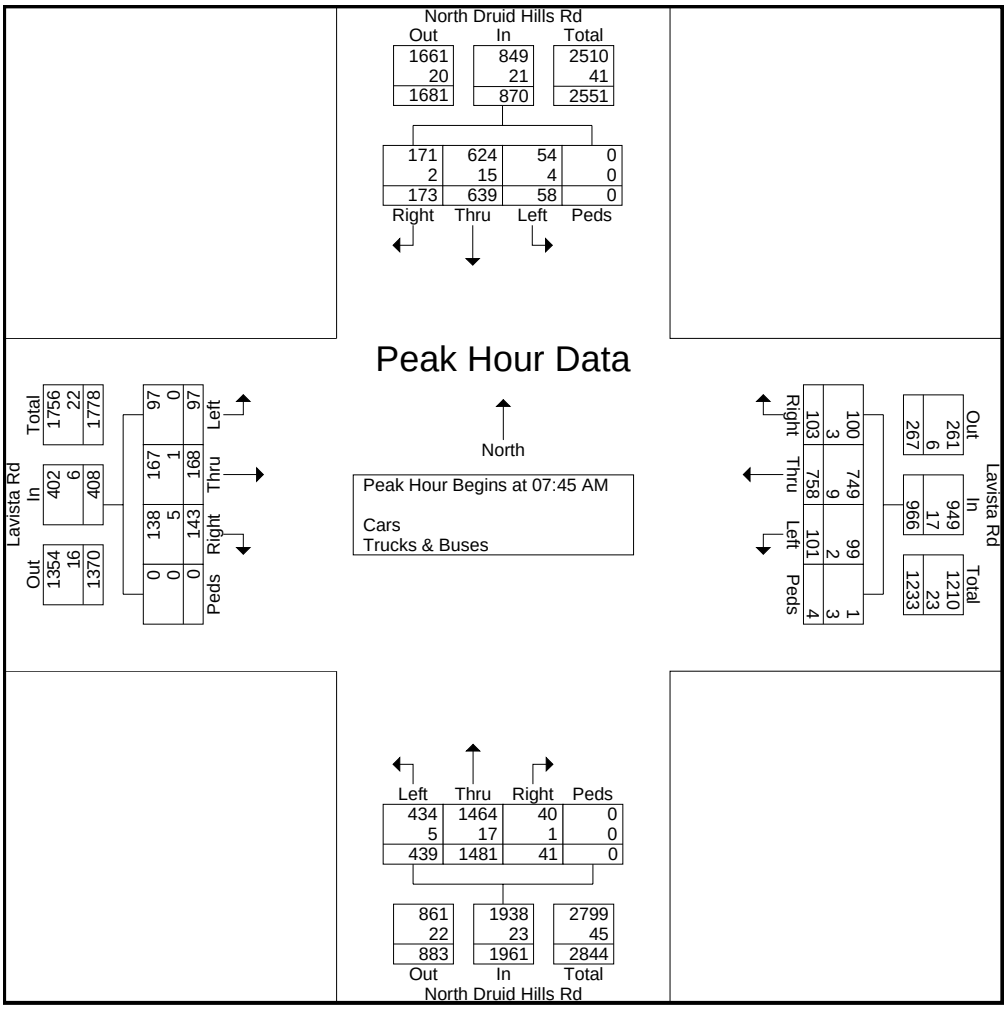
Traffic Data Collection, Inc.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 2447/1499
Counted By: JFU/EH
Weather: Mild
Other: MRA

File Name : 08505-06a
Site Code : 08050506
Start Date : 2/20/2008
Page No : 3

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					Lavista Rd Eastbound					Lavista Rd Westbound					
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 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	109	342	28	0	479	12	177	48	0	237	16	42	26	0	84	21	174	19	4	218	1018
08:00 AM	91	346	4	0	441	22	153	33	0	208	26	35	42	0	103	28	206	29	0	263	1015
08:15 AM	114	418	6	0	538	12	175	47	0	234	34	57	36	0	127	22	191	17	0	230	1129
08:30 AM	125	375	3	0	503	12	134	45	0	191	21	34	39	0	94	30	187	38	0	255	1043
Total Volume	439	1481	41	0	1961	58	639	173	0	870	97	168	143	0	408	101	758	103	4	966	4205
% App. Total	22.4	75.5	2.1	0		6.7	73.4	19.9	0		23.8	41.2	35	0		10.5	78.5	10.7	0.4		
PHF	.878	.886	.366	.000	.911	.659	.903	.901	.000	.918	.713	.737	.851	.000	.803	.842	.920	.678	.250	.918	.931
Cars	434	1464																			
% Cars	98.9	98.9	97.6	0	98.8	93.1	97.7	98.8	0	97.6	100	99.4	96.5	0	98.5	98.0	98.8	97.1	25.0	98.2	98.4
Trucks & Buses	5	17	1	0	23	4	15	2	0	21	0	1	5	0	6	2	9	3	3	17	67
% Trucks & Buses	1.1	1.1	2.4	0	1.2	6.9	2.3	1.2	0	2.4	0	0.6	3.5	0	1.5	2.0	1.2	2.9	75.0	1.8	1.6



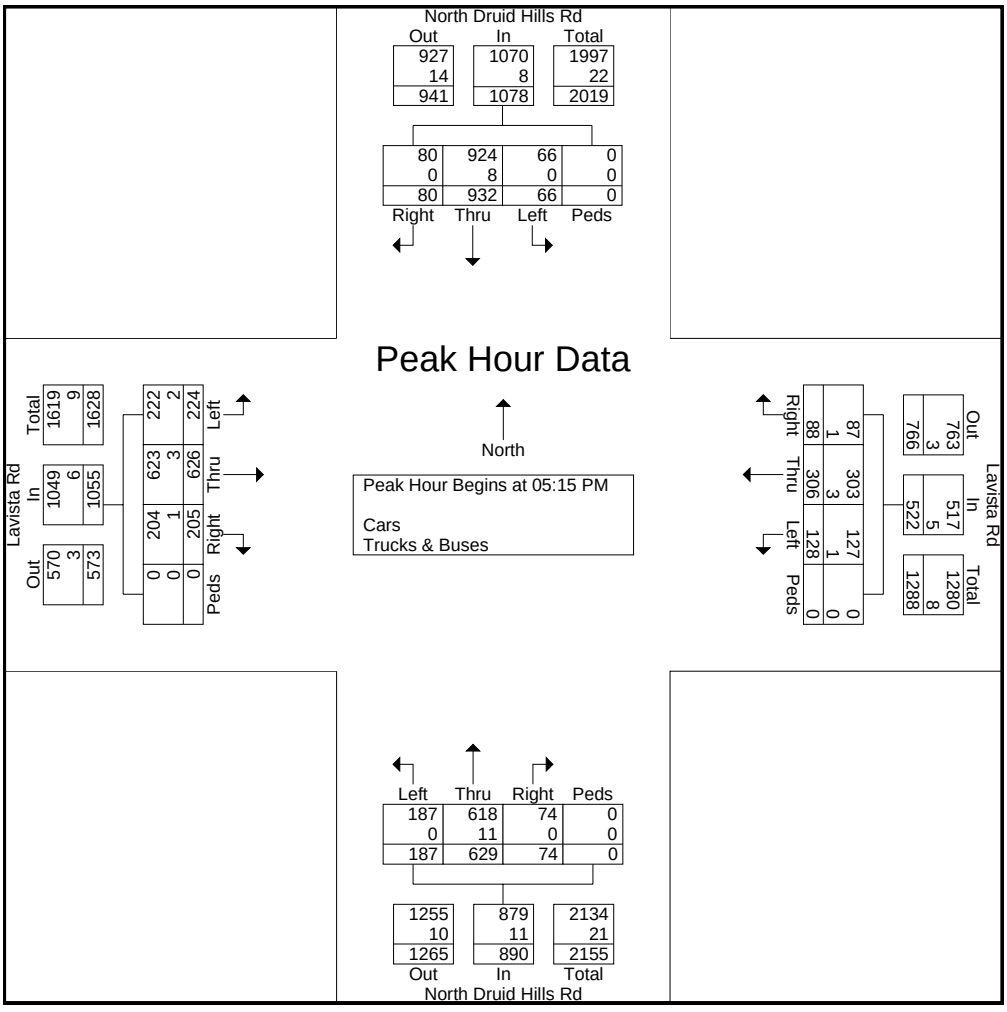
Traffic Data Collection, Inc.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 2447/1499
Counted By: JFU/EH
Weather: Mild
Other: MRA

File Name : 08505-06a
Site Code : 08050506
Start Date : 2/20/2008
Page No : 4

	North Druid Hills Rd Northbound					North Druid Hills Rd Southbound					Lavista Rd Eastbound					Lavista Rd Westbound					
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 12:00 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:15 PM																					
05:15 PM	44	176	11	0	231	12	262	20	0	294	72	160	37	0	269	22	77	20	0	119	913
05:30 PM	51	151	28	0	230	13	217	23	0	253	51	163	50	0	264	43	75	23	0	141	888
05:45 PM	43	141	20	0	204	21	233	19	0	273	51	140	56	0	247	33	82	27	0	142	866
06:00 PM	49	161	15	0	225	20	220	18	0	258	50	163	62	0	275	30	72	18	0	120	878
Total Volume	187	629	74	0	890	66	932	80	0	1078	224	626	205	0	1055	128	306	88	0	522	3545
% App. Total	21	70.7	8.3	0		6.1	86.5	7.4	0		21.2	59.3	19.4	0		24.5	58.6	16.9	0		
PHF	.917	.893	.661	.000	.963	.786	.889	.870	.000	.917	.778	.960	.827	.000	.959	.744	.933	.815	.000	.919	.971
Cars	187	618	74	0	879	66	924	80	0	1070	222	623	204	0	1049	127	303	87	0	517	3515
% Cars	100	98.3	100	0	98.8	100	99.1	100	0	99.3	99.1	99.5	99.5	0	99.4	99.2	99.0	98.9	0	99.0	99.2
Trucks & Buses																					
% Trucks & Buses	0	1.7	0	0	1.2	0	0.9	0	0	0.7	0.9	0.5	0.5	0	0.6	0.8	1.0	1.1	0	1.0	0.8



Traffic Data Collection, Inc.

Atlanta - Hilton Head

www.trafficdatacollection.com

Counter: 1935/1934
Counted By: JRM/BLR
Weather: Mild
Other: MRA

File Name : 08505-07
Site Code : 00850507
Start Date : 2/21/2008
Page No : 1

Groups Printed- Cars - Trucks & Buses

	Clairmont Rd Northbound					Clairmont Rd Southbound					Briarcliff Rd Eastbound					Briarcliff Rd Westbound					
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
07:00 AM	8	223	8	1	240	21	147	30	0	198	32	16	10	0	58	12	48	116	2	178	674
07:15 AM	17	282	2	1	302	26	208	50	0	284	40	19	8	0	67	17	75	112	0	204	857
07:30 AM	15	247	1	5	268	47	211	62	0	320	54	38	23	0	115	14	67	169	3	253	956
07:45 AM	13	249	2	1	265	49	233	99	0	381	44	57	34	0	135	10	86	177	0	273	1054
Total	53	1001	13	8	1075	143	799	241	0	1183	170	130	75	0	375	53	276	574	5	908	3541
08:00 AM	12	236	1	0	249	29	233	53	1	316	51	63	28	0	142	31	98	170	0	299	1006
08:15 AM	14	288	3	1	306	26	245	37	0	308	53	26	22	0	101	27	72	156	3	258	973
08:30 AM	19	260	0	3	282	27	198	27	1	253	47	27	15	0	89	33	87	166	1	287	911
08:45 AM	25	319	7	0	351	29	238	43	0	310	42	13	15	0	70	26	58	105	0	189	920
Total	70	1103	11	4	1188	111	914	160	2	1187	193	129	80	0	402	117	315	597	4	1033	3810
Break																					
04:30 PM	11	175	16	1	203	100	332	35	0	467	45	127	41	0	213	17	28	36	1	82	965
04:45 PM	15	186	14	0	215	99	344	41	1	485	37	122	68	0	227	19	21	33	2	75	1002
Total	26	361	30	1	418	199	676	76	1	952	82	249	109	0	440	36	49	69	3	157	1967
05:00 PM	14	178	18	0	210	115	348	47	1	511	42	115	56	0	213	21	38	32	1	92	1026
05:15 PM	13	173	21	0	207	113	372	38	3	526	54	124	74	0	252	19	39	29	0	87	1072
05:30 PM	19	197	19	1	236	126	347	43	1	517	35	117	53	0	205	28	27	28	0	83	1041
05:45 PM	21	184	17	0	222	108	341	42	3	494	48	142	42	0	232	20	33	29	0	82	1030
Total	67	732	75	1	875	462	1408	170	8	2048	179	498	225	0	902	88	137	118	1	344	4169
06:00 PM	19	196	23	0	238	104	380	46	0	530	50	153	56	0	259	26	40	26	0	92	1119
06:15 PM	16	202	17	0	235	94	342	46	2	484	37	110	45	0	192	11	50	39	0	100	1011
Grand Total	251	3595	169	14	4029	1113	4519	739	13	6384	711	1269	590	0	2570	331	867	1423	13	2634	15617
Apprch %	6.2	89.2	4.2	0.3		17.4	70.8	11.6	0.2		27.7	49.4	23	0		12.6	32.9	54	0.5		
Total %	1.6	23	1.1	0.1	25.8	7.1	28.9	4.7	0.1	40.9	4.6	8.1	3.8	0	16.5	2.1	5.6	9.1	0.1	16.9	
Cars	246	3552	167	14	3979	1105	4490	734	13	6342	707	1267	588	0	2562	323	845	1403	13	2584	15467
% Cars	98	98.8	98.8	100	98.8	99.3	99.4	99.3	100	99.3	99.4	99.8	99.7	0	99.7	97.6	97.5	98.6	100	98.1	99
Trucks & Buses	5	43	2	0	50	8	29	5	0	42	4	2	2	0	8	8	22	20	0	50	150
% Trucks & Buses	2	1.2	1.2	0	1.2	0.7	0.6	0.7	0	0.7	0.6	0.2	0.3	0	0.3	2.4	2.5	1.4	0	1.9	1

Note: Pedestrian data shown for each approach is crossing the approach from either direction combined.

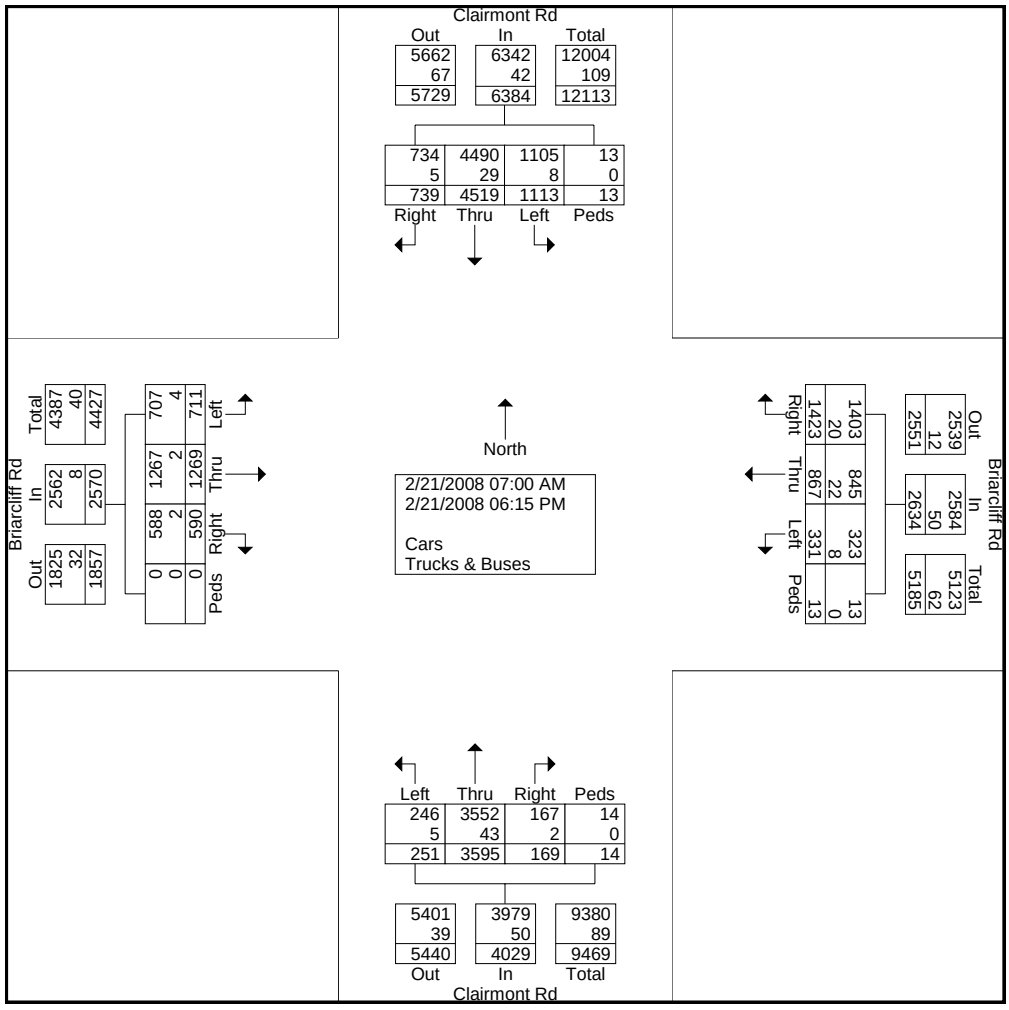
Traffic Data Collection, Inc.

Atlanta - Hilton Head

www.trafficdatacollection.com

Counter: 1935/1934
Counted By: JRM/BLR
Weather: Mild
Other: MRA

File Name : 08505-07
Site Code : 00850507
Start Date : 2/21/2008
Page No : 2



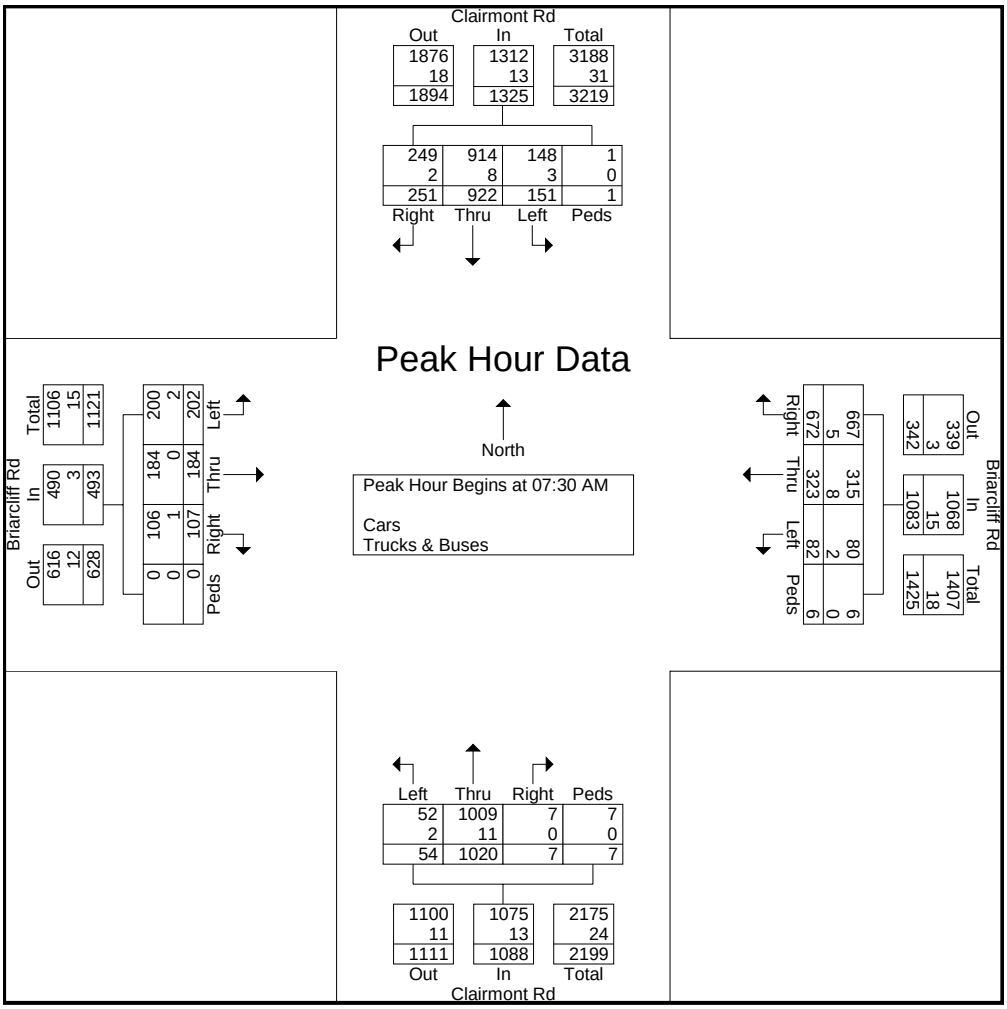
Traffic Data Collection, Inc.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1935/1934
Counted By: JRM/BLR
Weather: Mild
Other: MRA

File Name : 08505-07
Site Code : 00850507
Start Date : 2/21/2008
Page No : 3

	Clairmont Rd Northbound					Clairmont Rd Southbound					Briarcliff Rd Eastbound					Briarcliff Rd Westbound					
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 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	15	247	1	5	268	47	211	62	0	320	54	38	23	0	115	14	67	169	3	253	956
07:45 AM	13	249	2	1	265	49	233	99	0	381	44	57	34	0	135	10	86	177	0	273	1054
08:00 AM	12	236	1	0	249	29	233	53	1	316	51	63	28	0	142	31	98	170	0	299	1006
08:15 AM	14	288	3	1	306	26	245	37	0	308	53	26	22	0	101	27	72	156	3	258	973
Total Volume	54	1020	7	7	1088	151	922	251	1	1325	202	184	107	0	493	82	323	672	6	1083	3989
% App. Total	5	93.8	0.6	0.6		11.4	69.6	18.9	0.1		41	37.3	21.7	0		7.6	29.8	62	0.6		
PHF	.900	.885	.583	.350	.889	.770	.941	.634	.250	.869	.935	.730	.787	.000	.868	.661	.824	.949	.500	.906	.946
Cars	52	1009																			
% Cars	96.3	98.9	100	100	98.8	98.0	99.1	99.2	100	99.0	99.0	100	99.1	0	99.4	97.6	97.5	99.3	100	98.6	98.9
Trucks & Buses	2	11	0	0	13	3	8	2	0	13	2	0	1	0	3	2	8	5	0	15	44
% Trucks & Buses	3.7	1.1	0	0	1.2	2.0	0.9	0.8	0	1.0	1.0	0	0.9	0	0.6	2.4	2.5	0.7	0	1.4	1.1



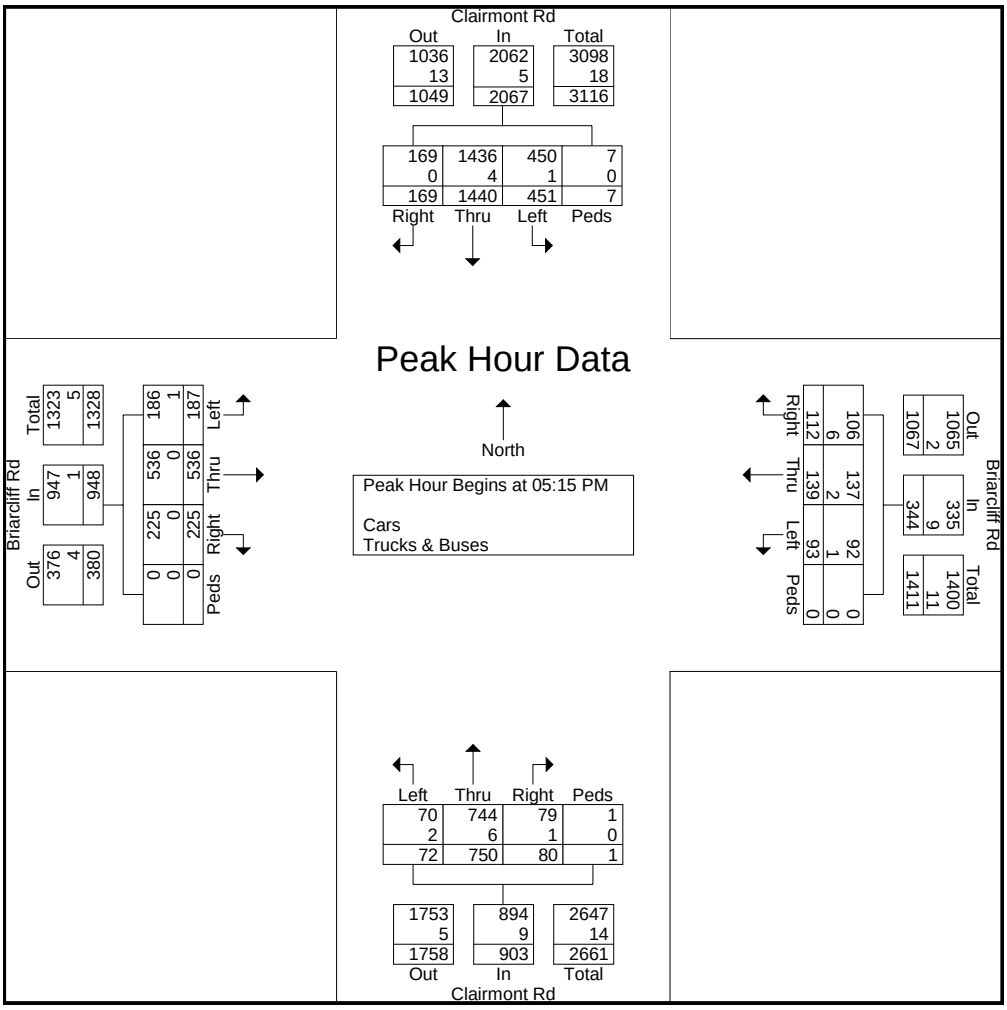
Traffic Data Collection, Inc.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1935/1934
Counted By: JRM/BLR
Weather: Mild
Other: MRA

File Name : 08505-07
Site Code : 00850507
Start Date : 2/21/2008
Page No : 4

	Clairmont Rd Northbound					Clairmont Rd Southbound					Briarcliff Rd Eastbound					Briarcliff Rd Westbound					
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 12:00 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:15 PM																					
05:15 PM	13	173	21	0	207	113	372	38	3	526	54	124	74	0	252	19	39	29	0	87	1072
05:30 PM	19	197	19	1	236	126	347	43	1	517	35	117	53	0	205	28	27	28	0	83	1041
05:45 PM	21	184	17	0	222	108	341	42	3	494	48	142	42	0	232	20	33	29	0	82	1030
06:00 PM	19	196	23	0	238	104	380	46	0	530	50	153	56	0	259	26	40	26	0	92	1119
Total Volume	72	750	80	1	903	451	1440	169	7	2067	187	536	225	0	948	93	139	112	0	344	4262
% App. Total	8	83.1	8.9	0.1		21.8	69.7	8.2	0.3		19.7	56.5	23.7	0		27	40.4	32.6	0		
PHF	.857	.952	.870	.250	.949	.895	.947	.918	.583	.975	.866	.876	.760	.000	.915	.830	.869	.966	.000	.935	.952
Cars	70	744	79	1	894	450	1436														
% Cars	97.2	99.2	98.8	100	99.0	99.8	99.7	100	100	99.8	99.5	100	100	0	99.9	98.9	98.6	94.6	0	97.4	99.4
Trucks & Buses	2	6	1	0	9	1	4	0	0	5	1	0	0	0	1	1	2	6	0	9	24
% Trucks & Buses	2.8	0.8	1.3	0	1.0	0.2	0.3	0	0	0.2	0.5	0	0	0	0.1	1.1	1.4	5.4	0	2.6	0.6



Traffic Data Collection, Inc.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 2447
Counted By: JRM
Weather: Mild
Other: MRA

File Name : 08505-08A
Site Code : 00850508
Start Date : 2/6/2008
Page No : 1

Groups Printed- Cars - Trucks & Buses

	Briarcliff Rd Northbound					Briarcliff Rd Southbound					Sheridan Rd Eastbound					Westbound					
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
07:00 AM	34	112	0	1	147	0	141	37	0	178	9	0	26	0	35	0	0	0	0	0	360
07:15 AM	56	161	0	2	219	0	151	34	0	185	10	0	37	3	50	0	0	0	0	0	454
07:30 AM	93	179	0	2	274	0	175	47	0	222	13	0	35	1	49	0	0	0	0	0	545
07:45 AM	103	188	0	0	291	0	158	48	0	206	29	0	27	0	56	0	0	0	0	0	553
Total	286	640	0	5	931	0	625	166	0	791	61	0	125	4	190	0	0	0	0	0	1912
08:00 AM	76	159	0	0	235	0	145	53	0	198	15	1	36	1	53	0	0	0	0	0	486
08:15 AM	89	184	0	0	273	0	156	61	0	217	19	0	45	5	69	0	0	0	0	0	559
08:30 AM	95	151	0	0	246	0	161	77	0	238	22	0	51	0	73	0	0	0	0	0	557
08:45 AM	84	143	0	0	227	0	157	56	0	213	17	1	36	0	54	0	0	0	0	0	494
Total	344	637	0	0	981	0	619	247	0	866	73	2	168	6	249	0	0	0	0	0	2096
Break																					
04:30 PM	25	240	0	1	266	0	164	29	0	193	50	0	94	0	144	0	0	0	0	0	603
04:45 PM	25	236	0	0	261	0	183	27	0	210	55	0	94	1	150	0	0	0	0	0	621
Total	50	476	0	1	527	0	347	56	0	403	105	0	188	1	294	0	0	0	0	0	1224
05:00 PM	26	262	0	0	288	0	152	29	0	181	67	0	113	0	180	0	0	0	0	0	649
05:15 PM	50	204	0	0	254	0	163	25	0	188	68	0	111	2	181	0	0	0	0	0	623
05:30 PM	41	223	0	0	264	0	168	45	0	213	54	0	117	0	171	0	0	0	0	0	648
05:45 PM	26	245	0	0	271	0	161	34	0	195	41	0	71	0	112	0	0	0	0	0	578
Total	143	934	0	0	1077	0	644	133	0	777	230	0	412	2	644	0	0	0	0	0	2498
06:00 PM	24	247	0	0	271	0	142	33	0	175	68	0	98	0	166	0	0	0	0	0	612
06:15 PM	24	267	0	0	291	0	139	30	0	169	52	0	98	0	150	0	0	0	0	0	610
Grand Total	871	3201	0	6	4078	0	2516	665	0	3181	589	2	1089	13	1693	0	0	0	0	0	8952
Apprch %	21.4	78.5	0	0.1		0	79.1	20.9	0		34.8	0.1	64.3	0.8		0	0	0	0		
Total %	9.7	35.8	0	0.1	45.6	0	28.1	7.4	0	35.5	6.6	0	12.2	0.1	18.9	0	0	0	0	0	
Cars	846	3137	0	6	3989	0	2474	645	0	3119	574	2	1070	13	1659	0	0	0	0	0	8767
% Cars	97.1	98	0	100	97.8	0	98.3	97	0	98.1	97.5	100	98.3	100	98	0	0	0	0	0	97.9
Trucks & Buses	25	64	0	0	89	0	42	20	0	62	15	0	19	0	34	0	0	0	0	0	185
% Trucks & Buses	2.9	2	0	0	2.2	0	1.7	3	0	1.9	2.5	0	1.7	0	2	0	0	0	0	0	2.1

Note: Pedestrian data shown for each approach is crossing the approach from either direction combined.

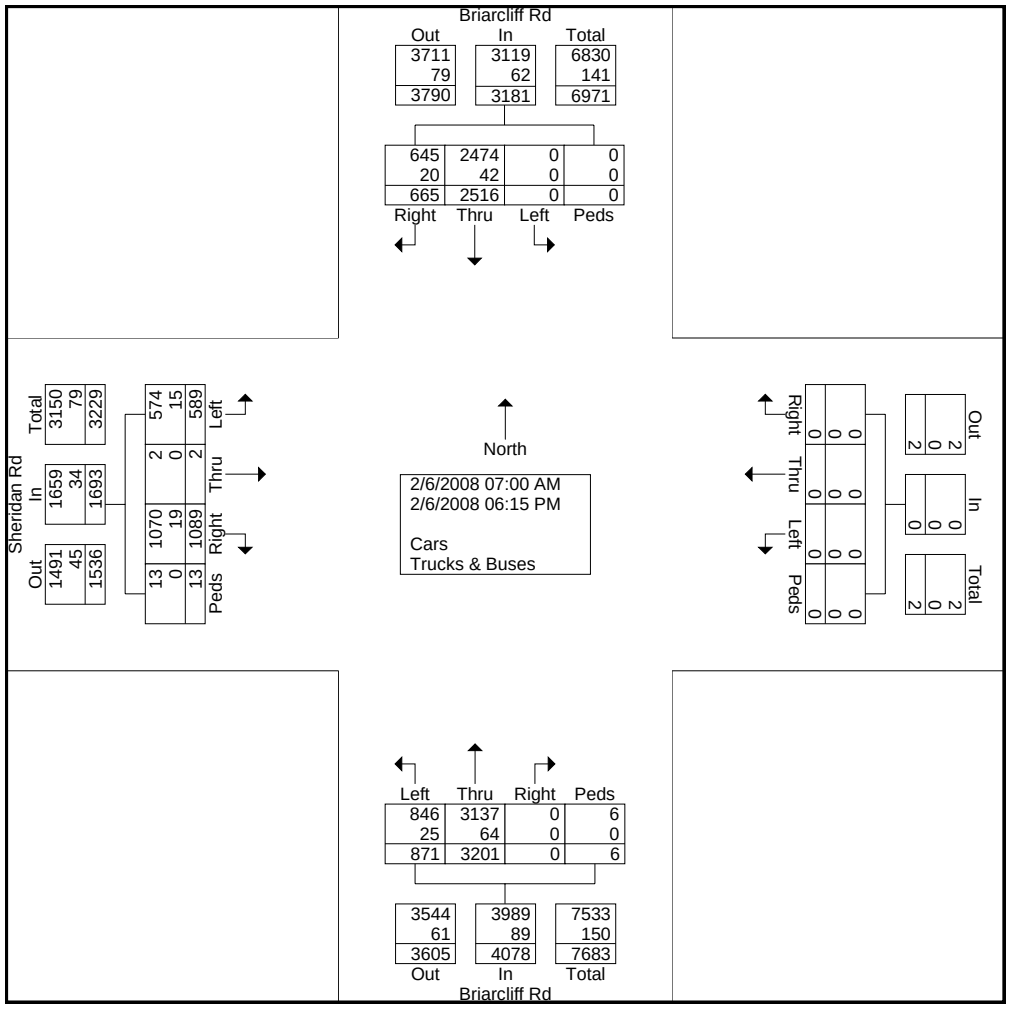
Traffic Data Collection, Inc.

Atlanta - Hilton Head

www.trafficdatacollection.com

Counter: 2447
Counted By: JRM
Weather: Mild
Other: MRA

File Name : 08505-08A
Site Code : 00850508
Start Date : 2/6/2008
Page No : 2



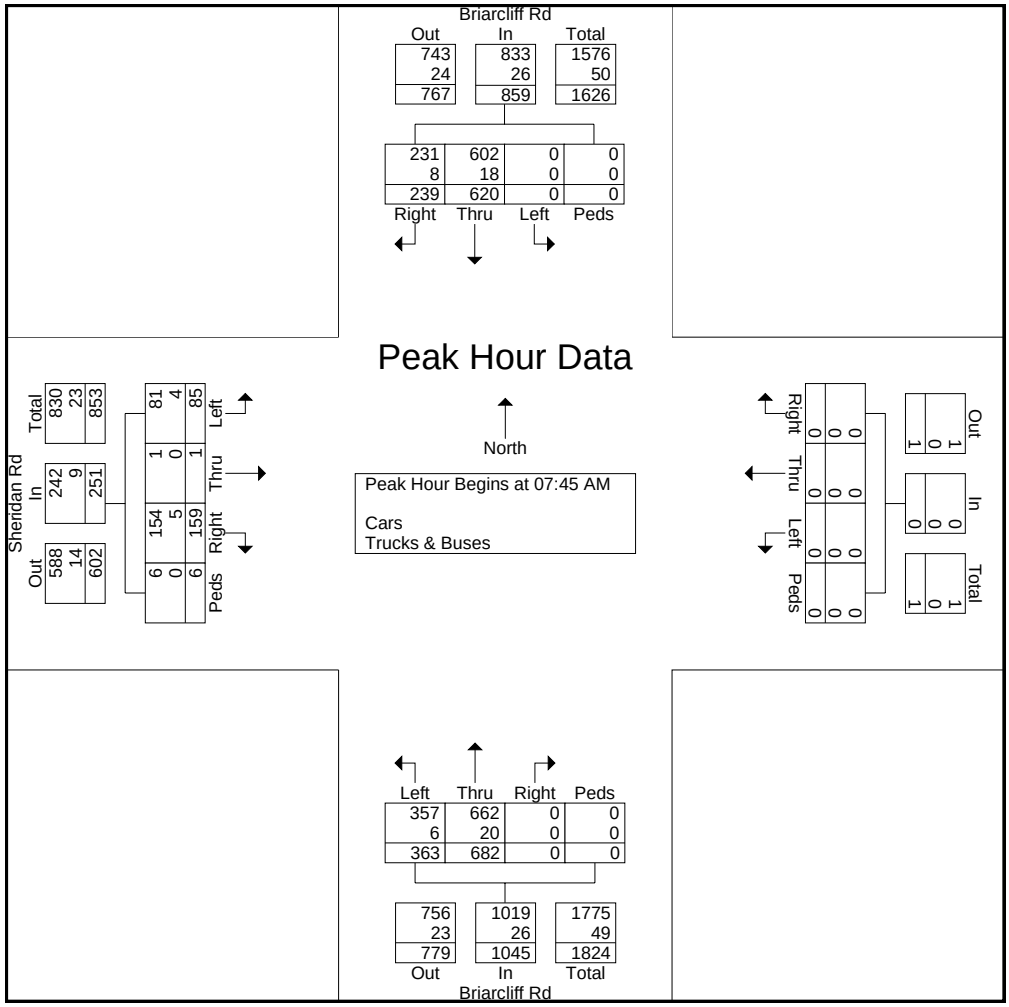
Traffic Data Collection, Inc.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 2447
Counted By: JRM
Weather: Mild
Other: MRA

File Name : 08505-08A
Site Code : 00850508
Start Date : 2/6/2008
Page No : 3

	Briarcliff Rd Northbound					Briarcliff Rd Southbound					Sheridan Rd Eastbound					Westbound					
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 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	103	188	0	0	291	0	158	48	0	206	29	0	27	0	56	0	0	0	0	0	553
08:00 AM	76	159	0	0	235	0	145	53	0	198	15	1	36	1	53	0	0	0	0	0	486
08:15 AM	89	184	0	0	273	0	156	61	0	217	19	0	45	5	69	0	0	0	0	0	559
08:30 AM	95	151	0	0	246	0	161	77	0	238	22	0	51	0	73	0	0	0	0	0	557
Total Volume	363	682	0	0	1045	0	620	239	0	859	85	1	159	6	251	0	0	0	0	0	2155
% App. Total	34.7	65.3	0	0		0	72.2	27.8	0		33.9	0.4	63.3	2.4		0	0	0	0		
PHF	.881	.907	.000	.000	.898	.000	.963	.776	.000	.902	.733	.250	.779	.300	.860	.000	.000	.000	.000	.000	.964
Cars	357	662	0	0	1019	0	602	231	0	833	81	1	154	6	242	0	0	0	0	0	2094
% Cars	98.3	97.1	0	0	97.5	0	97.1	96.7	0	97.0	95.3	100	96.9	100	96.4	0	0	0	0	0	97.2
Trucks & Buses																					
% Trucks & Buses	1.7	2.9	0	0	2.5	0	2.9	3.3	0	3.0	4.7	0	3.1	0	3.6	0	0	0	0	0	2.8



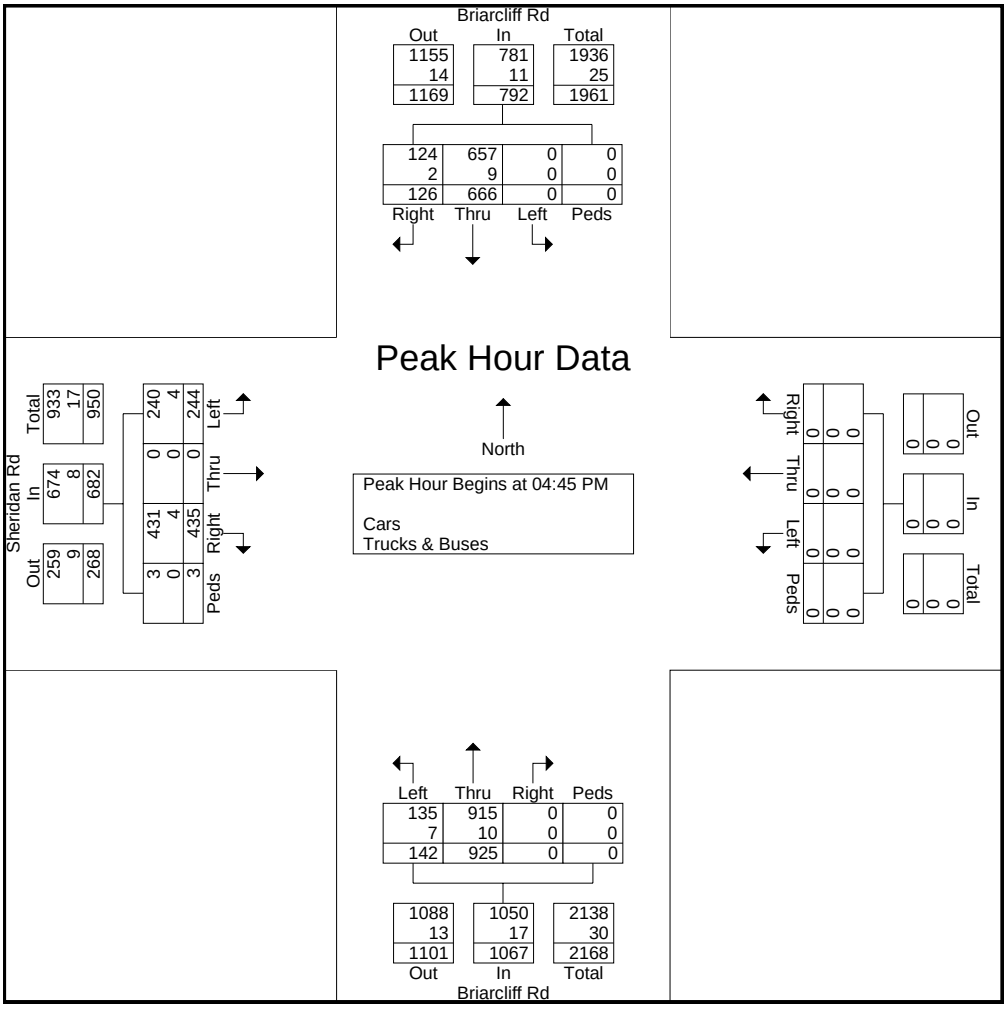
Traffic Data Collection, Inc.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 2447
Counted By: JRM
Weather: Mild
Other: MRA

File Name : 08505-08A
Site Code : 00850508
Start Date : 2/6/2008
Page No : 4

	Briarcliff Rd Northbound					Briarcliff Rd Southbound					Sheridan Rd Eastbound					Westbound					
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 12:00 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	25	236	0	0	261	0	183	27	0	210	55	0	94	1	150	0	0	0	0	0	621
05:00 PM	26	262	0	0	288	0	152	29	0	181	67	0	113	0	180	0	0	0	0	0	649
05:15 PM	50	204	0	0	254	0	163	25	0	188	68	0	111	2	181	0	0	0	0	0	623
05:30 PM	41	223	0	0	264	0	168	45	0	213	54	0	117	0	171	0	0	0	0	0	648
Total Volume	142	925	0	0	1067	0	666	126	0	792	244	0	435	3	682	0	0	0	0	0	2541
% App. Total	13.3	86.7	0	0		0	84.1	15.9	0		35.8	0	63.8	0.4		0	0	0	0		
PHF	.710	.883	.000	.000	.926	.000	.910	.700	.000	.930	.897	.000	.929	.375	.942	.000	.000	.000	.000	.000	.979
Cars	135	915	0	0	1050	0	657	124	0	781	240	0	431	3	674	0	0	0	0	0	2505
% Cars	95.1	98.9	0	0	98.4	0	98.6	98.4	0	98.6	98.4	0	99.1	100	98.8	0	0	0	0	0	98.6
Trucks & Buses																					
% Trucks & Buses	4.9	1.1	0	0	1.6	0	1.4	1.6	0	1.4	1.6	0	0.9	0	1.2	0	0	0	0	0	1.4



TRAFFIC DATA COLLECTION, INC.

Atlanta - Hilton Head
www.trafficdatacollection.com

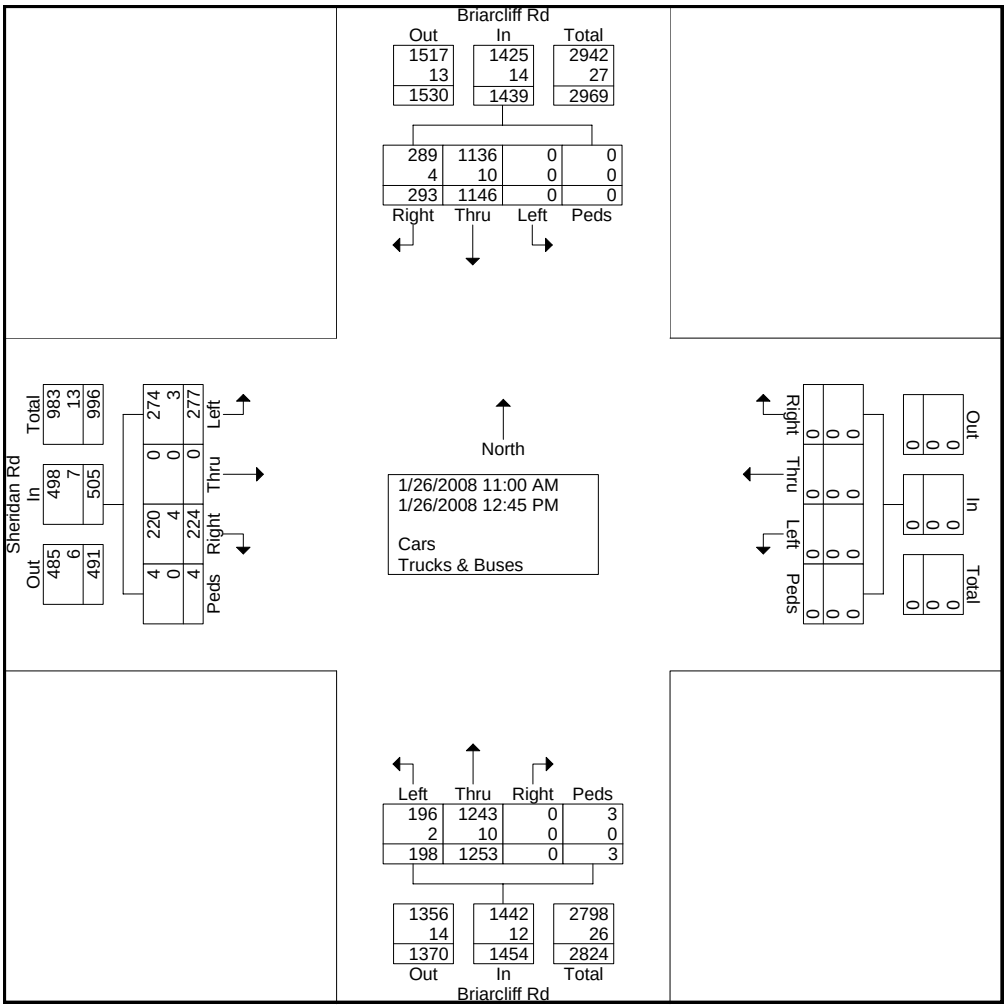
Counter: 1935
Counted By: JRM
Weather: Mild
Other: MRA

File Name : 08505-08B
Site Code : 00850508
Start Date : 1/26/2008
Page No : 1

Groups Printed- Cars - Trucks & Buses

	Briarcliff Rd Northbound					Briarcliff Rd Southbound					Sheridan Rd Eastbound					Westbound					
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
11:00 AM	24	129	0	0	153	0	117	35	0	152	19	0	17	0	36	0	0	0	0	0	341
11:15 AM	35	147	0	2	184	0	113	39	0	152	26	0	21	3	50	0	0	0	0	0	386
11:30 AM	25	152	0	0	177	0	152	37	0	189	38	0	27	0	65	0	0	0	0	0	431
11:45 AM	25	144	0	0	169	0	142	33	0	175	36	0	21	0	57	0	0	0	0	0	401
Total	109	572	0	2	683	0	524	144	0	668	119	0	86	3	208	0	0	0	0	0	1559
12:00 PM	17	155	0	0	172	0	149	28	0	177	46	0	34	1	81	0	0	0	0	0	430
12:15 PM	27	158	0	1	186	0	164	41	0	205	45	0	35	0	80	0	0	0	0	0	471
12:30 PM	24	182	0	0	206	0	151	43	0	194	32	0	38	0	70	0	0	0	0	0	470
12:45 PM	21	186	0	0	207	0	158	37	0	195	35	0	31	0	66	0	0	0	0	0	468
Total	89	681	0	1	771	0	622	149	0	771	158	0	138	1	297	0	0	0	0	0	1839
Grand Total	198	1253	0	3	1454	0	1146	293	0	1439	277	0	224	4	505	0	0	0	0	0	3398
Apprch %	13.6	86.2	0	0.2		0	79.6	20.4	0		54.9	0	44.4	0.8		0	0	0	0		
Total %	5.8	36.9	0	0.1	42.8	0	33.7	8.6	0	42.3	8.2	0	6.6	0.1	14.9	0	0	0	0	0	
Cars	196	1243	0	3	1442	0	1136	289	0	1425	274	0	220	4	498	0	0	0	0	0	3365
% Cars	99	99.2	0	100	99.2	0	99.1	98.6	0	99	98.9	0	98.2	100	98.6	0	0	0	0	0	99
Trucks & Buses	2	10	0	0	12	0	10	4	0	14	3	0	4	0	7	0	0	0	0	0	33
% Trucks & Buses	1	0.8	0	0	0.8	0	0.9	1.4	0	1	1.1	0	1.8	0	1.4	0	0	0	0	0	1

Note: Pedestrian data shown for each approach is crossing the approach from either direction combined.



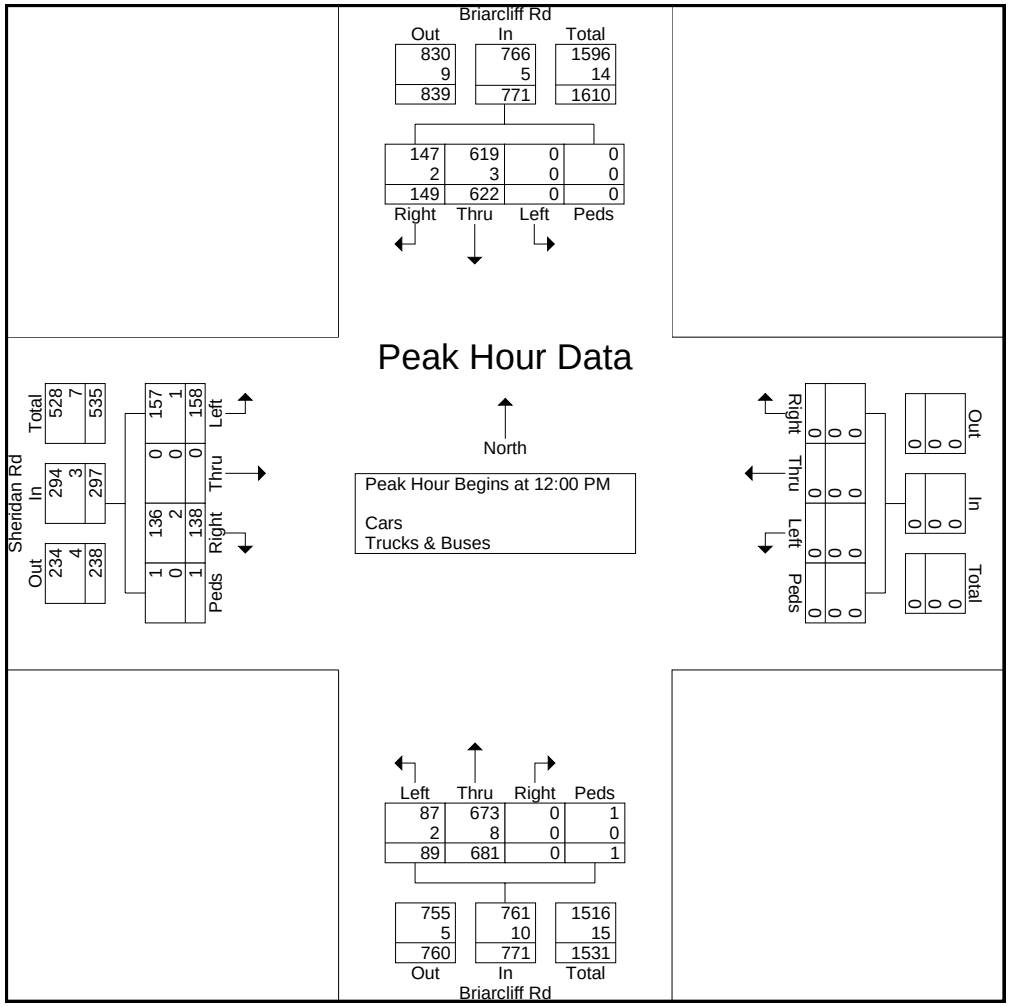
Traffic Data Collection, Inc.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1935
Counted By: JRM
Weather: Mild
Other: MRA

File Name : 08505-08B
Site Code : 00850508
Start Date : 1/26/2008
Page No : 2

	Briarcliff Rd Northbound					Briarcliff Rd Southbound					Sheridan Rd Eastbound					Westbound					
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 11:00 AM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	17	155	0	0	172	0	149	28	0	177	46	0	34	1	81	0	0	0	0	0	430
12:15 PM	27	158	0	1	186	0	164	41	0	205	45	0	35	0	80	0	0	0	0	0	471
12:30 PM	24	182	0	0	206	0	151	43	0	194	32	0	38	0	70	0	0	0	0	0	470
12:45 PM	21	186	0	0	207	0	158	37	0	195	35	0	31	0	66	0	0	0	0	0	468
Total Volume	89	681	0	1	771	0	622	149	0	771	158	0	138	1	297	0	0	0	0	0	1839
% App. Total	11.5	88.3	0	0.1		0	80.7	19.3	0		53.2	0	46.5	0.3		0	0	0	0		
PHF	.824	.915	.000	.250	.931	.000	.948	.866	.000	.940	.859	.000	.908	.250	.917	.000	.000	.000	.000	.000	.976
Cars	87	673	0	1	761	0	619	147	0	766	157	0	136	1	294	0	0	0	0	0	1821
% Cars	97.8	98.8	0	100	98.7	0	99.5	98.7	0	99.4	99.4	0	98.6	100	99.0	0	0	0	0	0	99.0
Trucks & Buses																					
% Trucks & Buses	2.2	1.2	0	0	1.3	0	0.5	1.3	0	0.6	0.6	0	1.4	0	1.0	0	0	0	0	0	1.0



Traffic Data Collection, Inc.

Atlanta - Hilton Head

www.trafficdatacollection.com

Counter: 1842
Counted By: JFU
Weather: Mild
Other: MRA

File Name : 08505-09a
Site Code : 00850509
Start Date : 2/7/2008
Page No : 1

Groups Printed- Cars - Trucks & Buses

	Briarcliff Rd Northbound					Briarcliff Rd Southbound					Lavista Rd Eastbound					Lavista Rd Westbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	16	111	11	0	138	9	156	10	1	176	30	37	12	1	80	14	93	27	0	134	528
07:15 AM	21	153	22	0	196	5	179	7	2	193	45	58	13	0	116	16	105	39	1	161	666
07:30 AM	20	161	23	0	204	10	188	9	0	207	51	45	17	1	114	7	128	56	0	191	716
07:45 AM	18	184	29	0	231	15	184	12	0	211	43	58	20	2	123	13	136	59	1	209	774
Total	75	609	85	0	769	39	707	38	3	787	169	198	62	4	433	50	462	181	2	695	2684
08:00 AM	22	153	30	0	205	10	168	6	1	185	36	50	11	1	98	11	113	58	0	182	670
08:15 AM	25	174	34	0	233	10	189	9	1	209	51	61	8	1	121	14	143	43	2	202	765
08:30 AM	22	152	21	0	195	10	179	8	2	199	40	45	17	3	105	13	155	52	0	220	719
08:45 AM	24	153	27	1	205	14	185	6	1	206	46	55	12	0	113	20	143	57	2	222	746
Total	93	632	112	1	838	44	721	29	5	799	173	211	48	5	437	58	554	210	4	826	2900
Break																					
04:30 PM	43	160	30	0	233	13	196	19	0	228	20	85	17	0	122	8	74	67	0	149	732
04:45 PM	16	152	32	0	200	8	154	26	0	188	28	76	18	0	122	10	65	33	1	109	619
Total	59	312	62	0	433	21	350	45	0	416	48	161	35	0	244	18	139	100	1	258	1351
05:00 PM	28	177	25	0	230	11	192	27	2	232	26	77	22	1	126	22	79	36	0	137	725
05:15 PM	38	168	16	1	223	15	185	33	0	233	11	99	22	1	133	15	72	46	0	133	722
05:30 PM	37	179	23	2	241	19	198	15	0	232	22	95	18	3	138	19	100	47	1	167	778
05:45 PM	38	179	24	3	244	15	182	28	1	226	16	86	20	2	124	15	86	48	1	150	744
Total	141	703	88	6	938	60	757	103	3	923	75	357	82	7	521	71	337	177	2	587	2969
06:00 PM	44	178	26	3	251	11	216	33	1	261	21	88	21	2	132	23	85	61	2	171	815
06:15 PM	46	158	37	0	241	13	226	25	0	264	17	100	16	0	133	18	94	55	0	167	805
Grand Total	458	2592	410	10	3470	188	2977	273	12	3450	503	1115	264	18	1900	238	1671	784	11	2704	11524
Apprch %	13.2	74.7	11.8	0.3		5.4	86.3	7.9	0.3		26.5	58.7	13.9	0.9		8.8	61.8	29	0.4		
Total %	4	22.5	3.6	0.1	30.1	1.6	25.8	2.4	0.1	29.9	4.4	9.7	2.3	0.2	16.5	2.1	14.5	6.8	0.1	23.5	
Cars	441	2509	378	10	3338	178	2890	267	12	3347	472	1094	253	18	1837	232	1647	771	11	2661	11183
% Cars	96.3	96.8	92.2	100	96.2	94.7	97.1	97.8	100	97	93.8	98.1	95.8	100	96.7	97.5	98.6	98.3	100	98.4	97
Trucks & Buses	17	83	32	0	132	10	87	6	0	103	31	21	11	0	63	6	24	13	0	43	341
% Trucks & Buses	3.7	3.2	7.8	0	3.8	5.3	2.9	2.2	0	3	6.2	1.9	4.2	0	3.3	2.5	1.4	1.7	0	1.6	3

Note: Pedestrian data shown for each approach is crossing the approach from either direction combined.

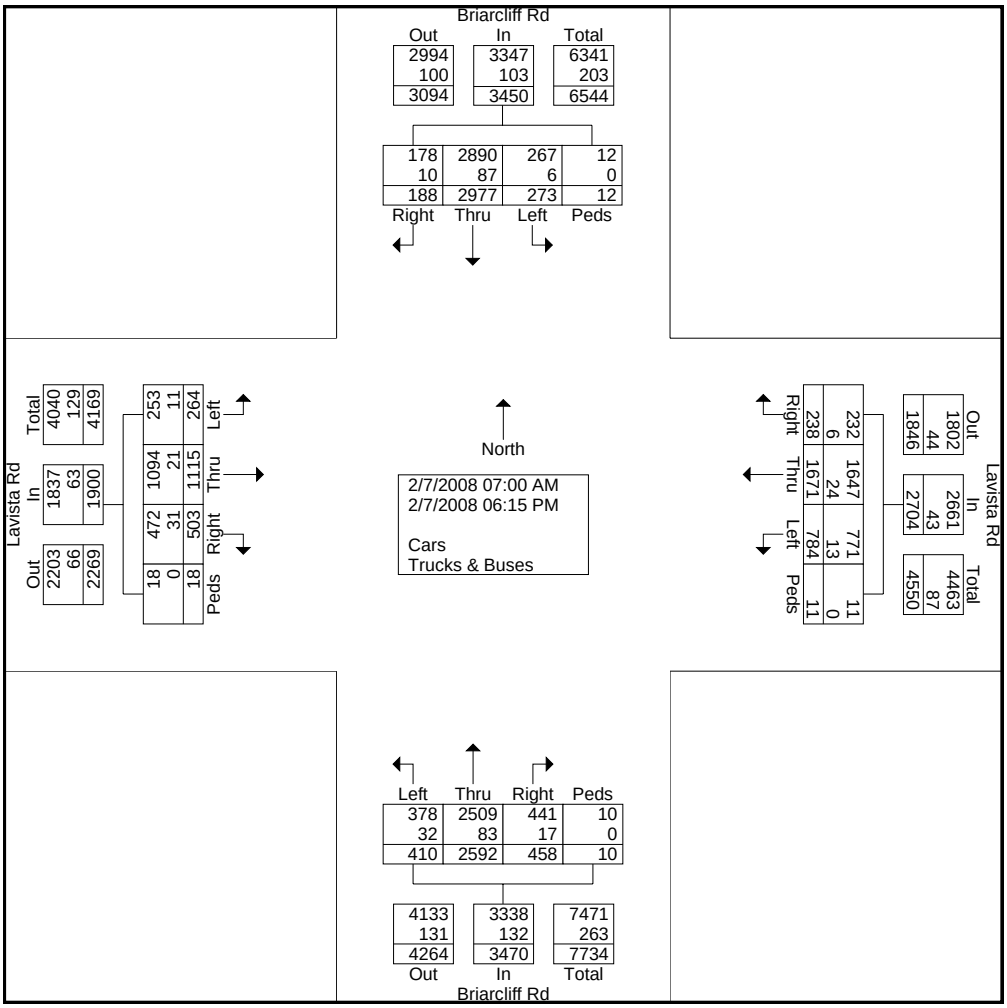
Traffic Data Collection, Inc.

Atlanta - Hilton Head

www.trafficdatacollection.com

Counter: 1842
Counted By: JFU
Weather: Mild
Other: MRA

File Name : 08505-09a
Site Code : 00850509
Start Date : 2/7/2008
Page No : 2



Traffic Data Collection, Inc.

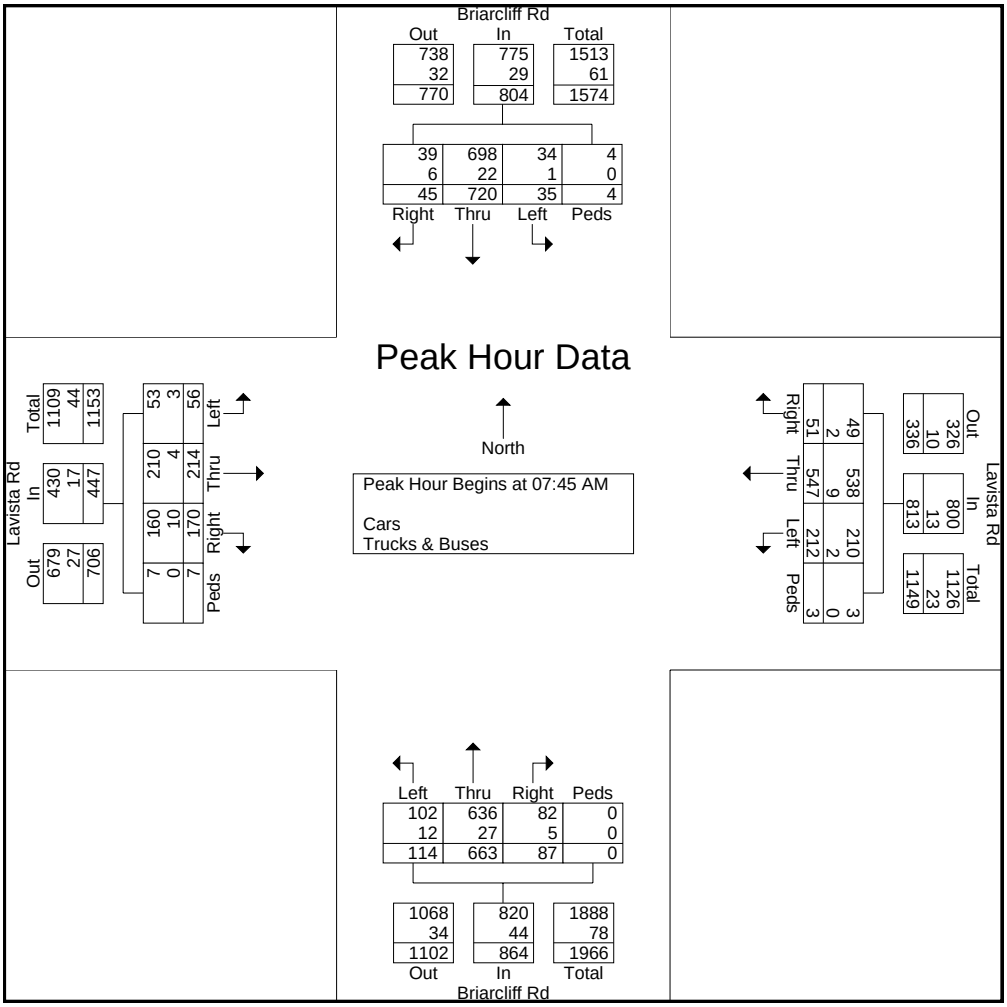
Atlanta - Hilton Head

www.trafficdatacollection.com

Counter: 1842
Counted By: JFU
Weather: Mild
Other: MRA

File Name : 08505-09a
Site Code : 00850509
Start Date : 2/7/2008
Page No : 3

	Briarcliff Rd Northbound					Briarcliff Rd Southbound					Lavista Rd Eastbound					Lavista Rd Westbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	18	184	29	0	231	15	184	12	0	211	43	58	20	2	123	13	136	59	1	209	774
08:00 AM	22	153	30	0	205	10	168	6	1	185	36	50	11	1	98	11	113	58	0	182	670
08:15 AM	25	174	34	0	233	10	189	9	1	209	51	61	8	1	121	14	143	43	2	202	765
08:30 AM	22	152	21	0	195	10	179	8	2	199	40	45	17	3	105	13	155	52	0	220	719
Total Volume	87	663	114	0	864	45	720	35	4	804	170	214	56	7	447	51	547	212	3	813	2928
% App. Total	10.1	76.7	13.2	0		5.6	89.6	4.4	0.5		38	47.9	12.5	1.6		6.3	67.3	26.1	0.4		
PHF	.870	.901	.838	.000	.927	.750	.952	.729	.500	.953	.833	.877	.700	.583	.909	.911	.882	.898	.375	.924	.946
Cars	82	636	102	0	820	39	698	34	4	775	160	210	53	7	430	49	538	210	3	800	2825
% Cars	94.3	95.9	89.5	0	94.9	86.7	96.9	97.1	100	96.4	94.1	98.1	94.6	100	96.2	96.1	98.4	99.1	100	98.4	96.5
Trucks & Buses																					
% Trucks & Buses	5.7	4.1	10.5	0	5.1	13.3	3.1	2.9	0	3.6	5.9	1.9	5.4	0	3.8	3.9	1.6	0.9	0	1.6	3.5



Traffic Data Collection, Inc.

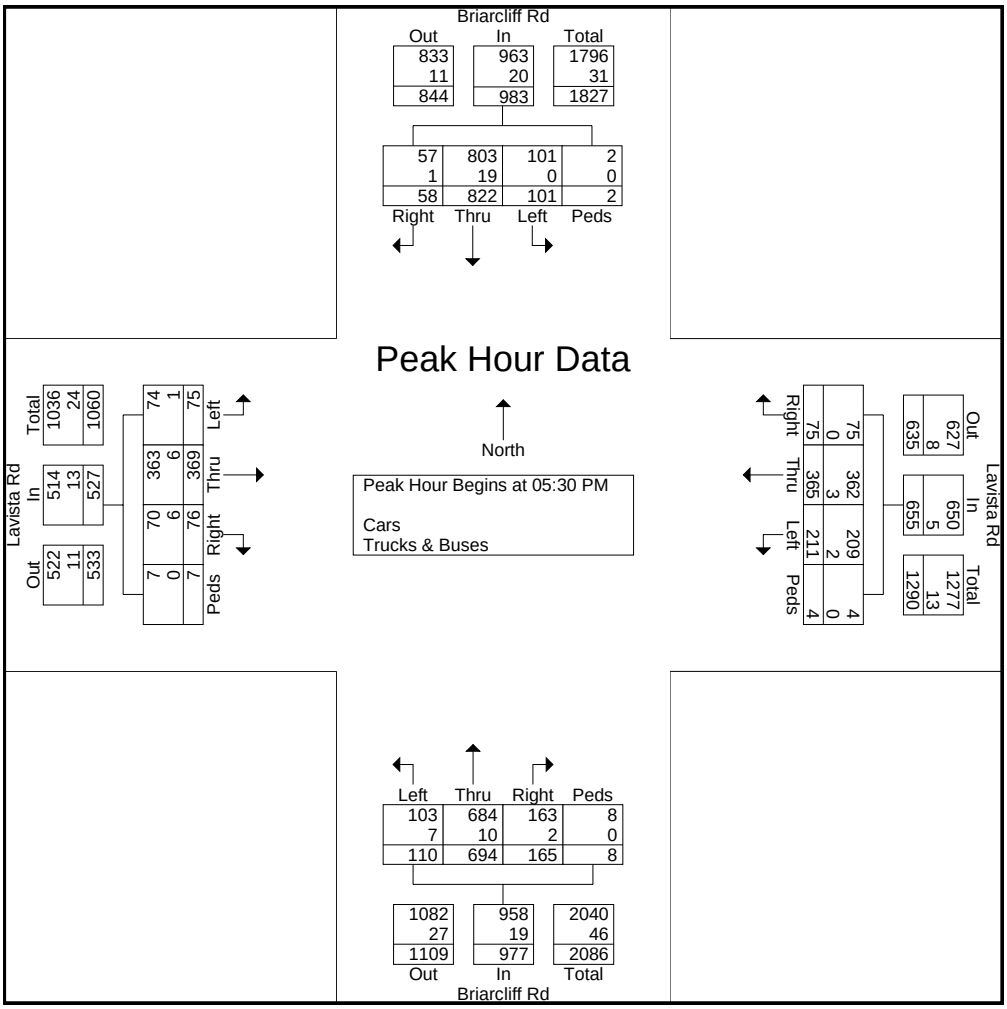
Atlanta - Hilton Head

www.trafficdatacollection.com

Counter: 1842
Counted By: JFU
Weather: Mild
Other: MRA

File Name : 08505-09a
Site Code : 00850509
Start Date : 2/7/2008
Page No : 4

	Briarcliff Rd Northbound					Briarcliff Rd Southbound					Lavista Rd Eastbound					Lavista Rd Westbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:30 PM																					
05:30 PM	37	179	23	2	241	19	198	15	0	232	22	95	18	3	138	19	100	47	1	167	778
05:45 PM	38	179	24	3	244	15	182	28	1	226	16	86	20	2	124	15	86	48	1	150	744
06:00 PM	44	178	26	3	251	11	216	33	1	261	21	88	21	2	132	23	85	61	2	171	815
06:15 PM	46	158	37	0	241	13	226	25	0	264	17	100	16	0	133	18	94	55	0	167	805
Total Volume	165	694	110	8	977	58	822	101	2	983	76	369	75	7	527	75	365	211	4	655	3142
% App. Total	16.9	71	11.3	0.8		5.9	83.6	10.3	0.2		14.4	70	14.2	1.3		11.5	55.7	32.2	0.6		
PHF	.897	.969	.743	.667	.973	.763	.909	.765	.500	.931	.864	.923	.893	.583	.955	.815	.913	.865	.500	.958	.964
Cars	163	684	103	8	958	57	803	101	2	963	70	363	74	7	514	75	362	209	4	650	3085
% Cars	98.8	98.6	93.6	100	98.1	98.3	97.7	100	100	98.0	92.1	98.4	98.7	100	97.5	100	99.2	99.1	100	99.2	98.2
Trucks & Buses																					
% Trucks & Buses	1.2	1.4	6.4	0	1.9	1.7	2.3	0	0	2.0	7.9	1.6	1.3	0	2.5	0	0.8	0.9	0	0.8	1.8



TRAFFIC DATA COLLECTION, INC.

Atlanta - Hilton Head
www.trafficdatacollection.com

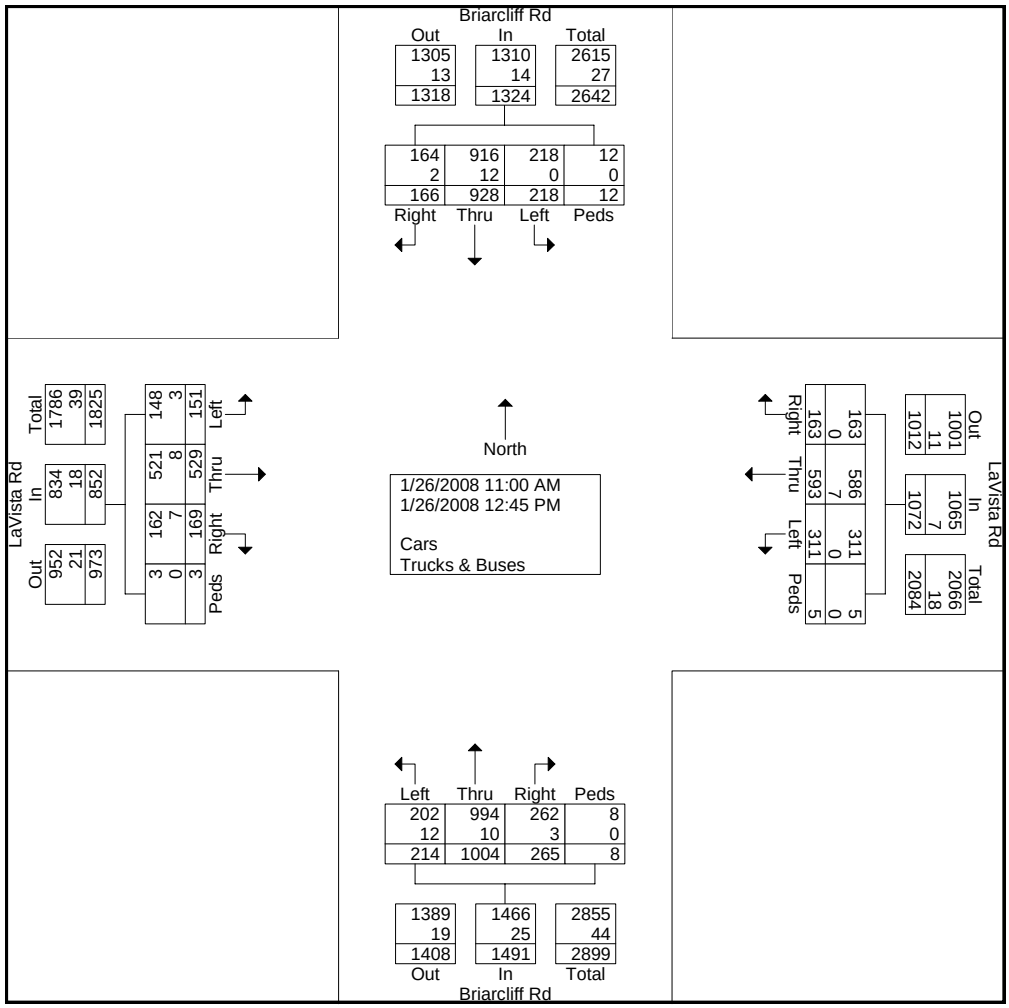
Counter: 1328
Counted By: BLE
Weather: Mild
Other: MRA

File Name : 08505-09b
Site Code : 00850509
Start Date : 1/26/2008
Page No : 1

Groups Printed- Cars - Trucks & Buses

	Briarcliff Rd Northbound					Briarcliff Rd Southbound					LaVista Rd Eastbound					LaVista Rd Westbound					
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
11:00 AM	14	120	28	0	162	23	95	16	0	134	19	56	24	0	99	30	64	21	0	115	510
11:15 AM	21	112	29	0	162	28	98	15	7	148	20	58	29	0	107	39	65	14	5	123	540
11:30 AM	19	104	42	1	166	27	115	14	0	156	24	68	27	0	119	36	65	25	0	126	567
11:45 AM	27	114	27	0	168	22	109	22	0	153	13	76	19	1	109	53	75	18	0	146	576
Total	81	450	126	1	658	100	417	67	7	591	76	258	99	1	434	158	269	78	5	510	2193
12:00 PM	31	115	33	2	181	28	123	25	2	178	17	67	21	0	105	38	67	23	0	128	592
12:15 PM	31	146	36	2	215	37	148	20	0	205	13	59	14	0	86	33	76	24	0	133	639
12:30 PM	38	139	38	3	218	28	116	32	0	176	24	63	16	0	103	42	92	22	0	156	653
12:45 PM	33	154	32	0	219	25	124	22	3	174	21	82	19	2	124	40	89	16	0	145	662
Total	133	554	139	7	833	118	511	99	5	733	75	271	70	2	418	153	324	85	0	562	2546
Grand Total	214	1004	265	8	1491	218	928	166	12	1324	151	529	169	3	852	311	593	163	5	1072	4739
Apprch %	14.4	67.3	17.8	0.5		16.5	70.1	12.5	0.9		17.7	62.1	19.8	0.4		29	55.3	15.2	0.5		
Total %	4.5	21.2	5.6	0.2	31.5	4.6	19.6	3.5	0.3	27.9	3.2	11.2	3.6	0.1	18	6.6	12.5	3.4	0.1	22.6	
Cars	202	994	262	8	1466	218	916	164	12	1310	148	521	162	3	834	311	586	163	5	1065	4675
% Cars	94.4	99	98.9	100	98.3	100	98.7	98.8	100	98.9	98	98.5	95.9	100	97.9	100	98.8	100	100	99.3	98.6
Trucks & Buses	12	10	3	0	25	0	12	2	0	14	3	8	7	0	18	0	7	0	0	7	64
% Trucks & Buses	5.6	1	1.1	0	1.7	0	1.3	1.2	0	1.1	2	1.5	4.1	0	2.1	0	1.2	0	0	0.7	1.4

Note: Pedestrian data shown for each approach is crossing the approach from either direction combined.



Traffic Data Collection, Inc.

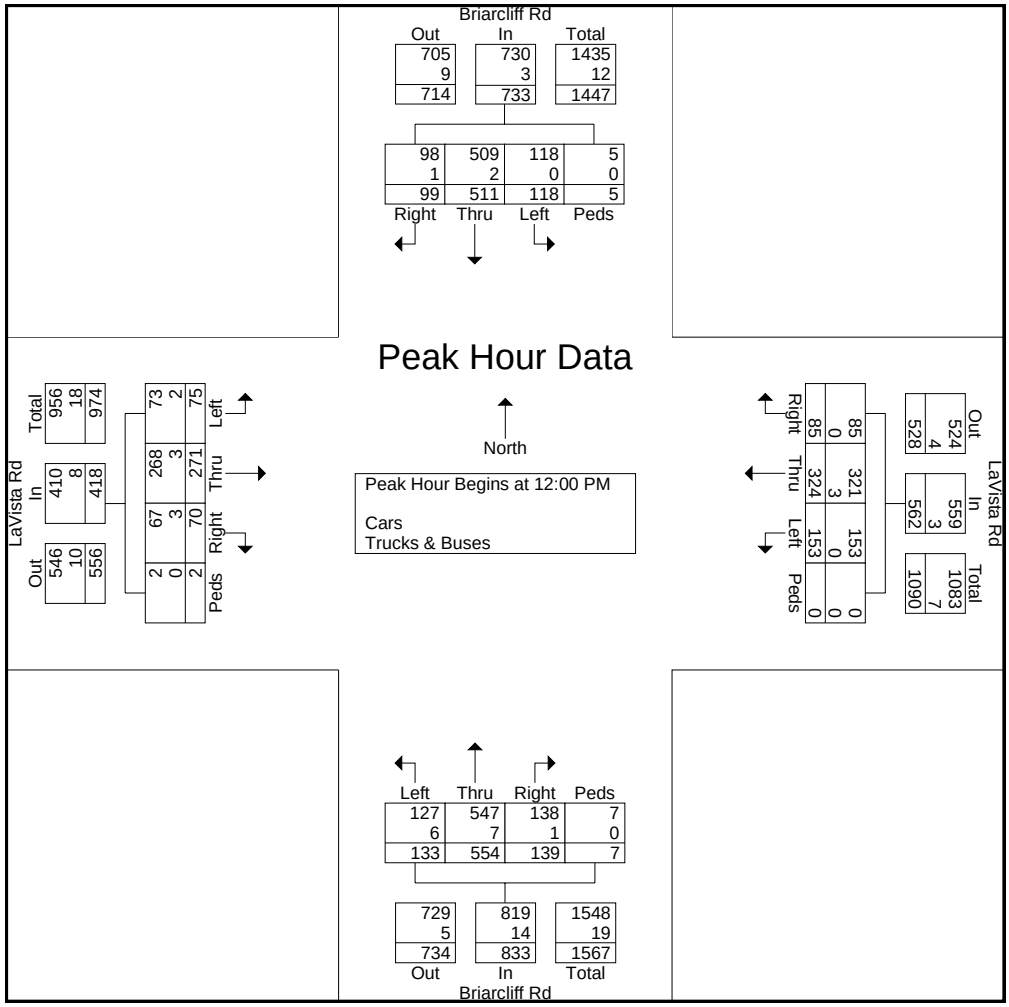
Atlanta - Hilton Head

www.trafficdatacollection.com

Counter: 1328
Counted By: BLE
Weather: Mild
Other: MRA

File Name : 08505-09b
Site Code : 00850509
Start Date : 1/26/2008
Page No : 2

	Briarcliff Rd Northbound					Briarcliff Rd Southbound					LaVista Rd Eastbound					LaVista Rd Westbound					
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 11:00 AM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	31	115	33	2	181	28	123	25	2	178	17	67	21	0	105	38	67	23	0	128	592
12:15 PM	31	146	36	2	215	37	148	20	0	205	13	59	14	0	86	33	76	24	0	133	639
12:30 PM	38	139	38	3	218	28	116	32	0	176	24	63	16	0	103	42	92	22	0	156	653
12:45 PM	33	154	32	0	219	25	124	22	3	174	21	82	19	2	124	40	89	16	0	145	662
Total Volume	133	554	139	7	833	118	511	99	5	733	75	271	70	2	418	153	324	85	0	562	2546
% App. Total	16	66.5	16.7	0.8		16.1	69.7	13.5	0.7		17.9	64.8	16.7	0.5		27.2	57.7	15.1	0		
PHF	.875	.899	.914	.583	.951	.797	.863	.773	.417	.894	.781	.826	.833	.250	.843	.911	.880	.885	.000	.901	.961
Cars	127	547	138	7	819	118	509	98	5	730	73	268	67	2	410	153	321	85	0	559	2518
% Cars	95.5	98.7	99.3	100	98.3	100	99.6	99.0	100	99.6	97.3	98.9	95.7	100	98.1	100	99.1	100	0	99.5	98.9
Trucks & Buses																					
% Trucks & Buses	4.5	1.3	0.7	0	1.7	0	0.4	1.0	0	0.4	2.7	1.1	4.3	0	1.9	0	0.9	0	0	0.5	1.1



TRAFFIC DATA COLLECTION, INC.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1934
Counted By: BLR
Weather: Mild
Other: MRA

File Name : 08505-10
Site Code : 00850510
Start Date : 2/7/2008
Page No : 1

Groups Printed- Cars - Trucks & Buses

	Briarcliff Rd Northbound					Briarcliff Rd Southbound					Synagogue Ent Eastbound					Clifton Rd Westbound					
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
07:00 AM	2	115	45	5	167	184	107	0	0	291	0	2	0	0	2	32	1	62	0	95	555
07:15 AM	0	139	65	3	207	198	123	0	0	321	0	0	0	0	0	34	1	96	1	132	660
07:30 AM	0	137	62	2	201	170	146	0	0	316	0	0	0	0	0	39	0	121	5	165	682
07:45 AM	0	149	65	0	214	188	168	2	0	358	0	0	0	2	2	67	0	104	4	175	749
Total	2	540	237	10	789	740	544	2	0	1286	0	2	0	2	4	172	2	383	10	567	2646
08:00 AM	1	175	50	0	226	182	155	0	1	338	0	0	0	0	0	76	2	97	1	176	740
08:15 AM	0	142	81	0	223	220	174	0	0	394	0	0	1	0	1	61	0	74	0	135	753
08:30 AM	0	163	71	2	236	192	145	0	2	339	0	0	0	0	0	77	0	89	1	167	742
08:45 AM	0	174	65	0	239	192	186	0	1	379	0	0	0	0	0	43	0	104	0	147	765
Total	1	654	267	2	924	786	660	0	4	1450	0	0	1	0	1	257	2	364	2	625	3000
Break																					
04:30 PM	1	200	47	1	249	93	205	2	0	300	1	0	1	2	4	79	4	178	3	264	817
04:45 PM	0	151	39	0	190	99	219	0	0	318	0	1	2	3	6	80	1	182	4	267	781
Total	1	351	86	1	439	192	424	2	0	618	1	1	3	5	10	159	5	360	7	531	1598
05:00 PM	0	163	60	1	224	78	233	0	0	311	0	0	0	0	0	82	0	170	2	254	789
05:15 PM	0	218	75	1	294	87	232	0	2	321	0	0	0	0	0	101	1	169	3	274	889
05:30 PM	0	207	70	0	277	99	226	0	3	328	1	0	1	0	2	90	0	156	6	252	859
05:45 PM	0	183	47	1	231	93	244	0	1	338	0	0	0	1	1	86	4	169	2	261	831
Total	0	771	252	3	1026	357	935	0	6	1298	1	0	1	1	3	359	5	664	13	1041	3368
06:00 PM	0	180	66	1	247	94	228	0	1	323	0	0	0	1	1	69	1	167	4	241	812
06:15 PM	0	156	64	0	220	117	218	0	1	336	1	0	0	0	1	65	0	153	3	221	778
Grand Total	4	2652	972	17	3645	2286	3009	4	12	5311	3	3	5	9	20	1081	15	2091	39	3226	12202
Apprch %	0.1	72.8	26.7	0.5		43	56.7	0.1	0.2		15	15	25	45		33.5	0.5	64.8	1.2		
Total %	0	21.7	8	0.1	29.9	18.7	24.7	0	0.1	43.5	0	0	0	0.1	0.2	8.9	0.1	17.1	0.3	26.4	
Cars	4	2591	947	17	3559	2212	2950	4	12	5178	3	3	5	9	20	1060	15	2012	39	3126	11883
% Cars	100	97.7	97.4	100	97.6	96.8	98	100	100	97.5	100	100	100	100	100	98.1	100	96.2	100	96.9	97.4
Trucks & Buses	0	61	25	0	86	74	59	0	0	133	0	0	0	0	0	21	0	79	0	100	319
% Trucks & Buses	0	2.3	2.6	0	2.4	3.2	2	0	0	2.5	0	0	0	0	0	1.9	0	3.8	0	3.1	2.6

Note: Pedestrian data shown for each approach is crossing the approach from either direction combined.

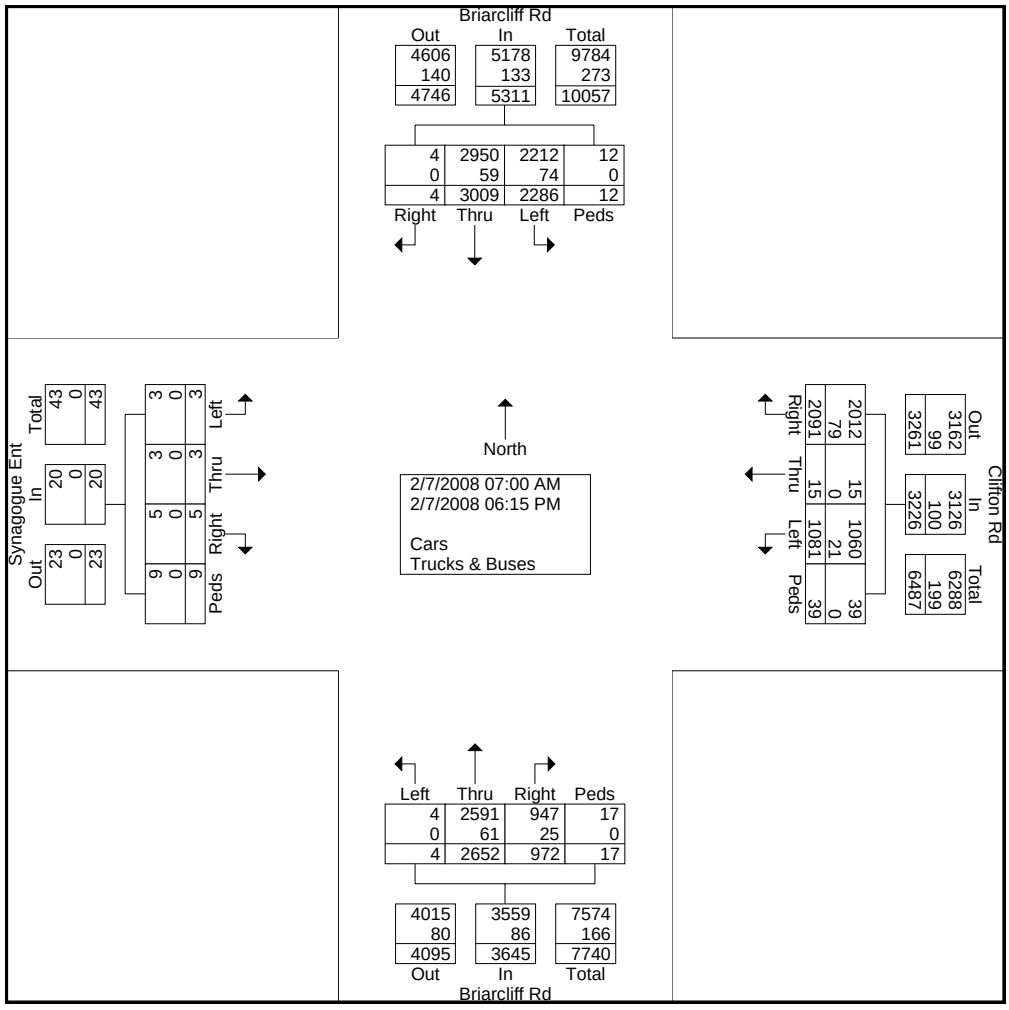
Traffic Data Collection, Inc.

Atlanta - Hilton Head

www.trafficdatacollection.com

Counter: 1934
Counted By: BLR
Weather: Mild
Other: MRA

File Name : 08505-10
Site Code : 00850510
Start Date : 2/7/2008
Page No : 2



Traffic Data Collection, Inc.

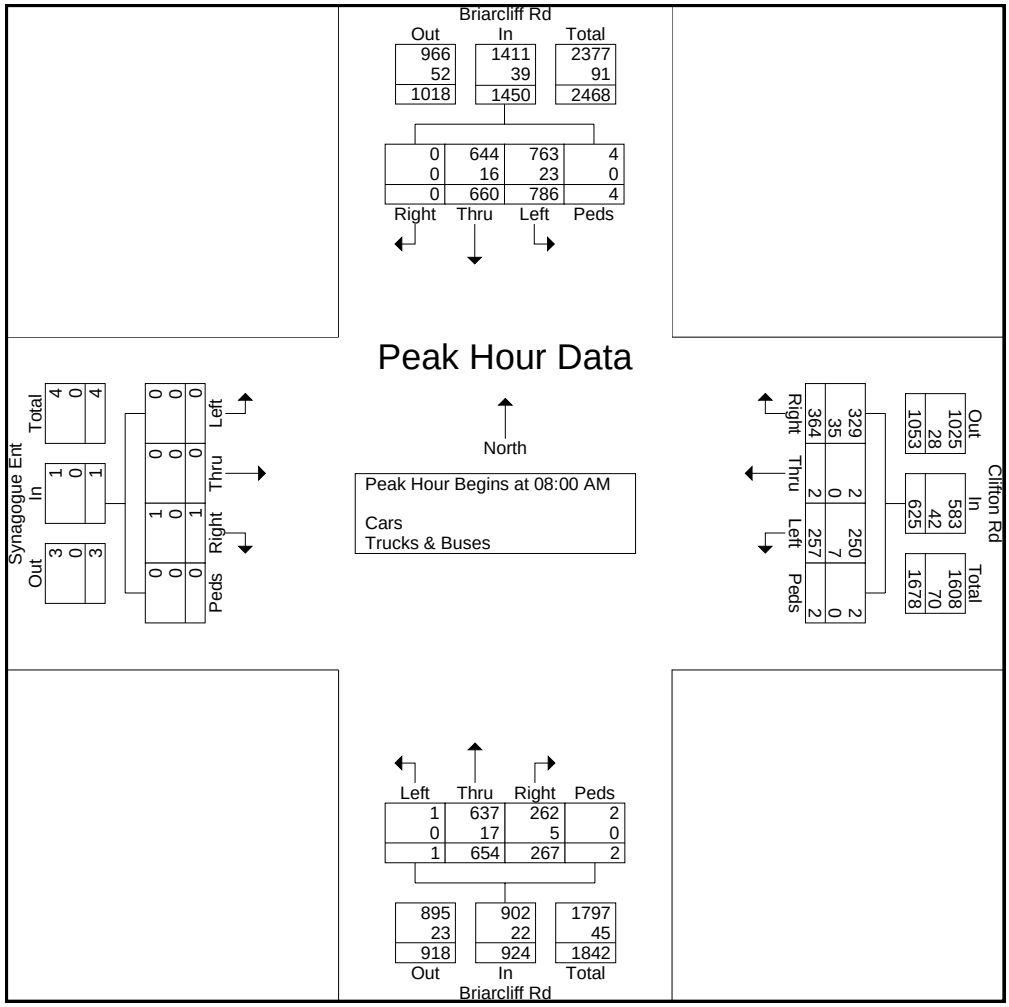
Atlanta - Hilton Head

www.trafficdatacollection.com

Counter: 1934
Counted By: BLR
Weather: Mild
Other: MRA

File Name : 08505-10
Site Code : 00850510
Start Date : 2/7/2008
Page No : 3

	Briarcliff Rd Northbound					Briarcliff Rd Southbound					Synagogue Ent Eastbound					Clifton Rd Westbound					
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 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	1	175	50	0	226	182	155	0	1	338	0	0	0	0	0	76	2	97	1	176	740
08:15 AM	0	142	81	0	223	220	174	0	0	394	0	0	1	0	1	61	0	74	0	135	753
08:30 AM	0	163	71	2	236	192	145	0	2	339	0	0	0	0	0	77	0	89	1	167	742
08:45 AM	0	174	65	0	239	192	186	0	1	379	0	0	0	0	0	43	0	104	0	147	765
Total Volume	1	654	267	2	924	786	660	0	4	1450	0	0	1	0	1	257	2	364	2	625	3000
% App. Total	0.1	70.8	28.9	0.2		54.2	45.5	0	0.3		0	0	100	0		41.1	0.3	58.2	0.3		
PHF	.250	.934	.824	.250	.967	.893	.887	.000	.500	.920	.000	.000	.250	.000	.250	.834	.250	.875	.500	.888	.980
Cars	1	637	262	2	902	763	644	0	4	1411	0	0	1	0	1	250	2	329	2	583	2897
% Cars	100	97.4	98.1	100	97.6	97.1	97.6	0	100	97.3	0	0	100	0	100	97.3	100	90.4	100	93.3	96.6
Trucks & Buses																					
% Trucks & Buses	0	2.6	1.9	0	2.4	2.9	2.4	0	0	2.7	0	0	0	0	0	2.7	0	9.6	0	6.7	3.4



Traffic Data Collection, Inc.

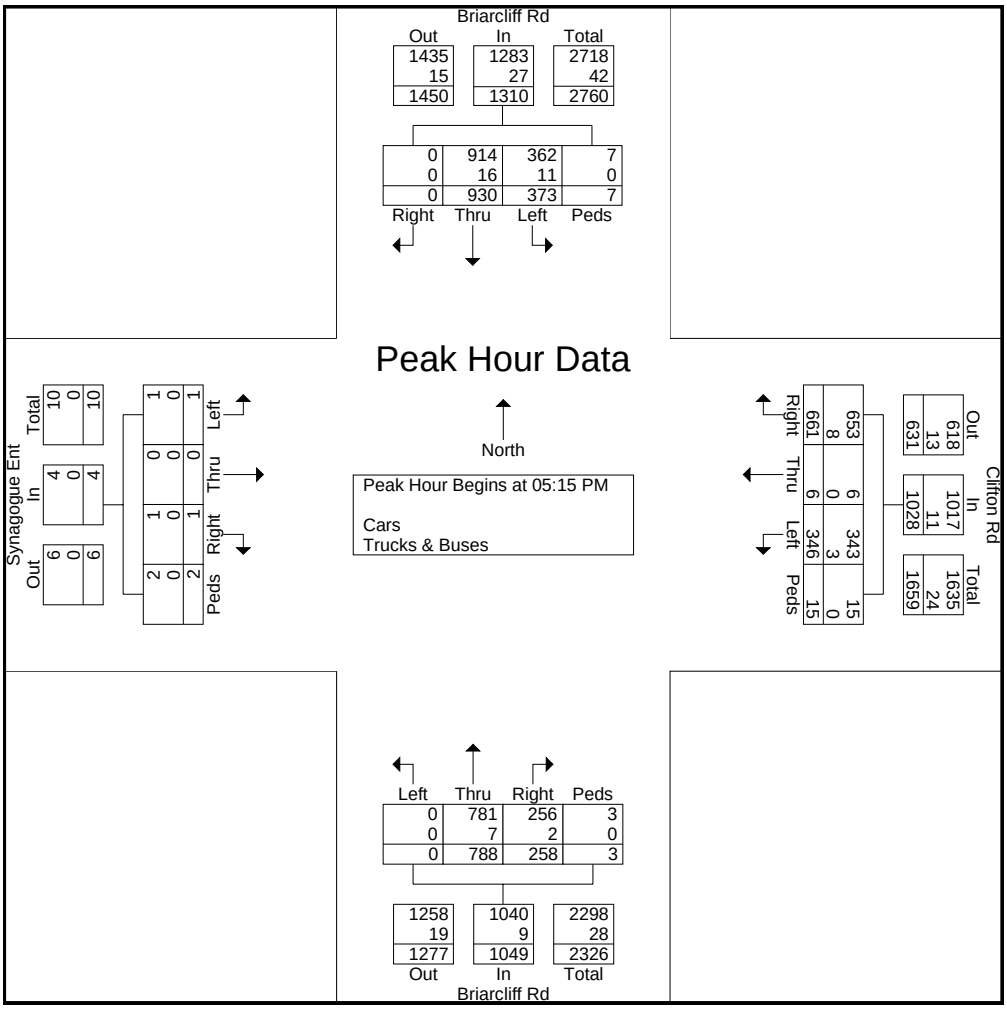
Atlanta - Hilton Head

www.trafficdatacollection.com

Counter: 1934
Counted By: BLR
Weather: Mild
Other: MRA

File Name : 08505-10
Site Code : 00850510
Start Date : 2/7/2008
Page No : 4

	Briarcliff Rd Northbound					Briarcliff Rd Southbound					Synagogue Ent Eastbound					Clifton Rd Westbound					
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 12:00 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:15 PM																					
05:15 PM	0	218	75	1	294	87	232	0	2	321	0	0	0	0	0	101	1	169	3	274	889
05:30 PM	0	207	70	0	277	99	226	0	3	328	1	0	1	0	2	90	0	156	6	252	859
05:45 PM	0	183	47	1	231	93	244	0	1	338	0	0	0	1	1	86	4	169	2	261	831
06:00 PM	0	180	66	1	247	94	228	0	1	323	0	0	0	1	1	69	1	167	4	241	812
Total Volume	0	788	258	3	1049	373	930	0	7	1310	1	0	1	2	4	346	6	661	15	1028	3391
% App. Total	0	75.1	24.6	0.3		28.5	71	0	0.5		25	0	25	50		33.7	0.6	64.3	1.5		
PHF	.000	.904	.860	.750	.892	.942	.953	.000	.583	.969	.250	.000	.250	.500	.500	.856	.375	.978	.625	.938	.954
Cars	0	781	256	3	1040	362	914	0	7	1283	1	0	1	2	4	343	6	653	15	1017	3344
% Cars	0	99.1	99.2	100	99.1	97.1	98.3	0	100	97.9	100	0	100	100	100	99.1	100	98.8	100	98.9	98.6
Trucks & Buses																					
% Trucks & Buses	0	0.9	0.8	0	0.9	2.9	1.7	0	0	2.1	0	0	0	0	0	0.9	0	1.2	0	1.1	1.4



Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780005
Site Code : 24780005
Start Date : 1/31/2008
Page No : 1

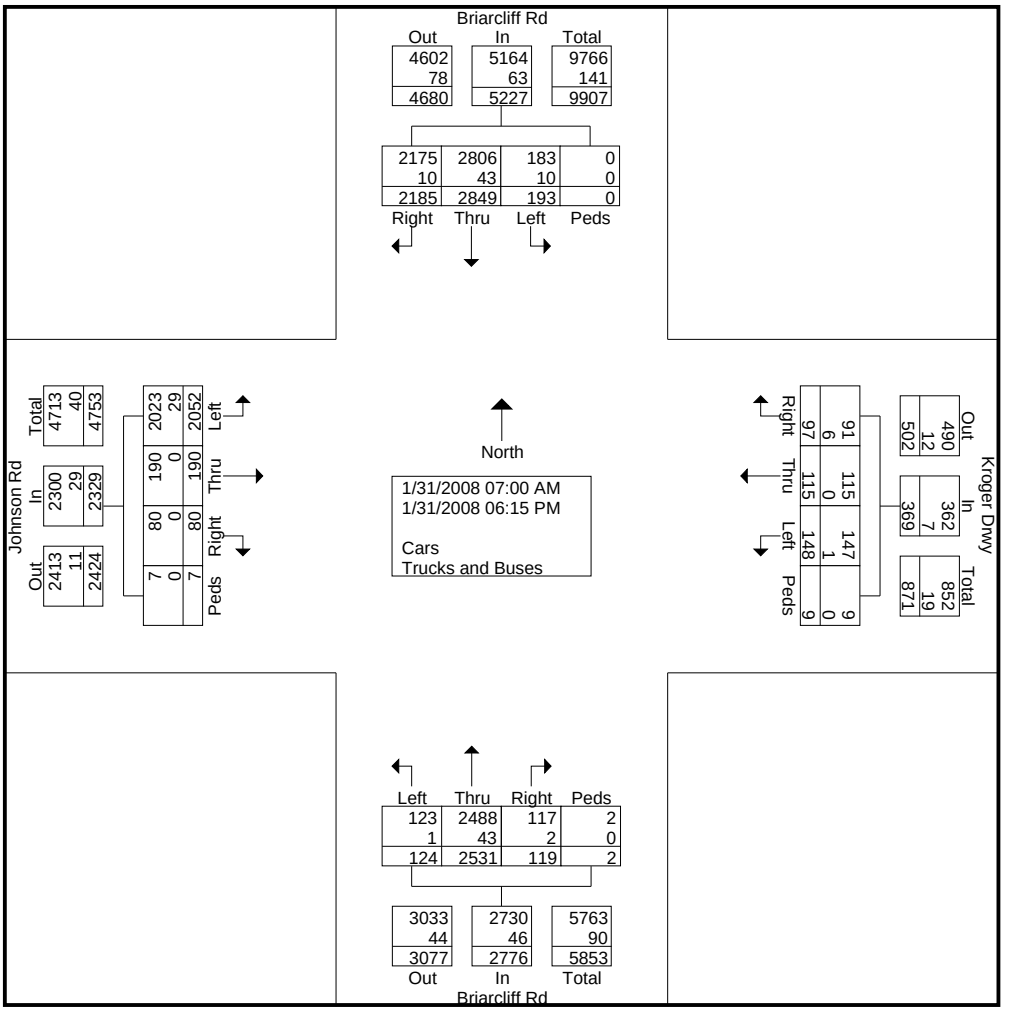
Groups Printed- Cars - Trucks and Buses

	Briarcliff Rd Northbound					Briarcliff Rd Southbound					Johnson Rd Eastbound					Kroger Drwy Westbound					
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
07:00 AM	3	143	2	0	148	7	105	96	0	208	120	4	3	0	127	3	1	3	0	7	490
07:15 AM	5	157	2	0	164	8	115	104	0	227	127	6	4	0	137	2	2	6	0	10	538
07:30 AM	8	175	3	0	186	11	123	111	0	245	133	5	4	1	143	3	4	6	0	13	587
07:45 AM	6	185	4	0	195	14	138	128	0	280	140	9	5	0	154	3	2	8	1	14	643
Total	22	660	11	0	693	40	481	439	0	960	520	24	16	1	561	11	9	23	1	44	2258
08:00 AM	8	183	2	0	193	12	118	117	0	247	124	6	6	0	136	4	3	6	1	14	590
08:15 AM	9	170	4	0	183	12	131	105	0	248	120	4	4	1	129	3	1	10	0	14	574
08:30 AM	16	163	2	0	181	9	124	98	0	231	116	8	5	0	129	2	2	6	1	11	552
08:45 AM	12	139	5	0	156	6	118	94	0	218	116	7	3	0	126	4	2	4	0	10	510
Total	45	655	13	0	713	39	491	414	0	944	476	25	18	1	520	13	8	26	2	49	2226
*** BREAK ***																					
04:30 PM	4	140	10	0	154	11	220	158	0	389	116	15	6	0	137	12	12	4	0	28	708
04:45 PM	6	148	15	0	169	15	238	166	0	419	130	18	8	0	156	15	15	7	1	38	782
Total	10	288	25	0	323	26	458	324	0	808	246	33	14	0	293	27	27	11	1	66	1490
05:00 PM	8	159	11	0	178	17	244	174	0	435	134	20	5	1	160	17	11	5	0	33	806
05:15 PM	12	171	13	1	197	20	256	187	0	463	148	24	7	1	180	21	14	10	1	46	886
05:30 PM	9	159	10	0	178	16	251	176	0	443	142	21	4	0	167	18	12	6	0	36	824
05:45 PM	6	150	17	0	173	14	238	149	0	401	137	17	6	2	162	14	9	8	1	32	768
Total	35	639	51	1	726	67	989	686	0	1742	561	82	22	4	669	70	46	29	2	147	3284
06:00 PM	5	148	11	1	165	11	220	158	0	389	129	14	4	1	148	15	13	5	1	34	736
06:15 PM	7	141	8	0	156	10	210	164	0	384	120	12	6	0	138	12	12	3	2	29	707
Grand Total	124	2531	119	2	2776	193	2849	2185	0	5227	2052	190	80	7	2329	148	115	97	9	369	10701
Apprch %	4.5	91.2	4.3	0.1		3.7	54.5	41.8	0		88.1	8.2	3.4	0.3		40.1	31.2	26.3	2.4		
Total %	1.2	23.7	1.1	0	25.9	1.8	26.6	20.4	0	48.8	19.2	1.8	0.7	0.1	21.8	1.4	1.1	0.9	0.1	3.4	
Cars	123	2488	117	2	2730	183	2806	2175	0	5164	2023	190	80	7	2300	147	115	91	9	362	10556
% Cars	99.2	98.3	98.3	100	98.3	94.8	98.5	99.5	0	98.8	98.6	100	100	100	98.8	99.3	100	93.8	100	98.1	98.6
Trucks and Buses	1	43	2	0	46	10	43	10	0	63	29	0	0	0	29	1	0	6	0	7	145
% Trucks and Buses	0.8	1.7	1.7	0	1.7	5.2	1.5	0.5	0	1.2	1.4	0	0	0	1.2	0.7	0	6.2	0	1.9	1.4

Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780005
Site Code : 24780005
Start Date : 1/31/2008
Page No : 2

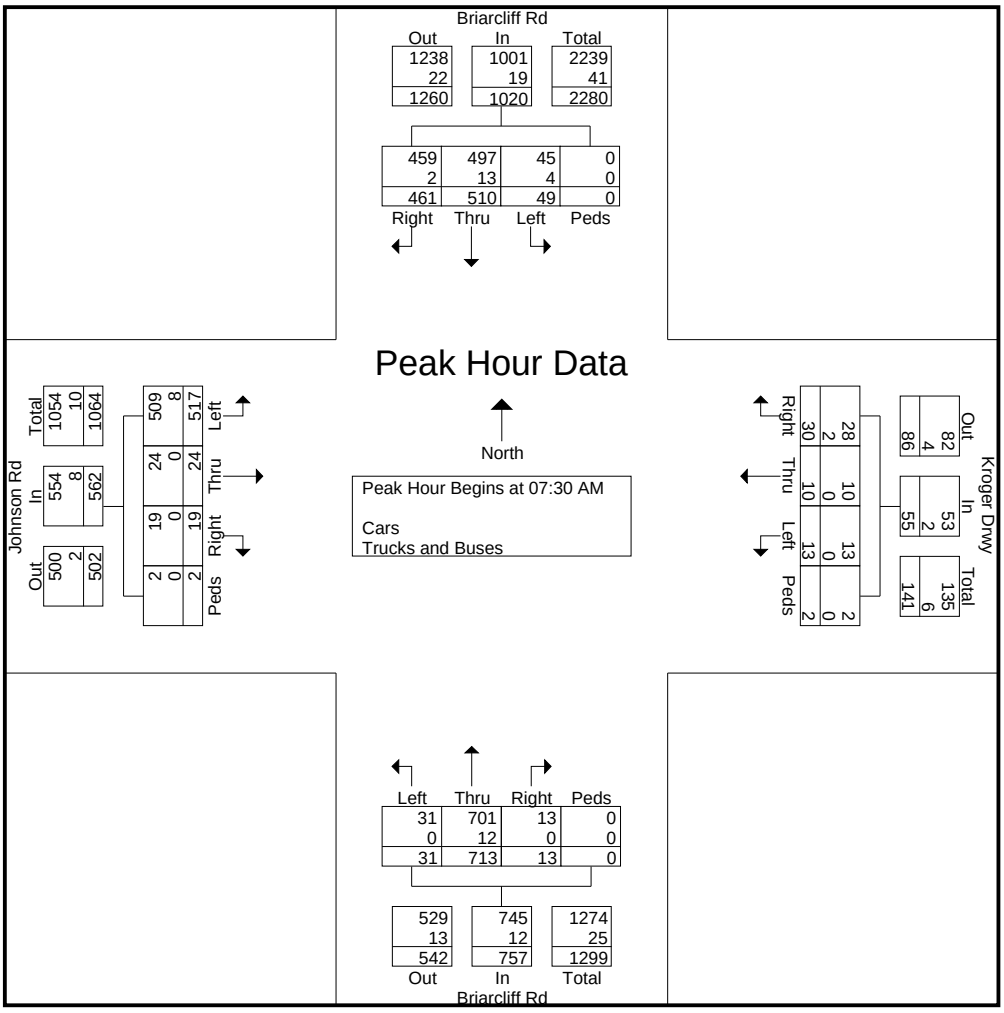


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780005
Site Code : 24780005
Start Date : 1/31/2008
Page No : 3

	Briarcliff Rd Northbound					Briarcliff Rd Southbound					Johnson Rd Eastbound					Kroger Drwy Westbound					
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 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	8	175	3	0	186	11	123	111	0	245	133	5	4	1	143	3	4	6	0	13	587
07:45 AM	6	185	4	0	195	14	138	128	0	280	140	9	5	0	154	3	2	8	1	14	643
08:00 AM	8	183	2	0	193	12	118	117	0	247	124	6	6	0	136	4	3	6	1	14	590
08:15 AM	9	170	4	0	183	12	131	105	0	248	120	4	4	1	129	3	1	10	0	14	574
Total Volume	31	713	13	0	757	49	510	461	0	1020	517	24	19	2	562	13	10	30	2	55	2394
% App. Total	4.1	94.2	1.7	0		4.8	50	45.2	0		92	4.3	3.4	0.4		23.6	18.2	54.5	3.6		
PHF	.861	.964	.813	.000	.971	.875	.924	.900	.000	.911	.923	.667	.792	.500	.912	.813	.625	.750	.500	.982	.931
Cars	31	701	13	0	745	45	497	459	0	1001	509	24	19	2	554	13	10	28	2	53	2353
% Cars	100	98.3	100	0	98.4	91.8	97.5	99.6	0	98.1	98.5	100	100	100	98.6	100	100	93.3	100	96.4	98.3
Trucks and Buses	0	12	0	0	12	4	13	2	0	19	8	0	0	0	8	0	0	2	0	2	41
% Trucks and Buses	0	1.7	0	0	1.6	8.2	2.5	0.4	0	1.9	1.5	0	0	0	1.4	0	0	6.7	0	3.6	1.7

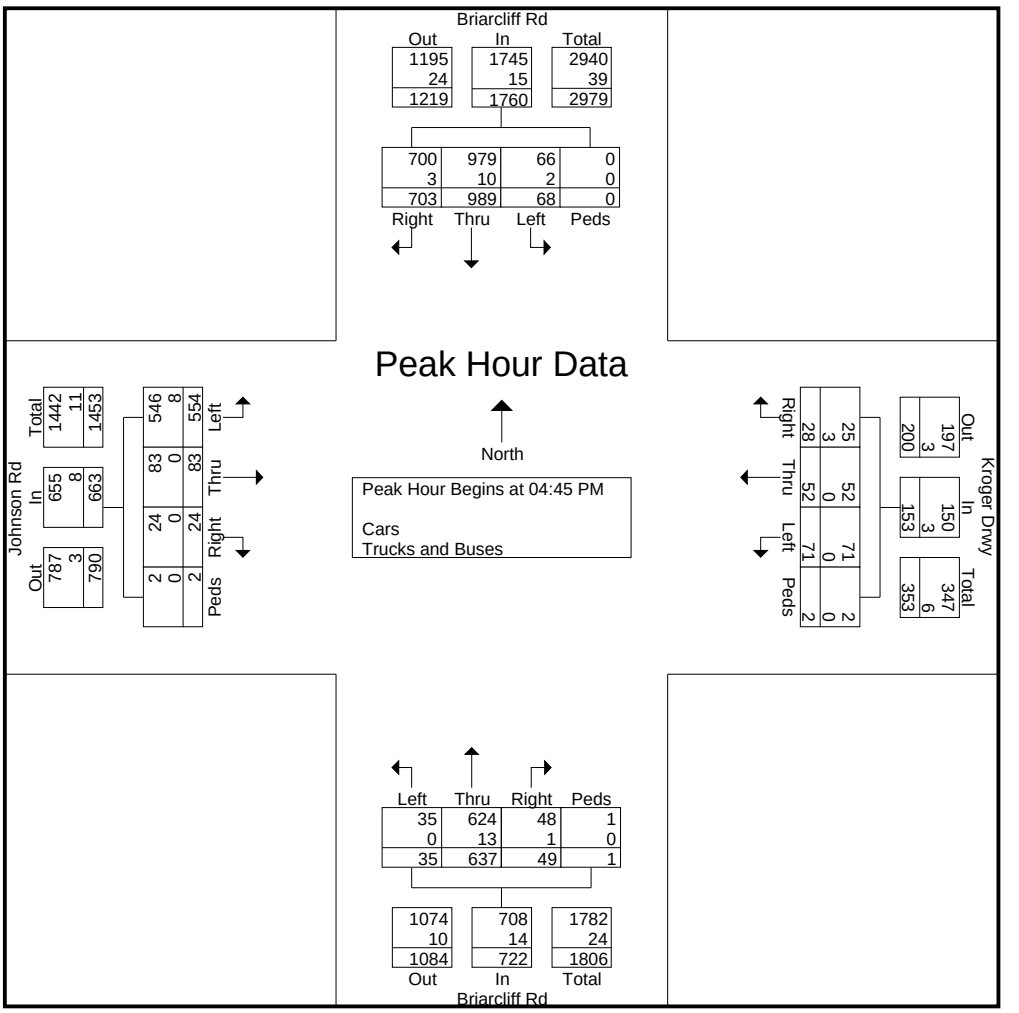


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780005
Site Code : 24780005
Start Date : 1/31/2008
Page No : 4

	Briarcliff Rd Northbound					Briarcliff Rd Southbound					Johnson Rd Eastbound					Kroger Drwy Westbound					
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 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	6	148	15	0	169	15	238	166	0	419	130	18	8	0	156	15	15	7	1	38	782
05:00 PM	8	159	11	0	178	17	244	174	0	435	134	20	5	1	160	17	11	5	0	33	806
05:15 PM	12	171	13	1	197	20	256	187	0	463	148	24	7	1	180	21	14	10	1	46	886
05:30 PM	9	159	10	0	178	16	251	176	0	443	142	21	4	0	167	18	12	6	0	36	824
Total Volume	35	637	49	1	722	68	989	703	0	1760	554	83	24	2	663	71	52	28	2	153	3298
% App. Total	4.8	88.2	6.8	0.1		3.9	56.2	39.9	0		83.6	12.5	3.6	0.3		46.4	34	18.3	1.3		
PHF	.729	.931	.817	.250	.916	.850	.966	.940	.000	.950	.936	.865	.750	.500	.921	.845	.867	.700	.500	.832	.931
Cars	35	624	48	1	708	66	979	700	0	1745	546	83	24	2	655	71	52	25	2	150	3258
% Cars	100	98.0	98.0	100	98.1	97.1	99.0	99.6	0	99.1	98.6	100	100	100	98.8	100	100	89.3	100	98.0	98.8
Trucks and Buses	0	13	1	0	14	2	10	3	0	15	8	0	0	0	8	0	0	3	0	3	40
% Trucks and Buses	0	2.0	2.0	0	1.9	2.9	1.0	0.4	0	0.9	1.4	0	0	0	1.2	0	0	10.7	0	2.0	1.2



Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780006
Site Code : 24780006
Start Date : 2/6/2008
Page No : 1

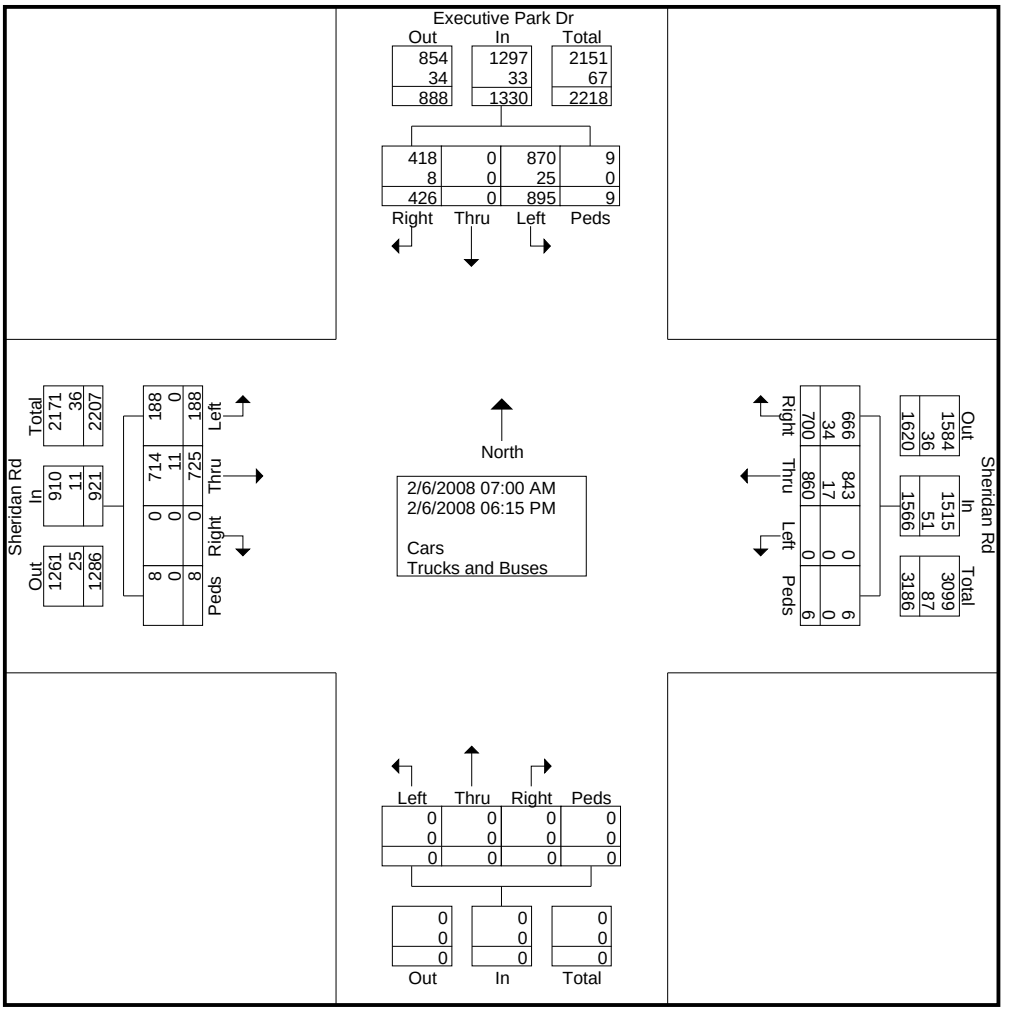
Groups Printed- Cars - Trucks and Buses

	Northbound					Executive Park Dr Southbound					Sheridan Rd Eastbound					Sheridan Rd Westbound					
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
07:00 AM	0	0	0	0	0	13	0	6	0	19	11	15	0	0	26	0	49	44	0	93	138
07:15 AM	0	0	0	0	0	20	0	9	1	30	15	19	0	0	34	0	59	56	0	115	179
07:30 AM	0	0	0	0	0	28	0	12	0	40	18	22	0	0	40	0	55	80	0	135	215
07:45 AM	0	0	0	0	0	23	0	13	2	38	12	25	0	0	37	0	58	55	0	113	188
Total	0	0	0	0	0	84	0	40	3	127	56	81	0	0	137	0	221	235	0	456	720
08:00 AM	0	0	0	0	0	21	0	9	0	30	16	31	0	0	47	0	78	82	0	160	237
08:15 AM	0	0	0	0	0	26	0	11	0	37	13	25	0	0	38	0	87	92	0	179	254
08:30 AM	0	0	0	0	0	30	0	15	0	45	11	28	0	0	39	0	64	66	0	130	214
08:45 AM	0	0	0	0	0	26	0	10	1	37	9	24	0	0	33	0	51	59	0	110	180
Total	0	0	0	0	0	103	0	45	1	149	49	108	0	0	157	0	280	299	0	579	885
*** BREAK ***																					
04:30 PM	0	0	0	0	0	64	0	29	0	93	7	43	0	0	50	0	27	14	1	42	185
04:45 PM	0	0	0	0	0	78	0	38	1	117	8	47	0	0	55	0	34	18	1	53	225
Total	0	0	0	0	0	142	0	67	1	210	15	90	0	0	105	0	61	32	2	95	410
05:00 PM	0	0	0	0	0	84	0	44	0	128	11	53	0	3	67	0	41	17	0	58	253
05:15 PM	0	0	0	0	0	115	0	59	1	175	9	77	0	0	86	0	51	21	1	73	334
05:30 PM	0	0	0	0	0	105	0	55	0	160	13	78	0	0	91	0	56	24	0	80	331
05:45 PM	0	0	0	0	0	91	0	42	2	135	10	90	0	2	102	0	54	29	1	84	321
Total	0	0	0	0	0	395	0	200	3	598	43	298	0	5	346	0	202	91	2	295	1239
06:00 PM	0	0	0	0	0	92	0	40	0	132	14	77	0	0	91	0	50	21	0	71	294
06:15 PM	0	0	0	0	0	79	0	34	1	114	11	71	0	3	85	0	46	22	2	70	269
Grand Total	0	0	0	0	0	895	0	426	9	1330	188	725	0	8	921	0	860	700	6	1566	3817
Apprch %	0	0	0	0		67.3	0	32	0.7		20.4	78.7	0	0.9		0	54.9	44.7	0.4		
Total %	0	0	0	0	0	23.4	0	11.2	0.2	34.8	4.9	19	0	0.2	24.1	0	22.5	18.3	0.2	41	
Cars	0	0	0	0	0	870	0	418	9	1297	188	714	0	8	910	0	843	666	6	1515	3722
% Cars	0	0	0	0	0	97.2	0	98.1	100	97.5	100	98.5	0	100	98.8	0	98	95.1	100	96.7	97.5
Trucks and Buses	0	0	0	0	0	25	0	8	0	33	0	11	0	0	11	0	17	34	0	51	95
% Trucks and Buses	0	0	0	0	0	2.8	0	1.9	0	2.5	0	1.5	0	0	1.2	0	2	4.9	0	3.3	2.5

Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780006
Site Code : 24780006
Start Date : 2/6/2008
Page No : 2

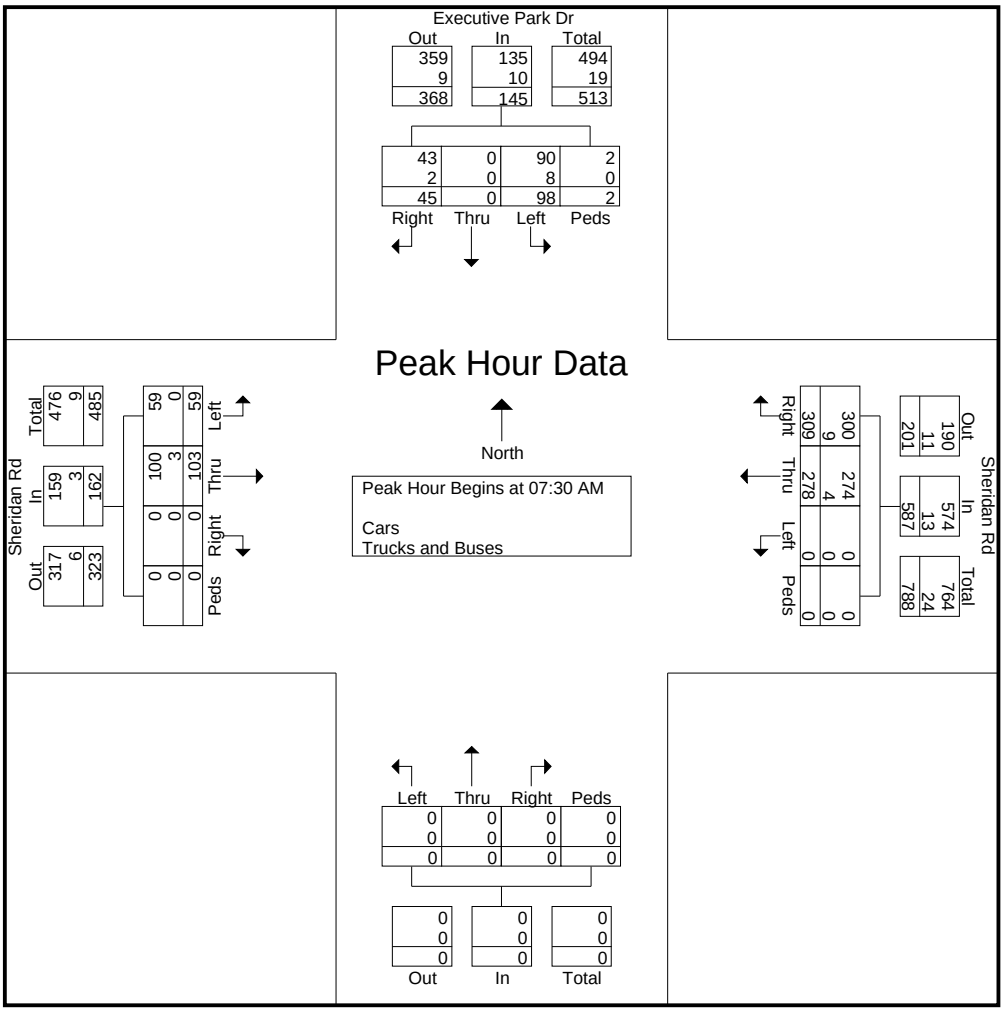


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780006
Site Code : 24780006
Start Date : 2/6/2008
Page No : 3

	Northbound					Executive Park Dr Southbound					Sheridan Rd Eastbound					Sheridan Rd Westbound					
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 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	0	0	28	0	12	0	40	18	22	0	0	40	0	55	80	0	135	215
07:45 AM	0	0	0	0	0	23	0	13	2	38	12	25	0	0	37	0	58	55	0	113	188
08:00 AM	0	0	0	0	0	21	0	9	0	30	16	31	0	0	47	0	78	82	0	160	237
08:15 AM	0	0	0	0	0	26	0	11	0	37	13	25	0	0	38	0	87	92	0	179	254
Total Volume	0	0	0	0	0	98	0	45	2	145	59	103	0	0	162	0	278	309	0	587	894
% App. Total	0	0	0	0		67.6	0	31	1.4		36.4	63.6	0	0		0	47.4	52.6	0		
PHF	.000	.000	.000	.000	.000	.875	.000	.865	.250	.906	.819	.831	.000	.000	.862	.000	.799	.840	.000	.820	.880
Cars	0	0	0	0	0	90	0	43	2	135	59	100	0	0	159	0	274	300	0	574	868
% Cars	0	0	0	0	0	91.8	0	95.6	100	93.1	100	97.1	0	0	98.1	0	98.6	97.1	0	97.8	97.1
Trucks and Buses	0	0	0	0	0	8	0	2	0	10	0	3	0	0	3	0	4	9	0	13	26
% Trucks and Buses	0	0	0	0	0	8.2	0	4.4	0	6.9	0	2.9	0	0	1.9	0	1.4	2.9	0	2.2	2.9

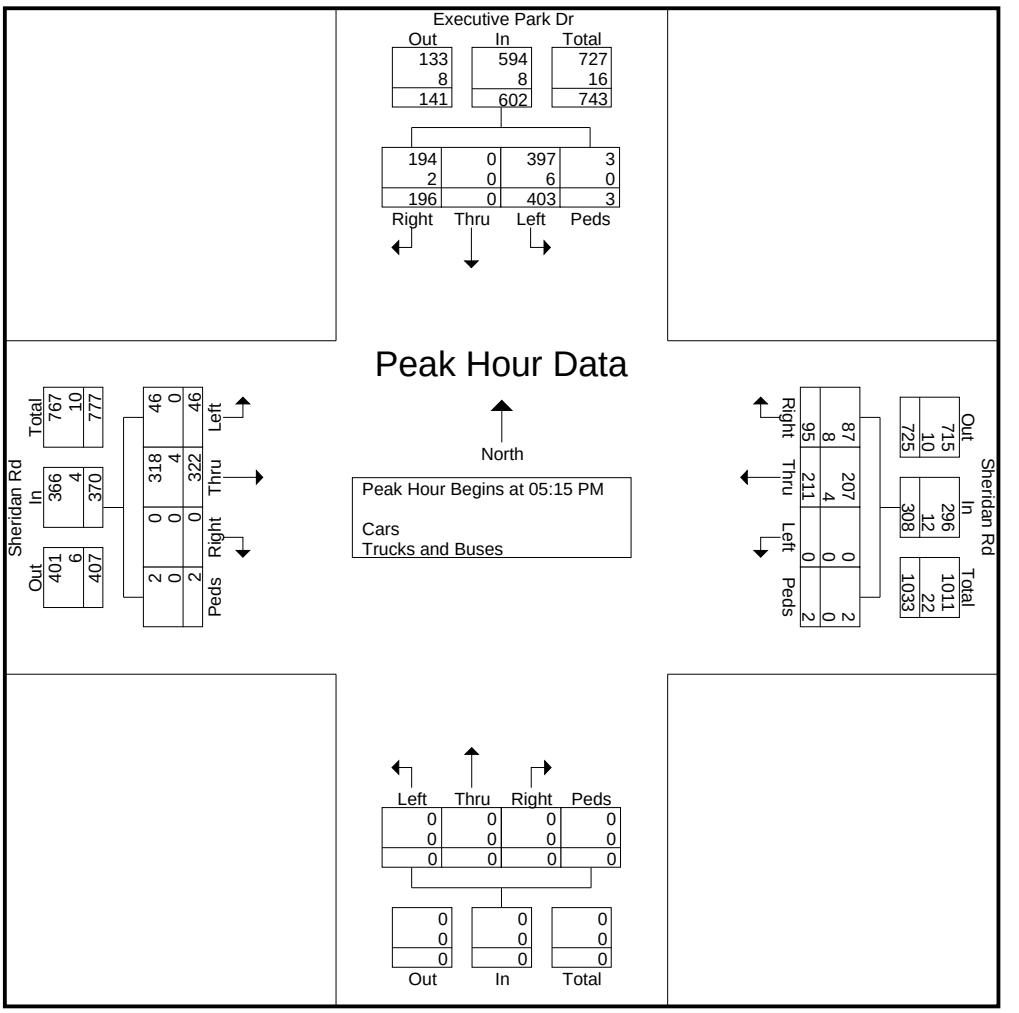


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780006
Site Code : 24780006
Start Date : 2/6/2008
Page No : 4

	Northbound					Executive Park Dr Southbound					Sheridan Rd Eastbound					Sheridan Rd Westbound					
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 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:15 PM																					
05:15 PM	0	0	0	0	0	115	0	59	1	175	9	77	0	0	86	0	51	21	1	73	334
05:30 PM	0	0	0	0	0	105	0	55	0	160	13	78	0	0	91	0	56	24	0	80	331
05:45 PM	0	0	0	0	0	91	0	42	2	135	10	90	0	2	102	0	54	29	1	84	321
06:00 PM	0	0	0	0	0	92	0	40	0	132	14	77	0	0	91	0	50	21	0	71	294
Total Volume	0	0	0	0	0	403	0	196	3	602	46	322	0	2	370	0	211	95	2	308	1280
% App. Total	0	0	0	0		66.9	0	32.6	0.5		12.4	87	0	0.5		0	68.5	30.8	0.6		
PHF	.000	.000	.000	.000	.000	.876	.000	.831	.375	.860	.821	.894	.000	.250	.907	.000	.942	.819	.500	.917	.958
Cars	0	0	0	0	0	397	0	194	3	594	46	318	0	2	366	0	207	87	2	296	1256
% Cars	0	0	0	0	0	98.5	0	99.0	100	98.7	100	98.8	0	100	98.9	0	98.1	91.6	100	96.1	98.1
Trucks and Buses	0	0	0	0	0	6	0	2	0	8	0	4	0	0	4	0	4	8	0	12	24
% Trucks and Buses	0	0	0	0	0	1.5	0	1.0	0	1.3	0	1.2	0	0	1.1	0	1.9	8.4	0	3.9	1.9



Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780006-sat
Site Code : 24780006
Start Date : 1/26/2008
Page No : 1

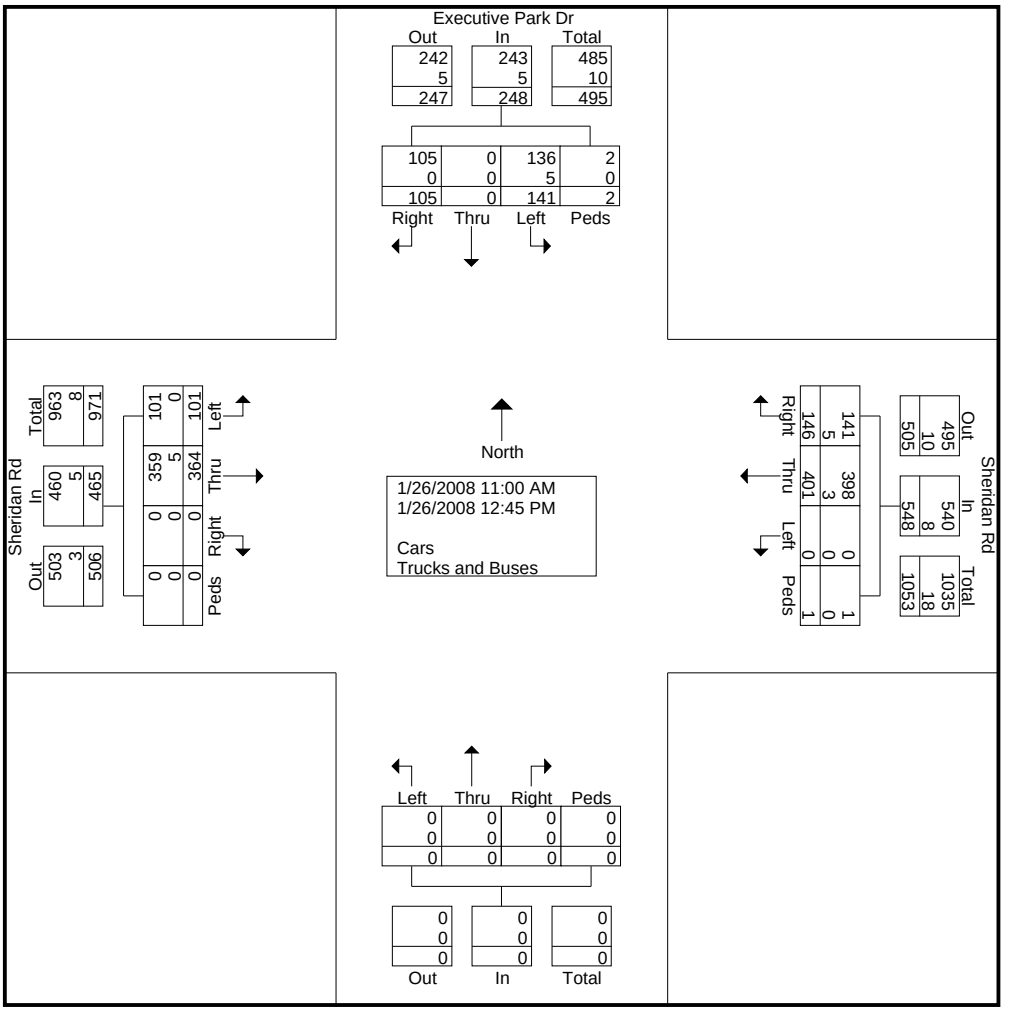
Groups Printed- Cars - Trucks and Buses

	Northbound					Executive Park Dr Southbound					Sheridan Rd Eastbound					Sheridan Rd Westbound					
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
11:00 AM	0	0	0	0	0	14	0	11	0	25	12	40	0	0	52	0	53	18	0	71	148
11:15 AM	0	0	0	0	0	12	0	14	0	26	14	42	0	0	56	0	58	18	0	76	158
11:30 AM	0	0	0	0	0	16	0	15	1	32	12	49	0	0	61	0	45	17	0	62	155
11:45 AM	0	0	0	0	0	17	0	14	0	31	16	44	0	0	60	0	42	22	0	64	155
Total	0	0	0	0	0	59	0	54	1	114	54	175	0	0	229	0	198	75	0	273	616
12:00 PM	0	0	0	0	0	21	0	17	1	39	12	49	0	0	61	0	50	20	0	70	170
12:15 PM	0	0	0	0	0	19	0	13	0	32	11	56	0	0	67	0	54	17	1	72	171
12:30 PM	0	0	0	0	0	24	0	10	0	34	13	43	0	0	56	0	52	19	0	71	161
12:45 PM	0	0	0	0	0	18	0	11	0	29	11	41	0	0	52	0	47	15	0	62	143
Total	0	0	0	0	0	82	0	51	1	134	47	189	0	0	236	0	203	71	1	275	645
Grand Total	0	0	0	0	0	141	0	105	2	248	101	364	0	0	465	0	401	146	1	548	1261
Apprch %	0	0	0	0		56.9	0	42.3	0.8		21.7	78.3	0	0		0	73.2	26.6	0.2		
Total %	0	0	0	0	0	11.2	0	8.3	0.2	19.7	8	28.9	0	0	36.9	0	31.8	11.6	0.1	43.5	
Cars	0	0	0	0	0	136	0	105	2	243	101	359	0	0	460	0	398	141	1	540	1243
% Cars	0	0	0	0	0	96.5	0	100	100	98	100	98.6	0	0	98.9	0	99.3	96.6	100	98.5	98.6
Trucks and Buses	0	0	0	0	0	5	0	0	0	5	0	5	0	0	5	0	3	5	0	8	18
% Trucks and Buses	0	0	0	0	0	3.5	0	0	0	2	0	1.4	0	0	1.1	0	0.7	3.4	0	1.5	1.4

Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780006-sat
Site Code : 24780006
Start Date : 1/26/2008
Page No : 2

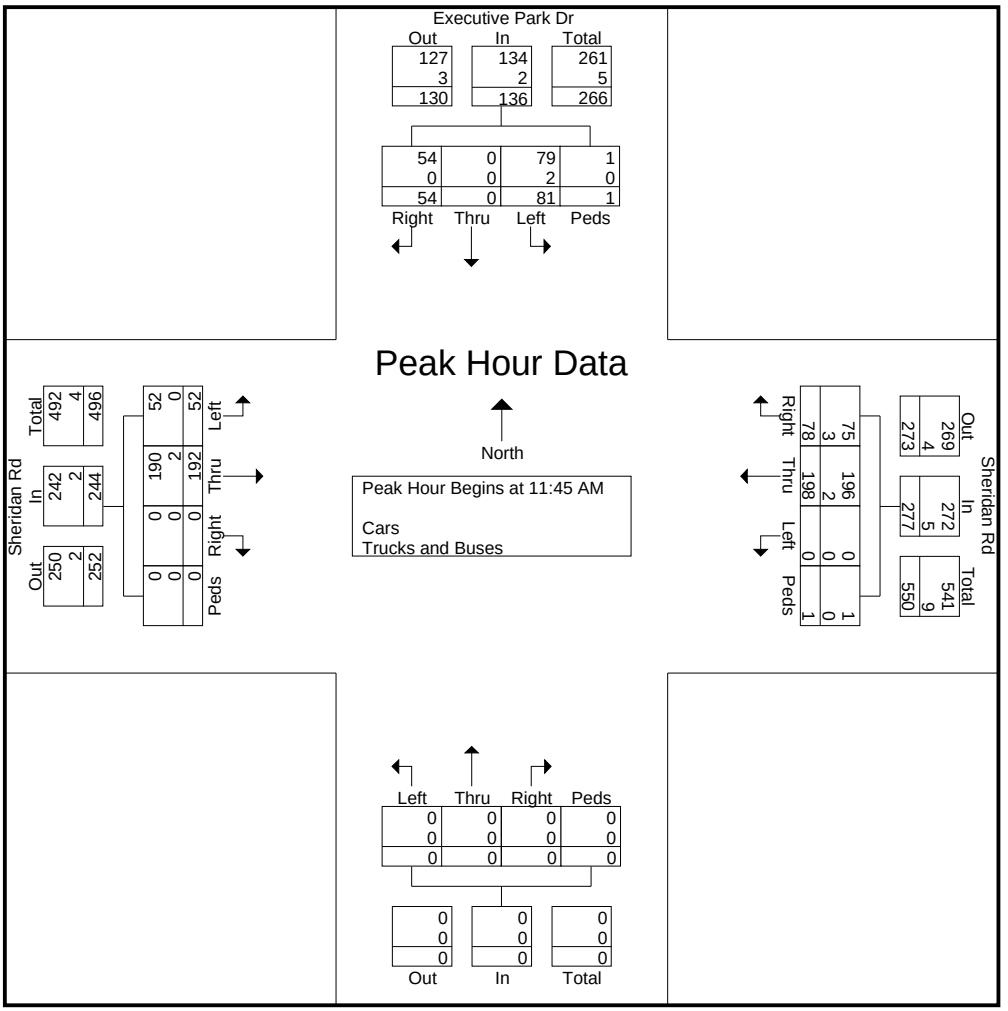


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780006-sat
Site Code : 24780006
Start Date : 1/26/2008
Page No : 3

	Northbound					Executive Park Dr Southbound					Sheridan Rd Eastbound					Sheridan Rd Westbound					
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 11:00 AM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:45 AM																					
11:45 AM	0	0	0	0	0	17	0	14	0	31	16	44	0	0	60	0	42	22	0	64	155
12:00 PM	0	0	0	0	0	21	0	17	1	39	12	49	0	0	61	0	50	20	0	70	170
12:15 PM	0	0	0	0	0	19	0	13	0	32	11	56	0	0	67	0	54	17	1	72	171
12:30 PM	0	0	0	0	0	24	0	10	0	34	13	43	0	0	56	0	52	19	0	71	161
Total Volume	0	0	0	0	0	81	0	54	1	136	52	192	0	0	244	0	198	78	1	277	657
% App. Total	0	0	0	0		59.6	0	39.7	0.7		21.3	78.7	0	0		0	71.5	28.2	0.4		
PHF	.000	.000	.000	.000	.000	.844	.000	.794	.250	.872	.813	.857	.000	.000	.910	.000	.917	.886	.250	.962	.961
Cars	0	0	0	0	0	79	0	54	1	134	52	190	0	0	242	0	196	75	1	272	648
% Cars	0	0	0	0	0	97.5	0	100	100	98.5	100	99.0	0	0	99.2	0	99.0	96.2	100	98.2	98.6
Trucks and Buses	0	0	0	0	0	2	0	0	0	2	0	2	0	0	2	0	2	3	0	5	9
% Trucks and Buses	0	0	0	0	0	2.5	0	0	0	1.5	0	1.0	0	0	0.8	0	1.0	3.8	0	1.8	1.4



Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780007
Site Code : 24780007
Start Date : 2/6/2008
Page No : 1

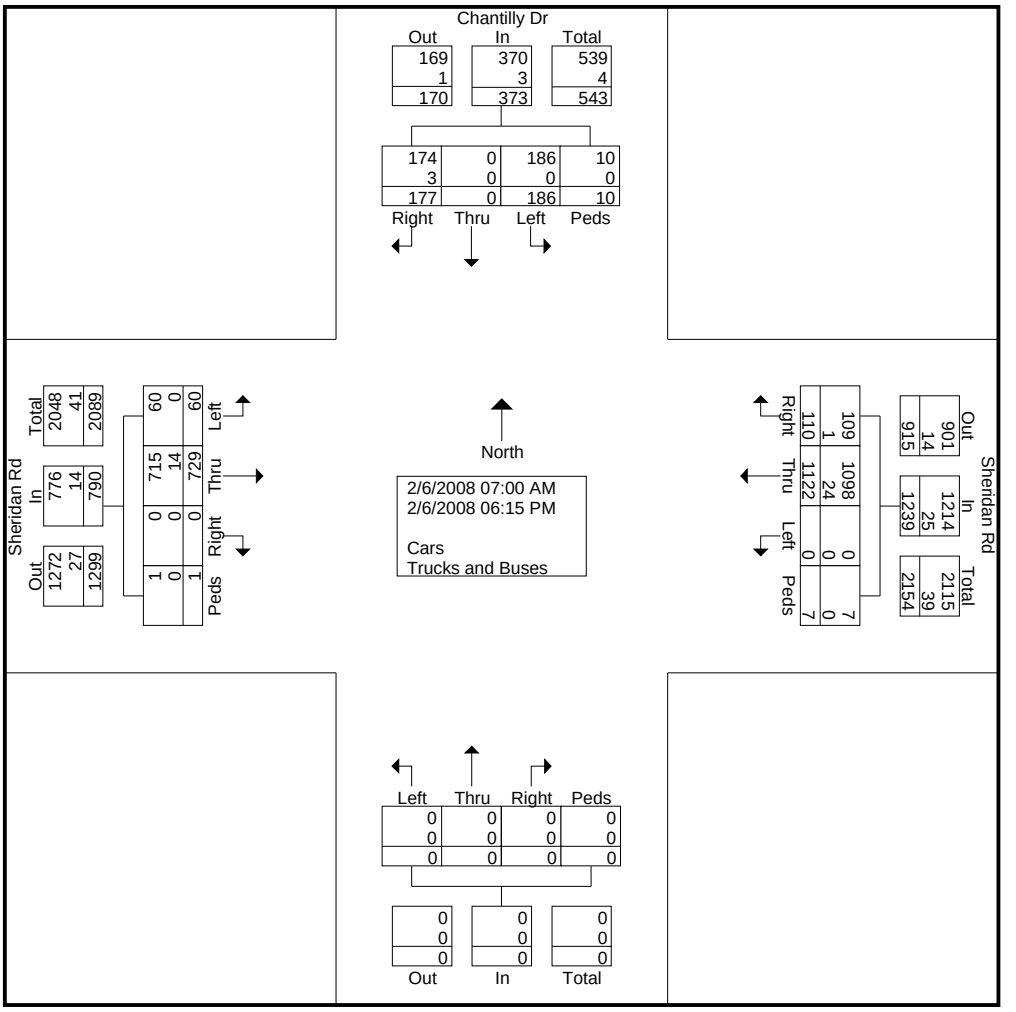
Groups Printed- Cars - Trucks and Buses

	Northbound					Chantilly Dr Southbound					Sheridan Rd Eastbound					Sheridan Rd Westbound					
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
07:00 AM	0	0	0	0	0	1	0	4	0	5	4	23	0	0	27	0	43	5	0	48	80
07:15 AM	0	0	0	0	0	1	0	5	0	6	2	29	0	0	31	0	60	6	0	66	103
07:30 AM	0	0	0	0	0	2	0	10	2	14	7	32	0	0	39	0	64	8	0	72	125
07:45 AM	0	0	0	0	0	5	0	9	1	15	3	37	0	0	40	0	69	9	1	79	134
Total	0	0	0	0	0	9	0	28	3	40	16	121	0	0	137	0	236	28	1	265	442
08:00 AM	0	0	0	0	0	2	0	9	0	11	6	42	0	1	49	0	71	9	0	80	140
08:15 AM	0	0	0	0	0	7	0	7	1	15	3	37	0	0	40	0	66	15	2	83	138
08:30 AM	0	0	0	0	0	4	0	6	0	10	4	34	0	0	38	0	65	12	1	78	126
08:45 AM	0	0	0	0	0	2	0	7	1	10	6	32	0	0	38	0	60	9	0	69	117
Total	0	0	0	0	0	15	0	29	2	46	19	145	0	1	165	0	262	45	3	310	521
*** BREAK ***																					
04:30 PM	0	0	0	0	0	12	0	12	0	24	2	42	0	0	44	0	62	3	0	65	133
04:45 PM	0	0	0	0	0	15	0	11	1	27	3	48	0	0	51	0	66	5	1	72	150
Total	0	0	0	0	0	27	0	23	1	51	5	90	0	0	95	0	128	8	1	137	283
05:00 PM	0	0	0	0	0	18	0	15	0	33	2	56	0	0	58	0	80	4	0	84	175
05:15 PM	0	0	0	0	0	21	0	18	1	40	3	62	0	0	65	0	84	3	0	87	192
05:30 PM	0	0	0	0	0	26	0	16	2	44	4	64	0	0	68	0	89	6	1	96	208
05:45 PM	0	0	0	0	0	29	0	19	0	48	5	67	0	0	72	0	86	2	0	88	208
Total	0	0	0	0	0	94	0	68	3	165	14	249	0	0	263	0	339	15	1	355	783
06:00 PM	0	0	0	0	0	24	0	17	1	42	3	64	0	0	67	0	82	5	1	88	197
06:15 PM	0	0	0	0	0	17	0	12	0	29	3	60	0	0	63	0	75	9	0	84	176
Grand Total	0	0	0	0	0	186	0	177	10	373	60	729	0	1	790	0	1122	110	7	1239	2402
Apprch %	0	0	0	0		49.9	0	47.5	2.7		7.6	92.3	0	0.1		0	90.6	8.9	0.6		
Total %	0	0	0	0	0	7.7	0	7.4	0.4	15.5	2.5	30.3	0	0	32.9	0	46.7	4.6	0.3	51.6	
Cars	0	0	0	0	0	186	0	174	10	370	60	715	0	1	776	0	1098	109	7	1214	2360
% Cars	0	0	0	0	0	100	0	98.3	100	99.2	100	98.1	0	100	98.2	0	97.9	99.1	100	98	98.3
Trucks and Buses	0	0	0	0	0	0	0	3	0	3	0	14	0	0	14	0	24	1	0	25	42
% Trucks and Buses	0	0	0	0	0	0	0	1.7	0	0.8	0	1.9	0	0	1.8	0	2.1	0.9	0	2	1.7

Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780007
Site Code : 24780007
Start Date : 2/6/2008
Page No : 2

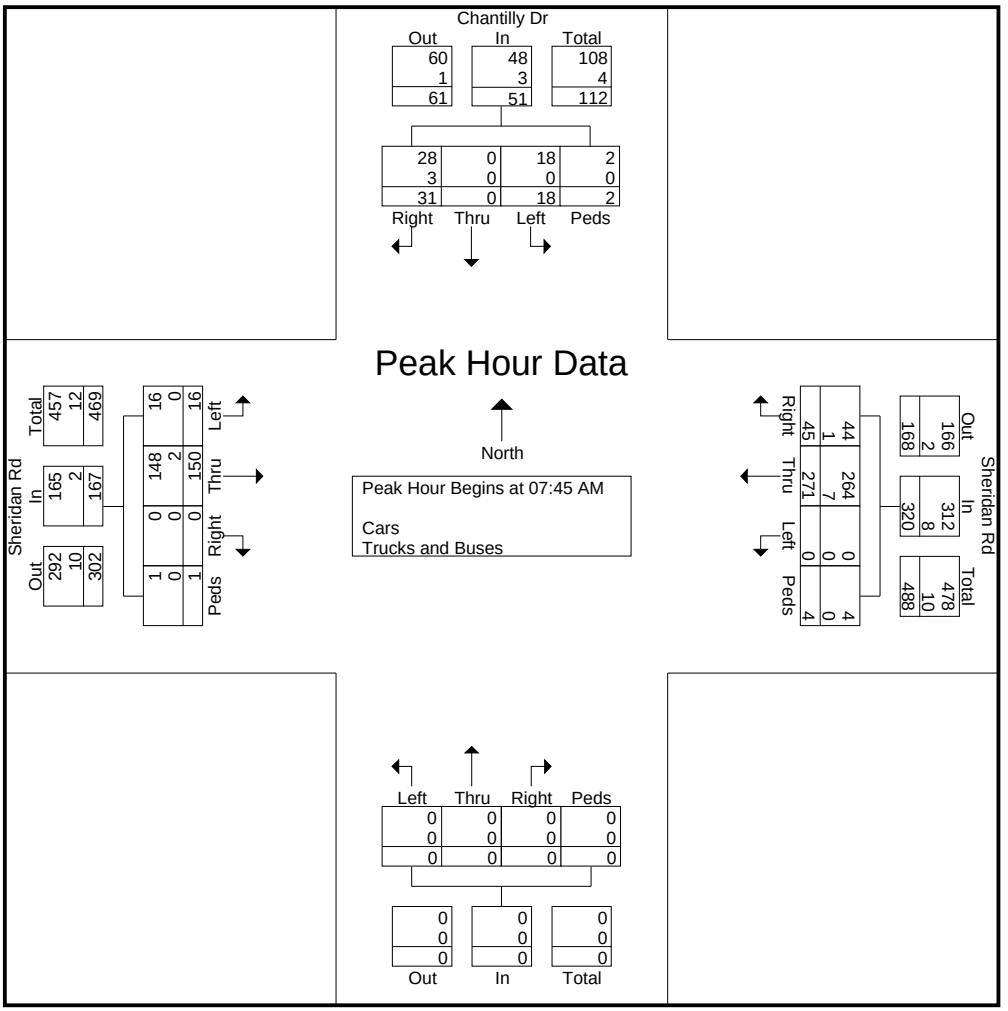


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780007
Site Code : 24780007
Start Date : 2/6/2008
Page No : 3

	Northbound					Chantilly Dr Southbound					Sheridan Rd Eastbound					Sheridan Rd Westbound					
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 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	0	0	0	0	5	0	9	1	15	3	37	0	0	40	0	69	9	1	79	134
08:00 AM	0	0	0	0	0	2	0	9	0	11	6	42	0	1	49	0	71	9	0	80	140
08:15 AM	0	0	0	0	0	7	0	7	1	15	3	37	0	0	40	0	66	15	2	83	138
08:30 AM	0	0	0	0	0	4	0	6	0	10	4	34	0	0	38	0	65	12	1	78	126
Total Volume	0	0	0	0	0	18	0	31	2	51	16	150	0	1	167	0	271	45	4	320	538
% App. Total	0	0	0	0		35.3	0	60.8	3.9		9.6	89.8	0	0.6		0	84.7	14.1	1.2		
PHF	.000	.000	.000	.000	.000	.643	.000	.861	.500	.850	.667	.893	.000	.250	.852	.000	.954	.750	.500	.964	.961
Cars	0	0	0	0	0	18	0	28	2	48	16	148	0	1	165	0	264	44	4	312	525
% Cars	0	0	0	0	0	100	0	90.3	100	94.1	100	98.7	0	100	98.8	0	97.4	97.8	100	97.5	97.6
Trucks and Buses	0	0	0	0	0	0	0	3	0	3	0	2	0	0	2	0	7	1	0	8	13
% Trucks and Buses	0	0	0	0	0	0	0	9.7	0	5.9	0	1.3	0	0	1.2	0	2.6	2.2	0	2.5	2.4

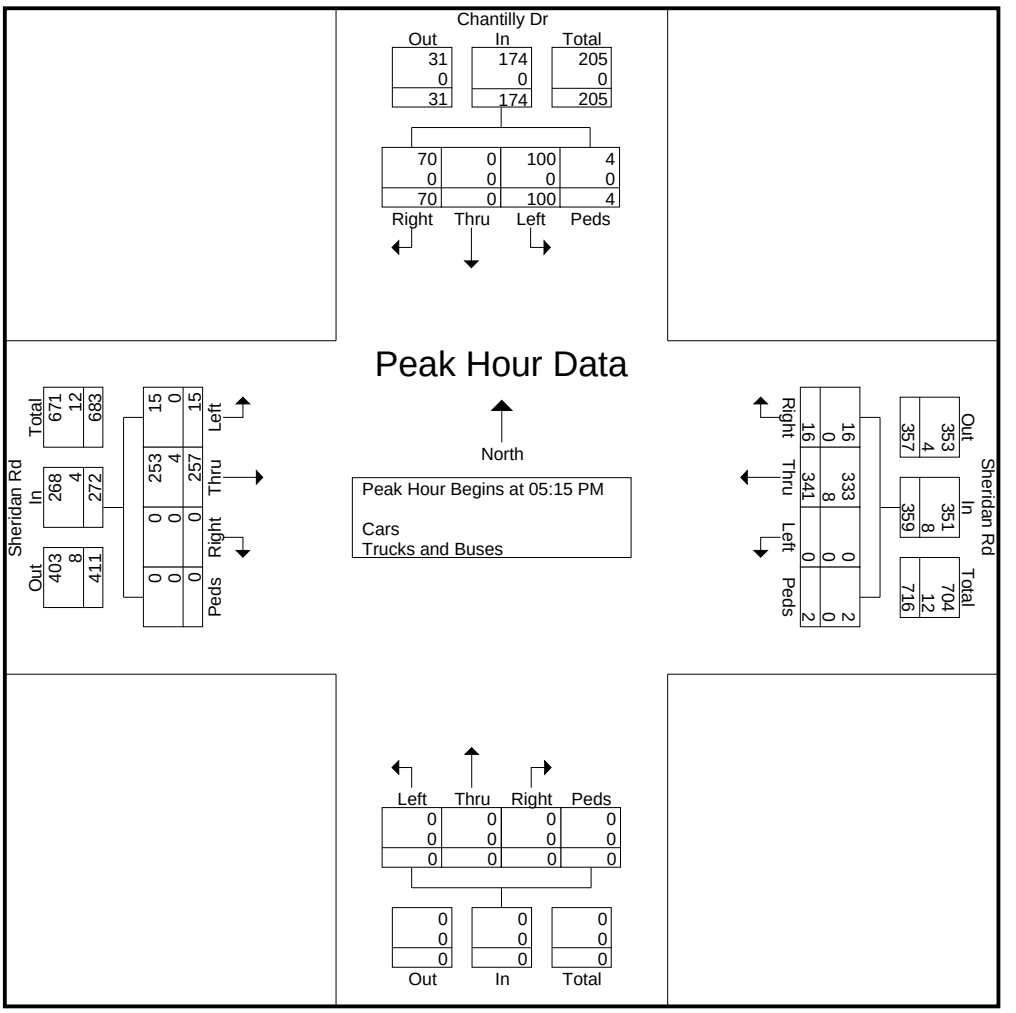


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780007
Site Code : 24780007
Start Date : 2/6/2008
Page No : 4

	Northbound					Chantilly Dr Southbound					Sheridan Rd Eastbound					Sheridan Rd Westbound					
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 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:15 PM																					
05:15 PM	0	0	0	0	0	21	0	18	1	40	3	62	0	0	65	0	84	3	0	87	192
05:30 PM	0	0	0	0	0	26	0	16	2	44	4	64	0	0	68	0	89	6	1	96	208
05:45 PM	0	0	0	0	0	29	0	19	0	48	5	67	0	0	72	0	86	2	0	88	208
06:00 PM	0	0	0	0	0	24	0	17	1	42	3	64	0	0	67	0	82	5	1	88	197
Total Volume	0	0	0	0	0	100	0	70	4	174	15	257	0	0	272	0	341	16	2	359	805
% App. Total	0	0	0	0		57.5	0	40.2	2.3		5.5	94.5	0	0		0	95	4.5	0.6		
PHF	.000	.000	.000	.000	.000	.862	.000	.921	.500	.906	.750	.959	.000	.000	.944	.000	.958	.667	.500	.935	.968
Cars	0	0	0	0	0	100	0	70	4	174	15	253	0	0	268	0	333	16	2	351	793
% Cars	0	0	0	0	0	100	0	100	100	100	100	98.4	0	0	98.5	0	97.7	100	100	97.8	98.5
Trucks and Buses	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	8	0	0	8	12
% Trucks and Buses	0	0	0	0	0	0	0	0	0	0	0	1.6	0	0	1.5	0	2.3	0	0	2.2	1.5



Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780007-sat
Site Code : 24780007
Start Date : 1/26/2008
Page No : 1

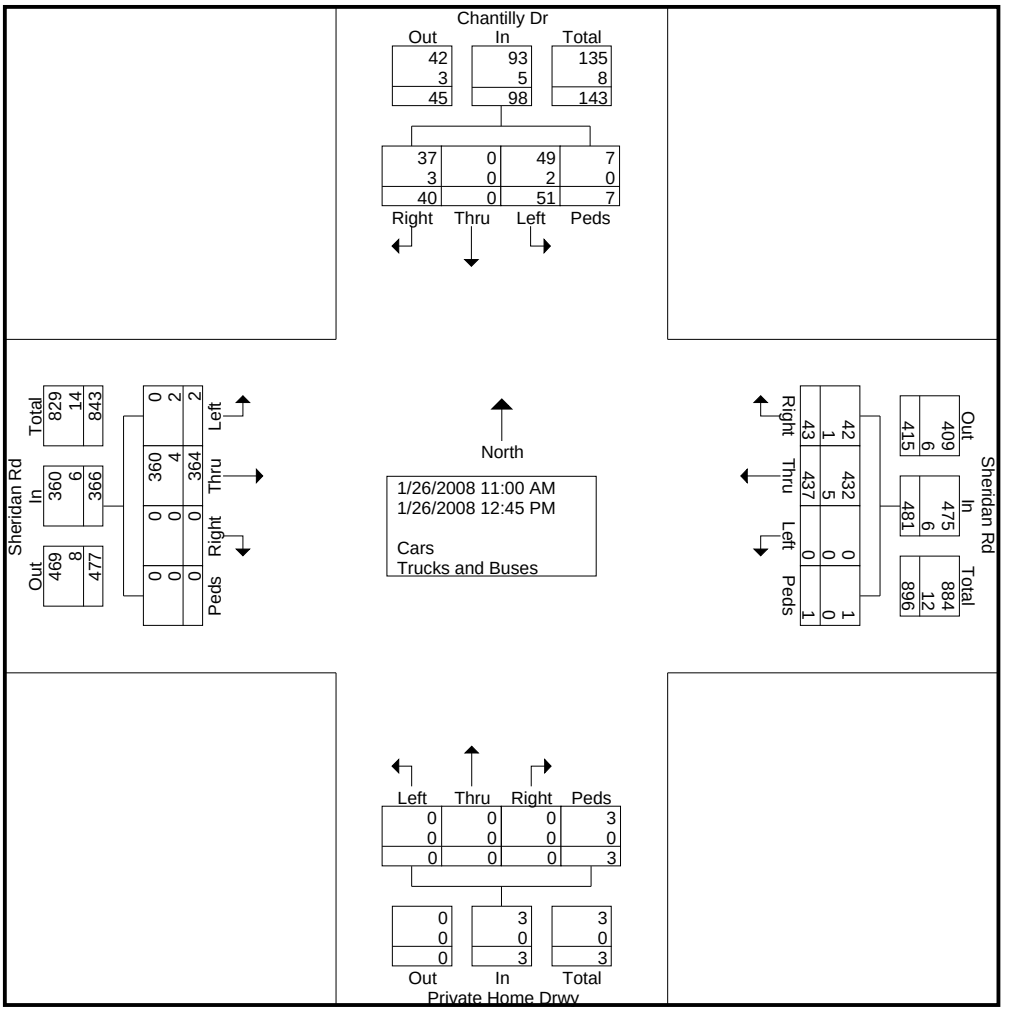
Groups Printed- Cars - Trucks and Buses

	Private Home Drwy Northbound					Chantilly Dr Southbound					Sheridan Rd Eastbound					Sheridan Rd Westbound					
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
11:00 AM	0	0	0	0	0	5	0	4	0	9	0	37	0	0	37	0	48	4	0	52	98
11:15 AM	0	0	0	1	1	6	0	5	2	13	0	44	0	0	44	0	53	4	1	58	116
11:30 AM	0	0	0	0	0	7	0	5	1	13	1	49	0	0	50	0	59	5	0	64	127
11:45 AM	0	0	0	0	0	6	0	6	1	13	0	52	0	0	52	0	62	8	0	70	135
Total	0	0	0	1	1	24	0	20	4	48	1	182	0	0	183	0	222	21	1	244	476
12:00 PM	0	0	0	1	1	8	0	5	0	13	0	50	0	0	50	0	64	4	0	68	132
12:15 PM	0	0	0	1	1	7	0	7	2	16	1	43	0	0	44	0	57	6	0	63	124
12:30 PM	0	0	0	0	0	7	0	5	1	13	0	47	0	0	47	0	48	7	0	55	115
12:45 PM	0	0	0	0	0	5	0	3	0	8	0	42	0	0	42	0	46	5	0	51	101
Total	0	0	0	2	2	27	0	20	3	50	1	182	0	0	183	0	215	22	0	237	472
Grand Total	0	0	0	3	3	51	0	40	7	98	2	364	0	0	366	0	437	43	1	481	948
Apprch %	0	0	0	100		52	0	40.8	7.1		0.5	99.5	0	0		0	90.9	8.9	0.2		
Total %	0	0	0	0.3	0.3	5.4	0	4.2	0.7	10.3	0.2	38.4	0	0	38.6	0	46.1	4.5	0.1	50.7	
Cars	0	0	0	3	3	49	0	37	7	93	0	360	0	0	360	0	432	42	1	475	931
% Cars	0	0	0	100	100	96.1	0	92.5	100	94.9	0	98.9	0	0	98.4	0	98.9	97.7	100	98.8	98.2
Trucks and Buses	0	0	0	0	0	2	0	3	0	5	2	4	0	0	6	0	5	1	0	6	17
% Trucks and Buses	0	0	0	0	0	3.9	0	7.5	0	5.1	100	1.1	0	0	1.6	0	1.1	2.3	0	1.2	1.8

Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780007-sat
Site Code : 24780007
Start Date : 1/26/2008
Page No : 2

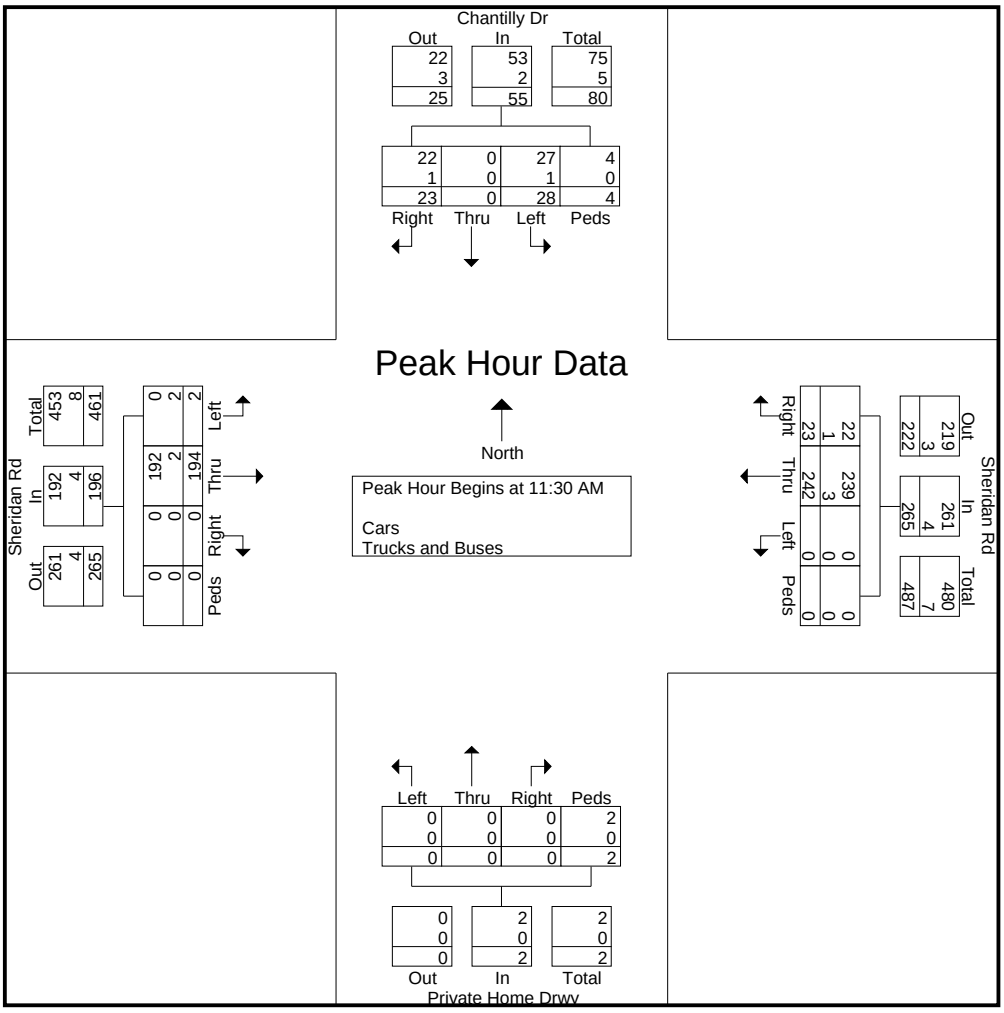


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780007-sat
Site Code : 24780007
Start Date : 1/26/2008
Page No : 3

	Private Home Drwy Northbound					Chantilly Dr Southbound					Sheridan Rd Eastbound					Sheridan Rd Westbound					
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 11:00 AM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:30 AM																					
11:30 AM	0	0	0	0	0	7	0	5	1	13	1	49	0	0	50	0	59	5	0	64	127
11:45 AM	0	0	0	0	0	6	0	6	1	13	0	52	0	0	52	0	62	8	0	70	135
12:00 PM	0	0	0	1	1	8	0	5	0	13	0	50	0	0	50	0	64	4	0	68	132
12:15 PM	0	0	0	1	1	7	0	7	2	16	1	43	0	0	44	0	57	6	0	63	124
Total Volume	0	0	0	2	2	28	0	23	4	55	2	194	0	0	196	0	242	23	0	265	518
% App. Total	0	0	0	100		50.9	0	41.8	7.3		1	99	0	0		0	91.3	8.7	0		
PHF	.000	.000	.000	.500	.500	.875	.000	.821	.500	.859	.500	.933	.000	.000	.942	.000	.945	.719	.000	.946	.959
Cars	0	0	0	2	2	27	0	22	4	53	0	192	0	0	192	0	239	22	0	261	508
% Cars	0	0	0	100	100	96.4	0	95.7	100	96.4	0	99.0	0	0	98.0	0	98.8	95.7	0	98.5	98.1
Trucks and Buses	0	0	0	0	0	1	0	1	0	2	2	2	0	0	4	0	3	1	0	4	10
% Trucks and Buses	0	0	0	0	0	3.6	0	4.3	0	3.6	100	1.0	0	0	2.0	0	1.2	4.3	0	1.5	1.9



Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780008
Site Code : 24780008
Start Date : 2/6/2008
Page No : 1

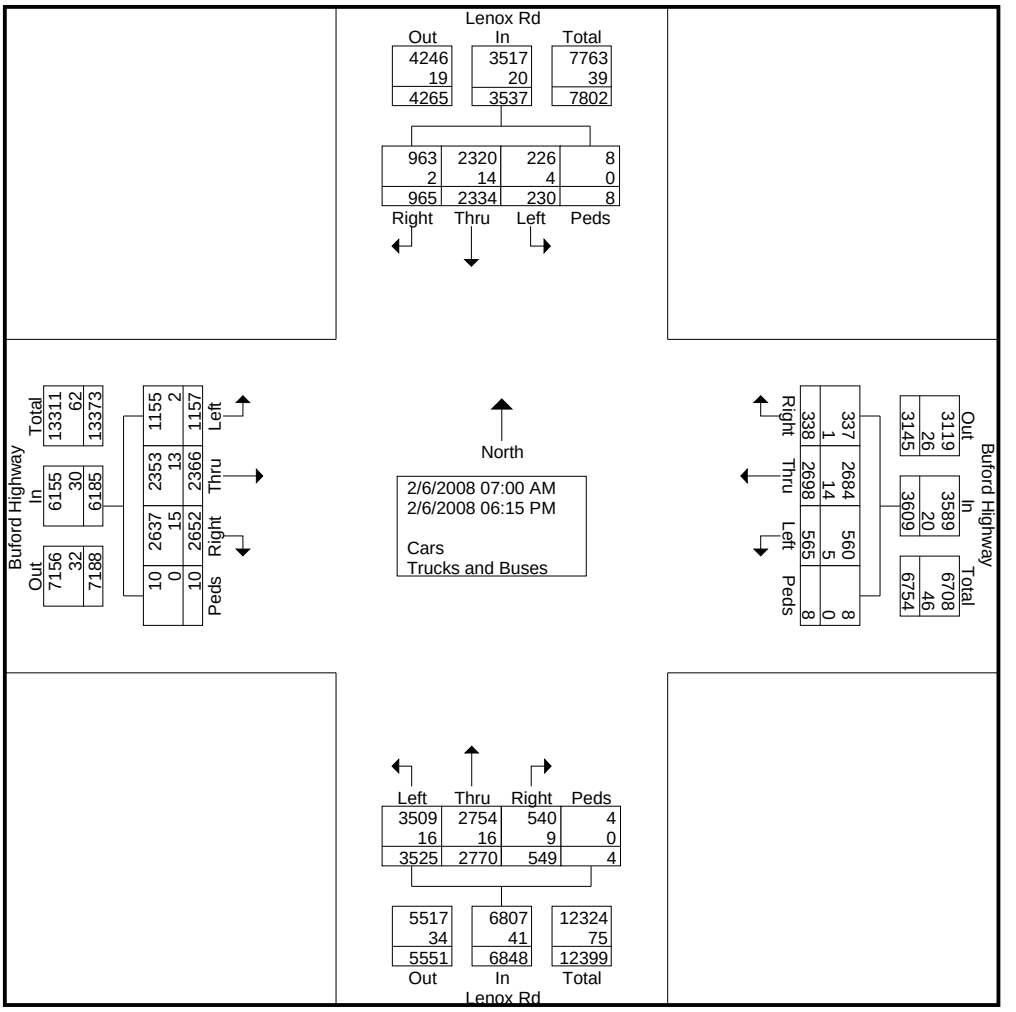
Groups Printed- Cars - Trucks and Buses

	Lenox Rd Northbound					Lenox Rd Southbound					Buford Highway Eastbound					Buford Highway Westbound					
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
07:00 AM	208	160	13	0	381	8	63	43	0	114	53	103	113	1	270	19	140	13	0	172	937
07:15 AM	214	168	18	1	401	9	69	48	0	126	66	117	143	0	326	23	148	17	0	188	1041
07:30 AM	251	185	23	0	459	12	79	53	1	145	62	120	166	1	349	36	165	13	1	215	1168
07:45 AM	279	181	27	0	487	14	84	59	0	157	69	123	176	1	369	26	179	16	0	221	1234
Total	952	694	81	1	1728	43	295	203	1	542	250	463	598	3	1314	104	632	59	1	796	4380
08:00 AM	285	194	33	1	513	13	98	63	0	174	64	132	155	0	351	29	198	19	1	247	1285
08:15 AM	267	189	29	0	485	19	113	74	1	207	73	129	133	0	335	35	213	16	2	266	1293
08:30 AM	239	185	32	0	456	15	97	87	1	200	68	115	119	4	306	28	208	11	0	247	1209
08:45 AM	222	179	26	1	428	12	95	65	0	172	65	104	107	2	278	31	193	13	1	238	1116
Total	1013	747	120	2	1882	59	403	289	2	753	270	480	514	6	1270	123	812	59	4	998	4903
*** BREAK ***																					
04:30 PM	185	158	32	0	375	11	199	53	0	263	74	170	188	0	432	32	141	22	0	195	1265
04:45 PM	196	170	37	1	404	13	204	59	1	277	80	177	197	1	455	38	158	24	0	220	1356
Total	381	328	69	1	779	24	403	112	1	540	154	347	385	1	887	70	299	46	0	415	2621
05:00 PM	208	176	40	0	424	16	209	61	1	287	84	181	201	0	466	46	168	23	0	237	1414
05:15 PM	212	182	53	0	447	13	219	56	1	289	89	175	205	0	469	49	173	32	1	255	1460
05:30 PM	204	180	61	0	445	17	213	53	0	283	93	189	193	0	475	44	154	36	0	234	1437
05:45 PM	194	165	46	0	405	22	206	59	0	287	77	193	180	0	450	45	162	33	1	241	1383
Total	818	703	200	0	1721	68	847	229	2	1146	343	738	779	0	1860	184	657	124	2	967	5694
06:00 PM	187	155	43	0	385	19	198	62	0	279	75	178	186	0	439	44	159	27	0	230	1333
06:15 PM	174	143	36	0	353	17	188	70	2	277	65	160	190	0	415	40	139	23	1	203	1248
Grand Total	3525	2770	549	4	6848	230	2334	965	8	3537	1157	2366	2652	10	6185	565	2698	338	8	3609	20179
Apprch %	51.5	40.4	8	0.1		6.5	66	27.3	0.2		18.7	38.3	42.9	0.2		15.7	74.8	9.4	0.2		
Total %	17.5	13.7	2.7	0	33.9	1.1	11.6	4.8	0	17.5	5.7	11.7	13.1	0	30.7	2.8	13.4	1.7	0	17.9	
Cars	3509	2754	540	4	6807	226	2320	963	8	3517	1155	2353	2637	10	6155	560	2684	337	8	3589	20068
% Cars	99.5	99.4	98.4	100	99.4	98.3	99.4	99.8	100	99.4	99.8	99.5	99.4	100	99.5	99.1	99.5	99.7	100	99.4	99.4
Trucks and Buses	16	16	9	0	41	4	14	2	0	20	2	13	15	0	30	5	14	1	0	20	111
% Trucks and Buses	0.5	0.6	1.6	0	0.6	1.7	0.6	0.2	0	0.6	0.2	0.5	0.6	0	0.5	0.9	0.5	0.3	0	0.6	0.6

Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780008
Site Code : 24780008
Start Date : 2/6/2008
Page No : 2

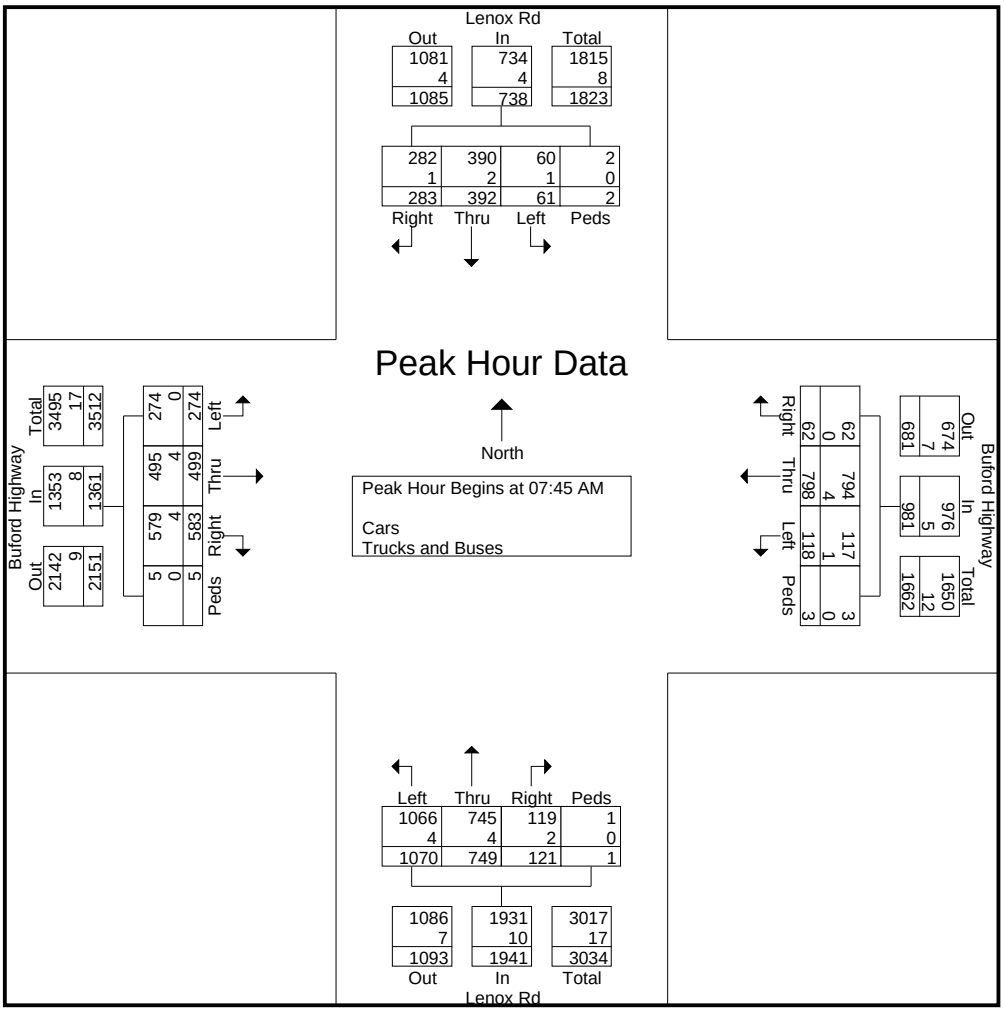


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780008
Site Code : 24780008
Start Date : 2/6/2008
Page No : 3

	Lenox Rd Northbound					Lenox Rd Southbound					Buford Highway Eastbound					Buford Highway Westbound					
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 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	279	181	27	0	487	14	84	59	0	157	69	123	176	1	369	26	179	16	0	221	1234
08:00 AM	285	194	33	1	513	13	98	63	0	174	64	132	155	0	351	29	198	19	1	247	1285
08:15 AM	267	189	29	0	485	19	113	74	1	207	73	129	133	0	335	35	213	16	2	266	1293
08:30 AM	239	185	32	0	456	15	97	87	1	200	68	115	119	4	306	28	208	11	0	247	1209
Total Volume	1070	749	121	1	1941	61	392	283	2	738	274	499	583	5	1361	118	798	62	3	981	5021
% App. Total	55.1	38.6	6.2	0.1		8.3	53.1	38.3	0.3		20.1	36.7	42.8	0.4		12	81.3	6.3	0.3		
PHF	.939	.965	.917	.250	.946	.803	.867	.813	.500	.891	.938	.945	.828	.313	.922	.843	.937	.816	.375	.922	.971
Cars	1066	745	119	1	1931	60	390	282	2	734	274	495	579	5	1353	117	794	62	3	976	4994
% Cars	99.6	99.5	98.3	100	99.5	98.4	99.5	99.6	100	99.5	100	99.2	99.3	100	99.4	99.2	99.5	100	100	99.5	99.5
Trucks and Buses	4	4	2	0	10	1	2	1	0	4	0	4	4	0	8	1	4	0	0	5	27
% Trucks and Buses	0.4	0.5	1.7	0	0.5	1.6	0.5	0.4	0	0.5	0	0.8	0.7	0	0.6	0.8	0.5	0	0	0.5	0.5

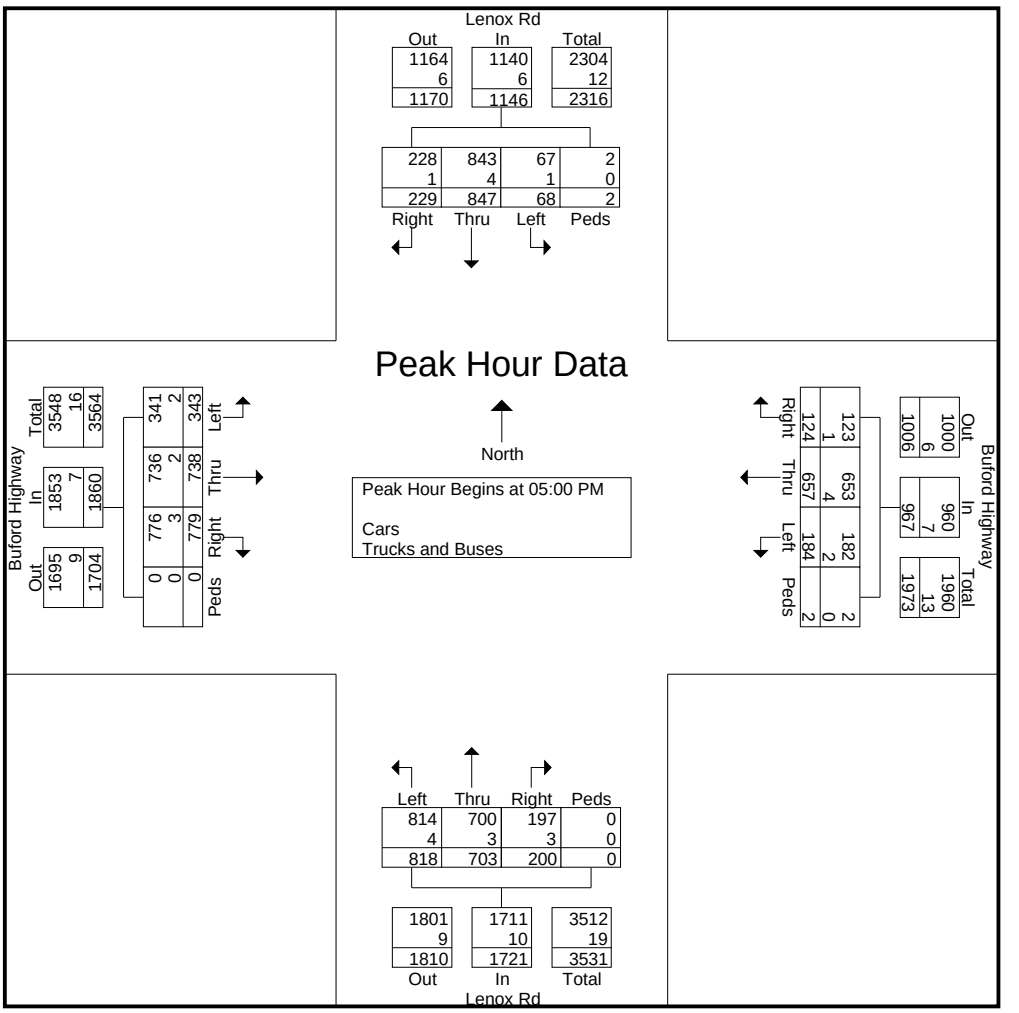


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780008
Site Code : 24780008
Start Date : 2/6/2008
Page No : 4

	Lenox Rd Northbound					Lenox Rd Southbound					Buford Highway Eastbound					Buford Highway Westbound					
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 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	208	176	40	0	424	16	209	61	1	287	84	181	201	0	466	46	168	23	0	237	1414
05:15 PM	212	182	53	0	447	13	219	56	1	289	89	175	205	0	469	49	173	32	1	255	1460
05:30 PM	204	180	61	0	445	17	213	53	0	283	93	189	193	0	475	44	154	36	0	234	1437
05:45 PM	194	165	46	0	405	22	206	59	0	287	77	193	180	0	450	45	162	33	1	241	1383
Total Volume	818	703	200	0	1721	68	847	229	2	1146	343	738	779	0	1860	184	657	124	2	967	5694
% App. Total	47.5	40.8	11.6	0		5.9	73.9	20	0.2		18.4	39.7	41.9	0		19	67.9	12.8	0.2		
PHF	.965	.966	.820	.000	.963	.773	.967	.939	.500	.991	.922	.956	.950	.000	.979	.939	.949	.861	.500	.948	.975
Cars	814	700	197	0	1711	67	843	228	2	1140	341	736	776	0	1853	182	653	123	2	960	5664
% Cars	99.5	99.6	98.5	0	99.4	98.5	99.5	99.6	100	99.5	99.4	99.7	99.6	0	99.6	98.9	99.4	99.2	100	99.3	99.5
Trucks and Buses	4	3	3	0	10	1	4	1	0	6	2	2	3	0	7	2	4	1	0	7	30
% Trucks and Buses	0.5	0.4	1.5	0	0.6	1.5	0.5	0.4	0	0.5	0.6	0.3	0.4	0	0.4	1.1	0.6	0.8	0	0.7	0.5



Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780009
Site Code : 24780009
Start Date : 2/7/2008
Page No : 1

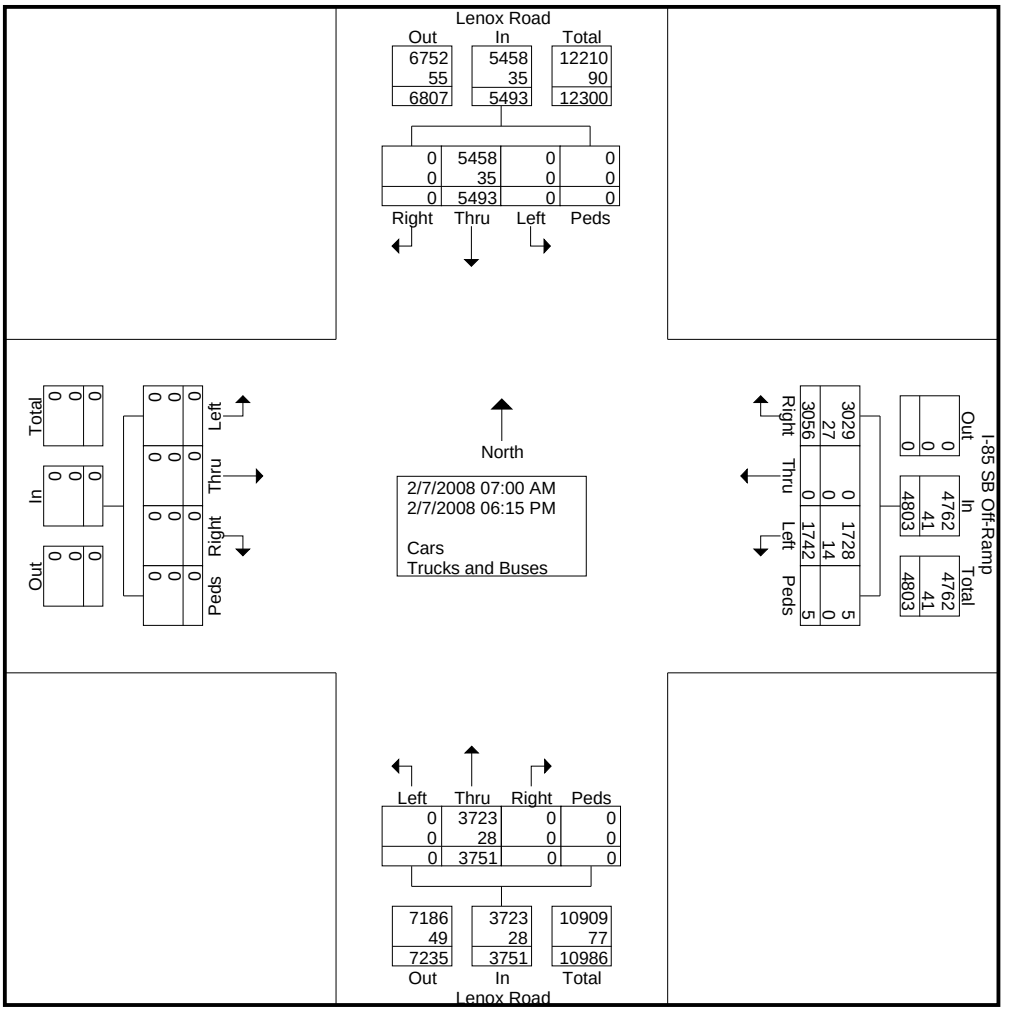
Groups Printed- Cars - Trucks and Buses

	Lenox Road Northbound					Lenox Road Southbound					Eastbound					I-85 SB Off-Ramp Westbound					
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
07:00 AM	0	215	0	0	215	0	237	0	0	237	0	0	0	0	0	64	0	186	0	250	702
07:15 AM	0	225	0	0	225	0	245	0	0	245	0	0	0	0	0	77	0	197	0	274	744
07:30 AM	0	241	0	0	241	0	266	0	0	266	0	0	0	0	0	94	0	216	0	310	817
07:45 AM	0	256	0	0	256	0	299	0	0	299	0	0	0	0	0	107	0	224	0	331	886
Total	0	937	0	0	937	0	1047	0	0	1047	0	0	0	0	0	342	0	823	0	1165	3149
08:00 AM	0	274	0	0	274	0	289	0	0	289	0	0	0	0	0	100	0	233	1	334	897
08:15 AM	0	280	0	0	280	0	274	0	0	274	0	0	0	0	0	86	0	221	0	307	861
08:30 AM	0	272	0	0	272	0	265	0	0	265	0	0	0	0	0	80	0	211	1	292	829
08:45 AM	0	255	0	0	255	0	257	0	0	257	0	0	0	0	0	76	0	206	0	282	794
Total	0	1081	0	0	1081	0	1085	0	0	1085	0	0	0	0	0	342	0	871	2	1215	3381
*** BREAK ***																					
04:30 PM	0	208	0	0	208	0	428	0	0	428	0	0	0	0	0	124	0	167	0	291	927
04:45 PM	0	213	0	0	213	0	440	0	0	440	0	0	0	0	0	132	0	170	1	303	956
Total	0	421	0	0	421	0	868	0	0	868	0	0	0	0	0	256	0	337	1	594	1883
05:00 PM	0	218	0	0	218	0	421	0	0	421	0	0	0	0	0	135	0	177	0	312	951
05:15 PM	0	237	0	0	237	0	430	0	0	430	0	0	0	0	0	142	0	183	1	326	993
05:30 PM	0	237	0	0	237	0	440	0	0	440	0	0	0	0	0	145	0	173	0	318	995
05:45 PM	0	218	0	0	218	0	418	0	0	418	0	0	0	0	0	135	0	169	1	305	941
Total	0	910	0	0	910	0	1709	0	0	1709	0	0	0	0	0	557	0	702	2	1261	3880
06:00 PM	0	208	0	0	208	0	398	0	0	398	0	0	0	0	0	125	0	165	0	290	896
06:15 PM	0	194	0	0	194	0	386	0	0	386	0	0	0	0	0	120	0	158	0	278	858
Grand Total	0	3751	0	0	3751	0	5493	0	0	5493	0	0	0	0	0	1742	0	3056	5	4803	14047
Apprch %	0	100	0	0		0	100	0	0		0	0	0	0		36.3	0	63.6	0.1		
Total %	0	26.7	0	0	26.7	0	39.1	0	0	39.1	0	0	0	0	0	12.4	0	21.8	0	34.2	
Cars	0	3723	0	0	3723	0	5458	0	0	5458	0	0	0	0	0	1728	0	3029	5	4762	13943
% Cars	0	99.3	0	0	99.3	0	99.4	0	0	99.4	0	0	0	0	0	99.2	0	99.1	100	99.1	99.3
Trucks and Buses	0	28	0	0	28	0	35	0	0	35	0	0	0	0	0	14	0	27	0	41	104
% Trucks and Buses	0	0.7	0	0	0.7	0	0.6	0	0	0.6	0	0	0	0	0	0.8	0	0.9	0	0.9	0.7

Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780009
Site Code : 24780009
Start Date : 2/7/2008
Page No : 2

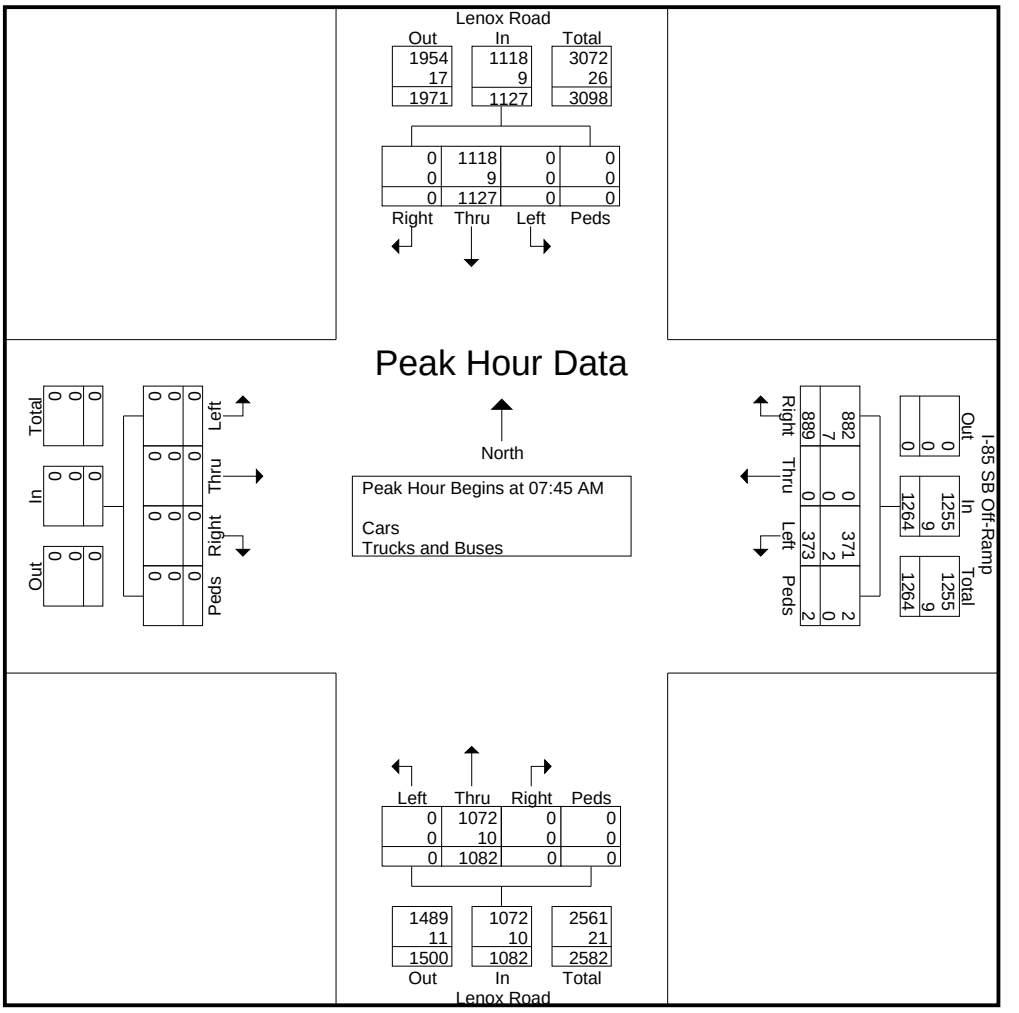


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780009
Site Code : 24780009
Start Date : 2/7/2008
Page No : 3

	Lenox Road Northbound					Lenox Road Southbound					Eastbound					I-85 SB Off-Ramp Westbound					
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 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	256	0	0	256	0	299	0	0	299	0	0	0	0	0	107	0	224	0	331	886
08:00 AM	0	274	0	0	274	0	289	0	0	289	0	0	0	0	0	100	0	233	1	334	897
08:15 AM	0	280	0	0	280	0	274	0	0	274	0	0	0	0	0	86	0	221	0	307	861
08:30 AM	0	272	0	0	272	0	265	0	0	265	0	0	0	0	0	80	0	211	1	292	829
Total Volume	0	1082	0	0	1082	0	1127	0	0	1127	0	0	0	0	0	373	0	889	2	1264	3473
% App. Total	0	100	0	0		0	100	0	0		0	0	0	0		29.5	0	70.3	0.2		
PHF	.000	.966	.000	.000	.966	.000	.942	.000	.000	.942	.000	.000	.000	.000	.000	.871	.000	.954	.500	.946	.968
Cars	0	1072	0	0	1072	0	1118	0	0	1118	0	0	0	0	0	371	0	882	2	1255	3445
% Cars	0	99.1	0	0	99.1	0	99.2	0	0	99.2	0	0	0	0	0	99.5	0	99.2	100	99.3	99.2
Trucks and Buses	0	10	0	0	10	0	9	0	0	9	0	0	0	0	0	2	0	7	0	9	28
% Trucks and Buses	0	0.9	0	0	0.9	0	0.8	0	0	0.8	0	0	0	0	0	0.5	0	0.8	0	0.7	0.8

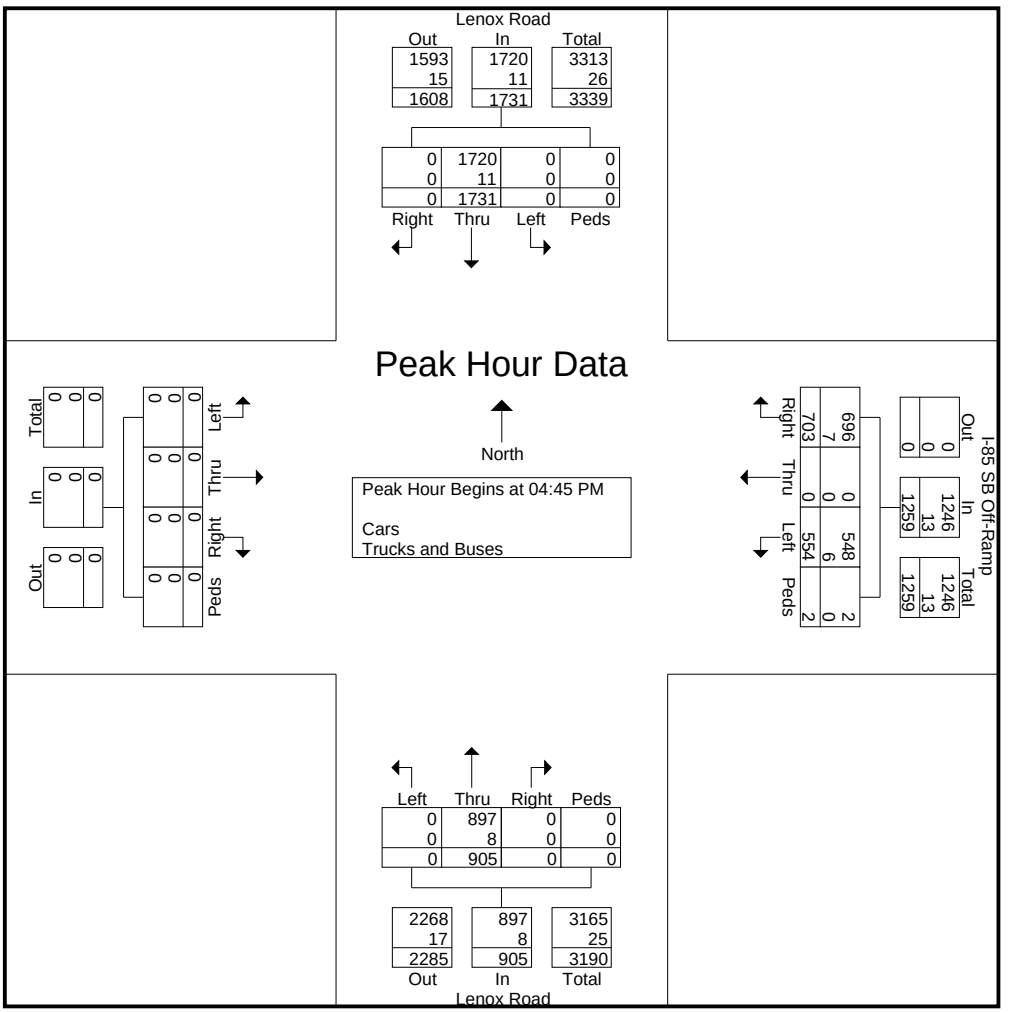


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780009
Site Code : 24780009
Start Date : 2/7/2008
Page No : 4

	Lenox Road Northbound					Lenox Road Southbound					Eastbound					I-85 SB Off-Ramp Westbound					
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 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	213	0	0	213	0	440	0	0	440	0	0	0	0	0	132	0	170	1	303	956
05:00 PM	0	218	0	0	218	0	421	0	0	421	0	0	0	0	0	135	0	177	0	312	951
05:15 PM	0	237	0	0	237	0	430	0	0	430	0	0	0	0	0	142	0	183	1	326	993
05:30 PM	0	237	0	0	237	0	440	0	0	440	0	0	0	0	0	145	0	173	0	318	995
Total Volume	0	905	0	0	905	0	1731	0	0	1731	0	0	0	0	0	554	0	703	2	1259	3895
% App. Total	0	100	0	0		0	100	0	0		0	0	0	0		44	0	55.8	0.2		
PHF	.000	.955	.000	.000	.955	.000	.984	.000	.000	.984	.000	.000	.000	.000	.000	.955	.000	.960	.500	.965	.979
Cars	0	897	0	0	897	0	1720	0	0	1720	0	0	0	0	0	548	0	696	2	1246	3863
% Cars	0	99.1	0	0	99.1	0	99.4	0	0	99.4	0	0	0	0	0	98.9	0	99.0	100	99.0	99.2
Trucks and Buses	0	8	0	0	8	0	11	0	0	11	0	0	0	0	0	6	0	7	0	13	32
% Trucks and Buses	0	0.9	0	0	0.9	0	0.6	0	0	0.6	0	0	0	0	0	1.1	0	1.0	0	1.0	0.8



Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780010
Site Code : 24780010
Start Date : 2/7/2008
Page No : 1

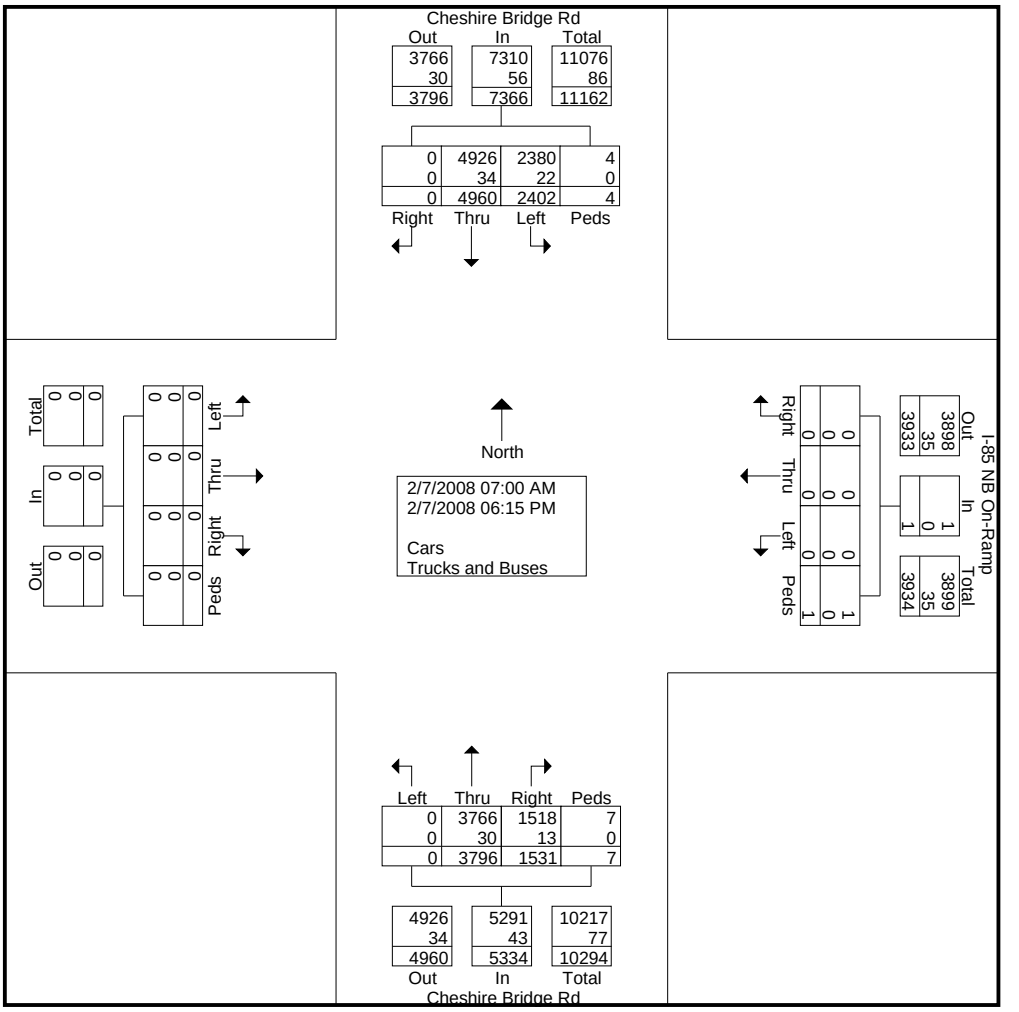
Groups Printed- Cars - Trucks and Buses

	Cheshire Bridge Rd Northbound					Cheshire Bridge Rd Southbound					Eastbound					I-85 NB On-Ramp Westbound					
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
07:00 AM	0	212	82	0	294	102	218	0	0	320	0	0	0	0	0	0	0	0	0	0	614
07:15 AM	0	226	85	0	311	104	237	0	0	341	0	0	0	0	0	0	0	0	0	0	652
07:30 AM	0	241	94	0	335	110	261	0	0	371	0	0	0	0	0	0	0	0	0	0	706
07:45 AM	0	287	88	1	376	114	288	0	1	403	0	0	0	0	0	0	0	0	0	0	779
Total	0	966	349	1	1316	430	1004	0	1	1435	0	0	0	0	0	0	0	0	0	0	2751
08:00 AM	0	318	98	0	416	123	274	0	0	397	0	0	0	0	0	0	0	0	0	0	813
08:15 AM	0	286	90	1	377	120	266	0	2	388	0	0	0	0	0	0	0	0	1	1	766
08:30 AM	0	270	74	0	344	108	256	0	1	365	0	0	0	0	0	0	0	0	0	0	709
08:45 AM	0	258	65	0	323	104	248	0	0	352	0	0	0	0	0	0	0	0	0	0	675
Total	0	1132	327	1	1460	455	1044	0	3	1502	0	0	0	0	0	0	0	0	1	1	2963
*** BREAK ***																					
04:30 PM	0	184	108	0	292	178	349	0	0	527	0	0	0	0	0	0	0	0	0	0	819
04:45 PM	0	197	105	1	303	182	363	0	0	545	0	0	0	0	0	0	0	0	0	0	848
Total	0	381	213	1	595	360	712	0	0	1072	0	0	0	0	0	0	0	0	0	0	1667
05:00 PM	0	210	113	1	324	186	377	0	0	563	0	0	0	0	0	0	0	0	0	0	887
05:15 PM	0	222	108	0	330	191	385	0	0	576	0	0	0	0	0	0	0	0	0	0	906
05:30 PM	0	237	113	0	350	205	374	0	0	579	0	0	0	0	0	0	0	0	0	0	929
05:45 PM	0	226	108	2	336	198	367	0	0	565	0	0	0	0	0	0	0	0	0	0	901
Total	0	895	442	3	1340	780	1503	0	0	2283	0	0	0	0	0	0	0	0	0	0	3623
06:00 PM	0	218	101	1	320	193	354	0	0	547	0	0	0	0	0	0	0	0	0	0	867
06:15 PM	0	204	99	0	303	184	343	0	0	527	0	0	0	0	0	0	0	0	0	0	830
Grand Total	0	3796	1531	7	5334	2402	4960	0	4	7366	0	0	0	0	0	0	0	0	1	1	12701
Apprch %	0	71.2	28.7	0.1		32.6	67.3	0	0.1		0	0	0	0		0	0	0	100		
Total %	0	29.9	12.1	0.1	42	18.9	39.1	0	0	58	0	0	0	0	0	0	0	0	0	0	
Cars	0	3766	1518	7	5291	2380	4926	0	4	7310	0	0	0	0	0	0	0	0	1	1	12602
% Cars	0	99.2	99.2	100	99.2	99.1	99.3	0	100	99.2	0	0	0	0	0	0	0	0	100	100	99.2
Trucks and Buses	0	30	13	0	43	22	34	0	0	56	0	0	0	0	0	0	0	0	0	0	99
% Trucks and Buses	0	0.8	0.8	0	0.8	0.9	0.7	0	0	0.8	0	0	0	0	0	0	0	0	0	0	0.8

Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780010
Site Code : 24780010
Start Date : 2/7/2008
Page No : 2

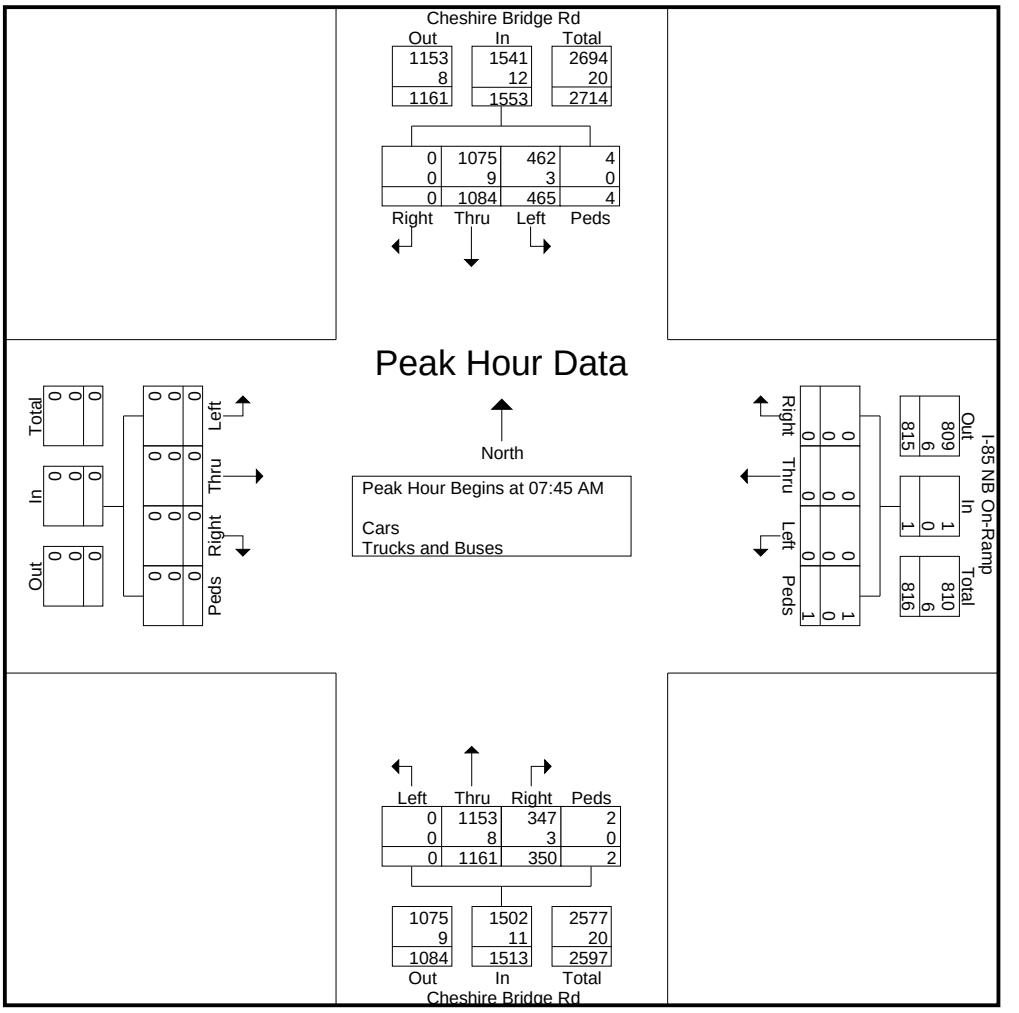


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780010
Site Code : 24780010
Start Date : 2/7/2008
Page No : 3

	Cheshire Bridge Rd Northbound					Cheshire Bridge Rd Southbound					Eastbound					I-85 NB On-Ramp Westbound					
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 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	287	88	1	376	114	288	0	1	403	0	0	0	0	0	0	0	0	0	0	779
08:00 AM	0	318	98	0	416	123	274	0	0	397	0	0	0	0	0	0	0	0	0	0	813
08:15 AM	0	286	90	1	377	120	266	0	2	388	0	0	0	0	0	0	0	0	1	1	766
08:30 AM	0	270	74	0	344	108	256	0	1	365	0	0	0	0	0	0	0	0	0	0	709
Total Volume	0	1161	350	2	1513	465	1084	0	4	1553	0	0	0	0	0	0	0	0	1	1	3067
% App. Total	0	76.7	23.1	0.1		29.9	69.8	0	0.3		0	0	0	0		0	0	0	100		
PHF	.000	.913	.893	.500	.909	.945	.941	.000	.500	.963	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.943
Cars	0	1153	347	2	1502	462	1075	0	4	1541	0	0	0	0	0	0	0	0	1	1	3044
% Cars	0	99.3	99.1	100	99.3	99.4	99.2	0	100	99.2	0	0	0	0	0	0	0	0	100	100	99.3
Trucks and Buses	0	8	3	0	11	3	9	0	0	12	0	0	0	0	0	0	0	0	0	0	23
% Trucks and Buses	0	0.7	0.9	0	0.7	0.6	0.8	0	0	0.8	0	0	0	0	0	0	0	0	0	0	0.7

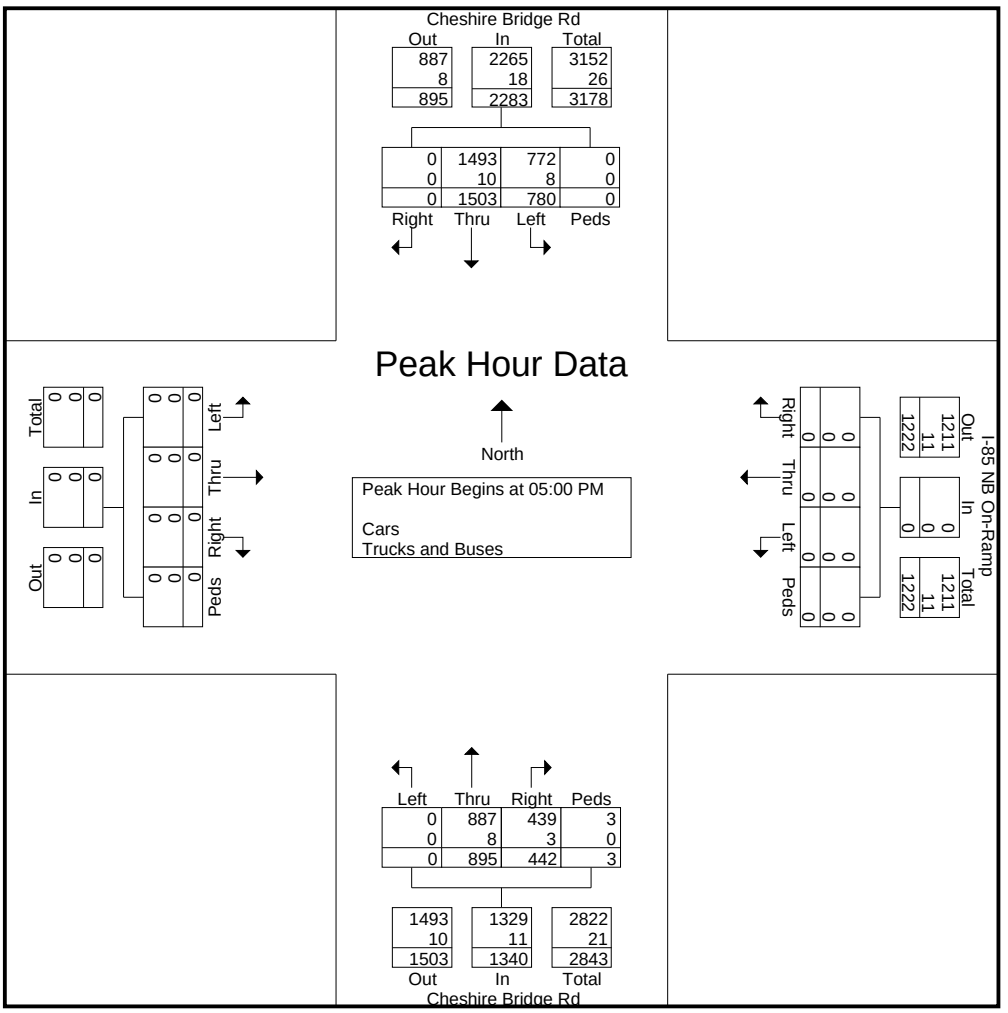


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780010
Site Code : 24780010
Start Date : 2/7/2008
Page No : 4

	Cheshire Bridge Rd Northbound					Cheshire Bridge Rd Southbound					Eastbound					I-85 NB On-Ramp Westbound					
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 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	210	113	1	324	186	377	0	0	563	0	0	0	0	0	0	0	0	0	0	887
05:15 PM	0	222	108	0	330	191	385	0	0	576	0	0	0	0	0	0	0	0	0	0	906
05:30 PM	0	237	113	0	350	205	374	0	0	579	0	0	0	0	0	0	0	0	0	0	929
05:45 PM	0	226	108	2	336	198	367	0	0	565	0	0	0	0	0	0	0	0	0	0	901
Total Volume	0	895	442	3	1340	780	1503	0	0	2283	0	0	0	0	0	0	0	0	0	0	3623
% App. Total	0	66.8	33	0.2		34.2	65.8	0	0		0	0	0	0		0	0	0	0		
PHF	.000	.944	.978	.375	.957	.951	.976	.000	.000	.986	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.975
Cars	0	887	439	3	1329	772	1493	0	0	2265	0	0	0	0	0	0	0	0	0	0	3594
% Cars	0	99.1	99.3	100	99.2	99.0	99.3	0	0	99.2	0	0	0	0	0	0	0	0	0	0	99.2
Trucks and Buses	0	8	3	0	11	8	10	0	0	18	0	0	0	0	0	0	0	0	0	0	29
% Trucks and Buses	0	0.9	0.7	0	0.8	1.0	0.7	0	0	0.8	0	0	0	0	0	0	0	0	0	0	0.8



Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780011
Site Code : 24780011
Start Date : 2/7/2008
Page No : 1

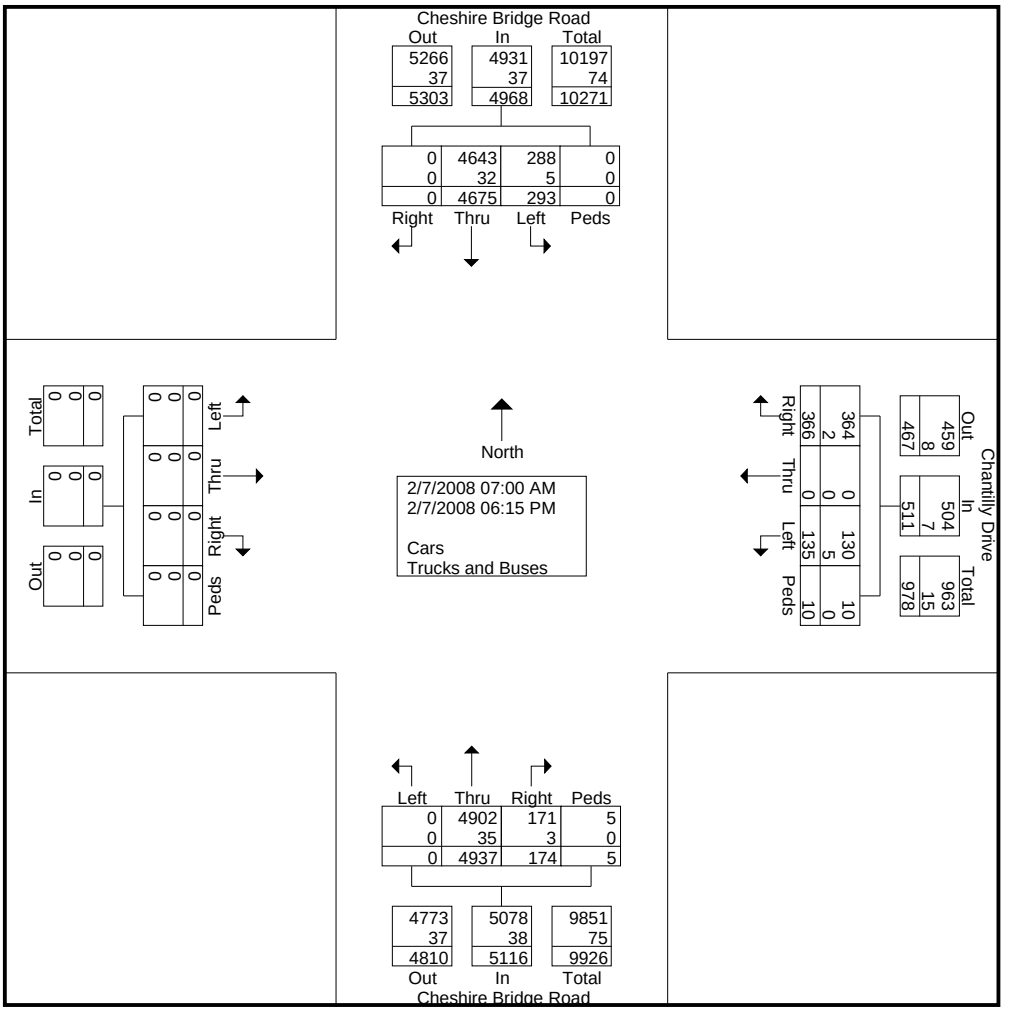
Groups Printed- Cars - Trucks and Buses

	Cheshire Bridge Road Northbound					Cheshire Bridge Road Southbound					Eastbound					Chantilly Drive Westbound					
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
07:00 AM	0	284	9	0	293	10	239	0	0	249	0	0	0	0	0	4	0	8	0	12	554
07:15 AM	0	302	8	0	310	13	248	0	0	261	0	0	0	0	0	2	0	11	0	13	584
07:30 AM	0	310	10	0	320	16	261	0	0	277	0	0	0	0	0	4	0	16	1	21	618
07:45 AM	0	334	10	2	346	20	277	0	0	297	0	0	0	0	0	5	0	23	2	30	673
Total	0	1230	37	2	1269	59	1025	0	0	1084	0	0	0	0	0	15	0	58	3	76	2429
08:00 AM	0	355	12	0	367	18	270	0	0	288	0	0	0	0	0	6	0	25	0	31	686
08:15 AM	0	363	11	0	374	22	256	0	0	278	0	0	0	0	0	4	0	27	1	32	684
08:30 AM	0	367	10	0	377	20	248	0	0	268	0	0	0	0	0	4	0	23	0	27	672
08:45 AM	0	351	7	0	358	16	235	0	0	251	0	0	0	0	0	3	0	19	0	22	631
Total	0	1436	40	0	1476	76	1009	0	0	1085	0	0	0	0	0	17	0	94	1	112	2673
*** BREAK ***																					
04:30 PM	0	259	9	0	268	15	319	0	0	334	0	0	0	0	0	12	0	19	0	31	633
04:45 PM	0	264	11	1	276	18	327	0	0	345	0	0	0	0	0	13	0	21	1	35	656
Total	0	523	20	1	544	33	646	0	0	679	0	0	0	0	0	25	0	40	1	66	1289
05:00 PM	0	283	15	0	298	20	345	0	0	365	0	0	0	0	0	15	0	28	1	44	707
05:15 PM	0	297	12	1	310	22	351	0	0	373	0	0	0	0	0	11	0	34	0	45	728
05:30 PM	0	303	17	0	320	26	344	0	0	370	0	0	0	0	0	15	0	37	1	53	743
05:45 PM	0	299	13	0	312	23	332	0	0	355	0	0	0	0	0	13	0	31	2	46	713
Total	0	1182	57	1	1240	91	1372	0	0	1463	0	0	0	0	0	54	0	130	4	188	2891
06:00 PM	0	291	11	0	302	19	319	0	0	338	0	0	0	0	0	13	0	26	1	40	680
06:15 PM	0	275	9	1	285	15	304	0	0	319	0	0	0	0	0	11	0	18	0	29	633
Grand Total	0	4937	174	5	5116	293	4675	0	0	4968	0	0	0	0	0	135	0	366	10	511	10595
Apprch %	0	96.5	3.4	0.1		5.9	94.1	0	0		0	0	0	0		26.4	0	71.6	2		
Total %	0	46.6	1.6	0	48.3	2.8	44.1	0	0	46.9	0	0	0	0	0	1.3	0	3.5	0.1	4.8	
Cars	0	4902	171	5	5078	288	4643	0	0	4931	0	0	0	0	0	130	0	364	10	504	10513
% Cars	0	99.3	98.3	100	99.3	98.3	99.3	0	0	99.3	0	0	0	0	0	96.3	0	99.5	100	98.6	99.2
Trucks and Buses	0	35	3	0	38	5	32	0	0	37	0	0	0	0	0	5	0	2	0	7	82
% Trucks and Buses	0	0.7	1.7	0	0.7	1.7	0.7	0	0	0.7	0	0	0	0	0	3.7	0	0.5	0	1.4	0.8

Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780011
Site Code : 24780011
Start Date : 2/7/2008
Page No : 2

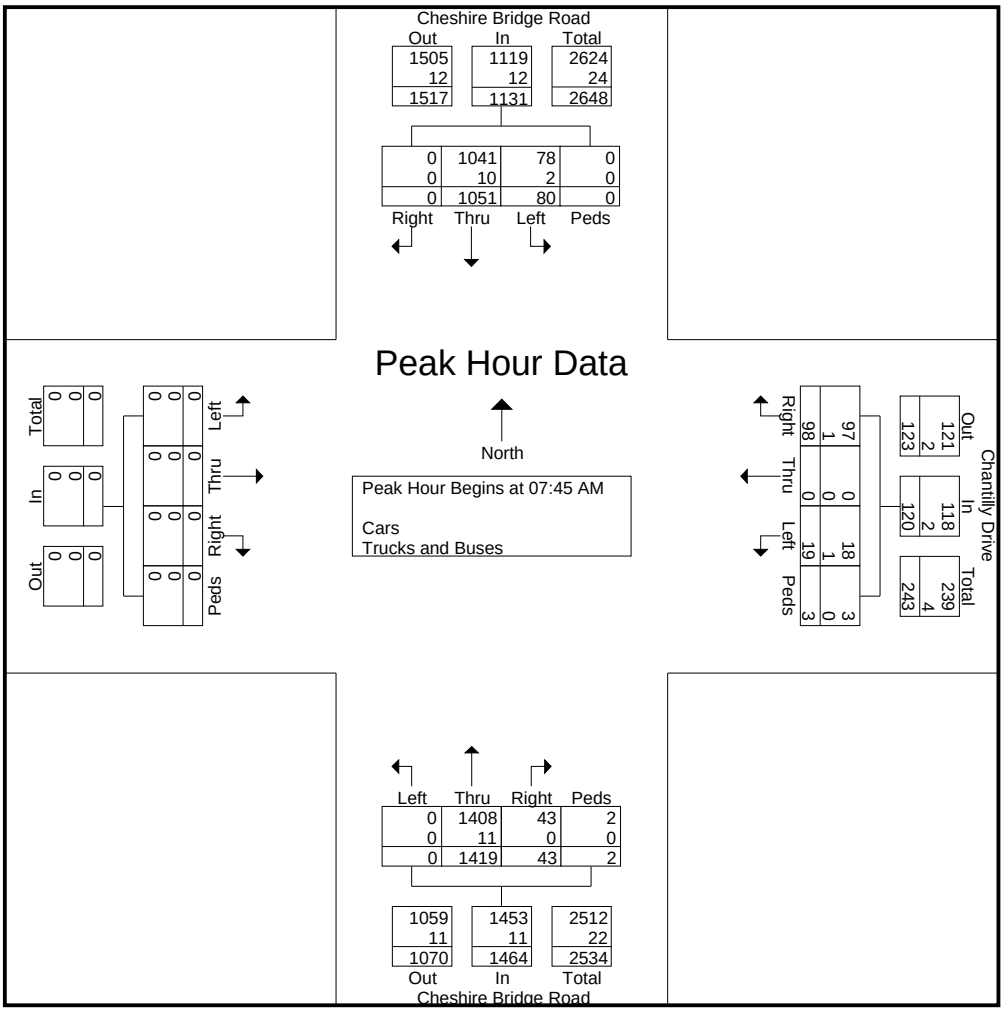


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780011
Site Code : 24780011
Start Date : 2/7/2008
Page No : 3

	Cheshire Bridge Road Northbound					Cheshire Bridge Road Southbound					Eastbound					Chantilly Drive Westbound					
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 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	334	10	2	346	20	277	0	0	297	0	0	0	0	0	5	0	23	2	30	673
08:00 AM	0	355	12	0	367	18	270	0	0	288	0	0	0	0	0	6	0	25	0	31	686
08:15 AM	0	363	11	0	374	22	256	0	0	278	0	0	0	0	0	4	0	27	1	32	684
08:30 AM	0	367	10	0	377	20	248	0	0	268	0	0	0	0	0	4	0	23	0	27	672
Total Volume	0	1419	43	2	1464	80	1051	0	0	1131	0	0	0	0	0	19	0	98	3	120	2715
% App. Total	0	96.9	2.9	0.1		7.1	92.9	0	0		0	0	0	0		15.8	0	81.7	2.5		
PHF	.000	.967	.896	.250	.971	.909	.949	.000	.000	.952	.000	.000	.000	.000	.000	.792	.000	.907	.375	.938	.989
Cars	0	1408	43	2	1453	78	1041	0	0	1119	0	0	0	0	0	18	0	97	3	118	2690
% Cars	0	99.2	100	100	99.2	97.5	99.0	0	0	98.9	0	0	0	0	0	94.7	0	99.0	100	98.3	99.1
Trucks and Buses	0	11	0	0	11	2	10	0	0	12	0	0	0	0	0	1	0	1	0	2	25
% Trucks and Buses	0	0.8	0	0	0.8	2.5	1.0	0	0	1.1	0	0	0	0	0	5.3	0	1.0	0	1.7	0.9

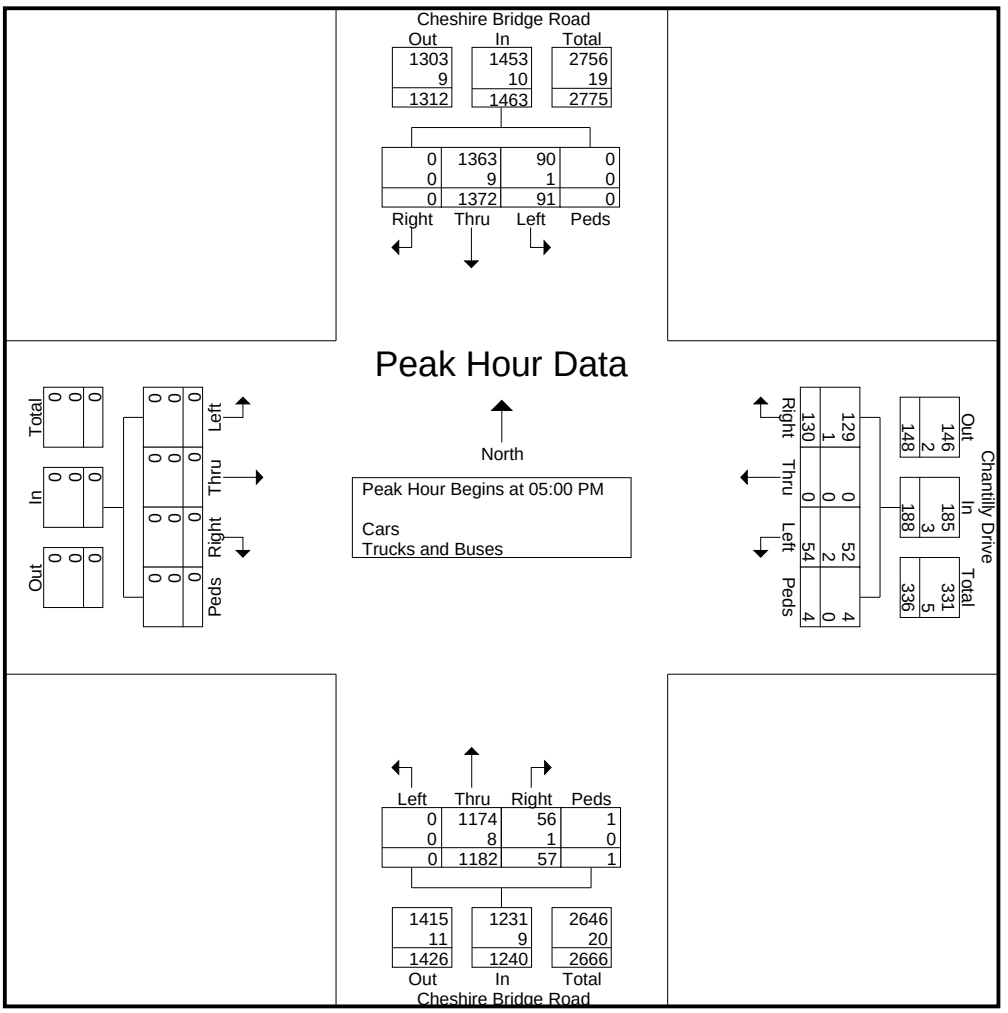


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780011
Site Code : 24780011
Start Date : 2/7/2008
Page No : 4

	Cheshire Bridge Road Northbound					Cheshire Bridge Road Southbound					Eastbound					Chantilly Drive Westbound					
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 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	283	15	0	298	20	345	0	0	365	0	0	0	0	0	15	0	28	1	44	707
05:15 PM	0	297	12	1	310	22	351	0	0	373	0	0	0	0	0	11	0	34	0	45	728
05:30 PM	0	303	17	0	320	26	344	0	0	370	0	0	0	0	0	15	0	37	1	53	743
05:45 PM	0	299	13	0	312	23	332	0	0	355	0	0	0	0	0	13	0	31	2	46	713
Total Volume	0	1182	57	1	1240	91	1372	0	0	1463	0	0	0	0	0	54	0	130	4	188	2891
% App. Total	0	95.3	4.6	0.1		6.2	93.8	0	0		0	0	0	0		28.7	0	69.1	2.1		
PHF	.000	.975	.838	.250	.969	.875	.977	.000	.000	.981	.000	.000	.000	.000	.000	.900	.000	.878	.500	.887	.973
Cars	0	1174	56	1	1231	90	1363	0	0	1453	0	0	0	0	0	52	0	129	4	185	2869
% Cars	0	99.3	98.2	100	99.3	98.9	99.3	0	0	99.3	0	0	0	0	0	96.3	0	99.2	100	98.4	99.2
Trucks and Buses	0	8	1	0	9	1	9	0	0	10	0	0	0	0	0	2	0	1	0	3	22
% Trucks and Buses	0	0.7	1.8	0	0.7	1.1	0.7	0	0	0.7	0	0	0	0	0	3.7	0	0.8	0	1.6	0.8



Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780011-sat
Site Code : 24780011
Start Date : 1/26/2008
Page No : 1

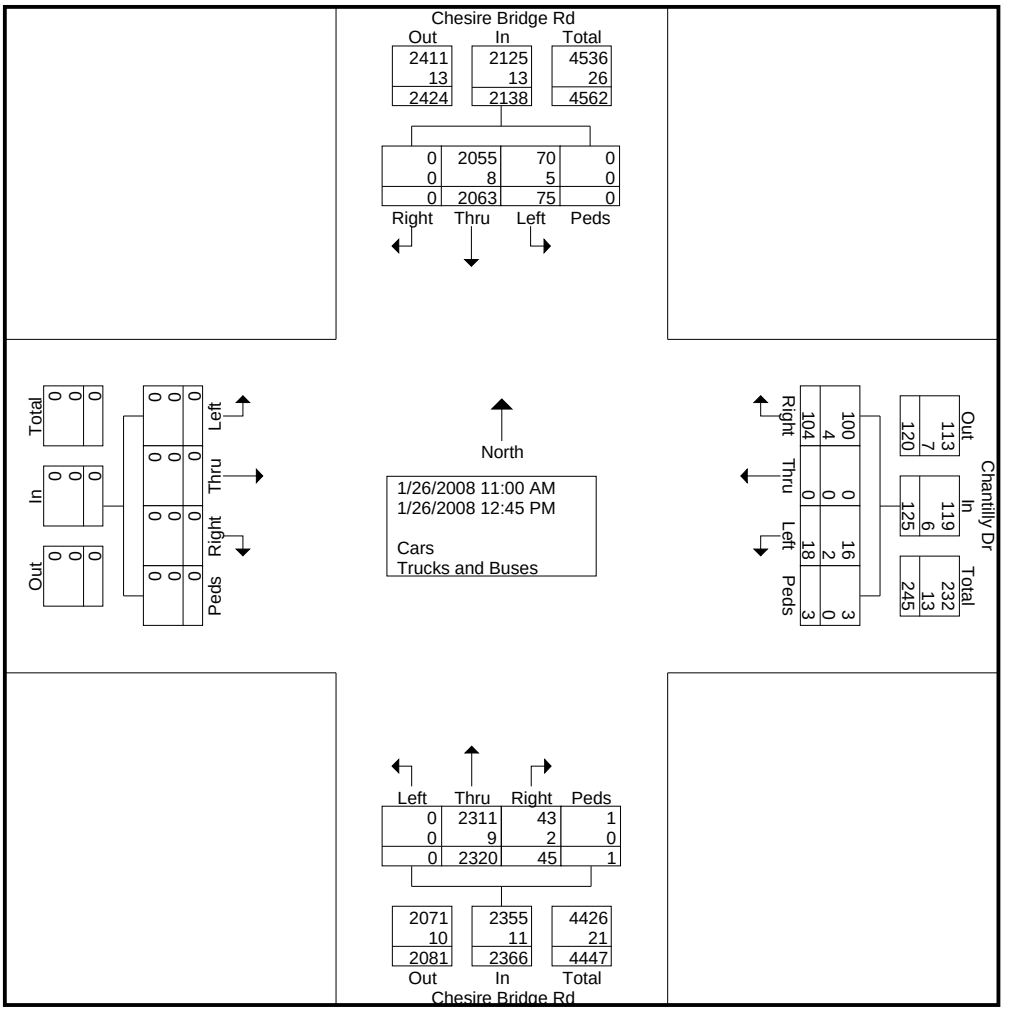
Groups Printed- Cars - Trucks and Buses

	Chesire Bridge Rd Northbound					Chesire Bridge Rd Southbound					Eastbound					Chantilly Dr Westbound					
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
11:00 AM	0	228	4	0	232	6	224	0	0	230	0	0	0	0	0	2	0	13	0	15	477
11:15 AM	0	246	5	0	251	10	221	0	0	231	0	0	0	0	0	3	0	13	1	17	499
11:30 AM	0	273	8	0	281	12	228	0	0	240	0	0	0	0	0	0	0	15	0	15	536
11:45 AM	0	320	6	1	327	8	253	0	0	261	0	0	0	0	0	3	0	15	0	18	606
Total	0	1067	23	1	1091	36	926	0	0	962	0	0	0	0	0	8	0	56	1	65	2118
12:00 PM	0	330	7	0	337	12	295	0	0	307	0	0	0	0	0	3	0	13	1	17	661
12:15 PM	0	315	6	0	321	10	287	0	0	297	0	0	0	0	0	3	0	13	0	16	634
12:30 PM	0	309	6	0	315	10	282	0	0	292	0	0	0	0	0	1	0	11	1	13	620
12:45 PM	0	299	3	0	302	7	273	0	0	280	0	0	0	0	0	3	0	11	0	14	596
Total	0	1253	22	0	1275	39	1137	0	0	1176	0	0	0	0	0	10	0	48	2	60	2511
Grand Total	0	2320	45	1	2366	75	2063	0	0	2138	0	0	0	0	0	18	0	104	3	125	4629
Apprch %	0	98.1	1.9	0		3.5	96.5	0	0		0	0	0	0		14.4	0	83.2	2.4		
Total %	0	50.1	1	0	51.1	1.6	44.6	0	0	46.2	0	0	0	0	0	0.4	0	2.2	0.1	2.7	
Cars	0	2311	43	1	2355	70	2055	0	0	2125	0	0	0	0	0	16	0	100	3	119	4599
% Cars	0	99.6	95.6	100	99.5	93.3	99.6	0	0	99.4	0	0	0	0	0	88.9	0	96.2	100	95.2	99.4
Trucks and Buses	0	9	2	0	11	5	8	0	0	13	0	0	0	0	0	2	0	4	0	6	30
% Trucks and Buses	0	0.4	4.4	0	0.5	6.7	0.4	0	0	0.6	0	0	0	0	0	11.1	0	3.8	0	4.8	0.6

Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780011-sat
Site Code : 24780011
Start Date : 1/26/2008
Page No : 2

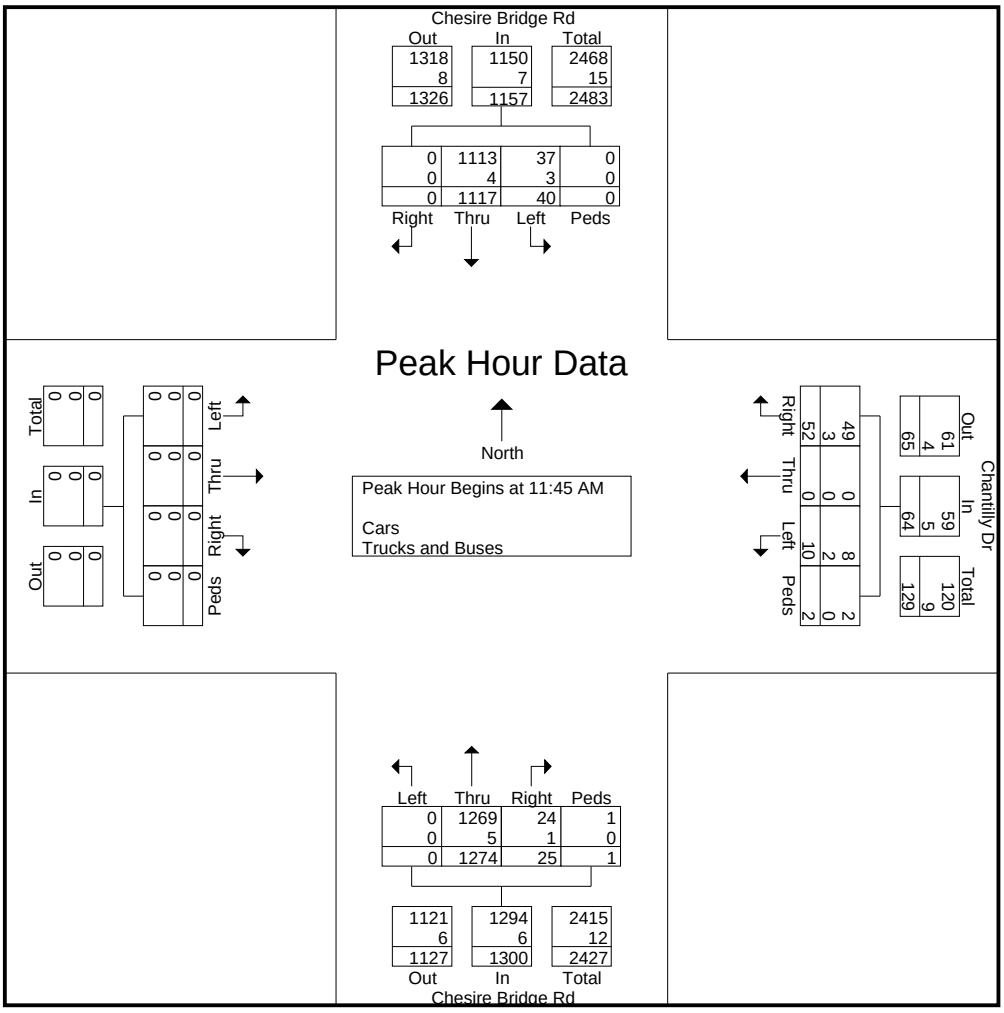


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780011-sat
Site Code : 24780011
Start Date : 1/26/2008
Page No : 3

	Chesire Bridge Rd Northbound					Chesire Bridge Rd Southbound					Eastbound					Chantilly Dr Westbound					
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 11:00 AM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:45 AM																					
11:45 AM	0	320	6	1	327	8	253	0	0	261	0	0	0	0	0	3	0	15	0	18	606
12:00 PM	0	330	7	0	337	12	295	0	0	307	0	0	0	0	0	3	0	13	1	17	661
12:15 PM	0	315	6	0	321	10	287	0	0	297	0	0	0	0	0	3	0	13	0	16	634
12:30 PM	0	309	6	0	315	10	282	0	0	292	0	0	0	0	0	1	0	11	1	13	620
Total Volume	0	1274	25	1	1300	40	1117	0	0	1157	0	0	0	0	0	10	0	52	2	64	2521
% App. Total	0	98	1.9	0.1		3.5	96.5	0	0		0	0	0	0		15.6	0	81.2	3.1		
PHF	.000	.965	.893	.250	.964	.833	.947	.000	.000	.942	.000	.000	.000	.000	.000	.833	.000	.867	.500	.889	.953
Cars	0	1269	24	1	1294	37	1113	0	0	1150	0	0	0	0	0	8	0	49	2	59	2503
% Cars	0	99.6	96.0	100	99.5	92.5	99.6	0	0	99.4	0	0	0	0	0	80.0	0	94.2	100	92.2	99.3
Trucks and Buses	0	5	1	0	6	3	4	0	0	7	0	0	0	0	0	2	0	3	0	5	18
% Trucks and Buses	0	0.4	4.0	0	0.5	7.5	0.4	0	0	0.6	0	0	0	0	0	20.0	0	5.8	0	7.8	0.7



TRAFFIC DATA COLLECTION, INC.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1842
Counted By: OSP
Weather: Mild
Other: MRA

File Name : 08505-11A
Site Code : 00850511
Start Date : 2/20/2008
Page No : 1

Groups Printed- Cars - Trucks & Buses

	Cheshire Bridge Rd Northbound					Cheshire Bridge Rd Southbound					Dr Eastbound					Sheridan Rd Westbound					
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
07:00 AM	0	174	11	0	185	10	200	0	0	210	0	0	0	0	0	24	0	20	2	46	441
07:15 AM	0	183	9	0	192	10	255	0	0	265	0	0	0	0	0	15	0	32	1	48	505
07:30 AM	0	283	14	0	297	12	255	0	0	267	0	0	0	0	0	26	0	33	0	59	623
07:45 AM	0	270	14	0	284	27	269	0	3	299	0	0	0	0	0	52	0	68	2	122	705
Total	0	910	48	0	958	59	979	0	3	1041	0	0	0	0	0	117	0	153	5	275	2274
08:00 AM	1	292	15	3	311	30	268	0	0	298	0	0	1	0	1	60	1	62	0	123	733
08:15 AM	1	279	18	1	299	22	249	1	0	272	0	0	0	2	2	74	0	50	0	124	697
08:30 AM	2	290	18	0	310	22	282	0	0	304	1	0	0	1	2	48	1	51	1	101	717
08:45 AM	1	284	23	0	308	16	295	0	0	311	0	0	0	1	1	70	0	45	1	116	736
Total	5	1145	74	4	1228	90	1094	1	0	1185	1	0	1	4	6	252	2	208	2	464	2883
Break																					
04:30 PM	1	299	21	3	324	50	290	1	2	343	1	0	1	0	2	32	0	16	1	49	718
04:45 PM	2	319	31	0	352	35	278	3	1	317	0	2	2	0	4	32	0	24	2	58	731
Total	3	618	52	3	676	85	568	4	3	660	1	2	3	0	6	64	0	40	3	107	1449
05:00 PM	1	260	45	0	306	59	300	0	0	359	0	0	2	0	2	51	1	36	1	89	756
05:15 PM	0	282	47	1	330	37	341	0	2	380	0	0	0	0	0	36	2	17	0	55	765
05:30 PM	0	294	42	0	336	46	303	0	1	350	0	0	0	0	0	52	0	27	2	81	767
05:45 PM	0	305	41	1	347	47	336	0	1	384	0	2	0	0	2	40	1	22	0	63	796
Total	1	1141	175	2	1319	189	1280	0	4	1473	0	2	2	0	4	179	4	102	3	288	3084
06:00 PM	0	335	34	0	369	31	288	0	2	321	1	1	2	4	8	41	2	27	3	73	771
06:15 PM	0	285	60	3	348	42	313	0	1	356	0	0	0	1	1	35	3	16	0	54	759
Grand Total	9	4434	443	12	4898	496	4522	5	13	5036	3	5	8	9	25	688	11	546	16	1261	11220
Apprch %	0.2	90.5	9	0.2		9.8	89.8	0.1	0.3		12	20	32	36		54.6	0.9	43.3	1.3		
Total %	0.1	39.5	3.9	0.1	43.7	4.4	40.3	0	0.1	44.9	0	0	0.1	0.1	0.2	6.1	0.1	4.9	0.1	11.2	
Cars	9	4372	440	12	4833	492	4457	4	13	4966	3	5	8	9	25	680	11	543	16	1250	11074
% Cars	100	98.6	99.3	100	98.7	99.2	98.6	80	100	98.6	100	100	100	100	100	98.8	100	99.5	100	99.1	98.7
Trucks & Buses	0	62	3	0	65	4	65	1	0	70	0	0	0	0	0	8	0	3	0	11	146
% Trucks & Buses	0	1.4	0.7	0	1.3	0.8	1.4	20	0	1.4	0	0	0	0	0	1.2	0	0.5	0	0.9	1.3

Note: Pedestrian data shown for each approach is crossing the approach from either direction combined.

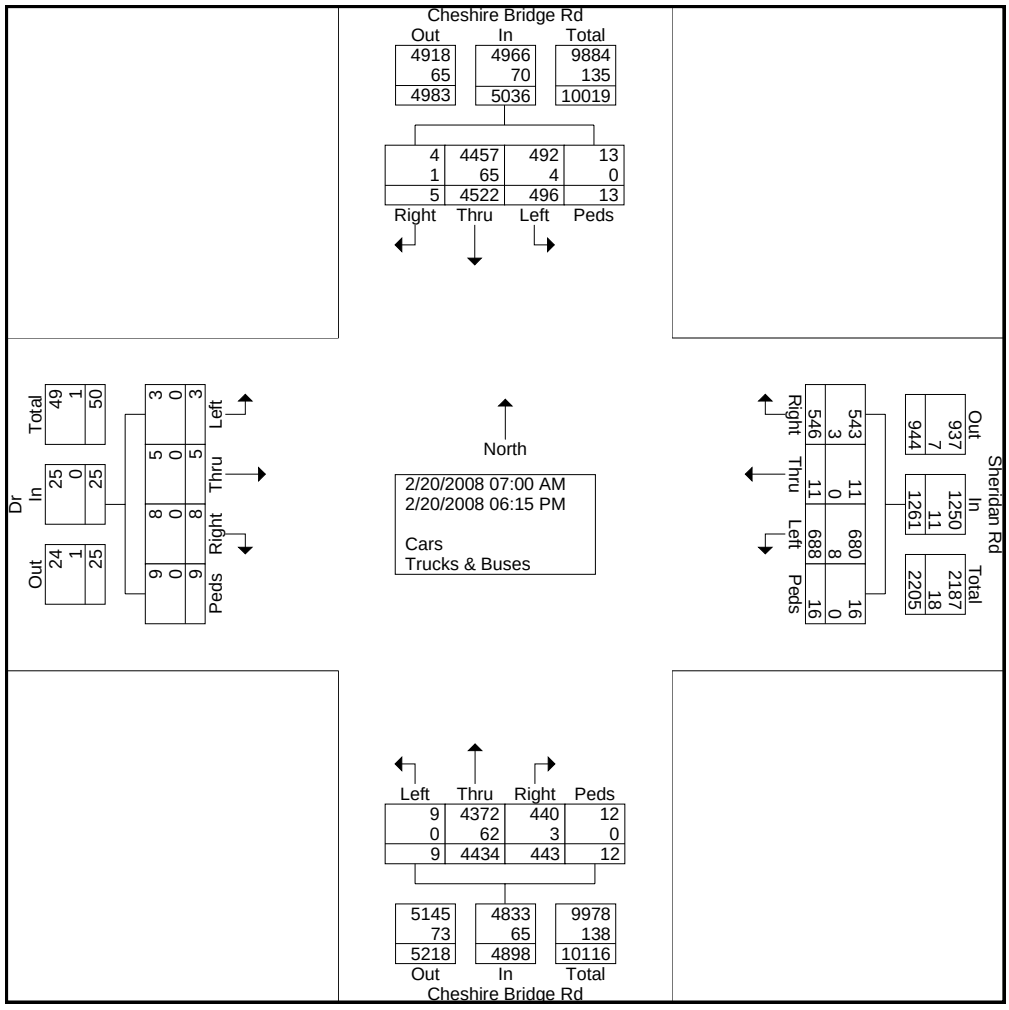
Traffic Data Collection, Inc.

Atlanta - Hilton Head

www.trafficdatacollection.com

Counter: 1842
Counted By: OSP
Weather: Mild
Other: MRA

File Name : 08505-11A
Site Code : 00850511
Start Date : 2/20/2008
Page No : 2



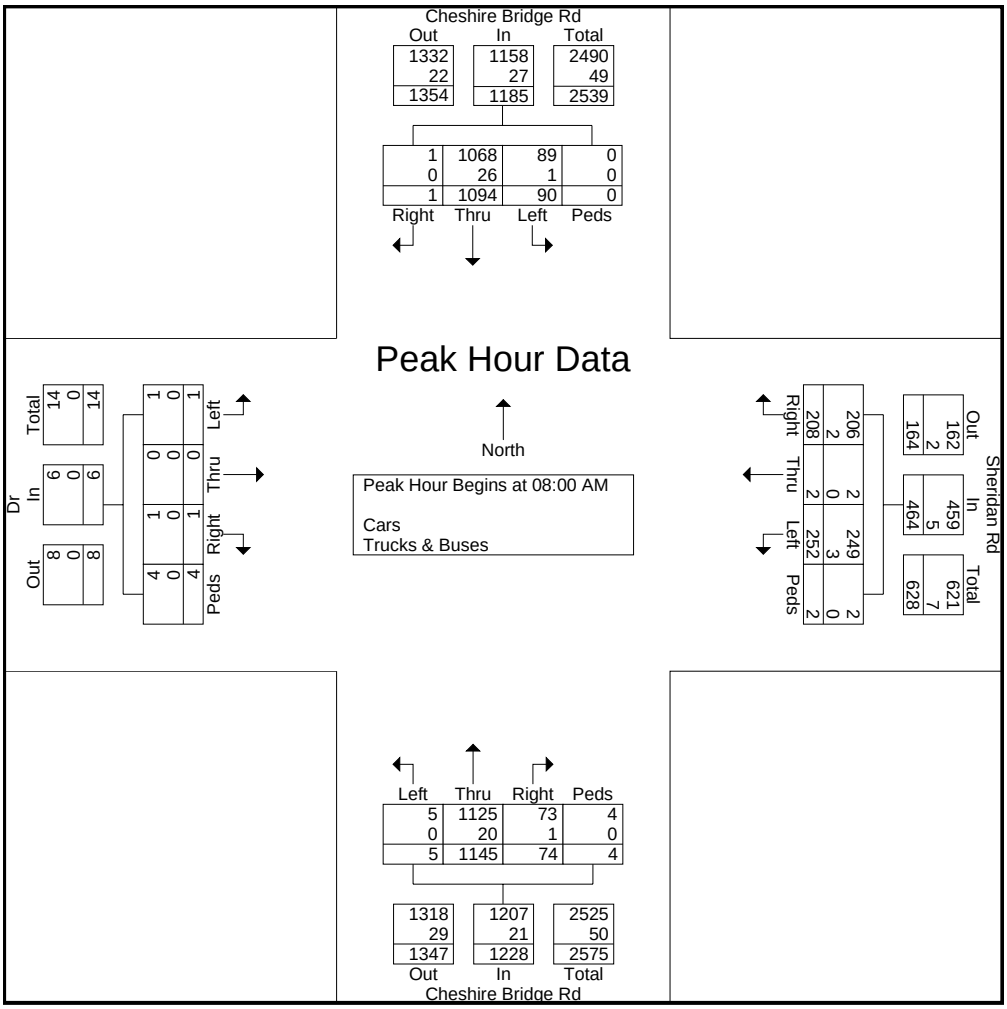
TRAFFIC DATA COLLECTION, INC.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1842
Counted By: OSP
Weather: Mild
Other: MRA

File Name : 08505-11A
Site Code : 00850511
Start Date : 2/20/2008
Page No : 3

	Cheshire Bridge Rd Northbound					Cheshire Bridge Rd Southbound					Dr Eastbound					Sheridan Rd Westbound					
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 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	1	292	15	3	311	30	268	0	0	298	0	0	1	0	1	60	1	62	0	123	733
08:15 AM	1	279	18	1	299	22	249	1	0	272	0	0	0	2	2	74	0	50	0	124	697
08:30 AM	2	290	18	0	310	22	282	0	0	304	1	0	0	1	2	48	1	51	1	101	717
08:45 AM	1	284	23	0	308	16	295	0	0	311	0	0	0	1	1	70	0	45	1	116	736
Total Volume	5	1145	74	4	1228	90	1094	1	0	1185	1	0	1	4	6	252	2	208	2	464	2883
% App. Total	0.4	93.2	6	0.3		7.6	92.3	0.1	0		16.7	0	16.7	66.7		54.3	0.4	44.8	0.4		
PHF	.625	.980	.804	.333	.987	.750	.927	.250	.000	.953	.250	.000	.250	.500	.750	.851	.500	.839	.500	.935	.979
Cars	5	1125					1068														
% Cars	100	98.3	98.6	100	98.3	98.9	97.6	100	0	97.7	100	0	100	100	100	98.8	100	99.0	100	98.9	98.2
Trucks & Buses	0	20	1	0	21	1	26	0	0	27	0	0	0	0	0	3	0	2	0	5	53
% Trucks & Buses	0	1.7	1.4	0	1.7	1.1	2.4	0	0	2.3	0	0	0	0	0	1.2	0	1.0	0	1.1	1.8



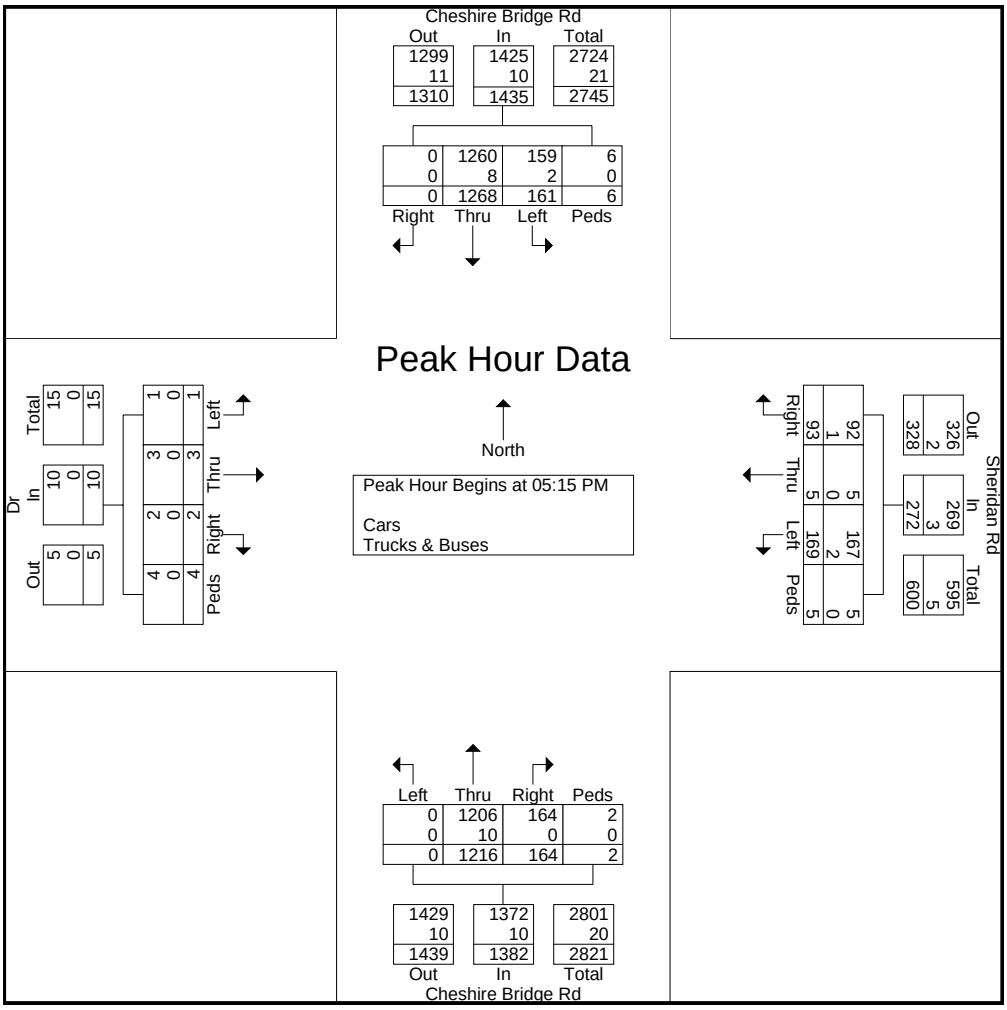
Traffic Data Collection, Inc.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1842
Counted By: OSP
Weather: Mild
Other: MRA

File Name : 08505-11A
Site Code : 00850511
Start Date : 2/20/2008
Page No : 4

	Cheshire Bridge Rd Northbound					Cheshire Bridge Rd Southbound					Dr Eastbound					Sheridan Rd Westbound					
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 12:00 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:15 PM																					
05:15 PM	0	282	47	1	330	37	341	0	2	380	0	0	0	0	0	36	2	17	0	55	765
05:30 PM	0	294	42	0	336	46	303	0	1	350	0	0	0	0	0	52	0	27	2	81	767
05:45 PM	0	305	41	1	347	47	336	0	1	384	0	2	0	0	2	40	1	22	0	63	796
06:00 PM	0	335	34	0	369	31	288	0	2	321	1	1	2	4	8	41	2	27	3	73	771
Total Volume	0	1216	164	2	1382	161	1268	0	6	1435	1	3	2	4	10	169	5	93	5	272	3099
% App. Total	0	88	11.9	0.1		11.2	88.4	0	0.4		10	30	20	40		62.1	1.8	34.2	1.8		
PHF	.000	.907	.872	.500	.936	.856	.930	.000	.750	.934	.250	.375	.250	.250	.313	.813	.625	.861	.417	.840	.973
Cars	0	1206					1260														
% Cars	0	99.2	100	100	99.3	98.8	99.4	0	100	99.3	100	100	100	100	100	98.8	100	98.9	100	98.9	99.3
Trucks & Buses	0	10	0	0	10	2	8	0	0	10	0	0	0	0	0	2	0	1	0	3	23
% Trucks & Buses	0	0.8	0	0	0.7	1.2	0.6	0	0	0.7	0	0	0	0	0	1.2	0	1.1	0	1.1	0.7



TRAFFIC DATA COLLECTION, INC.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 2447/1499
Counted By: JFU/EH
Weather: Mild
Other: MRA

File Name : 08505-12A
Site Code : 00850512
Start Date : 2/20/2008
Page No : 1

Groups Printed- Cars - Trucks & Buses

	Cheshire Bridge Rd Northbound					Cheshire Bridge Rd Southbound					Lindbergh Dr Eastbound					Lavista Rd Westbound					
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
07:15 AM	23	88	10	0	121	107	106	38	0	251	22	66	9	0	97	23	73	44	0	140	609
07:30 AM	24	120	14	0	158	104	123	53	0	280	23	54	15	0	92	45	89	96	0	230	760
07:45 AM	26	135	8	0	169	80	134	47	0	261	34	53	11	0	98	31	118	95	0	244	772
Total	73	343	32	0	448	291	363	138	0	792	79	173	35	0	287	99	280	235	0	614	2141
08:00 AM	19	163	3	0	185	84	114	39	3	240	40	45	3	0	88	42	112	102	0	256	769
08:15 AM	22	122	19	0	163	86	142	80	0	308	49	73	8	0	130	69	124	95	0	288	889
08:30 AM	24	180	21	0	225	89	133	60	0	282	41	60	11	0	112	55	108	77	0	240	859
08:45 AM	10	148	15	0	173	92	210	84	0	386	41	54	18	0	113	67	116	97	0	280	952
Total	75	613	58	0	746	351	599	263	3	1216	171	232	40	0	443	233	460	371	0	1064	3469
09:00 AM	46	170	9	0	225	87	172	73	0	332	49	76	10	0	135	35	94	62	0	191	883
Break																					
Total	46	170	9	0	225	87	172	73	0	332	49	76	10	0	135	35	94	62	0	191	883
Break																					
04:30 PM	20	131	17	0	168	82	177	37	0	296	55	76	20	0	151	42	70	92	0	204	819
04:45 PM	5	155	25	0	185	72	203	31	0	306	40	85	21	0	146	38	79	101	0	218	855
Total	25	286	42	0	353	154	380	68	0	602	95	161	41	0	297	80	149	193	0	422	1674
05:00 PM	18	148	25	0	191	73	227	27	0	327	47	84	18	0	149	38	86	99	0	223	890
05:15 PM	18	152	36	0	206	87	195	40	0	322	59	100	19	0	178	41	69	67	0	177	883
05:30 PM	10	179	29	0	218	99	195	41	0	335	44	87	12	0	143	54	82	65	0	201	897
05:45 PM	27	164	48	0	239	91	212	40	0	343	71	100	12	0	183	33	82	71	0	186	951
Total	73	643	138	0	854	350	829	148	0	1327	221	371	61	0	653	166	319	302	0	787	3621
06:00 PM	3	171	25	0	199	90	203	45	0	338	44	89	14	0	147	50	80	100	0	230	914
06:15 PM	18	152	23	0	193	89	201	33	0	323	53	90	28	0	171	50	81	88	0	219	906
Grand Total	313	2378	327	0	3018	1412	2747	768	3	4930	712	1192	229	0	2133	713	1463	1351	0	3527	13608
Apprch %	10.4	78.8	10.8	0		28.6	55.7	15.6	0.1		33.4	55.9	10.7	0		20.2	41.5	38.3	0		
Total %	2.3	17.5	2.4	0	22.2	10.4	20.2	5.6	0	36.2	5.2	8.8	1.7	0	15.7	5.2	10.8	9.9	0	25.9	
Cars	298	2355	325	0	2978	1395	2699	757	3	4854	704	1146	213	0	2063	708	1428	1343	0	3479	13374
% Cars	95.2	99	99.4	0	98.7	98.8	98.3	98.6	100	98.5	98.9	96.1	93	0	96.7	99.3	97.6	99.4	0	98.6	98.3
Trucks & Buses	15	23	2	0	40	17	48	11	0	76	8	46	16	0	70	5	35	8	0	48	234
% Trucks & Buses	4.8	1	0.6	0	1.3	1.2	1.7	1.4	0	1.5	1.1	3.9	7	0	3.3	0.7	2.4	0.6	0	1.4	1.7

Note: Pedestrian data shown for each approach is crossing the approach from either direction combined.

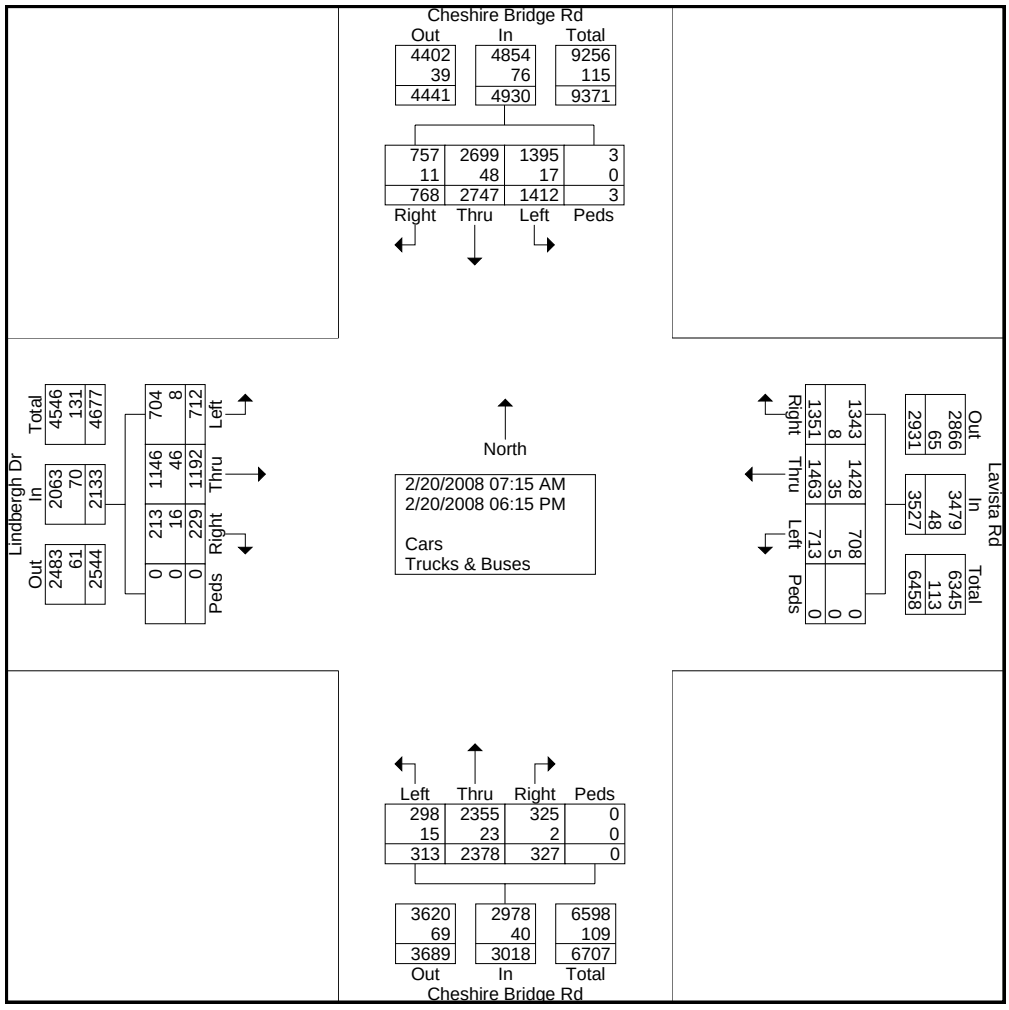
Traffic Data Collection, Inc.

Atlanta - Hilton Head

www.trafficdatacollection.com

Counter: 2447/1499
Counted By: JFU/EH
Weather: Mild
Other: MRA

File Name : 08505-12A
Site Code : 00850512
Start Date : 2/20/2008
Page No : 2



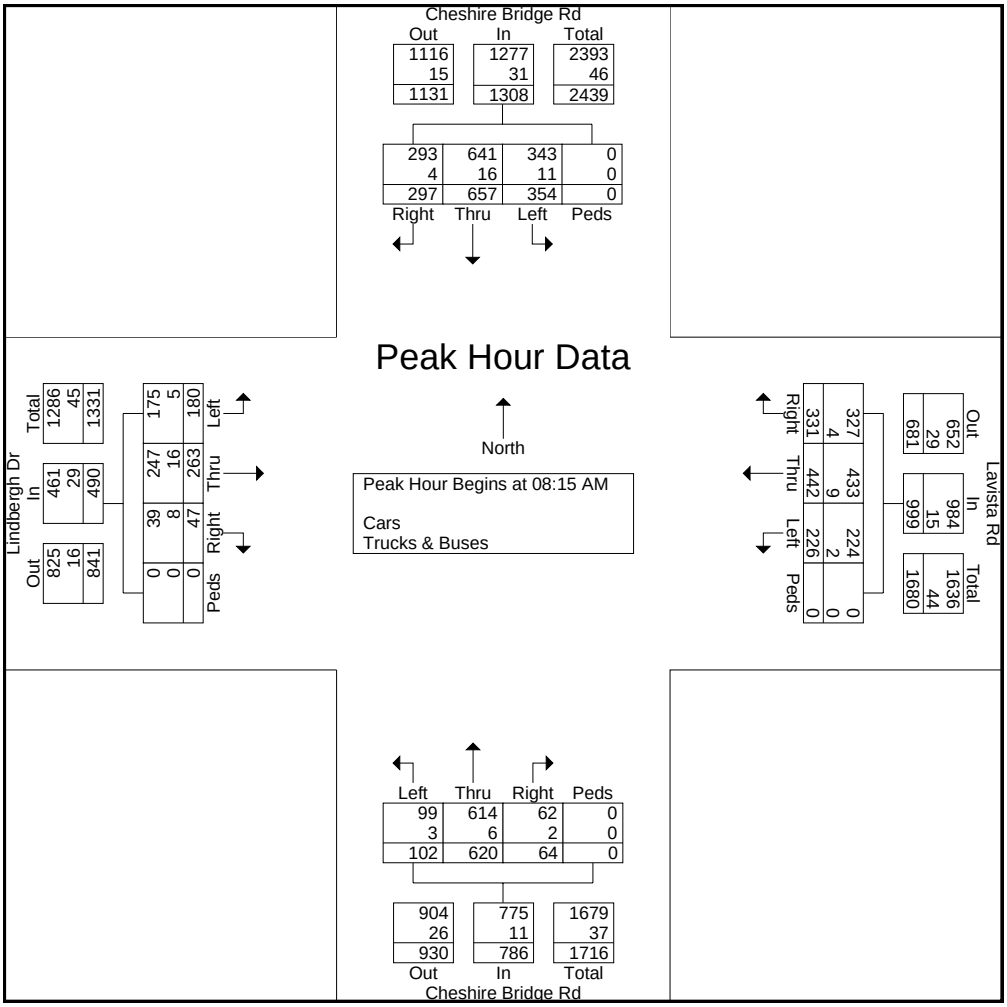
TRAFFIC DATA COLLECTION, INC.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 2447/1499
Counted By: JFU/EH
Weather: Mild
Other: MRA

File Name : 08505-12A
Site Code : 00850512
Start Date : 2/20/2008
Page No : 3

	Cheshire Bridge Rd Northbound					Cheshire Bridge Rd Southbound					Lindbergh Dr Eastbound					Lavista Rd Westbound					
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 07:15 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:15 AM																					
08:15 AM	22	122	19	0	163	86	142	80	0	308	49	73	8	0	130	69	124	95	0	288	889
08:30 AM	24	180	21	0	225	89	133	60	0	282	41	60	11	0	112	55	108	77	0	240	859
08:45 AM	10	148	15	0	173	92	210	84	0	386	41	54	18	0	113	67	116	97	0	280	952
09:00 AM	46	170	9	0	225	87	172	73	0	332	49	76	10	0	135	35	94	62	0	191	883
Total Volume	102	620	64	0	786	354	657	297	0	1308	180	263	47	0	490	226	442	331	0	999	3583
% App. Total	13	78.9	8.1	0		27.1	50.2	22.7	0		36.7	53.7	9.6	0		22.6	44.2	33.1	0		
PHF	.554	.861	.762	.000	.873	.962	.782	.884	.000	.847	.918	.865	.653	.000	.907	.819	.891	.853	.000	.867	.941
Cars	99	614	62	0	775	343	641	293	0	1277	175	247	39	0	461	224	433	327	0	984	3497
% Cars	97.1	99.0	96.9	0	98.6	96.9	97.6	98.7	0	97.6	97.2	93.9	83.0	0	94.1	99.1	98.0	98.8	0	98.5	97.6
Trucks & Buses																					
% Trucks & Buses	2.9	1.0	3.1	0	1.4	3.1	2.4	1.3	0	2.4	2.8	6.1	17.0	0	5.9	0.9	2.0	1.2	0	1.5	2.4



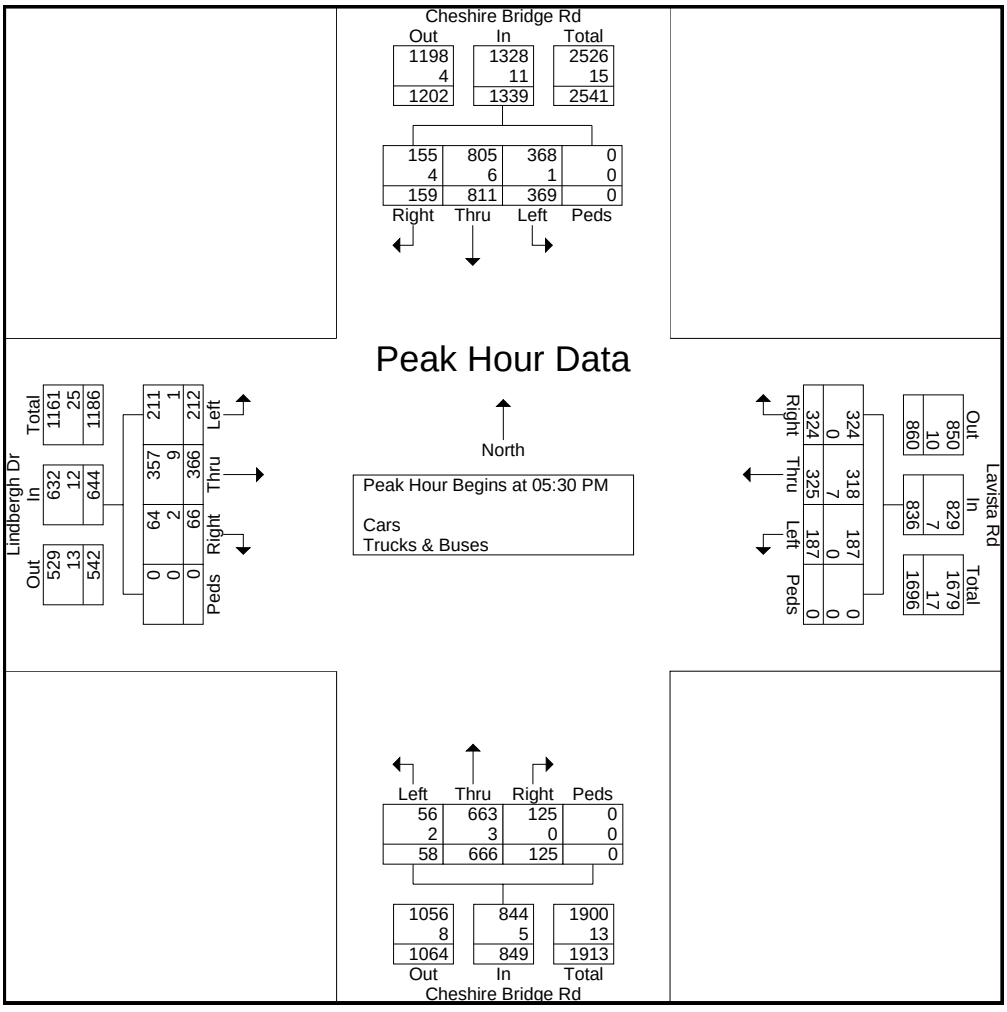
TRAFFIC DATA COLLECTION, INC.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 2447/1499
Counted By: JFU/EH
Weather: Mild
Other: MRA

File Name : 08505-12A
Site Code : 00850512
Start Date : 2/20/2008
Page No : 4

	Cheshire Bridge Rd Northbound					Cheshire Bridge Rd Southbound					Lindbergh Dr Eastbound					Lavista Rd Westbound					
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 12:00 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:30 PM																					
05:30 PM	10	179	29	0	218	99	195	41	0	335	44	87	12	0	143	54	82	65	0	201	897
05:45 PM	27	164	48	0	239	91	212	40	0	343	71	100	12	0	183	33	82	71	0	186	951
06:00 PM	3	171	25	0	199	90	203	45	0	338	44	89	14	0	147	50	80	100	0	230	914
06:15 PM	18	152	23	0	193	89	201	33	0	323	53	90	28	0	171	50	81	88	0	219	906
Total Volume	58	666	125	0	849	369	811	159	0	1339	212	366	66	0	644	187	325	324	0	836	3668
% App. Total	6.8	78.4	14.7	0		27.6	60.6	11.9	0		32.9	56.8	10.2	0		22.4	38.9	38.8	0		
PHF	.537	.930	.651	.000	.888	.932	.956	.883	.000	.976	.746	.915	.589	.000	.880	.866	.991	.810	.000	.909	.964
Cars	56	663	125	0	844	368	805	155	0	1328	211	357	64	0	632	187	318	324	0	829	3633
% Cars	96.6	99.5	100	0	99.4	99.7	99.3	97.5	0	99.2	99.5	97.5	97.0	0	98.1	100	97.8	100	0	99.2	99.0
Trucks & Buses																					
% Trucks & Buses	3.4	0.5	0	0	0.6	0.3	0.7	2.5	0	0.8	0.5	2.5	3.0	0	1.9	0	2.2	0	0	0.8	1.0



Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780012
Site Code : 24780012
Start Date : 2/7/2008
Page No : 1

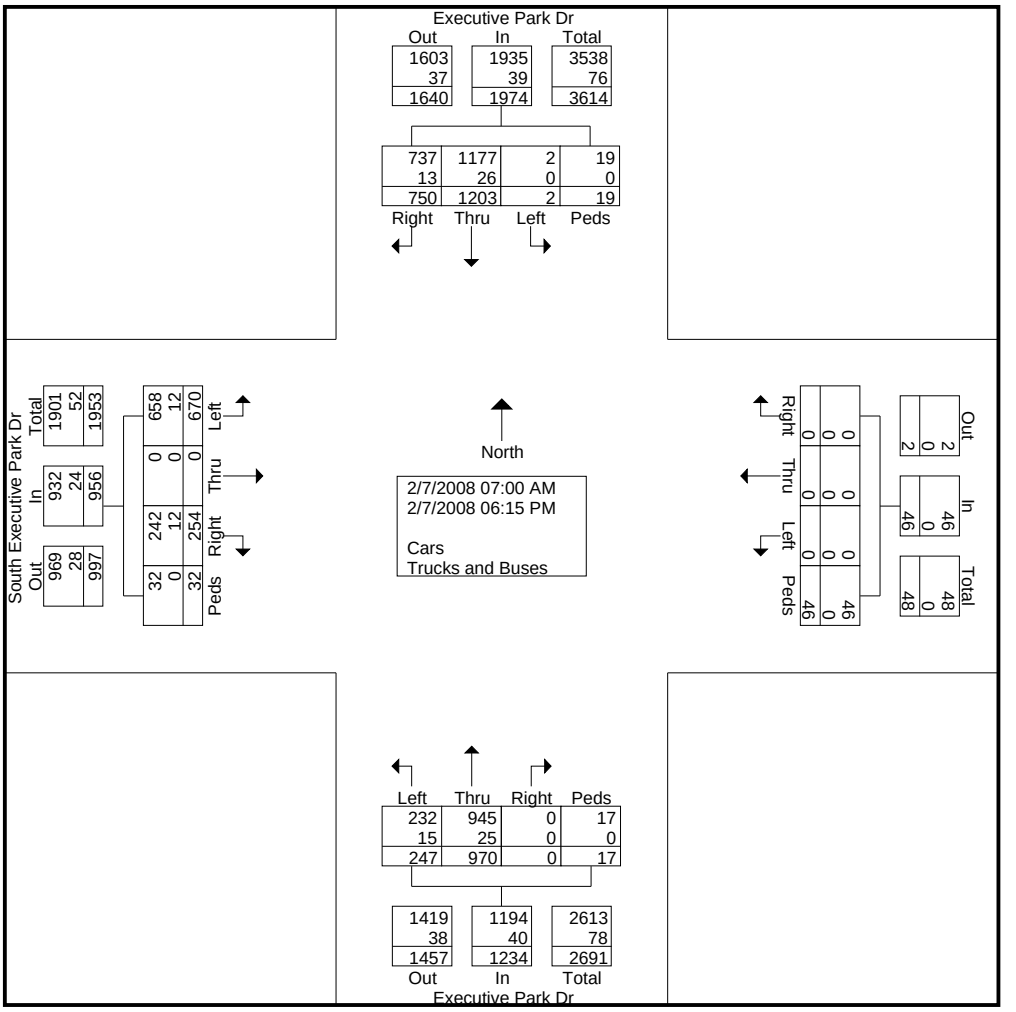
Groups Printed- Cars - Trucks and Buses

	Executive Park Dr Northbound					Executive Park Dr Southbound					South Executive Park Dr Eastbound					Westbound					
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
07:00 AM	20	45	0	0	65	0	54	60	0	114	18	0	5	0	23	0	0	0	3	3	205
07:15 AM	24	58	0	0	82	0	54	67	2	123	20	0	8	2	30	0	0	0	3	3	238
07:30 AM	28	71	0	1	100	0	58	77	1	136	21	0	10	1	32	0	0	0	4	4	272
07:45 AM	28	75	0	0	103	0	70	81	0	151	26	0	8	2	36	0	0	0	3	3	293
Total	100	249	0	1	350	0	236	285	3	524	85	0	31	5	121	0	0	0	13	13	1008
08:00 AM	23	77	0	1	101	0	72	79	4	155	34	0	14	2	50	0	0	0	5	5	311
08:15 AM	21	81	0	0	102	0	72	76	1	149	39	0	16	4	59	0	0	0	3	3	313
08:30 AM	18	82	0	2	102	0	76	83	3	162	32	0	14	3	49	0	0	0	5	5	318
08:45 AM	17	74	0	0	91	0	71	82	1	154	25	0	14	5	44	0	0	0	3	3	292
Total	79	314	0	3	396	0	291	320	9	620	130	0	58	14	202	0	0	0	16	16	1234
*** BREAK ***																					
04:30 PM	7	40	0	1	48	0	70	14	1	85	54	0	19	0	73	0	0	0	1	1	207
04:45 PM	10	49	0	2	61	0	74	16	1	91	62	0	26	1	89	0	0	0	2	2	243
Total	17	89	0	3	109	0	144	30	2	176	116	0	45	1	162	0	0	0	3	3	450
05:00 PM	8	54	0	2	64	0	80	20	0	100	67	0	22	2	91	0	0	0	4	4	259
05:15 PM	9	61	0	1	71	0	86	23	2	111	70	0	28	1	99	0	0	0	2	2	283
05:30 PM	6	59	0	1	66	0	95	19	0	114	60	0	22	2	84	0	0	0	1	1	265
05:45 PM	9	55	0	3	67	0	103	18	2	123	52	0	18	1	71	0	0	0	3	3	264
Total	32	229	0	7	268	0	364	80	4	448	249	0	90	6	345	0	0	0	10	10	1071
06:00 PM	12	46	0	2	60	0	90	18	0	108	48	0	16	4	68	0	0	0	2	2	238
06:15 PM	7	43	0	1	51	2	78	17	1	98	42	0	14	2	58	0	0	0	2	2	209
Grand Total	247	970	0	17	1234	2	1203	750	19	1974	670	0	254	32	956	0	0	0	46	46	4210
Apprch %	20	78.6	0	1.4		0.1	60.9	38	1		70.1	0	26.6	3.3		0	0	0	100		
Total %	5.9	23	0	0.4	29.3	0	28.6	17.8	0.5	46.9	15.9	0	6	0.8	22.7	0	0	0	1.1	1.1	
Cars	232	945	0	17	1194	2	1177	737	19	1935	658	0	242	32	932	0	0	0	46	46	4107
% Cars	93.9	97.4	0	100	96.8	100	97.8	98.3	100	98	98.2	0	95.3	100	97.5	0	0	0	100	100	97.6
Trucks and Buses	15	25	0	0	40	0	26	13	0	39	12	0	12	0	24	0	0	0	0	0	103
% Trucks and Buses	6.1	2.6	0	0	3.2	0	2.2	1.7	0	2	1.8	0	4.7	0	2.5	0	0	0	0	0	2.4

Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780012
Site Code : 24780012
Start Date : 2/7/2008
Page No : 2

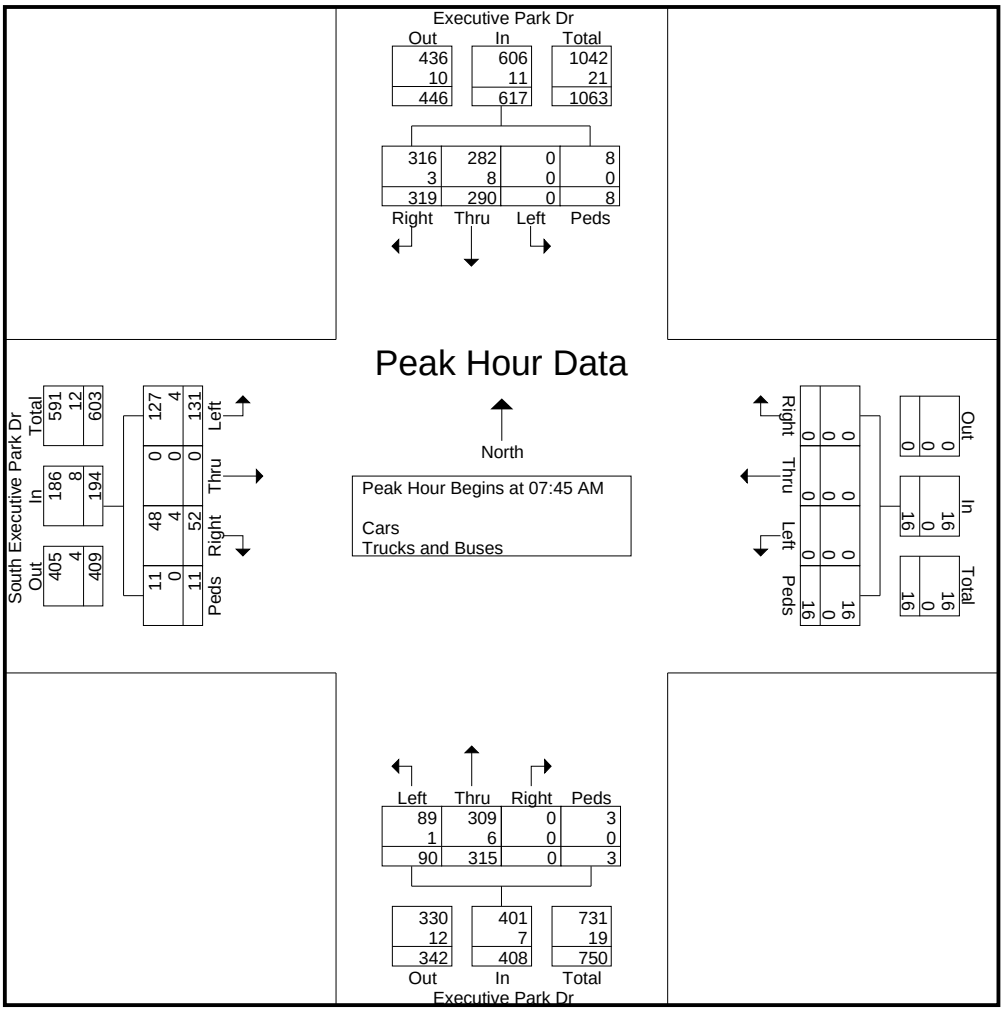


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780012
Site Code : 24780012
Start Date : 2/7/2008
Page No : 3

	Executive Park Dr Northbound					Executive Park Dr Southbound					South Executive Park Dr Eastbound					Westbound					
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 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	28	75	0	0	103	0	70	81	0	151	26	0	8	2	36	0	0	0	3	3	293
08:00 AM	23	77	0	1	101	0	72	79	4	155	34	0	14	2	50	0	0	0	5	5	311
08:15 AM	21	81	0	0	102	0	72	76	1	149	39	0	16	4	59	0	0	0	3	3	313
08:30 AM	18	82	0	2	102	0	76	83	3	162	32	0	14	3	49	0	0	0	5	5	318
Total Volume	90	315	0	3	408	0	290	319	8	617	131	0	52	11	194	0	0	0	16	16	1235
% App. Total	22.1	77.2	0	0.7		0	47	51.7	1.3		67.5	0	26.8	5.7		0	0	0	100		
PHF	.804	.960	.000	.375	.990	.000	.954	.961	.500	.952	.840	.000	.813	.688	.822	.000	.000	.000	.800	.800	.971
Cars	89	309	0	3	401	0	282	316	8	606	127	0	48	11	186	0	0	0	16	16	1209
% Cars	98.9	98.1	0	100	98.3	0	97.2	99.1	100	98.2	96.9	0	92.3	100	95.9	0	0	0	100	100	97.9
Trucks and Buses	1	6	0	0	7	0	8	3	0	11	4	0	4	0	8	0	0	0	0	0	26
% Trucks and Buses	1.1	1.9	0	0	1.7	0	2.8	0.9	0	1.8	3.1	0	7.7	0	4.1	0	0	0	0	0	2.1

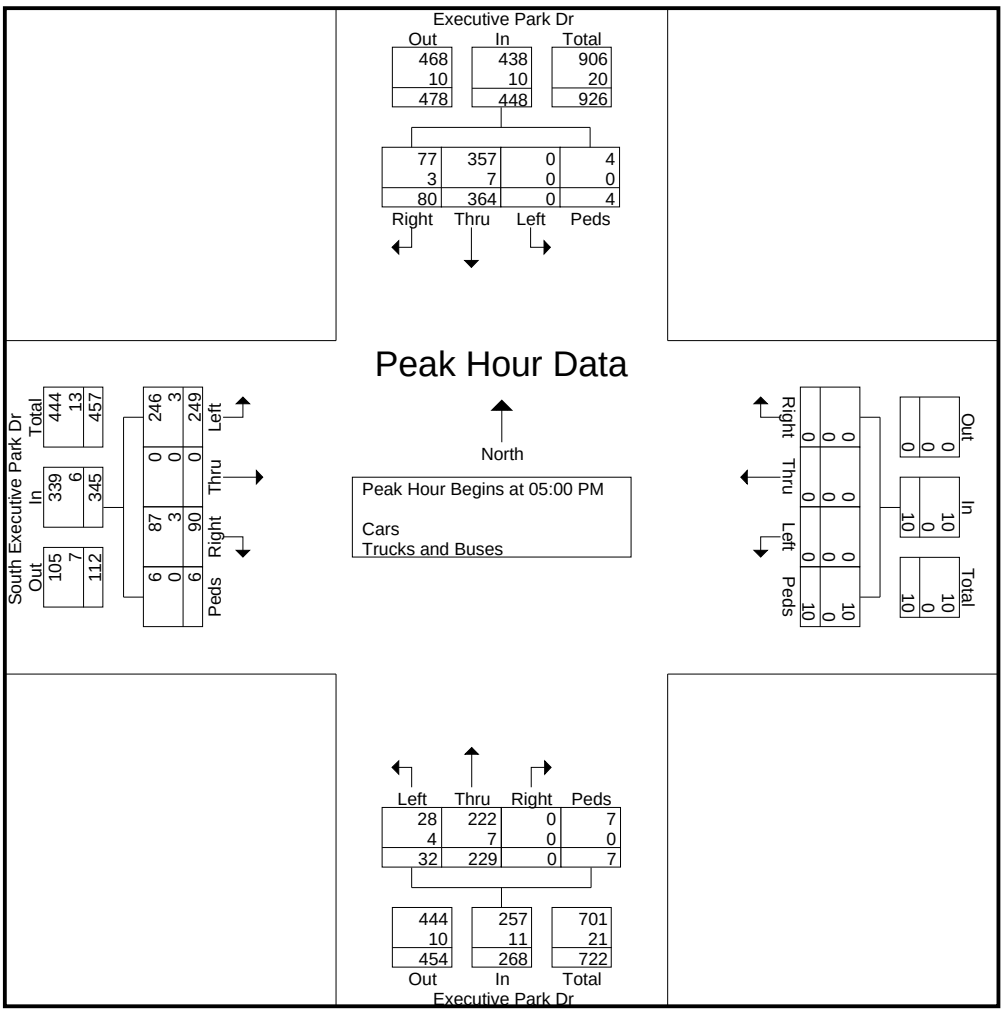


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780012
Site Code : 24780012
Start Date : 2/7/2008
Page No : 4

	Executive Park Dr Northbound					Executive Park Dr Southbound					South Executive Park Dr Eastbound					Westbound					
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 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	8	54	0	2	64	0	80	20	0	100	67	0	22	2	91	0	0	0	4	4	259
05:15 PM	9	61	0	1	71	0	86	23	2	111	70	0	28	1	99	0	0	0	2	2	283
05:30 PM	6	59	0	1	66	0	95	19	0	114	60	0	22	2	84	0	0	0	1	1	265
05:45 PM	9	55	0	3	67	0	103	18	2	123	52	0	18	1	71	0	0	0	3	3	264
Total Volume	32	229	0	7	268	0	364	80	4	448	249	0	90	6	345	0	0	0	10	10	1071
% App. Total	11.9	85.4	0	2.6		0	81.2	17.9	0.9		72.2	0	26.1	1.7		0	0	0	100		
PHF	.889	.939	.000	.583	.944	.000	.883	.870	.500	.911	.889	.000	.804	.750	.871	.000	.000	.000	.625	.625	.946
Cars	28	222	0	7	257	0	357	77	4	438	246	0	87	6	339	0	0	0	10	10	1044
% Cars	87.5	96.9	0	100	95.9	0	98.1	96.3	100	97.8	98.8	0	96.7	100	98.3	0	0	0	100	100	97.5
Trucks and Buses	4	7	0	0	11	0	7	3	0	10	3	0	3	0	6	0	0	0	0	0	27
% Trucks and Buses	12.5	3.1	0	0	4.1	0	1.9	3.8	0	2.2	1.2	0	3.3	0	1.7	0	0	0	0	0	2.5



Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780012-sat
Site Code : 24780012
Start Date : 1/26/2008
Page No : 1

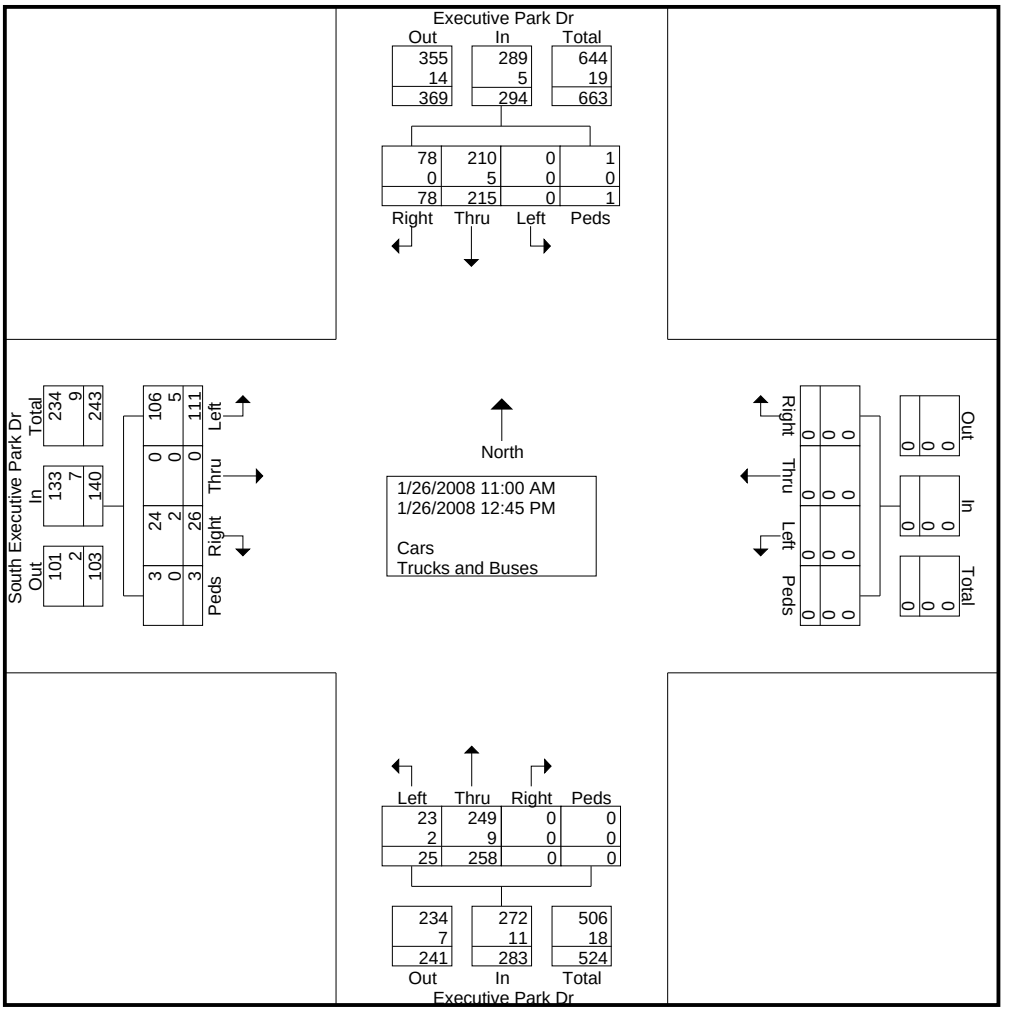
Groups Printed- Cars - Trucks and Buses

	Executive Park Dr Northbound					Executive Park Dr Southbound					South Executive Park Dr Eastbound					Westbound					
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
11:00 AM	2	31	0	0	33	0	23	9	0	32	11	0	2	1	14	0	0	0	0	0	79
11:15 AM	3	31	0	0	34	0	26	12	0	38	25	0	3	0	28	0	0	0	0	0	100
11:30 AM	8	32	0	0	40	0	30	10	0	40	16	0	3	0	19	0	0	0	0	0	99
11:45 AM	2	60	0	0	62	0	26	9	1	36	18	0	2	1	21	0	0	0	0	0	119
Total	15	154	0	0	169	0	105	40	1	146	70	0	10	2	82	0	0	0	0	0	397
12:00 PM	3	24	0	0	27	0	29	10	0	39	11	0	3	0	14	0	0	0	0	0	80
12:15 PM	1	34	0	0	35	0	26	11	0	37	12	0	8	0	20	0	0	0	0	0	92
12:30 PM	4	22	0	0	26	0	29	9	0	38	9	0	2	1	12	0	0	0	0	0	76
12:45 PM	2	24	0	0	26	0	26	8	0	34	9	0	3	0	12	0	0	0	0	0	72
Total	10	104	0	0	114	0	110	38	0	148	41	0	16	1	58	0	0	0	0	0	320
Grand Total	25	258	0	0	283	0	215	78	1	294	111	0	26	3	140	0	0	0	0	0	717
Apprch %	8.8	91.2	0	0		0	73.1	26.5	0.3		79.3	0	18.6	2.1		0	0	0	0		
Total %	3.5	36	0	0	39.5	0	30	10.9	0.1	41	15.5	0	3.6	0.4	19.5	0	0	0	0	0	
Cars	23	249	0	0	272	0	210	78	1	289	106	0	24	3	133	0	0	0	0	0	694
% Cars	92	96.5	0	0	96.1	0	97.7	100	100	98.3	95.5	0	92.3	100	95	0	0	0	0	0	96.8
Trucks and Buses	2	9	0	0	11	0	5	0	0	5	5	0	2	0	7	0	0	0	0	0	23
% Trucks and Buses	8	3.5	0	0	3.9	0	2.3	0	0	1.7	4.5	0	7.7	0	5	0	0	0	0	0	3.2

Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780012-sat
Site Code : 24780012
Start Date : 1/26/2008
Page No : 2

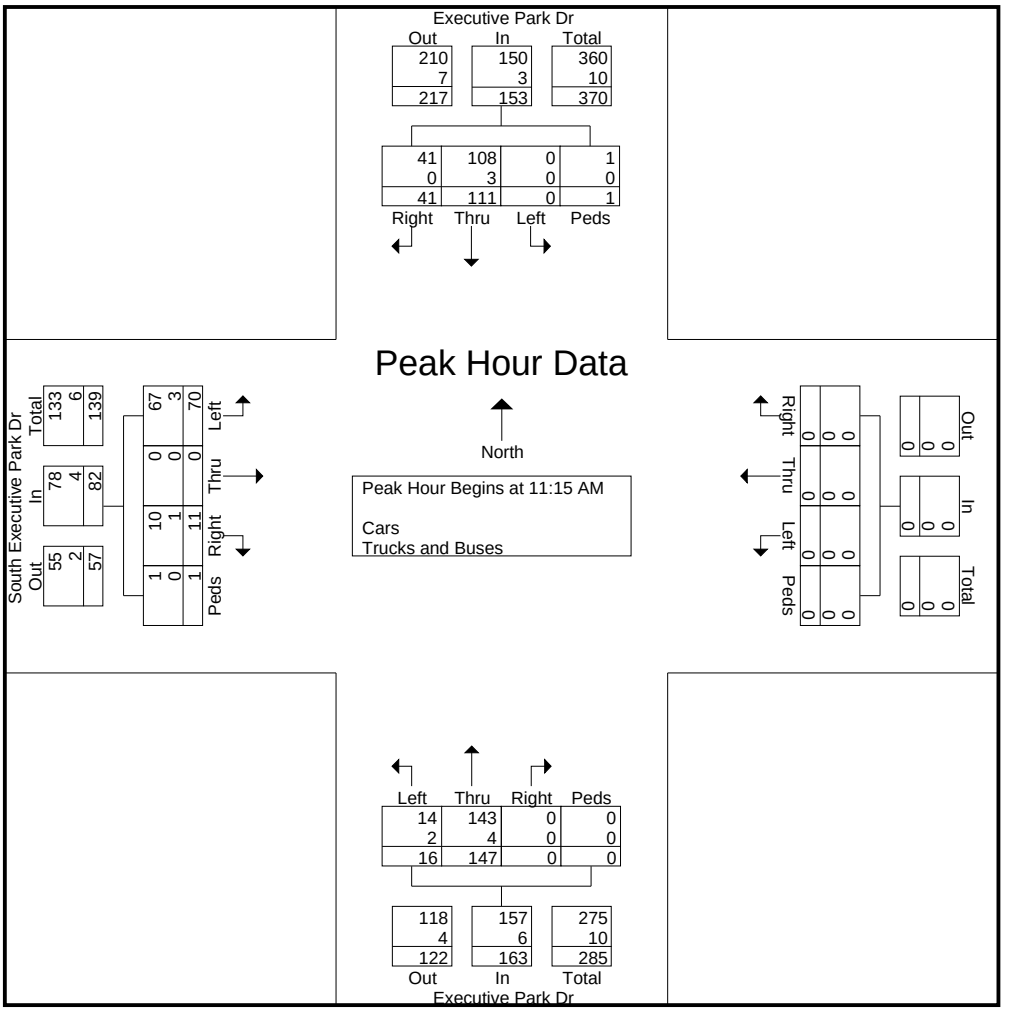


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780012-sat
Site Code : 24780012
Start Date : 1/26/2008
Page No : 3

	Executive Park Dr Northbound					Executive Park Dr Southbound					South Executive Park Dr Eastbound					Westbound					
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 11:00 AM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:15 AM																					
11:15 AM	3	31	0	0	34	0	26	12	0	38	25	0	3	0	28	0	0	0	0	0	100
11:30 AM	8	32	0	0	40	0	30	10	0	40	16	0	3	0	19	0	0	0	0	0	99
11:45 AM	2	60	0	0	62	0	26	9	1	36	18	0	2	1	21	0	0	0	0	0	119
12:00 PM	3	24	0	0	27	0	29	10	0	39	11	0	3	0	14	0	0	0	0	0	80
Total Volume	16	147	0	0	163	0	111	41	1	153	70	0	11	1	82	0	0	0	0	0	398
% App. Total	9.8	90.2	0	0		0	72.5	26.8	0.7		85.4	0	13.4	1.2		0	0	0	0		
PHF	.500	.613	.000	.000	.657	.000	.925	.854	.250	.956	.700	.000	.917	.250	.732	.000	.000	.000	.000	.000	.836
Cars	14	143	0	0	157	0	108	41	1	150	67	0	10	1	78	0	0	0	0	0	385
% Cars	87.5	97.3	0	0	96.3	0	97.3	100	100	98.0	95.7	0	90.9	100	95.1	0	0	0	0	0	96.7
Trucks and Buses	2	4	0	0	6	0	3	0	0	3	3	0	1	0	4	0	0	0	0	0	13
% Trucks and Buses	12.5	2.7	0	0	3.7	0	2.7	0	0	2.0	4.3	0	9.1	0	4.9	0	0	0	0	0	3.3



Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780013
Site Code : 24780013
Start Date : 2/7/2008
Page No : 1

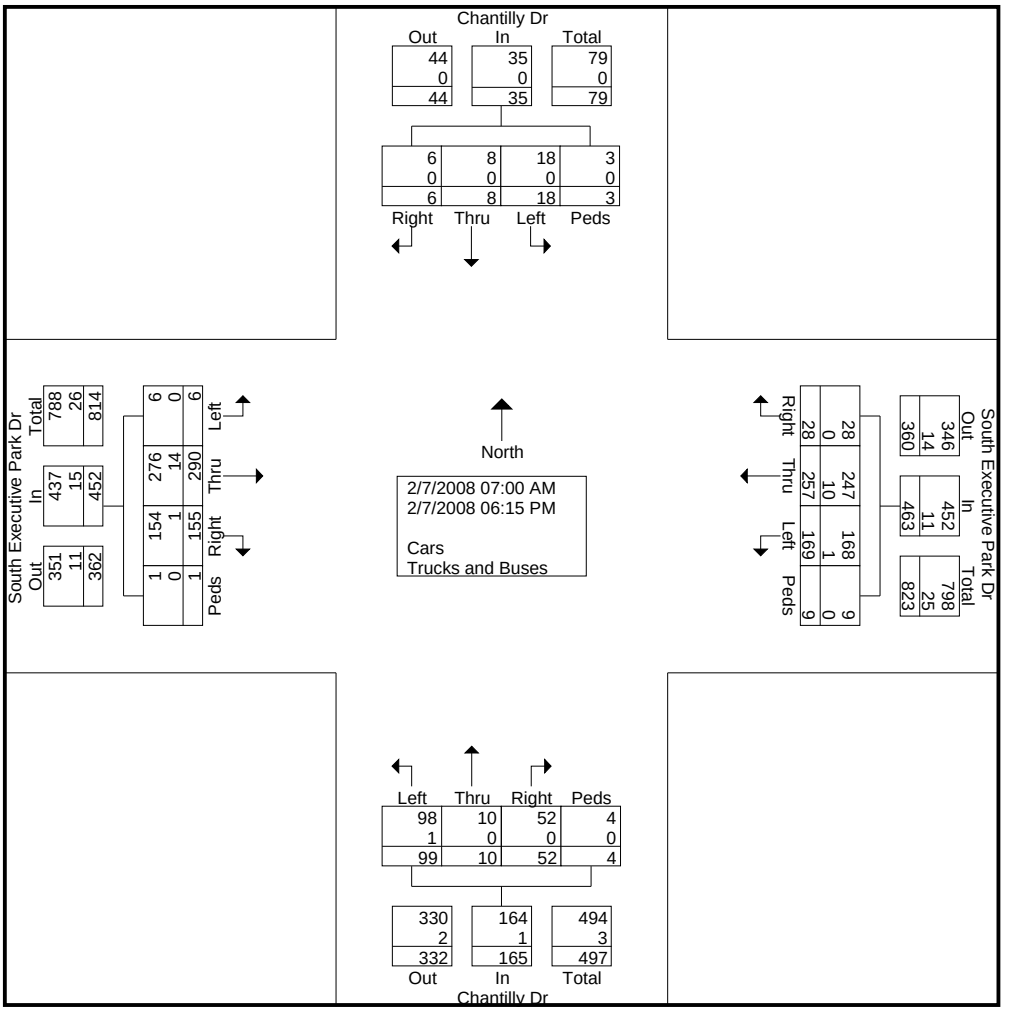
Groups Printed- Cars - Trucks and Buses

	Chantilly Dr Northbound					Chantilly Dr Southbound					South Executive Park Dr Eastbound					South Executive Park Dr Westbound					
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
07:00 AM	5	0	2	0	7	0	0	0	0	0	1	18	3	0	22	3	3	1	0	7	36
07:15 AM	7	1	3	0	11	0	0	0	0	0	0	25	5	0	30	5	6	2	0	13	54
07:30 AM	6	1	5	1	13	1	0	0	0	1	1	23	4	0	28	6	8	1	1	16	58
07:45 AM	7	0	6	0	13	0	0	0	0	0	1	28	2	0	31	5	12	4	1	22	66
Total	25	2	16	1	44	1	0	0	0	1	3	94	14	0	111	19	29	8	2	58	214
08:00 AM	8	3	6	1	18	0	0	1	0	1	0	32	7	0	39	3	12	3	0	18	76
08:15 AM	7	1	5	0	13	0	0	0	0	0	0	25	6	0	31	5	15	3	0	23	67
08:30 AM	15	3	4	0	22	0	0	1	0	1	1	34	7	0	42	5	15	4	1	25	90
08:45 AM	5	0	6	0	11	1	0	0	0	1	1	25	7	0	33	6	17	3	0	26	71
Total	35	7	21	1	64	1	0	2	0	3	2	116	27	0	145	19	59	13	1	92	304
*** BREAK ***																					
04:30 PM	0	0	3	0	3	1	1	1	0	3	0	16	11	0	27	24	21	2	0	47	80
04:45 PM	7	0	2	1	10	2	1	0	0	3	0	17	15	0	32	13	25	0	2	40	85
Total	7	0	5	1	13	3	2	1	0	6	0	33	26	0	59	37	46	2	2	87	165
05:00 PM	5	0	3	0	8	3	1	1	1	6	1	8	19	0	28	23	31	1	0	55	97
05:15 PM	5	1	0	0	6	4	0	1	0	5	0	8	14	1	23	12	22	1	1	36	70
05:30 PM	7	0	2	1	10	0	2	0	1	3	0	10	17	0	27	15	19	0	0	34	74
05:45 PM	5	0	1	0	6	3	2	0	0	5	0	7	13	0	20	17	15	2	1	35	66
Total	22	1	6	1	30	10	5	2	2	19	1	33	63	1	98	67	87	4	2	160	307
06:00 PM	6	0	2	0	8	1	0	1	0	2	0	8	11	0	19	12	20	1	2	35	64
06:15 PM	4	0	2	0	6	2	1	0	1	4	0	6	14	0	20	15	16	0	0	31	61
Grand Total	99	10	52	4	165	18	8	6	3	35	6	290	155	1	452	169	257	28	9	463	1115
Apprch %	60	6.1	31.5	2.4		51.4	22.9	17.1	8.6		1.3	64.2	34.3	0.2		36.5	55.5	6	1.9		
Total %	8.9	0.9	4.7	0.4	14.8	1.6	0.7	0.5	0.3	3.1	0.5	26	13.9	0.1	40.5	15.2	23	2.5	0.8	41.5	
Cars	98	10	52	4	164	18	8	6	3	35	6	276	154	1	437	168	247	28	9	452	1088
% Cars	99	100	100	100	99.4	100	100	100	100	100	100	95.2	99.4	100	96.7	99.4	96.1	100	100	97.6	97.6
Trucks and Buses	1	0	0	0	1	0	0	0	0	0	0	14	1	0	15	1	10	0	0	11	27
% Trucks and Buses	1	0	0	0	0.6	0	0	0	0	0	0	4.8	0.6	0	3.3	0.6	3.9	0	0	2.4	2.4

Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780013
Site Code : 24780013
Start Date : 2/7/2008
Page No : 2

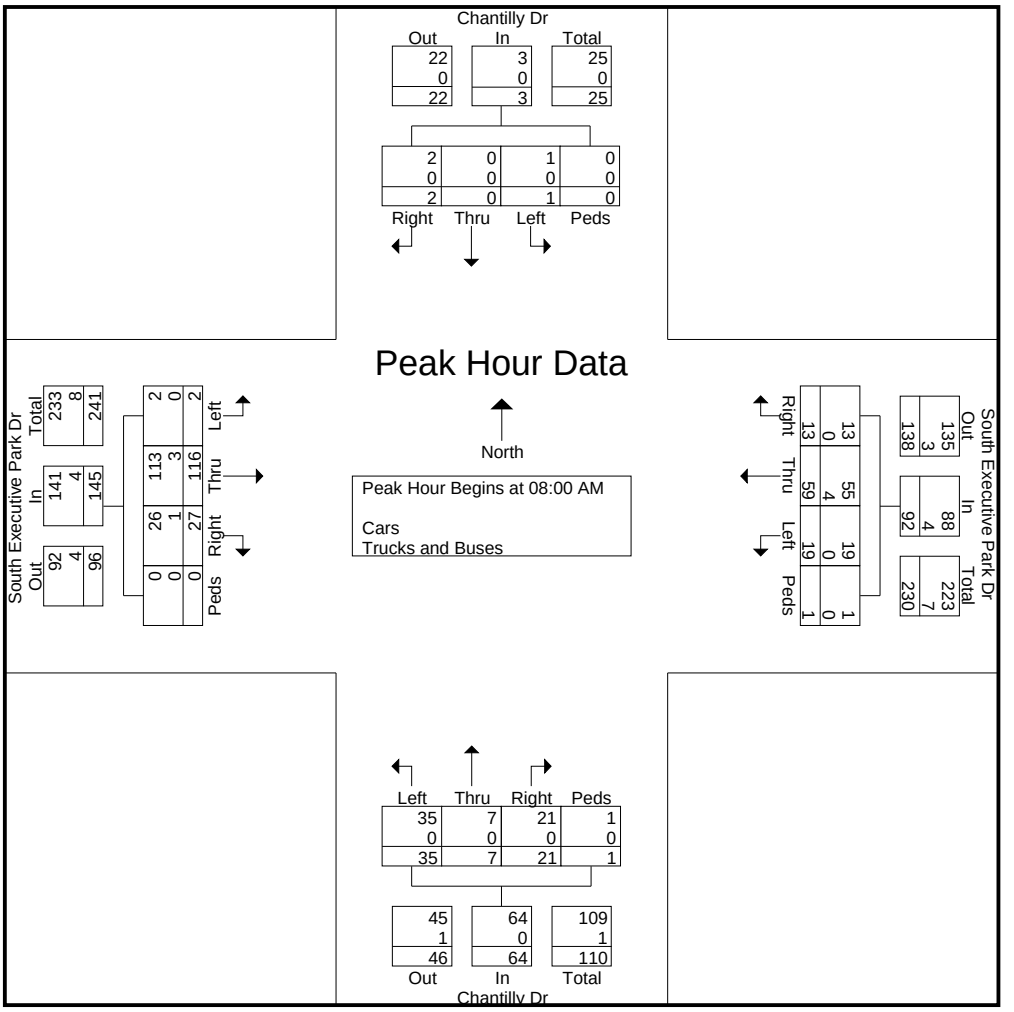


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780013
Site Code : 24780013
Start Date : 2/7/2008
Page No : 3

	Chantilly Dr Northbound					Chantilly Dr Southbound					South Executive Park Dr Eastbound					South Executive Park Dr Westbound					
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 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	8	3	6	1	18	0	0	1	0	1	0	32	7	0	39	3	12	3	0	18	76
08:15 AM	7	1	5	0	13	0	0	0	0	0	0	25	6	0	31	5	15	3	0	23	67
08:30 AM	15	3	4	0	22	0	0	1	0	1	1	34	7	0	42	5	15	4	1	25	90
08:45 AM	5	0	6	0	11	1	0	0	0	1	1	25	7	0	33	6	17	3	0	26	71
Total Volume	35	7	21	1	64	1	0	2	0	3	2	116	27	0	145	19	59	13	1	92	304
% App. Total	54.7	10.9	32.8	1.6		33.3	0	66.7	0		1.4	80	18.6	0		20.7	64.1	14.1	1.1		
PHF	.583	.583	.875	.250	.727	.250	.000	.500	.000	.750	.500	.853	.964	.000	.863	.792	.868	.813	.250	.885	.844
Cars	35	7	21	1	64	1	0	2	0	3	2	113	26	0	141	19	55	13	1	88	296
% Cars	100	100	100	100	100	100	0	100	0	100	100	97.4	96.3	0	97.2	100	93.2	100	100	95.7	97.4
Trucks and Buses	0	0	0	0	0	0	0	0	0	0	0	3	1	0	4	0	4	0	0	4	8
% Trucks and Buses	0	0	0	0	0	0	0	0	0	0	0	2.6	3.7	0	2.8	0	6.8	0	0	4.3	2.6

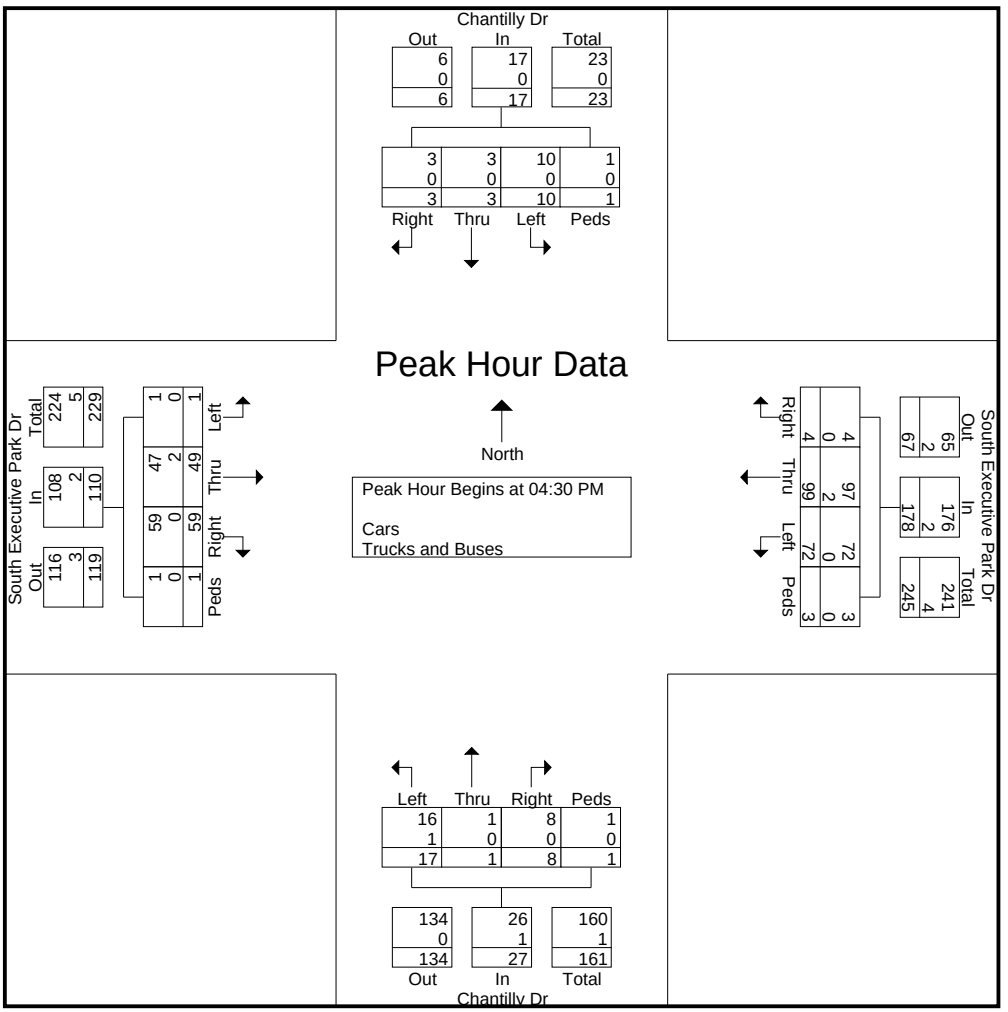


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780013
Site Code : 24780013
Start Date : 2/7/2008
Page No : 4

	Chantilly Dr Northbound					Chantilly Dr Southbound					South Executive Park Dr Eastbound					South Executive Park Dr Westbound					
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 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	3	0	3	1	1	1	0	3	0	16	11	0	27	24	21	2	0	47	80
04:45 PM	7	0	2	1	10	2	1	0	0	3	0	17	15	0	32	13	25	0	2	40	85
05:00 PM	5	0	3	0	8	3	1	1	1	6	1	8	19	0	28	23	31	1	0	55	97
05:15 PM	5	1	0	0	6	4	0	1	0	5	0	8	14	1	23	12	22	1	1	36	70
Total Volume	17	1	8	1	27	10	3	3	1	17	1	49	59	1	110	72	99	4	3	178	332
% App. Total	63	3.7	29.6	3.7		58.8	17.6	17.6	5.9		0.9	44.5	53.6	0.9		40.4	55.6	2.2	1.7		
PHF	.607	.250	.667	.250	.675	.625	.750	.750	.250	.708	.250	.721	.776	.250	.859	.750	.798	.500	.375	.809	.856
Cars	16	1	8	1	26	10	3	3	1	17	1	47	59	1	108	72	97	4	3	176	327
% Cars	94.1	100	100	100	96.3	100	100	100	100	100	100	95.9	100	100	98.2	100	98.0	100	100	98.9	98.5
Trucks and Buses	1	0	0	0	1	0	0	0	0	0	0	2	0	0	2	0	2	0	0	2	5
% Trucks and Buses	5.9	0	0	0	3.7	0	0	0	0	0	0	4.1	0	0	1.8	0	2.0	0	0	1.1	1.5



Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780013-sat
Site Code : 24780013
Start Date : 1/26/2008
Page No : 1

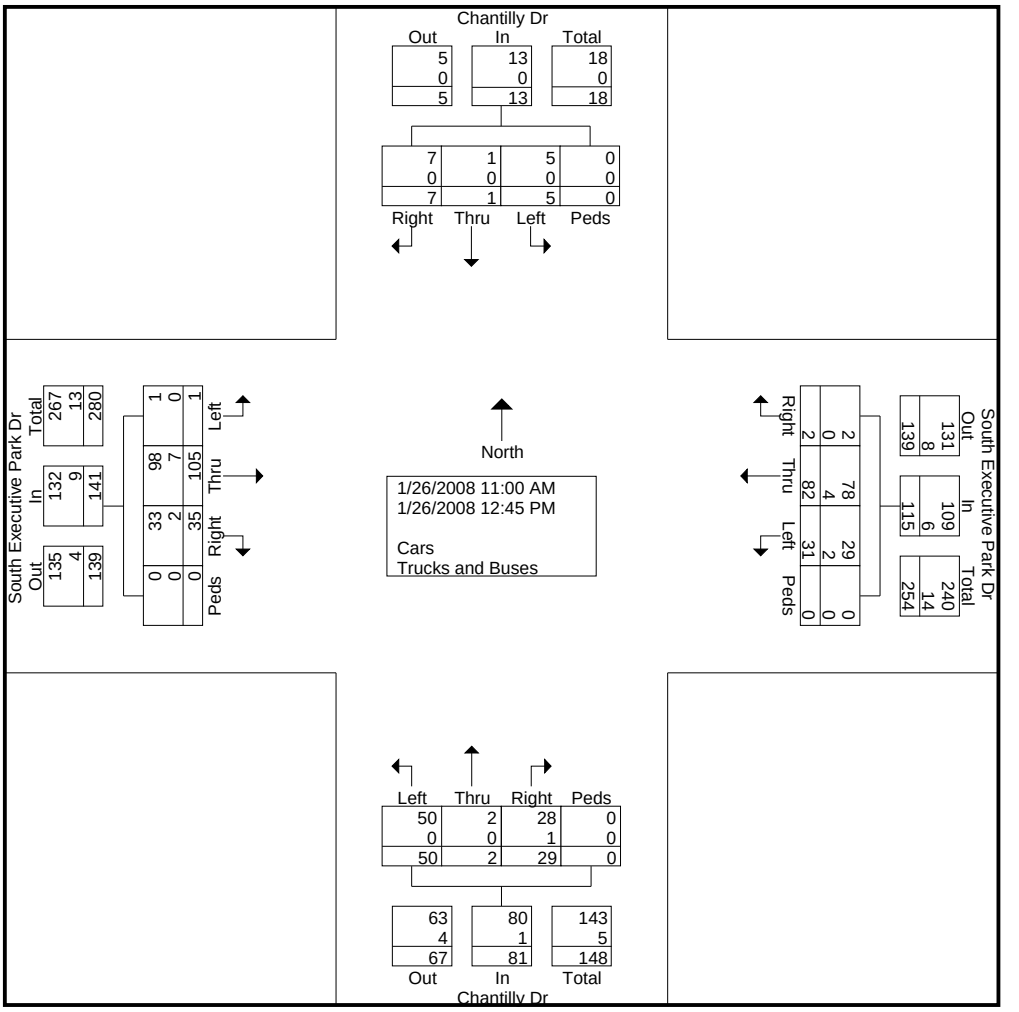
Groups Printed- Cars - Trucks and Buses

	Chantilly Dr Northbound					Chantilly Dr Southbound					South Executive Park Dr Eastbound					South Executive Park Dr Westbound					
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
11:00 AM	4	0	3	0	7	0	0	0	0	0	0	11	3	0	14	2	7	0	0	9	30
11:15 AM	6	0	2	0	8	1	0	2	0	3	0	11	3	0	14	2	11	1	0	14	39
11:30 AM	5	0	4	0	9	2	0	1	0	3	0	16	5	0	21	5	13	0	0	18	51
11:45 AM	8	1	6	0	15	0	0	1	0	1	0	17	5	0	22	3	16	0	0	19	57
Total	23	1	15	0	39	3	0	4	0	7	0	55	16	0	71	12	47	1	0	60	177
12:00 PM	6	0	6	0	12	0	1	0	0	1	1	15	6	0	22	6	11	0	0	17	52
12:15 PM	9	0	4	0	13	1	0	2	0	3	0	11	5	0	16	4	8	0	0	12	44
12:30 PM	7	1	2	0	10	1	0	1	0	2	0	14	5	0	19	5	10	1	0	16	47
12:45 PM	5	0	2	0	7	0	0	0	0	0	0	10	3	0	13	4	6	0	0	10	30
Total	27	1	14	0	42	2	1	3	0	6	1	50	19	0	70	19	35	1	0	55	173
Grand Total	50	2	29	0	81	5	1	7	0	13	1	105	35	0	141	31	82	2	0	115	350
Apprch %	61.7	2.5	35.8	0		38.5	7.7	53.8	0		0.7	74.5	24.8	0		27	71.3	1.7	0		
Total %	14.3	0.6	8.3	0	23.1	1.4	0.3	2	0	3.7	0.3	30	10	0	40.3	8.9	23.4	0.6	0	32.9	
Cars	50	2	28	0	80	5	1	7	0	13	1	98	33	0	132	29	78	2	0	109	334
% Cars	100	100	96.6	0	98.8	100	100	100	0	100	100	93.3	94.3	0	93.6	93.5	95.1	100	0	94.8	95.4
Trucks and Buses	0	0	1	0	1	0	0	0	0	0	0	7	2	0	9	2	4	0	0	6	16
% Trucks and Buses	0	0	3.4	0	1.2	0	0	0	0	0	0	6.7	5.7	0	6.4	6.5	4.9	0	0	5.2	4.6

Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780013-sat
Site Code : 24780013
Start Date : 1/26/2008
Page No : 2

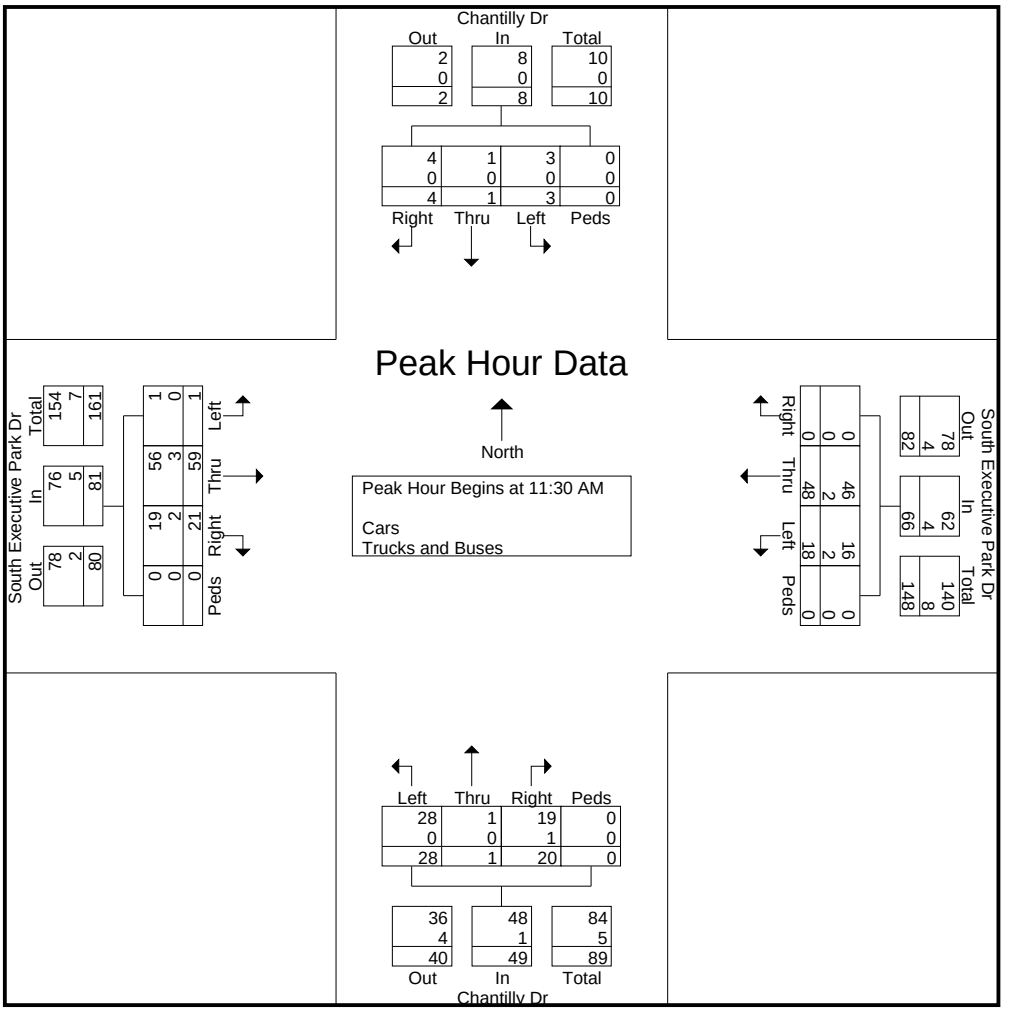


Reliable Traffic Data Services, LLC
Tel: (770) 578-5158 Fax: (770) 578-8159
Email: reliabletraffic@msn.com

TMC Data

File Name : 24780013-sat
Site Code : 24780013
Start Date : 1/26/2008
Page No : 3

	Chantilly Dr Northbound					Chantilly Dr Southbound					South Executive Park Dr Eastbound					South Executive Park Dr Westbound					
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 11:00 AM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:30 AM																					
11:30 AM	5	0	4	0	9	2	0	1	0	3	0	16	5	0	21	5	13	0	0	18	51
11:45 AM	8	1	6	0	15	0	0	1	0	1	0	17	5	0	22	3	16	0	0	19	57
12:00 PM	6	0	6	0	12	0	1	0	0	1	1	15	6	0	22	6	11	0	0	17	52
12:15 PM	9	0	4	0	13	1	0	2	0	3	0	11	5	0	16	4	8	0	0	12	44
Total Volume	28	1	20	0	49	3	1	4	0	8	1	59	21	0	81	18	48	0	0	66	204
% App. Total	57.1	2	40.8	0		37.5	12.5	50	0		1.2	72.8	25.9	0		27.3	72.7	0	0		
PHF	.778	.250	.833	.000	.817	.375	.250	.500	.000	.667	.250	.868	.875	.000	.920	.750	.750	.000	.000	.868	.895
Cars	28	1	19	0	48	3	1	4	0	8	1	56	19	0	76	16	46	0	0	62	194
% Cars	100	100	95.0	0	98.0	100	100	100	0	100	100	94.9	90.5	0	93.8	88.9	95.8	0	0	93.9	95.1
Trucks and Buses	0	0	1	0	1	0	0	0	0	0	0	3	2	0	5	2	2	0	0	4	10
% Trucks and Buses	0	0	5.0	0	2.0	0	0	0	0	0	0	5.1	9.5	0	6.2	11.1	4.2	0	0	6.1	4.9



Appendix D
Traffic Volume Worksheets

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Intersection 1: East Roxboro Road and Goodwin Road

A.M. Peak Hour

	Northbound E. Roxboro Road				Southbound E. Roxboro Road				Eastbound Goodwin Road				Westbound Goodwin Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thurs, Jan 31, 2008)	**2**	**1132**	**7**	**1141**	**5**	**675**	**5**	**685**	**26**	**6**	**14**	**46**	**12**	**13**	**70**	**95**
The Gables site trips	0	12	0	12	0	3	0	3	0	0	0	0	0	0	0	0
Clifton Road DRI #1320	0	2	0	2	0	1	0	1	0	0	0	0	0	0	0	0
Background Growth 2008 to 2011	6.1%	9.3%	6.1%		6.1%	9.3%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**2**	**1251**	**7**	**1260**	**5**	**742**	**5**	**752**	**28**	**6**	**15**	**49**	**13**	**14**	**74**	**101**
Background Growth 2008 to 2016	17.2%	26.7%	17.2%		17.2%	26.7%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**2**	**1448**	**8**	**1459**	**6**	**859**	**6**	**871**	**30**	**7**	**16**	**54**	**14**	**15**	**82**	**111**
Executive Park Phase I																
Office*	0	2	0	2	0	15	0	15	0	0	4	4	0	0	0	0
Residential/Hotel	0	16	0	16	0	7	0	7	0	0	0	0	0	0	0	0
Retail/Civic	2	5	0	7	0	8	0	8	0	0	3	3	0	0	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**2**	**23**	**0**	**25**	**0**	**30**	**0**	**30**	**0**	**0**	**7**	**7**	**0**	**0**	**0**	**0**
2011 Build Volumes	**4**	**1274**	**7**	**1285**	**5**	**772**	**5**	**782**	**28**	**6**	**22**	**56**	**13**	**14**	**74**	**101**
Executive Park Phase II (full build-out)**																
Office*	2	13	0	15	0	91	0	91	0	0	17	17	0	0	0	0
Residential/Hotel	0	26	0	26	0	9	0	9	0	0	0	0	0	0	0	0
Retail/Civic	4	12	0	16	0	18	0	18	0	0	6	6	0	0	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**6**	**51**	**0**	**57**	**0**	**118**	**0**	**118**	**0**	**0**	**23**	**23**	**0**	**0**	**0**	**0**
2016 Build Volumes	**8**	**1499**	**8**	**1516**	**6**	**977**	**6**	**989**	**30**	**7**	**39**	**77**	**14**	**15**	**82**	**111**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound E. Roxboro Road				Southbound E. Roxboro Road				Eastbound Goodwin Road				Westbound Goodwin Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thurs, Jan 31, 2008)	**10**	**704**	**6**	**720**	**1**	**1120**	**14**	**1135**	**22**	**17**	**19**	**58**	**11**	**16**	**6**	**33**
The Gables site trips	0	7	0	7	0	12	0	12	0	0	0	0	0	0	0	0
Clifton Road DRI #1320	0	2	0	2	0	1	0	1	0	0	0	0	0	0	0	0
Background Growth 2008 to 2011	6.1%	9.3%	6.1%		6.1%	9.3%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**11**	**778**	**6**	**795**	**1**	**1237**	**15**	**1253**	**23**	**18**	**20**	**62**	**12**	**17**	**6**	**35**
Background Growth 2008 to 2016	17.2%	26.7%	17.2%		17.2%	26.7%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**12**	**901**	**7**	**920**	**1**	**1432**	**16**	**1449**	**26**	**20**	**22**	**68**	**13**	**19**	**7**	**39**
Executive Park Phase I																
Office*	2	9	0	11	0	1	0	1	0	0	0	0	0	0	0	0
Residential/Hotel	0	8	0	8	0	14	0	14	0	0	0	0	0	0	0	0
Retail/Civic	10	31	0	41	0	30	0	30	0	0	10	10	0	0	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**12**	**48**	**0**	**60**	**0**	**45**	**0**	**45**	**0**	**0**	**10**	**10**	**0**	**0**	**0**	**0**
2011 Build Volumes	**23**	**826**	**6**	**855**	**1**	**1282**	**15**	**1298**	**23**	**18**	**30**	**72**	**12**	**17**	**6**	**35**
Executive Park Phase II (full build-out)**																
Office*	15	80	0	95	0	16	0	16	0	0	3	3	0	0	0	0
Residential/Hotel	0	9	0	9	0	22	0	22	0	0	0	0	0	0	0	0
Retail/Civic	21	62	0	83	0	58	0	58	0	0	19	19	0	0	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**36**	**151**	**0**	**187**	**0**	**96**	**0**	**96**	**0**	**0**	**22**	**22**	**0**	**0**	**0**	**0**
2016 Build Volumes	**48**	**1052**	**7**	**1107**	**1**	**1528**	**16**	**1545**	**26**	**20**	**44**	**90**	**13**	**19**	**7**	**39**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Intersection 2: North Druid Hills Road and Goodwin Road

A.M. Peak Hour

	Northbound N. Druid Hills Road			Southbound N. Druid Hills Road			Eastbound Goodwin Road			
	L	T	Tot	T	R	Tot	L	R	Tot	
Counted Volumes (Thurs, Jan 31, 2008)	**72**	**593**	**665**	**759**	**12**	**771**	**13**	**6**	**19**	
The Gables site trips	0	8	8	2	0	2	0	0	0	
Clifton Road DRI #1320	0	2	2	1	0	1	0	0	0	
Background Growth 2008 to 2011	6.1%	9.3%		9.3%	6.1%		6.1%	6.1%		
2011 No-Build Volumes	**76**	**658**	**734**	**832**	**13**	**845**	**14**	**6**	**20**	
Background Growth 2008 to 2016	17.2%	26.7%		26.7%	17.2%		17.2%	17.2%		
2016 No-Build Volumes	**84**	**761**	**846**	**965**	**14**	**979**	**15**	**7**	**22**	
Executive Park Phase I										
Office*	0	2	2	15	0	15	0	0	0	
Residential/Hotel	0	11	11	5	0	5	0	0	0	
Retail/Civic	0	5	5	8	0	8	0	0	0	
Retail Pass-by	0	0	0	0	0	0	0	0	0	
Total Executive Park Trips Phase I	**0**	**18**	**18**	**28**	**0**	**28**	**0**	**0**	**0**	
2011 Build Volumes	**76**	**676**	**752**	**860**	**13**	**873**	**14**	**6**	**20**	
Executive Park Phase II (full build-out)**										
Office*	0	13	13	91	0	91	0	0	0	
Residential/Hotel	0	17	17	6	0	6	0	0	0	
Retail/Civic	0	12	12	18	0	18	0	0	0	
Retail Pass-by	0	0	0	0	0	0	0	0	0	
Total Executive Park Trips Full Build Out	**0**	**42**	**42**	**115**	**0**	**115**	**0**	**0**	**0**	
2016 Build Volumes	**84**	**803**	**888**	**1080**	**14**	**1094**	**15**	**7**	**22**	

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound N. Druid Hills Road			Southbound N. Druid Hills Road			Eastbound Goodwin Road			
	L	T	Tot	T	R	Tot	L	R	Tot	
Counted Volumes (Thurs, Jan 31, 2008)	**11**	**772**	**783**	**563**	**23**	**586**	**7**	**3**	**10**	
The Gables site trips	0	4	4	8	0	8	0	0	0	
Clifton Road DRI #1320	0	1	1	0	0	0	0	0	0	
Background Growth 2008 to 2011	6.1%	9.3%		9.3%	6.1%		6.1%	6.1%		
2011 No-Build Volumes	**12**	**849**	**860**	**623**	**24**	**648**	**7**	**3**	**11**	
Background Growth 2008 to 2016	17.2%	26.7%		26.7%	17.2%		17.2%	17.2%		
2016 No-Build Volumes	**13**	**983**	**996**	**721**	**27**	**748**	**8**	**4**	**12**	
Executive Park Phase I										
Office*	0	9	9	1	0	1	0	0	0	
Residential/Hotel	0	5	5	10	0	10	0	0	0	
Retail/Civic	0	31	31	30	0	30	0	0	0	
Retail Pass-by	0	0	0	0	0	0	0	0	0	
Total Executive Park Trips Phase I	**0**	**45**	**45**	**41**	**0**	**41**	**0**	**0**	**0**	
2011 Build Volumes	**12**	**894**	**905**	**664**	**24**	**689**	**7**	**3**	**11**	
Executive Park Phase II (full build-out)**										
Office*	0	80	80	16	0	16	0	0	0	
Residential/Hotel	0	6	6	15	0	15	0	0	0	
Retail/Civic	0	62	62	58	0	58	0	0	0	
Retail Pass-by	0	0	0	0	0	0	0	0	0	
Total Executive Park Trips Full Build Out	**0**	**148**	**148**	**89**	**0**	**89**	**0**	**0**	**0**	
2016 Build Volumes	**13**	**1131**	**1144**	**810**	**27**	**837**	**8**	**4**	**12**	

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Intersection 3: North Druid Hills Road and East Roxboro Road

A.M. Peak Hour

	Northbound N. Druid Hills Road			Southbound E. Roxboro Road			Westbound N. Druid Hills Road	
	T	R	Tot	T	Tot		L	Tot
Counted Volumes (Thurs, Jan 31, 2008)	**1106**	**662**	**1768**	**738**	**738**		**772**	**772**
The Gables site trips	12	8	20	2	2		2	2
Clifton Road DRI #1320	2	2	4	1	1		1	1
Background Growth 2008 to 2011	9.3%	9.3%		9.3%			9.3%	
2011 No-Build Volumes	**1223**	**733**	**1956**	**809**	**809**		**847**	**847**
Background Growth 2008 to 2016	26.7%	26.7%		26.7%			26.7%	
2016 No-Build Volumes	**1415**	**849**	**2264**	**938**	**938**		**981**	**981**
Executive Park Phase I								
Office*	2	2	4	19	19		15	15
Residential/Hotel	16	11	27	7	7		5	5
Retail/Civic	7	5	12	11	11		8	8
Retail Pass-by	0	0	0	0	0		0	0
Total Executive Park Trips Phase I	**25**	**18**	**43**	**37**	**37**		**28**	**28**
2011 Build Volumes	**1248**	**751**	**1999**	**846**	**846**		**875**	**875**
Executive Park Phase II (full build-out)**								
Office*	15	13	28	108	108		91	91
Residential/Hotel	26	17	43	9	9		6	6
Retail/Civic	16	12	28	24	24		18	18
Retail Pass-by	0	0	0	0	0		0	0
Total Executive Park Trips Full Build Out	**57**	**42**	**99**	**141**	**141**		**115**	**115**
2016 Build Volumes	**1472**	**891**	**2363**	**1079**	**1079**		**1096**	**1096**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound N. Druid Hills Road			Southbound E. Roxboro Road			Westbound N. Druid Hills Road	
	T	R	Tot	T	Tot		L	Tot
Counted Volumes (Thurs, Jan 31, 2008)	**735**	**752**	**1487**	**1152**	**1152**		**555**	**555**
The Gables site trips	7	4	11	12	12		8	8
Clifton Road DRI #1320	2	1	3	1	1		1	1
Background Growth 2008 to 2011	9.3%	9.3%		9.3%			9.3%	
2011 No-Build Volumes	**812**	**827**	**1639**	**1272**	**1272**		**615**	**615**
Background Growth 2008 to 2016	26.7%	26.7%		26.7%			26.7%	
2016 No-Build Volumes	**940**	**958**	**1898**	**1472**	**1472**		**712**	**712**
Executive Park Phase I								
Office*	11	9	20	1	1		1	1
Residential/Hotel	8	5	13	14	14		10	10
Retail/Civic	41	31	72	40	40		30	30
Retail Pass-by	0	0	0	0	0		0	0
Total Executive Park Trips Phase I	**60**	**45**	**105**	**55**	**55**		**41**	**41**
2011 Build Volumes	**872**	**872**	**1744**	**1327**	**1327**		**656**	**656**
Executive Park Phase II (full build-out)**								
Office*	95	80	175	19	19		16	16
Residential/Hotel	9	6	15	22	22		15	15
Retail/Civic	83	62	145	77	77		58	58
Retail Pass-by	0	0	0	0	0		0	0
Total Executive Park Trips Full Build Out	**187**	**148**	**335**	**118**	**118**		**89**	**89**
2016 Build Volumes	**1127**	**1106**	**2233**	**1590**	**1590**		**801**	**801**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Intersection 4: Buford Highway and North Druid Hills Road

A.M. Peak Hour

	Northbound N. Druid Hills Road				Southbound N. Druid Hills Road				Eastbound Buford Highway				Westbound Buford Highway			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Wed, Feb 20, 2008)	**482**	**1469**	**211**	**2162**	**72**	**1060**	**275**	**1407**	**263**	**379**	**274**	**916**	**295**	**623**	**126**	**1044**
The Gables site trips	0	20	5	25	0	4	0	4	0	0	0	0	1	0	0	1
Clifton Road DRI #1320	0	4	0	4	0	2	0	2	0	0	0	0	0	0	0	0
Background Growth 2008 to 2011	6.1%	9.3%	6.1%		6.1%	9.3%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**511**	**1629**	**229**	**2370**	**76**	**1164**	**292**	**1532**	**279**	**402**	**291**	**972**	**314**	**661**	**134**	**1109**
Background Growth 2008 to 2016	17.2%	26.7%	17.2%		17.2%	26.7%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**565**	**1885**	**252**	**2702**	**84**	**1349**	**322**	**1755**	**308**	**444**	**321**	**1073**	**347**	**730**	**148**	**1224**
Executive Park Phase I																
Office*	0	4	0	4	0	34	0	34	0	0	0	0	4	0	0	4
Residential/Hotel	0	27	7	34	0	12	0	12	0	0	0	0	3	0	0	3
Retail/Civic	12	12	4	28	0	19	0	19	0	0	17	17	5	0	0	5
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**12**	**43**	**11**	**66**	**0**	**65**	**0**	**65**	**0**	**0**	**17**	**17**	**12**	**0**	**0**	**12**
2011 Build Volumes	**523**	**1672**	**240**	**2436**	**76**	**1229**	**292**	**1597**	**279**	**402**	**308**	**989**	**326**	**661**	**134**	**1121**
Executive Park Phase II (full build-out)**																
Office*	1	28	5	34	0	199	0	199	0	0	6	6	34	0	0	34
Residential/Hotel	0	43	11	54	0	15	0	15	0	0	0	0	4	0	0	4
Retail/Civic	30	28	8	66	0	42	0	42	0	0	39	39	12	0	0	12
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**31**	**99**	**24**	**154**	**0**	**256**	**0**	**256**	**0**	**0**	**45**	**45**	**50**	**0**	**0**	**50**
2016 Build Volumes	**596**	**1984**	**276**	**2856**	**84**	**1605**	**322**	**2011**	**308**	**444**	**366**	**1118**	**397**	**730**	**148**	**1274**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound N. Druid Hills Road				Southbound N. Druid Hills Road				Eastbound Buford Highway				Westbound Buford Highway			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Wed, Feb 20, 2008)	**218**	**1055**	**372**	**1645**	**90**	**1456**	**171**	**1717**	**320**	**701**	**293**	**1314**	**222**	**501**	**103**	**826**
The Gables site trips	0	11	3	14	0	20	0	20	0	0	0	0	5	0	0	5
Clifton Road DRI #1320	0	3	0	3	0	1	0	1	0	0	0	0	0	0	0	0
Background Growth 2008 to 2011	6.1%	9.3%	6.1%		6.1%	9.3%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**231**	**1167**	**398**	**1796**	**96**	**1612**	**181**	**1889**	**340**	**744**	**311**	**1394**	**241**	**532**	**109**	**882**
Background Growth 2008 to 2016	17.2%	26.7%	17.2%		17.2%	26.7%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**255**	**1350**	**439**	**2045**	**105**	**1865**	**200**	**2171**	**375**	**821**	**343**	**1540**	**265**	**587**	**121**	**973**
Executive Park Phase I																
Office*	0	20	2	22	0	2	0	2	0	0	0	0	0	0	0	0
Residential/Hotel	0	13	3	16	0	24	0	24	0	0	0	0	6	0	0	6
Retail/Civic	67	72	21	160	0	70	0	70	0	0	60	60	20	0	0	20
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**67**	**105**	**26**	**198**	**0**	**96**	**0**	**96**	**0**	**0**	**60**	**60**	**26**	**0**	**0**	**26**
2011 Build Volumes	**298**	**1272**	**424**	**1994**	**96**	**1708**	**181**	**1985**	**340**	**744**	**371**	**1454**	**267**	**532**	**109**	**908**
Executive Park Phase II (full build-out)**																
Office*	5	175	30	210	0	35	0	35	0	0	1	1	6	0	0	6
Residential/Hotel	0	15	4	19	0	37	0	37	0	0	0	0	10	0	0	10
Retail/Civic	134	145	41	320	0	135	0	135	0	0	126	126	39	0	0	39
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**139**	**335**	**75**	**549**	**0**	**207**	**0**	**207**	**0**	**0**	**127**	**127**	**55**	**0**	**0**	**55**
2016 Build Volumes	**394**	**1685**	**514**	**2594**	**105**	**2072**	**200**	**2378**	**375**	**821**	**470**	**1667**	**320**	**587**	**121**	**1028**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Intersection 5: North Druid Hills Road and West Druid Hills Drive

A.M. Peak Hour

	Northbound N. Druid Hills Road			Southbound N. Druid Hills Road			Eastbound W. Druid Hills Drive		
	L	T	Tot	T	R	Tot	L	R	Tot
Counted Volumes (Thurs, Jan 31, 2008)	**120**	**1928**	**2048**	**1547**	**15**	**1562**	**20**	**49**	**69**
The Gables site trips	0	25	25	5	0	5	0	0	0
Clifton Road DRI #1320	0	4	4	2	0	2	0	0	0
Background Growth 2008 to 2011	6.1%	9.3%		9.3%	6.1%		6.1%	6.1%	
2011 No-Build Volumes	**127**	**2136**	**2263**	**1697**	**16**	**1713**	**21**	**52**	**73**
Background Growth 2008 to 2016	17.2%	26.7%		26.7%	17.2%		17.2%	17.2%	
2016 No-Build Volumes	**141**	**2471**	**2612**	**1967**	**18**	**1984**	**23**	**57**	**81**
Executive Park Phase I									
Office*	0	4	4	38	0	38	0	0	0
Residential/Hotel	0	34	34	15	0	15	0	0	0
Retail/Civic	0	28	28	41	0	41	0	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**0**	**66**	**66**	**94**	**0**	**94**	**0**	**0**	**0**
2011 Build Volumes	**127**	**2202**	**2329**	**1791**	**16**	**1807**	**21**	**52**	**73**
Executive Park Phase II (full build-out)**									
Office*	0	34	34	239	0	239	0	0	0
Residential/Hotel	0	54	54	19	0	19	0	0	0
Retail/Civic	0	66	66	93	0	93	0	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**0**	**154**	**154**	**351**	**0**	**351**	**0**	**0**	**0**
2016 Build Volumes	**141**	**2625**	**2766**	**2318**	**18**	**2335**	**23**	**57**	**81**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound N. Druid Hills Road			Southbound N. Druid Hills Road			Eastbound W. Druid Hills Drive		
	L	T	Tot	T	R	Tot	L	R	Tot
Counted Volumes (Thurs, Jan 31, 2008)	**56**	**1489**	**1545**	**1850**	**14**	**1864**	**22**	**176**	**198**
The Gables site trips	0	14	14	25	0	25	0	0	0
Clifton Road DRI #1320	0	3	3	2	0	2	0	0	0
Background Growth 2008 to 2011	6.1%	9.3%		9.3%	6.1%		6.1%	6.1%	
2011 No-Build Volumes	**59**	**1644**	**1703**	**2048**	**15**	**2063**	**23**	**187**	**210**
Background Growth 2008 to 2016	17.2%	26.7%		26.7%	17.2%		17.2%	17.2%	
2016 No-Build Volumes	**66**	**1903**	**1969**	**2371**	**16**	**2387**	**26**	**206**	**232**
Executive Park Phase I									
Office*	0	22	22	2	0	2	0	0	0
Residential/Hotel	0	16	16	30	0	30	0	0	0
Retail/Civic	0	160	160	150	0	150	0	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**0**	**198**	**198**	**182**	**0**	**182**	**0**	**0**	**0**
2011 Build Volumes	**59**	**1842**	**1901**	**2230**	**15**	**2245**	**23**	**187**	**210**
Executive Park Phase II (full build-out)**									
Office*	0	210	210	42	0	42	0	0	0
Residential/Hotel	0	19	19	47	0	47	0	0	0
Retail/Civic	0	320	320	300	0	300	0	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**0**	**549**	**549**	**389**	**0**	**389**	**0**	**0**	**0**
2016 Build Volumes	**66**	**2452**	**2518**	**2760**	**16**	**2776**	**26**	**206**	**232**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Intersection 6: Interstate 85 Southbound Ramps and North Druid Hills Road

A.M. Peak Hour

	Northbound N. Druid Hills Road			Southbound N. Druid Hills Road				Westbound I-85 SB Ramp			
	L	T	Tot	T	R	Tot		L	T	R	Tot
Counted Volumes (Wed, Feb 13, 2008)	**649**	**1242**	**1891**	**965**	**661**	**1626**		**965**	**177**	**619**	**1761**
The Gables site trips	13	25	38	5	0	5		3	0	0	3
Clifton Road DRI #1320	11	4	15	2	0	2		7	0	0	7
Background Growth 2008 to 2011	6.1%	9.3%		9.3%	6.1%			6.1%	6.1%	6.1%	
2011 No-Build Volumes	**713**	**1386**	**2099**	**1061**	**701**	**1763**		**1034**	**188**	**657**	**1879**
Background Growth 2008 to 2016	17.2%	26.7%		26.7%	17.2%			17.2%	17.2%	17.2%	
2016 No-Build Volumes	**784**	**1602**	**2387**	**1229**	**774**	**2004**		**1141**	**207**	**725**	**2073**
Executive Park Phase I											
Office*	2	4	6	38	0	38		27	0	0	27
Residential/Hotel	18	34	52	15	0	15		7	0	0	7
Retail/Civic	5	28	33	41	0	41		16	0	0	16
Retail Pass-by	0	0	0	0	0	0		0	0	0	0
Total Executive Park Trips Phase I	**25**	**66**	**91**	**94**	**0**	**94**		**50**	**0**	**0**	**50**
2011 Build Volumes	**738**	**1452**	**2190**	**1155**	**701**	**1857**		**1084**	**188**	**657**	**1929**
Executive Park Phase II (full build-out)**											
Office*	16	34	50	239	0	239		170	0	0	170
Residential/Hotel	29	54	83	19	0	19		9	0	0	9
Retail/Civic	12	66	78	93	0	93		36	0	0	36
Retail Pass-by	0	0	0	0	0	0		0	0	0	0
Total Executive Park Trips Full Build Out	**57**	**154**	**211**	**351**	**0**	**351**		**215**	**0**	**0**	**215**
2016 Build Volumes	**841**	**1756**	**2598**	**1580**	**774**	**2355**		**1356**	**207**	**725**	**2288**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound N. Druid Hills Road			Southbound N. Druid Hills Road				Westbound I-85 SB Ramp			
	L	T	Tot	T	R	Tot		L	T	R	Tot
Counted Volumes (Wed, Feb 13, 2008)	**462**	**1194**	**1656**	**1774**	**442**	**2216**		**957**	**287**	**367**	**1611**
The Gables site trips	7	14	21	25	0	25		12	0	0	12
Clifton Road DRI #1320	8	3	11	2	0	2		14	0	0	14
Background Growth 2008 to 2011	6.1%	9.3%		9.3%	6.1%			6.1%	6.1%	6.1%	
2011 No-Build Volumes	**505**	**1322**	**1827**	**1965**	**469**	**2435**		**1042**	**305**	**389**	**1736**
Background Growth 2008 to 2016	17.2%	26.7%		26.7%	17.2%			17.2%	17.2%	17.2%	
2016 No-Build Volumes	**556**	**1530**	**2086**	**2274**	**518**	**2792**		**1147**	**336**	**430**	**1914**
Executive Park Phase I											
Office*	11	22	33	2	0	2		1	0	0	1
Residential/Hotel	9	16	25	30	0	30		14	0	0	14
Retail/Civic	31	160	191	150	0	150		59	0	0	59
Retail Pass-by	0	0	0	0	0	0		0	0	0	0
Total Executive Park Trips Phase I	**51**	**198**	**249**	**182**	**0**	**182**		**74**	**0**	**0**	**74**
2011 Build Volumes	**556**	**1520**	**2076**	**2147**	**469**	**2617**		**1116**	**305**	**389**	**1810**
Executive Park Phase II (full build-out)**											
Office*	100	210	310	42	0	42		31	0	0	31
Residential/Hotel	10	19	29	47	0	47		22	0	0	22
Retail/Civic	62	320	382	300	0	300		116	0	0	116
Retail Pass-by	0	0	0	0	0	0		0	0	0	0
Total Executive Park Trips Full Build Out	**172**	**549**	**721**	**389**	**0**	**389**		**169**	**0**	**0**	**169**
2016 Build Volumes	**728**	**2079**	**2807**	**2663**	**518**	**3181**		**1316**	**336**	**430**	**2083**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

Saturday Peak Hour

	Northbound N. Druid Hills Road			Southbound N. Druid Hills Road				Westbound I-85 SB Ramp			
	L	T	Tot	T	R	Tot		L	T	R	Tot
Counted Volumes (Sat, Feb 2, 2008)	**564**	**1073**	**1637**	**1050**	**332**	**1382**		**495**	**148**	**434**	**1077**
The Gables site trips	8	15	23	16	0	16		8	0	0	8
Clifton Road DRI #1320	9	3	12	3	0	3		9	0	0	9
Background Growth 2008 to 2011	6.1%	9.3%		9.3%	6.1%			6.1%	6.1%	6.1%	
2011 No-Build Volumes	**616**	**1190**	**1806**	**1166**	**352**	**1519**		**542**	**157**	**461**	**1160**
Background Growth 2008 to 2016	17.2%	26.7%		26.7%	17.2%			17.2%	17.2%	17.2%	
2016 No-Build Volumes	**678**	**1377**	**2055**	**1349**	**389**	**1738**		**597**	**173**	**509**	**1279**
Executive Park Phase I											
Office*	0	0	0	0	0	0		0	0	0	0
Residential/Hotel	11	20	31	25	0	25		12	0	0	12
Retail/Civic	40	194	234	220	0	220		91	0	0	91
Retail Pass-by	0	0	0	0	0	0		0	0	0	0
Total Executive Park Trips Phase I	**51**	**214**	**265**	**245**	**0**	**245**		**103**	**0**	**0**	**103**
2011 Build Volumes	**667**	**1404**	**2071**	**1411**	**352**	**1764**		**645**	**157**	**461**	**1263**
Executive Park Phase II (full build-out)**											
Office*	12	25	37	29	0	29		21	0	0	21
Residential/Hotel	16	32	48	31	0	31		15	0	0	15
Retail/Civic	81	419	500	470	0	470		182	0	0	182
Retail Pass-by	0	0	0	0	0	0		0	0	0	0
Total Executive Park Trips Full Build Out	**109**	**476**	**585**	**530**	**0**	**530**		**218**	**0**	**0**	**218**
2016 Build Volumes	**787**	**1853**	**2640**	**1879**	**389**	**2268**		**815**	**173**	**509**	**1497**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Intersection 7: Interstate 85 Northbound Ramps and North Druid Hills Road

A.M. Peak Hour

	Northbound N. Druid Hills Road			Southbound N. Druid Hills Road			Eastbound I-85 NB Ramp			Westbound I-85 NB Ramp	
	T	R	Tot	L	T	Tot	T	R	Tot	R	Tot
Counted Volumes (Wed, Feb 13, 2008)	**1676**	**651**	**2327**	**449**	**1325**	**1774**	**215**	**682**	**897**	**339**	**339**
The Gables site trips	38	12	50	0	8	8	0	3	3	0	0
Clifton Road DRI #1320	14	14	28	0	9	9	0	6	6	0	0
Background Growth 2008 to 2011	9.3%	6.1%		6.1%	9.3%		6.1%	6.1%		6.1%	
2011 No-Build Volumes	**1883**	**717**	**2600**	**476**	**1465**	**1941**	**228**	**733**	**961**	**360**	**360**
Background Growth 2008 to 2016	26.7%	17.2%		17.2%	26.7%		17.2%	17.2%		17.2%	
2016 No-Build Volumes	**2175**	**789**	**2964**	**526**	**1696**	**2222**	**252**	**808**	**1060**	**397**	**397**
Executive Park Phase I											
Office*	6	3	9	0	65	65	0	18	18	0	0
Residential/Hotel	52	16	68	0	22	22	0	8	8	0	0
Retail/Civic	33	11	44	0	57	57	0	8	8	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**91**	**30**	**121**	**0**	**144**	**144**	**0**	**34**	**34**	**0**	**0**
2011 Build Volumes	**1974**	**747**	**2721**	**476**	**1609**	**2085**	**228**	**767**	**995**	**360**	**360**
Executive Park Phase II (full build-out)**											
Office*	50	19	69	0	409	409	0	114	114	0	0
Residential/Hotel	83	26	109	0	28	28	0	10	10	0	0
Retail/Civic	78	25	103	0	129	129	0	18	18	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**211**	**70**	**281**	**0**	**566**	**566**	**0**	**142**	**142**	**0**	**0**
2016 Build Volumes	**2386**	**859**	**3245**	**526**	**2262**	**2788**	**252**	**950**	**1202**	**397**	**397**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound N. Druid Hills Road			Southbound N. Druid Hills Road			Eastbound I-85 NB Ramp			Westbound I-85 NB Ramp	
	T	R	Tot	L	T	Tot	T	R	Tot	R	Tot
Counted Volumes (Wed, Feb 13, 2008)	**1343**	**744**	**2087**	**955**	**1614**	**2569**	**240**	**628**	**868**	**469**	**469**
The Gables site trips	21	7	28	0	37	37	0	13	13	0	0
Clifton Road DRI #1320	11	8	19	0	16	16	0	12	12	0	0
Background Growth 2008 to 2011	9.3%	6.1%		6.1%	9.3%		6.1%	6.1%		6.1%	
2011 No-Build Volumes	**1499**	**805**	**2304**	**1013**	**1817**	**2830**	**255**	**691**	**946**	**498**	**498**
Background Growth 2008 to 2016	26.7%	17.2%		17.2%	26.7%		17.2%	17.2%		17.2%	
2016 No-Build Volumes	**1733**	**887**	**2620**	**1119**	**2098**	**3217**	**281**	**761**	**1042**	**550**	**550**
Executive Park Phase I											
Office*	33	13	46	0	3	3	0	1	1	0	0
Residential/Hotel	25	8	33	0	44	44	0	16	16	0	0
Retail/Civic	191	63	254	0	209	209	0	30	30	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**249**	**84**	**333**	**0**	**256**	**256**	**0**	**47**	**47**	**0**	**0**
2011 Build Volumes	**1748**	**889**	**2637**	**1013**	**2073**	**3086**	**255**	**738**	**993**	**498**	**498**
Executive Park Phase II (full build-out)**											
Office*	310	120	430	0	73	73	0	21	21	0	0
Residential/Hotel	29	9	38	0	69	69	0	25	25	0	0
Retail/Civic	382	124	506	0	416	416	0	58	58	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**721**	**253**	**974**	**0**	**558**	**558**	**0**	**104**	**104**	**0**	**0**
2016 Build Volumes	**2454**	**1140**	**3594**	**1119**	**2656**	**3775**	**281**	**865**	**1146**	**550**	**550**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

Saturday Peak Hour

	Northbound N. Druid Hills Road			Southbound N. Druid Hills Road			Eastbound I-85 NB Ramp			Westbound I-85 NB Ramp	
	T	R	Tot	L	T	Tot	T	R	Tot	R	Tot
Counted Volumes (Sat, Feb 2, 2008)	**1282**	**470**	**1752**	**388**	**1131**	**1519**	**91**	**636**	**727**	**295**	**295**
The Gables site trips	23	7	30	0	24	24	0	8	8	0	0
Clifton Road DRI #1320	12	7	19	0	12	12	0	9	9	0	0
Background Growth 2008 to 2011	9.3%	6.1%		6.1%	9.3%		6.1%	6.1%		6.1%	
2011 No-Build Volumes	**1436**	**513**	**1949**	**412**	**1272**	**1684**	**97**	**692**	**788**	**313**	**313**
Background Growth 2008 to 2016	26.7%	17.2%		17.2%	26.7%		17.2%	17.2%		17.2%	
2016 No-Build Volumes	**1659**	**565**	**2224**	**455**	**1469**	**1923**	**107**	**762**	**869**	**346**	**346**
Executive Park Phase I											
Office*	0	0	0	0	0	0	0	0	0	0	0
Residential/Hotel	31	10	41	0	37	37	0	13	13	0	0
Retail/Civic	234	80	314	0	311	311	0	46	46	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**265**	**90**	**355**	**0**	**348**	**348**	**0**	**59**	**59**	**0**	**0**
2011 Build Volumes	**1701**	**603**	**2304**	**412**	**1620**	**2032**	**97**	**751**	**847**	**313**	**313**
Executive Park Phase II (full build-out)**											
Office*	37	14	51	0	56	56	0	14	14	0	0
Residential/Hotel	48	15	63	0	46	46	0	16	16	0	0
Retail/Civic	500	162	662	0	652	652	0	91	91	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**585**	**191**	**776**	**0**	**754**	**754**	**0**	**121**	**121**	**0**	**0**
2016 Build Volumes	**2244**	**756**	**3000**	**455**	**2223**	**2677**	**107**	**883**	**990**	**346**	**346**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Intersection 8: North Druid Hills Road and Executive Park Drive / Tully Road

A.M. Peak Hour

	Northbound N. Druid Hills Road				Southbound N. Druid Hills Road				Eastbound Executive Park Drive				Westbound Tully Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Tues, Feb 12, 2008)	**105**	**1968**	**52**	**2125**	**232**	**1388**	**545**	**2165**	**305**	**62**	**49**	**416**	**30**	**45**	**81**	**156**
The Gables site trips	0	0	0	0	0	0	11	11	50	0	0	50	0	0	0	0
Clifton Road DRI #1320	0	29	0	29	0	15	0	15	0	0	0	0	0	0	0	0
Background Growth 2008 to 2011	6.1%	9.3%	6.1%		6.1%	9.3%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**111**	**2179**	**55**	**2346**	**246**	**1532**	**589**	**2367**	**374**	**66**	**52**	**491**	**32**	**48**	**86**	**166**
Background Growth 2008 to 2016	17.2%	26.7%	17.2%		17.2%	26.7%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**123**	**2522**	**61**	**2706**	**272**	**1773**	**650**	**2695**	**407**	**73**	**57**	**537**	**35**	**53**	**95**	**183**
Executive Park Phase I																
Office*	39	0	0	39	0	0	83	83	9	0	5	14	0	0	0	0
Residential/Hotel	9	0	0	9	0	0	30	30	68	0	21	89	0	0	0	0
Retail/Civic	43	0	0	43	0	0	55	55	44	0	34	78	0	0	0	0
Retail Pass-by	14	-14	0	0	0	-10	10	0	9	0	7	16	0	0	0	0
Total Executive Park Trips Phase I	**105**	**-14**	**0**	**91**	**0**	**-10**	**178**	**168**	**130**	**0**	**67**	**197**	**0**	**0**	**0**	**0**
2011 Build Volumes	**216**	**2165**	**55**	**2437**	**246**	**1522**	**767**	**2535**	**504**	**66**	**119**	**688**	**32**	**48**	**86**	**166**
Executive Park Phase II (full build-out)**																
Office*	60	18	0	78	0	16	507	523	51	0	10	61	0	0	0	0
Residential/Hotel	4	55	0	59	0	3	35	38	54	0	12	66	0	0	0	0
Retail/Civic	24	77	0	101	0	88	59	147	26	0	22	48	0	0	0	0
Retail Pass-by	8	-8	0	0	0	-11	11	0	5	0	4	9	0	0	0	0
Total Executive Park Trips Full Build Out	**96**	**142**	**0**	**238**	**0**	**96**	**612**	**708**	**136**	**0**	**48**	**184**	**0**	**0**	**0**	**0**
2016 Build Volumes	**219**	**2664**	**61**	**2944**	**272**	**1869**	**1262**	**3403**	**543**	**73**	**105**	**721**	**35**	**53**	**95**	**183**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound N. Druid Hills Road				Southbound N. Druid Hills Road				Eastbound Executive Park Drive				Westbound Tully Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Tues, Feb 12, 2008)	**65**	**1416**	**9**	**1490**	**62**	**1937**	**413**	**2412**	**374**	**35**	**100**	**509**	**36**	**44**	**127**	**207**
The Gables site trips	0	0	0	0	0	0	50	50	28	0	0	28	0	0	0	0
Clifton Road DRI #1320	0	19	0	19	0	28	0	28	0	0	0	0	0	0	0	0
Background Growth 2008 to 2011	6.1%	9.3%	6.1%		6.1%	9.3%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**69**	**1566**	**10**	**1645**	**66**	**2145**	**488**	**2699**	**425**	**37**	**106**	**568**	**38**	**47**	**135**	**220**
Background Growth 2008 to 2016	17.2%	26.7%	17.2%		17.2%	26.7%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**76**	**1813**	**11**	**1899**	**73**	**2482**	**534**	**3088**	**466**	**41**	**117**	**624**	**42**	**52**	**149**	**243**
Executive Park Phase I																
Office*	1	0	0	1	0	0	5	5	46	0	22	68	0	0	0	0
Residential/Hotel	19	0	0	19	0	0	60	60	33	0	10	43	0	0	0	0
Retail/Civic	169	0	0	169	0	0	239	239	254	0	177	431	0	0	0	0
Retail Pass-by	37	-37	0	0	0	-50	50	0	39	0	53	92	0	0	0	0
Total Executive Park Trips Phase I	**226**	**-37**	**0**	**189**	**0**	**-50**	**354**	**304**	**372**	**0**	**262**	**634**	**0**	**0**	**0**	**0**
2011 Build Volumes	**295**	**1529**	**10**	**1834**	**66**	**2095**	**842**	**3003**	**797**	**37**	**368**	**1202**	**38**	**47**	**135**	**220**
Executive Park Phase II (full build-out)**																
Office*	11	107	0	118	0	3	91	94	323	0	65	388	0	0	0	0
Residential/Hotel	9	19	0	28	0	7	87	94	19	0	4	23	0	0	0	0
Retail/Civic	78	380	0	458	0	284	190	474	126	0	110	236	0	0	0	0
Retail Pass-by	18	-18	0	0	0	-49	49	0	19	0	32	51	0	0	0	0
Total Executive Park Trips Full Build Out	**116**	**488**	**0**	**604**	**0**	**245**	**417**	**662**	**487**	**0**	**211**	**698**	**0**	**0**	**0**	**0**
2016 Build Volumes	**192**	**2301**	**11**	**2503**	**73**	**2727**	**951**	**3750**	**953**	**41**	**328**	**1322**	**42**	**52**	**149**	**243**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

Saturday Peak Hour

	Northbound N. Druid Hills Road				Southbound N. Druid Hills Road				Eastbound Executive Park Drive				Westbound Tully Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Sat, Feb 9, 2008)	**40**	**1548**	**13**	**1601**	**96**	**1549**	**103**	**1748**	**177**	**19**	**64**	**260**	**58**	**17**	**86**	**161**
The Gables site trips	0	0	0	0	0	0	32	32	30	0	0	30	0	0	0	0
Clifton Road DRI #1320	0	19	0	19	0	21	0	21	0	0	0	0	0	0	0	0
Background Growth 2008 to 2011	6.1%	9.3%	6.1%		6.1%	9.3%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**42**	**1710**	**14**	**1767**	**102**	**1714**	**141**	**1957**	**218**	**20**	**68**	**306**	**62**	**18**	**91**	**171**
Background Growth 2008 to 2016	17.2%	26.7%	17.2%		17.2%	26.7%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**47**	**1980**	**15**	**2042**	**112**	**1983**	**153**	**2248**	**237**	**22**	**75**	**335**	**68**	**20**	**101**	**189**
Executive Park Phase I																
Office*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential/Hotel	15	0	0	15	0	0	50	50	41	0	13	54	0	0	0	0
Retail/Civic	257	0	0	257	0	0	357	357	314	0	225	539	0	0	0	0
Retail Pass-by	67	-67	0	0	0	-67	67	0	59	0	59	118	0	0	0	0
Total Executive Park Trips Phase I	**339**	**-67**	**0**	**272**	**0**	**-67**	**474**	**407**	**414**	**0**	**297**	**711**	**0**	**0**	**0**	**0**
2011 Build Volumes	**381**	**1643**	**14**	**2039**	**102**	**1647**	**615**	**2364**	**632**	**20**	**365**	**1017**	**62**	**18**	**91**	**171**
Executive Park Phase II (full build-out)**																
Office*	7	13	0	20	0	2	62	64	38	0	17	55	0	0	0	0
Residential/Hotel	6	17	0	23	0	3	41	44	17	0	7	24	0	0	0	0
Retail/Civic	122	497	0	619	0	446	297	743	166	0	145	311	0	0	0	0
Retail Pass-by	33	-33	0	0	0	-67	67	0	30	0	36	66	0	0	0	0
Total Executive Park Trips Full Build Out	**168**	**494**	**0**	**662**	**0**	**384**	**467**	**851**	**251**	**0**	**205**	**456**	**0**	**0**	**0**	**0**
2016 Build Volumes	**215**	**2474**	**15**	**2704**	**112**	**2367**	**620**	**3099**	**488**	**22**	**280**	**791**	**68**	**20**	**101**	**189**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Intersection 26: North Druid Hills Road and New Park Druid Hills Access

A.M. Peak Hour

	Northbound N. Druid Hills Road				Southbound N. Druid Hills Road				Eastbound New Access				counted Tully Drive			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes at EPD (Tues, Feb 12, 2008)	**105**	**1968**	**52**	**2125**	**232**	**1388**	**545**	**2165**	**305**	**62**	**49**	**416**	**30**	**45**	**81**	**156**
Volumes at Int 26 location		**2125**				**1467**										
The Gables site trips	0	0		0		0	0	0	50		0	50				
Clifton Road DRI #1320	0	29		29		15	0	15	0		0	0				
Background Growth 2008 to 2016	17.2%	26.7%				26.7%	17.2%		17.2%		17.2%					
2016 No-Build Volumes at Int 26 location	**0**	**2721**		**2721**		**1873**	**0**	**1873**	**50**		**0**	**50**				
Executive Park Phase II (full build-out)**																
Office*	20	60		80		10	16	26	18		1	19				
Residential/Hotel	4	0		4		12	0	12	55		12	67				
Retail/Civic	73	24		97		22	88	110	77		44	121				
Retail Pass-by	23	-23		0		-11	11	0	16		11	27				
Total Executive Park Trips Full Build Out	**120**	**61**		**181**		**33**	**115**	**148**	**166**		**68**	**234**				
2016 Build Volumes	**120**	**2782**		**2902**		**1906**	**115**	**2021**	**216**		**68**	**284**				

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound N. Druid Hills Road				Southbound N. Druid Hills Road				Eastbound New Access				counted Tully Drive			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes at EPD (Tues, Feb 12, 2008)	**65**	**1416**	**9**	**1490**	**62**	**1937**	**413**	**2412**	**374**	**35**	**100**	**509**	**36**	**44**	**127**	**207**
Volumes at Int 26 location		**1490**				**2073**										
The Gables site trips	0	0		0		0	0	0	28		0	28				
Clifton Road DRI #1320	0	19		19		28	0	28	0		0	0				
Background Growth 2008 to 2016	17.2%	26.7%				26.7%	17.2%		17.2%		17.2%					
2016 No-Build Volumes at Int 26 location	**0**	**1907**		**1907**		**2654**	**0**	**2654**	**28**		**0**	**28**				
Executive Park Phase II (full build-out)**																
Office*	3	11		14		65	3	68	108		6	114				
Residential/Hotel	10	0		10		4	0	4	19		4	23				
Retail/Civic	233	78		311		110	284	394	380		220	600				
Retail Pass-by	54	-54		0		-50	50	0	58		74	132				
Total Executive Park Trips Full Build Out	**300**	**35**		**335**		**129**	**337**	**466**	**565**		**304**	**869**				
2016 Build Volumes	**300**	**1942**		**2242**		**2783**	**337**	**3120**	**593**		**304**	**897**				

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

Saturday Peak Hour

	Northbound N. Druid Hills Road				Southbound N. Druid Hills Road				Eastbound New Access				counted Tully Drive			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes at EPD (Sat, Feb 9, 2008)	**40**	**1548**	**13**	**1601**	**96**	**1549**	**103**	**1748**	**177**	**19**	**64**	**260**	**58**	**17**	**86**	**161**
Volumes at Int 26 location		**1601**				**1671**										
The Gables site trips	0	0		0		0	0	0	30		0	30				
Clifton Road DRI #1320	0	19		19		21	0	21	0		0	0				
Background Growth 2008 to 2016	17.2%	26.7%				26.7%	17.2%		17.2%		17.2%					
2016 No-Build Volumes at Int 26 location	**0**	**2047**		**2047**		**2138**	**0**	**2138**	**30**		**0**	**30**				
Executive Park Phase II (full build-out)**																
Office*	2	7		9		17	2	19	13		3	16				
Residential/Hotel	7	0		7		7	0	7	17		6	23				
Retail/Civic	365	121		486		145	446	591	497		289	786				
Retail Pass-by	100	-100		0		-67	67	0	89		83	172				
Total Executive Park Trips Full Build Out	**474**	**28**		**502**		**102**	**515**	**617**	**616**		**381**	**997**				
2016 Build Volumes	**474**	**2075**		**2549**		**2240**	**515**	**2755**	**646**		**381**	**1027**				

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Intersection 9: North Druid Hills Road and Briarcliff Road

A.M. Peak Hour

	Northbound N. Druid Hills Road				Southbound N. Druid Hills Road				Eastbound Briarcliff Road				Westbound Briarcliff Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Tues, Feb 12, 2008)	**82**	**1365**	**18**	**1465**	**95**	**829**	**476**	**1400**	**416**	**235**	**35**	**686**	**107**	**257**	**252**	**616**
The Gables site trips	3	0	0	3	0	0	0	0	0	7	12	19	0	1	0	1
Clifton Road DRI #1320	0	0	0	0	0	0	15	15	29	13	0	42	0	7	0	7
Background Growth 2008 to 2011	6.1%	9.3%	6.1%		6.1%	9.3%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**90**	**1492**	**19**	**1601**	**101**	**906**	**520**	**1527**	**470**	**269**	**49**	**789**	**114**	**281**	**267**	**662**
Background Growth 2008 to 2016	17.2%	26.7%	17.2%		17.2%	26.7%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**99**	**1729**	**21**	**1849**	**111**	**1050**	**573**	**1734**	**516**	**295**	**53**	**865**	**125**	**309**	**295**	**730**
Executive Park Phase I																
Office*	5	12	0	17	1	2	2	5	18	0	1	19	0	4	9	13
Residential/Hotel	2	6	0	8	7	14	0	21	0	4	4	8	0	2	3	5
Retail/Civic	0	16	0	16	10	13	11	34	14	0	0	14	0	0	13	13
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**7**	**34**	**0**	**41**	**18**	**29**	**13**	**60**	**32**	**4**	**5**	**41**	**0**	**6**	**25**	**31**
2011 Build Volumes	**97**	**1526**	**19**	**1642**	**119**	**935**	**533**	**1587**	**502**	**273**	**54**	**830**	**114**	**287**	**292**	**693**
Executive Park Phase II (full build-out)**																
Office*	79	35	0	114	3	5	3	11	22	8	12	42	0	51	23	74
Residential/Hotel	5	5	0	10	9	15	0	24	0	8	14	22	0	3	3	6
Retail/Civic	0	38	0	38	21	25	20	66	29	0	0	29	0	0	30	30
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**84**	**78**	**0**	**162**	**33**	**45**	**23**	**101**	**51**	**16**	**26**	**93**	**0**	**54**	**56**	**110**
2016 Build Volumes	**183**	**1807**	**21**	**2011**	**144**	**1095**	**596**	**1835**	**567**	**311**	**79**	**958**	**125**	**363**	**351**	**840**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound N. Druid Hills Road				Southbound N. Druid Hills Road				Eastbound Briarcliff Road				Westbound Briarcliff Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Tues, Feb 12, 2008)	**139**	**769**	**31**	**939**	**329**	**1268**	**525**	**2122**	**475**	**512**	**66**	**1053**	**112**	**227**	**111**	**450**
The Gables site trips	13	0	0	13	0	0	0	0	0	5	7	12	0	7	0	7
Clifton Road DRI #1320	0	0	0	0	0	0	28	28	19	10	0	29	0	12	0	12
Background Growth 2008 to 2011	6.1%	9.3%	6.1%		6.1%	9.3%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**161**	**840**	**33**	**1034**	**349**	**1386**	**585**	**2320**	**523**	**558**	**77**	**1158**	**119**	**260**	**118**	**497**
Background Growth 2008 to 2016	17.2%	26.7%	17.2%		17.2%	26.7%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**176**	**974**	**36**	**1186**	**385**	**1606**	**643**	**2635**	**576**	**615**	**84**	**1275**	**131**	**285**	**130**	**546**
Executive Park Phase I																
Office*	0	1	0	1	5	7	10	22	0	2	2	4	0	0	0	0
Residential/Hotel	3	13	0	16	3	7	0	10	0	2	2	4	0	4	6	10
Retail/Civic	0	65	0	65	53	68	56	177	54	0	0	54	0	0	50	50
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**3**	**79**	**0**	**82**	**61**	**82**	**66**	**209**	**54**	**4**	**4**	**62**	**0**	**4**	**56**	**60**
2011 Build Volumes	**164**	**919**	**33**	**1116**	**410**	**1468**	**651**	**2529**	**577**	**562**	**81**	**1220**	**119**	**264**	**174**	**557**
Executive Park Phase II (full build-out)**																
Office*	14	6	0	20	20	31	20	71	4	45	69	118	0	9	4	13
Residential/Hotel	12	12	0	24	3	5	0	8	0	3	5	8	0	7	7	14
Retail/Civic	0	122	0	122	103	128	99	330	92	0	0	92	0	0	97	97
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**26**	**140**	**0**	**166**	**126**	**164**	**119**	**409**	**96**	**48**	**74**	**218**	**0**	**16**	**108**	**124**
2016 Build Volumes	**202**	**1114**	**36**	**1352**	**511**	**1770**	**762**	**3044**	**672**	**663**	**158**	**1493**	**131**	**301**	**238**	**670**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

Saturday Peak Hour

	Northbound N. Druid Hills Road				Southbound N. Druid Hills Road				Eastbound Briarcliff Road				Westbound Briarcliff Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Sat, Jan 26, 2008)	**175**	**853**	**36**	**1064**	**224**	**819**	**371**	**1414**	**472**	**337**	**133**	**942**	**90**	**333**	**260**	**683**
The Gables site trips	7	0	0	7	0	0	0	0	0	5	7	12	0	5	0	5
Clifton Road DRI #1320	0	0	0	0	0	0	21	21	19	9	0	28	0	9	0	9
Background Growth 2008 to 2011	6.1%	9.3%	6.1%		6.1%	9.3%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**193**	**932**	**38**	**1163**	**238**	**895**	**415**	**1547**	**520**	**372**	**148**	**1040**	**96**	**367**	**276**	**739**
Background Growth 2008 to 2016	17.2%	26.7%	17.2%		17.2%	26.7%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**212**	**1081**	**42**	**1335**	**262**	**1038**	**456**	**1756**	**572**	**409**	**163**	**1144**	**105**	**404**	**305**	**814**
Executive Park Phase I																
Office*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential/Hotel	3	10	0	13	4	9	0	13	0	2	2	4	0	3	5	8
Retail/Civic	0	99	0	99	67	87	72	226	82	0	0	82	0	0	76	76
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**3**	**109**	**0**	**112**	**71**	**96**	**72**	**239**	**82**	**2**	**2**	**86**	**0**	**3**	**81**	**84**
2011 Build Volumes	**196**	**1041**	**38**	**1275**	**309**	**991**	**487**	**1786**	**602**	**374**	**150**	**1126**	**96**	**370**	**357**	**823**
Executive Park Phase II (full build-out)**																
Office*	10	4	0	14	2	4	14	20	3	5	8	16	0	6	2	8
Residential/Hotel	8	8	0	16	5	8	0	13	0	5	8	13	0	5	5	10
Retail/Civic	0	189	0	189	135	169	130	434	145	0	0	145	0	0	152	152
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**18**	**201**	**0**	**219**	**142**	**181**	**144**	**467**	**148**	**10**	**16**	**174**	**0**	**11**	**159**	**170**
2016 Build Volumes	**230**	**1282**	**42**	**1554**	**404**	**1219**	**600**	**2223**	**720**	**419**	**179**	**1318**	**105**	**415**	**464**	**984**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Intersection 10: North Druid Hills Road and Lavista Road

A.M. Peak Hour

	Northbound N. Druid Hills Road				Southbound N. Druid Hills Road				Eastbound Lavista Road				Westbound Lavista Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Wed, Feb 20, 2008)	**439**	**1481**	**41**	**1961**	**58**	**639**	**173**	**870**	**97**	**168**	**143**	**408**	**101**	**758**	**103**	**962**
The Gables site trips	0	2	0	2	4	9	0	13	0	0	0	0	0	0	1	1
Clifton Road DRI #1320	7	0	0	7	0	0	0	0	0	10	11	21	0	6	0	6
Background Growth 2008 to 2011	6.1%	9.3%	6.1%		6.1%	9.3%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**473**	**1620**	**44**	**2137**	**66**	**707**	**184**	**956**	**103**	**188**	**163**	**454**	**107**	**810**	**110**	**1028**
Background Growth 2008 to 2016	17.2%	26.7%	17.2%		17.2%	26.7%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**521**	**1878**	**48**	**2448**	**72**	**818**	**203**	**1093**	**114**	**207**	**179**	**499**	**118**	**894**	**122**	**1134**
Executive Park Phase I																
Office*	0	15	0	15	1	2	0	3	0	0	0	0	0	0	2	2
Residential/Hotel	0	6	0	6	5	13	0	18	0	0	0	0	0	0	2	2
Retail/Civic	0	5	0	5	4	4	1	9	1	0	0	1	0	0	5	5
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**0**	**26**	**0**	**26**	**10**	**19**	**1**	**30**	**1**	**0**	**0**	**1**	**0**	**0**	**9**	**9**
2011 Build Volumes	**473**	**1646**	**44**	**2163**	**76**	**726**	**185**	**986**	**104**	**188**	**163**	**455**	**107**	**810**	**119**	**1037**
Executive Park Phase II (full build-out)**																
Office*	0	91	0	91	2	13	1	16	6	0	0	6	0	0	11	11
Residential/Hotel	0	7	0	7	9	20	0	29	0	0	0	0	0	0	3	3
Retail/Civic	0	12	0	12	8	8	2	18	3	0	0	3	0	0	12	12
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**0**	**110**	**0**	**110**	**19**	**41**	**3**	**63**	**9**	**0**	**0**	**9**	**0**	**0**	**26**	**26**
2016 Build Volumes	**521**	**1988**	**48**	**2558**	**91**	**859**	**206**	**1156**	**123**	**207**	**179**	**508**	**118**	**894**	**148**	**1160**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound N. Druid Hills Road				Southbound N. Druid Hills Road				Eastbound Lavista Road				Westbound Lavista Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Wed, Feb 20, 2008)	**187**	**629**	**74**	**890**	**66**	**932**	**80**	**1078**	**224**	**626**	**205**	**1055**	**128**	**306**	**88**	**522**
The Gables site trips	0	9	0	9	2	5	0	7	0	0	0	0	0	0	4	4
Clifton Road DRI #1320	12	0	0	12	0	0	0	0	0	8	9	17	0	11	0	11
Background Growth 2008 to 2011	6.1%	9.3%	6.1%		6.1%	9.3%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**210**	**696**	**79**	**985**	**72**	**1023**	**85**	**1180**	**238**	**672**	**227**	**1137**	**136**	**336**	**97**	**569**
Background Growth 2008 to 2016	17.2%	26.7%	17.2%		17.2%	26.7%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**231**	**806**	**87**	**1124**	**79**	**1186**	**94**	**1359**	**262**	**741**	**249**	**1253**	**150**	**370**	**107**	**627**
Executive Park Phase I																
Office*	0	1	0	1	0	9	0	9	0	0	0	0	0	0	0	0
Residential/Hotel	0	11	0	11	3	6	0	9	0	0	0	0	0	0	5	5
Retail/Civic	0	20	0	20	21	21	5	47	5	0	0	5	0	0	20	20
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**0**	**32**	**0**	**32**	**24**	**36**	**5**	**65**	**5**	**0**	**0**	**5**	**0**	**0**	**25**	**25**
2011 Build Volumes	**210**	**728**	**79**	**1017**	**96**	**1059**	**90**	**1245**	**243**	**672**	**227**	**1142**	**136**	**336**	**122**	**594**
Executive Park Phase II (full build-out)**																
Office*	0	16	0	16	10	80	5	95	1	0	0	1	0	0	2	2
Residential/Hotel	0	17	0	17	3	7	0	10	0	0	0	0	0	0	7	7
Retail/Civic	0	39	0	39	41	41	10	92	10	0	0	10	0	0	39	39
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**0**	**72**	**0**	**72**	**54**	**128**	**15**	**197**	**11**	**0**	**0**	**11**	**0**	**0**	**48**	**48**
2016 Build Volumes	**231**	**878**	**87**	**1196**	**133**	**1314**	**109**	**1556**	**273**	**741**	**249**	**1264**	**150**	**370**	**155**	**675**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Intersection 11: Clairmont Road and Briarcliff Road

A.M. Peak Hour

	Northbound Clairmont Road				Southbound Clairmont Road				Eastbound Briarcliff Road				Westbound Briarcliff Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thurs, Feb 21, 2008)	**54**	**1020**	**7**	**1081**	**151**	**922**	**251**	**1324**	**202**	**184**	**107**	**493**	**82**	**323**	**672**	**1077**
The Gables site trips	0	0	0	0	0	0	1	1	5	1	1	7	0	0	0	0
Clifton Road DRI #1320	0	0	0	0	0	0	5	5	9	4	0	13	0	2	0	2
Background Growth 2008 to 2011	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**57**	**1082**	**7**	**1147**	**160**	**978**	**272**	**1411**	**228**	**200**	**115**	**543**	**87**	**345**	**713**	**1145**
Background Growth 2008 to 2016	17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**63**	**1195**	**8**	**1267**	**177**	**1080**	**300**	**1557**	**251**	**221**	**126**	**598**	**96**	**380**	**787**	**1264**
Executive Park Phase I																
Office*	2	0	0	2	0	0	5	5	1	0	0	1	0	4	0	4
Residential/Hotel	1	0	0	1	0	0	3	3	7	2	2	11	0	1	0	1
Retail/Civic	4	0	0	4	0	0	0	0	0	4	3	7	0	5	0	5
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**7**	**0**	**0**	**7**	**0**	**0**	**8**	**8**	**8**	**6**	**5**	**19**	**0**	**10**	**0**	**10**
2011 Build Volumes	**64**	**1082**	**7**	**1154**	**160**	**978**	**280**	**1419**	**236**	**206**	**120**	**562**	**87**	**355**	**713**	**1155**
Executive Park Phase II (full build-out)**																
Office*	11	0	0	11	0	0	34	34	5	3	2	10	0	23	0	23
Residential/Hotel	1	0	0	1	0	0	4	4	11	3	3	17	0	1	0	1
Retail/Civic	9	0	0	9	0	0	0	0	0	8	6	14	0	12	0	12
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**21**	**0**	**0**	**21**	**0**	**0**	**38**	**38**	**16**	**14**	**11**	**41**	**0**	**36**	**0**	**36**
2016 Build Volumes	**84**	**1195**	**8**	**1288**	**177**	**1080**	**338**	**1595**	**267**	**235**	**137**	**639**	**96**	**416**	**787**	**1300**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound Clairmont Road				Southbound Clairmont Road				Eastbound Briarcliff Road				Westbound Briarcliff Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thurs, Feb 21, 2008)	**72**	**750**	**80**	**902**	**451**	**1440**	**169**	**2060**	**187**	**536**	**225**	**948**	**93**	**139**	**112**	**344**
The Gables site trips	1	0	0	1	0	0	5	5	3	1	1	5	0	1	0	1
Clifton Road DRI #1320	0	0	0	0	0	0	8	8	7	3	0	10	0	4	0	4
Background Growth 2008 to 2011	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**77**	**796**	**85**	**958**	**479**	**1528**	**192**	**2199**	**208**	**573**	**240**	**1021**	**99**	**153**	**119**	**370**
Background Growth 2008 to 2016	17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**85**	**879**	**94**	**1058**	**528**	**1687**	**211**	**2427**	**229**	**632**	**265**	**1126**	**109**	**168**	**131**	**408**
Executive Park Phase I																
Office*	0	0	0	0	0	0	0	0	3	2	1	6	0	0	0	0
Residential/Hotel	2	0	0	2	0	0	6	6	3	1	1	5	0	2	0	2
Retail/Civic	15	0	0	15	0	0	0	0	0	21	16	37	0	20	0	20
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**17**	**0**	**0**	**17**	**0**	**0**	**6**	**6**	**6**	**24**	**18**	**48**	**0**	**22**	**0**	**22**
2011 Build Volumes	**94**	**796**	**85**	**975**	**479**	**1528**	**198**	**2205**	**214**	**597**	**258**	**1069**	**99**	**175**	**119**	**392**
Executive Park Phase II (full build-out)**																
Office*	2	0	0	2	0	0	6	6	30	20	10	60	0	4	0	4
Residential/Hotel	2	0	0	2	0	0	10	10	4	1	1	6	0	2	0	2
Retail/Civic	29	0	0	29	0	0	0	0	0	41	31	72	0	39	0	39
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**33**	**0**	**0**	**33**	**0**	**0**	**16**	**16**	**34**	**62**	**42**	**138**	**0**	**45**	**0**	**45**
2016 Build Volumes	**118**	**879**	**94**	**1091**	**528**	**1687**	**227**	**2443**	**263**	**694**	**307**	**1264**	**109**	**213**	**131**	**453**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Intersection 12: Briarcliff Road and Sheridan Road

A.M. Peak Hour

	Northbound Briarcliff Road			Southbound Briarcliff Road			Eastbound Sheridan Road		
	L	T	Tot	T	R	Tot	L	R	Tot
Counted Volumes (Wed, Feb 6, 2008)	**363**	**682**	**1045**	**620**	**239**	**859**	**86**	**159**	**245**
The Gables site trips	6	0	6	0	4	4	19	20	39
Clifton Road DRI #1320	0	42	42	22	0	22	0	0	0
Background Growth 2008 to 2011	6.1%	6.1%		6.1%	6.1%		6.1%	6.1%	
2011 No-Build Volumes	**391**	**766**	**1157**	**680**	**258**	**938**	**110**	**189**	**299**
Background Growth 2008 to 2016	17.2%	17.2%		17.2%	17.2%		17.2%	17.2%	
2016 No-Build Volumes	**431**	**841**	**1272**	**748**	**284**	**1032**	**120**	**206**	**326**
Executive Park Phase I									
Office*	7	18	25	2	9	11	1	1	2
Residential/Hotel	13	0	13	0	4	4	8	29	37
Retail/Civic	10	14	24	11	0	11	0	7	7
Retail Pass-by	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**30**	**32**	**62**	**13**	**13**	**26**	**9**	**37**	**46**
2011 Build Volumes	**421**	**798**	**1219**	**693**	**271**	**964**	**119**	**226**	**345**
Executive Park Phase II (full build-out)**									
Office*	135	22	157	3	130	133	20	19	39
Residential/Hotel	16	0	16	0	8	8	22	45	67
Retail/Civic	19	29	48	20	0	20	0	13	13
Retail Pass-by	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**170**	**51**	**221**	**23**	**138**	**161**	**42**	**77**	**119**
2016 Build Volumes	**601**	**892**	**1493**	**771**	**422**	**1193**	**162**	**283**	**445**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound Briarcliff Road			Southbound Briarcliff Road			Eastbound Sheridan Road		
	L	T	Tot	T	R	Tot	L	R	Tot
Counted Volumes (Wed, Feb 6, 2008)	**142**	**925**	**1067**	**666**	**126**	**792**	**244**	**435**	**679**
The Gables site trips	20	0	20	0	20	20	12	10	22
Clifton Road DRI #1320	0	29	29	40	0	40	0	0	0
Background Growth 2008 to 2011	6.1%	6.1%		6.1%	6.1%		6.1%	6.1%	
2011 No-Build Volumes	**171**	**1011**	**1181**	**747**	**154**	**900**	**271**	**472**	**743**
Background Growth 2008 to 2016	17.2%	17.2%		17.2%	17.2%		17.2%	17.2%	
2016 No-Build Volumes	**186**	**1113**	**1299**	**820**	**168**	**988**	**298**	**520**	**818**
Executive Park Phase I									
Office*	0	0	0	10	0	10	4	4	8
Residential/Hotel	26	0	26	0	7	7	4	13	17
Retail/Civic	36	54	90	56	0	56	0	37	37
Retail Pass-by	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**62**	**54**	**116**	**66**	**7**	**73**	**8**	**54**	**62**
2011 Build Volumes	**233**	**1065**	**1297**	**813**	**161**	**973**	**279**	**526**	**805**
Executive Park Phase II (full build-out)**									
Office*	24	4	28	20	23	43	114	120	234
Residential/Hotel	39	0	39	0	19	19	8	16	24
Retail/Civic	62	92	154	99	0	99	0	66	66
Retail Pass-by	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**125**	**96**	**221**	**119**	**42**	**161**	**122**	**202**	**324**
2016 Build Volumes	**311**	**1209**	**1520**	**939**	**210**	**1149**	**420**	**722**	**1142**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

Saturday Peak Hour

	Northbound Briarcliff Road			Southbound Briarcliff Road			Eastbound Sheridan Road		
	L	T	Tot	T	R	Tot	L	R	Tot
Counted Volumes (Sat, Jan 26, 2008)	**89**	**681**	**770**	**622**	**149**	**771**	**158**	**138**	**296**
The Gables site trips	13	0	13	0	12	12	12	13	25
Clifton Road DRI #1320	0	28	28	30	0	30	0	0	0
Background Growth 2008 to 2011	6.1%	6.1%		6.1%	6.1%		6.1%	6.1%	
2011 No-Build Volumes	**107**	**751**	**858**	**690**	**170**	**860**	**180**	**159**	**339**
Background Growth 2008 to 2016	17.2%	17.2%		17.2%	17.2%		17.2%	17.2%	
2016 No-Build Volumes	**117**	**826**	**943**	**759**	**187**	**945**	**197**	**175**	**372**
Executive Park Phase I									
Office*	0	0	0	0	0	0	0	0	0
Residential/Hotel	21	0	21	0	6	6	4	17	21
Retail/Civic	55	82	137	72	0	72	0	48	48
Retail Pass-by	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**76**	**82**	**158**	**72**	**6**	**78**	**4**	**65**	**69**
2011 Build Volumes	**183**	**833**	**1016**	**762**	**176**	**938**	**184**	**224**	**408**
Executive Park Phase II (full build-out)**									
Office*	16	3	19	14	16	30	13	2	15
Residential/Hotel	26	0	26	0	13	13	13	26	39
Retail/Civic	96	145	241	130	0	130	0	87	87
Retail Pass-by	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**138**	**148**	**286**	**144**	**29**	**173**	**26**	**115**	**141**
2016 Build Volumes	**255**	**974**	**1229**	**903**	**216**	**1118**	**223**	**290**	**513**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Intersection 13: Briarcliff Road and Lavista Road

A.M. Peak Hour

	Northbound Briarcliff Road				Southbound Briarcliff Road				Eastbound Lavista Road				Westbound Lavista Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thurs, Feb 7, 2008)	**114**	**663**	**87**	**864**	**35**	**720**	**45**	**800**	**56**	**214**	**170**	**440**	**212**	**547**	**51**	**810**
The Gables site trips	0	6	0	6	0	20	0	20	0	0	0	0	0	0	0	0
Clifton Road DRI #1320	13	42	0	55	0	22	0	22	0	0	6	6	0	0	0	0
Background Growth 2008 to 2011	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**134**	**752**	**92**	**978**	**37**	**806**	**48**	**891**	**59**	**227**	**186**	**473**	**225**	**580**	**54**	**860**
Background Growth 2008 to 2016	17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**147**	**825**	**102**	**1073**	**41**	**886**	**53**	**979**	**66**	**251**	**205**	**522**	**248**	**641**	**60**	**949**
Executive Park Phase I																
Office*	0	21	0	21	0	3	0	3	2	0	0	2	0	0	2	2
Residential/Hotel	0	13	0	13	0	29	0	29	0	0	0	0	0	0	0	0
Retail/Civic	0	14	0	14	2	10	5	17	6	0	0	6	0	0	3	3
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**0**	**48**	**0**	**48**	**2**	**42**	**5**	**49**	**8**	**0**	**0**	**8**	**0**	**0**	**5**	**5**
2011 Build Volumes	**134**	**800**	**92**	**1026**	**39**	**848**	**53**	**940**	**67**	**227**	**186**	**481**	**225**	**580**	**59**	**865**
Executive Park Phase II (full build-out)**																
Office*	0	135	0	135	2	18	2	22	11	0	0	11	0	0	11	11
Residential/Hotel	0	16	0	16	0	45	0	45	0	0	0	0	0	0	0	0
Retail/Civic	0	30	0	30	4	21	6	31	9	0	0	9	0	0	6	6
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**0**	**181**	**0**	**181**	**6**	**84**	**8**	**98**	**20**	**0**	**0**	**20**	**0**	**0**	**17**	**17**
2016 Build Volumes	**147**	**1006**	**102**	**1254**	**47**	**970**	**61**	**1077**	**86**	**251**	**205**	**542**	**248**	**641**	**77**	**966**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound Briarcliff Road				Southbound Briarcliff Road				Eastbound Lavista Road				Westbound Lavista Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thurs, Feb 7, 2008)	**110**	**694**	**165**	**969**	**101**	**822**	**58**	**981**	**75**	**369**	**76**	**520**	**211**	**365**	**75**	**651**
The Gables site trips	0	20	0	20	0	10	0	10	0	0	0	0	0	0	0	0
Clifton Road DRI #1320	7	29	0	36	0	40	0	40	0	0	11	11	0	0	0	0
Background Growth 2008 to 2011	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**124**	**785**	**175**	**1084**	**107**	**922**	**62**	**1091**	**80**	**392**	**92**	**563**	**224**	**387**	**80**	**691**
Background Growth 2008 to 2016	17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**136**	**862**	**193**	**1191**	**118**	**1013**	**68**	**1199**	**88**	**432**	**100**	**620**	**247**	**428**	**88**	**763**
Executive Park Phase I																
Office*	0	0	0	0	1	12	1	14	0	0	0	0	0	0	0	0
Residential/Hotel	0	26	0	26	0	13	0	13	0	0	0	0	0	0	0	0
Retail/Civic	0	50	0	50	10	52	26	88	25	0	0	25	0	0	10	10
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**0**	**76**	**0**	**76**	**11**	**77**	**27**	**115**	**25**	**0**	**0**	**25**	**0**	**0**	**10**	**10**
2011 Build Volumes	**124**	**861**	**175**	**1160**	**118**	**999**	**89**	**1206**	**105**	**392**	**92**	**588**	**224**	**387**	**90**	**701**
Executive Park Phase II (full build-out)**																
Office*	0	24	0	24	10	120	10	140	2	0	0	2	0	0	2	2
Residential/Hotel	0	39	0	39	0	16	0	16	0	0	0	0	0	0	0	0
Retail/Civic	0	96	0	96	21	103	31	155	29	0	0	29	0	0	19	19
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**0**	**159**	**0**	**159**	**31**	**239**	**41**	**311**	**31**	**0**	**0**	**31**	**0**	**0**	**21**	**21**
2016 Build Volumes	**136**	**1021**	**193**	**1350**	**149**	**1252**	**109**	**1510**	**119**	**432**	**100**	**651**	**247**	**428**	**109**	**784**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

Saturday Peak Hour

	Northbound Briarcliff Road				Southbound Briarcliff Road				Eastbound Lavista Road				Westbound Lavista Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Sat, Jan 26, 2008)	**133**	**554**	**139**	**826**	**118**	**511**	**99**	**728**	**75**	**271**	**70**	**416**	**153**	**324**	**85**	**562**
The Gables site trips	0	13	0	13	0	13	0	13	0	0	0	0	0	0	0	0
Clifton Road DRI #1320	9	28	0	37	0	30	0	30	0	0	9	9	0	0	0	0
Background Growth 2008 to 2011	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**150**	**629**	**148**	**927**	**125**	**585**	**105**	**816**	**80**	**288**	**83**	**450**	**162**	**344**	**90**	**596**
Background Growth 2008 to 2016	17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**165**	**690**	**163**	**1018**	**138**	**642**	**116**	**896**	**88**	**318**	**91**	**496**	**179**	**380**	**100**	**658**
Executive Park Phase I																
Office*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential/Hotel	0	21	0	21	0	17	0	17	0	0	0	0	0	0	0	0
Retail/Civic	0	76	0	76	13	67	33	113	38	0	0	38	0	0	15	15
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**0**	**97**	**0**	**97**	**13**	**84**	**33**	**130**	**38**	**0**	**0**	**38**	**0**	**0**	**15**	**15**
2011 Build Volumes	**150**	**726**	**148**	**1024**	**138**	**669**	**138**	**946**	**118**	**288**	**83**	**488**	**162**	**344**	**105**	**611**
Executive Park Phase II (full build-out)**																
Office*	0	17	0	17	1	14	1	16	1	0	0	1	0	0	1	1
Residential/Hotel	0	26	0	26	0	26	0	26	0	0	0	0	0	0	0	0
Retail/Civic	0	151	0	151	27	135	41	203	45	0	0	45	0	0	30	30
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**0**	**194**	**0**	**194**	**28**	**175**	**42**	**245**	**46**	**0**	**0**	**46**	**0**	**0**	**31**	**31**
2016 Build Volumes	**165**	**884**	**163**	**1212**	**166**	**817**	**158**	**1141**	**134**	**318**	**91**	**542**	**179**	**380**	**131**	**689**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Intersection 14: Briarcliff Road and Clifton Road

A.M. Peak Hour

	Northbound Briarcliff Road				Southbound Briarcliff Road				Eastbound Synagogue				Westbound Clifton Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thurs, Feb 7, 2008)	**1**	**654**	**267**	**922**	**786**	**660**	**0**	**1446**	**0**	**0**	**1**	**1**	**257**	**2**	**364**	**623**
The Gables site trips	0	4	0	4	8	12	0	20	0	0	0	0	0	0	2	2
Clifton Road DRI #1320	0	0	23	23	43	0	0	43	0	0	0	0	35	0	74	109
Background Growth 2008 to 2011	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**1**	**698**	**306**	**1005**	**885**	**712**	**0**	**1597**	**0**	**0**	**1**	**1**	**308**	**2**	**462**	**772**
Background Growth 2008 to 2016	17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**1**	**770**	**336**	**1107**	**972**	**785**	**0**	**1757**	**0**	**0**	**1**	**1**	**336**	**2**	**502**	**841**
Executive Park Phase I																
Office*	0	14	0	14	1	2	0	3	0	0	0	0	0	0	7	7
Residential/Hotel	0	8	0	8	0	11	0	11	0	0	0	0	0	0	5	5
Retail/Civic	0	7	0	7	5	5	0	10	0	0	0	0	0	0	7	7
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**0**	**29**	**0**	**29**	**6**	**18**	**0**	**24**	**0**	**0**	**0**	**0**	**0**	**0**	**19**	**19**
2011 Build Volumes	**1**	**727**	**306**	**1034**	**891**	**730**	**0**	**1621**	**0**	**0**	**1**	**1**	**308**	**2**	**481**	**791**
Executive Park Phase II (full build-out)**																
Office*	0	90	0	90	6	12	0	18	0	0	0	0	0	0	45	45
Residential/Hotel	0	10	0	10	17	28	0	45	0	0	0	0	0	0	6	6
Retail/Civic	0	15	0	15	10	10	0	20	0	0	0	0	0	0	15	15
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**0**	**115**	**0**	**115**	**33**	**50**	**0**	**83**	**0**	**0**	**0**	**0**	**0**	**0**	**66**	**66**
2016 Build Volumes	**1**	**885**	**336**	**1222**	**1005**	**835**	**0**	**1840**	**0**	**0**	**1**	**1**	**336**	**2**	**568**	**907**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound Briarcliff Road				Southbound Briarcliff Road				Eastbound Synagogue				Westbound Clifton Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thurs, Feb 7, 2008)	**0**	**788**	**258**	**1046**	**373**	**930**	**0**	**1303**	**1**	**0**	**1**	**2**	**346**	**6**	**661**	**1013**
The Gables site trips	0	12	0	12	4	6	0	10	0	0	0	0	0	0	8	8
Clifton Road DRI #1320	0	0	40	40	75	0	0	75	0	0	0	0	34	0	58	92
Background Growth 2008 to 2011	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**0**	**848**	**314**	**1162**	**475**	**993**	**0**	**1468**	**1**	**0**	**1**	**2**	**401**	**6**	**767**	**1175**
Background Growth 2008 to 2016	17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**0**	**935**	**342**	**1278**	**516**	**1096**	**0**	**1612**	**1**	**0**	**1**	**2**	**439**	**7**	**840**	**1287**
Executive Park Phase I																
Office*	0	0	0	0	4	8	0	12	0	0	0	0	0	0	0	0
Residential/Hotel	0	16	0	16	5	8	0	13	0	0	0	0	0	0	10	10
Retail/Civic	0	25	0	25	26	26	0	52	0	0	0	0	0	0	25	25
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**0**	**41**	**0**	**41**	**35**	**42**	**0**	**77**	**0**	**0**	**0**	**0**	**0**	**0**	**35**	**35**
2011 Build Volumes	**0**	**889**	**314**	**1203**	**510**	**1035**	**0**	**1545**	**1**	**0**	**1**	**2**	**401**	**6**	**802**	**1210**
Executive Park Phase II (full build-out)**																
Office*	0	16	0	16	40	80	0	120	0	0	0	0	0	0	8	8
Residential/Hotel	0	24	0	24	6	10	0	16	0	0	0	0	0	0	15	15
Retail/Civic	0	48	0	48	52	52	0	104	0	0	0	0	0	0	48	48
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**0**	**88**	**0**	**88**	**98**	**142**	**0**	**240**	**0**	**0**	**0**	**0**	**0**	**0**	**71**	**71**
2016 Build Volumes	**0**	**1023**	**342**	**1366**	**614**	**1238**	**0**	**1852**	**1**	**0**	**1**	**2**	**439**	**7**	**911**	**1358**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Intersection 15: Briarcliff Road and Johnson Road

A.M. Peak Hour

	Northbound Briarcliff Road				Southbound Briarcliff Road				Eastbound Johnson Road				Westbound Shopping Center			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thurs, Jan 31, 2008)	**31**	**713**	**13**	**757**	**49**	**510**	**461**	**1020**	**517**	**24**	**19**	**560**	**13**	**10**	**30**	**53**
The Gables site trips	0	2	0	2	0	6	6	12	2	0	0	2	0	0	0	0
Clifton Road DRI #1320	0	19	0	19	0	29	6	35	4	0	0	4	0	0	0	0
Background Growth 2008 to 2011	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**33**	**778**	**14**	**824**	**52**	**576**	**501**	**1129**	**555**	**25**	**20**	**600**	**14**	**11**	**32**	**56**
Background Growth 2008 to 2016	17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**36**	**856**	**15**	**908**	**57**	**633**	**552**	**1242**	**612**	**28**	**22**	**662**	**15**	**12**	**35**	**62**
Executive Park Phase I																
Office*	0	7	0	7	0	1	1	2	7	0	0	7	0	0	0	0
Residential/Hotel	0	4	0	4	0	9	9	18	4	0	0	4	0	0	0	0
Retail/Civic	0	4	0	4	0	3	2	5	3	0	0	3	0	0	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**0**	**15**	**0**	**15**	**0**	**13**	**12**	**25**	**14**	**0**	**0**	**14**	**0**	**0**	**0**	**0**
2011 Build Volumes	**33**	**793**	**14**	**839**	**52**	**589**	**513**	**1154**	**569**	**25**	**20**	**614**	**14**	**11**	**32**	**56**
Executive Park Phase II (full build-out)**																
Office*	0	45	0	45	0	6	6	12	45	0	0	45	0	0	0	0
Residential/Hotel	0	5	0	5	0	14	14	28	5	0	0	5	0	0	0	0
Retail/Civic	0	9	0	9	0	6	4	10	6	0	0	6	0	0	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**0**	**59**	**0**	**59**	**0**	**26**	**24**	**50**	**56**	**0**	**0**	**56**	**0**	**0**	**0**	**0**
2016 Build Volumes	**36**	**915**	**15**	**967**	**57**	**659**	**576**	**1292**	**668**	**28**	**22**	**718**	**15**	**12**	**35**	**62**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound Briarcliff Road				Southbound Briarcliff Road				Eastbound Johnson Road				Westbound Shopping Center			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thurs, Jan 31, 2008)	**35**	**637**	**49**	**721**	**68**	**989**	**703**	**1760**	**554**	**83**	**24**	**661**	**71**	**52**	**28**	**151**
The Gables site trips	0	6	0	6	0	3	3	6	6	0	0	6	0	0	0	0
Clifton Road DRI #1320	0	33	0	33	0	28	6	34	7	0	0	7	0	0	0	0
Background Growth 2008 to 2011	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**37**	**715**	**52**	**804**	**72**	**1081**	**755**	**1908**	**601**	**88**	**25**	**714**	**75**	**55**	**30**	**160**
Background Growth 2008 to 2016	17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**41**	**785**	**57**	**884**	**80**	**1190**	**833**	**2102**	**662**	**97**	**28**	**787**	**83**	**61**	**33**	**177**
Executive Park Phase I																
Office*	0	0	0	0	0	4	4	8	0	0	0	0	0	0	0	0
Residential/Hotel	0	8	0	8	0	4	4	8	8	0	0	8	0	0	0	0
Retail/Civic	0	15	0	15	0	16	10	26	10	0	0	10	0	0	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**0**	**23**	**0**	**23**	**0**	**24**	**18**	**42**	**18**	**0**	**0**	**18**	**0**	**0**	**0**	**0**
2011 Build Volumes	**37**	**738**	**52**	**827**	**72**	**1105**	**773**	**1950**	**619**	**88**	**25**	**732**	**75**	**55**	**30**	**160**
Executive Park Phase II (full build-out)**																
Office*	0	8	0	8	0	40	40	80	8	0	0	8	0	0	0	0
Residential/Hotel	0	12	0	12	0	5	5	10	12	0	0	12	0	0	0	0
Retail/Civic	0	29	0	29	0	31	21	52	19	0	0	19	0	0	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**0**	**49**	**0**	**49**	**0**	**76**	**66**	**142**	**39**	**0**	**0**	**39**	**0**	**0**	**0**	**0**
2016 Build Volumes	**41**	**834**	**57**	**933**	**80**	**1266**	**899**	**2244**	**701**	**97**	**28**	**826**	**83**	**61**	**33**	**177**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Intersection 16: Sheridan Road and Executive Park Drive

A.M. Peak Hour

	Southbound Executive Park Drive				Eastbound Sheridan Road				Westbound Sheridan Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Wed, Feb 6, 2008)	**98**		**45**	**143**	**59**	**103**		**162**		**278**	**309**	**587**
The Gables site trips	0		0	0	0	59		59		10	0	10
Clifton Road DRI #1320	0		0	0	0	0		0		0	0	0
Background Growth 2008 to 2011	6.1%		6.1%		6.1%	6.1%				6.1%	6.1%	
2011 No-Build Volumes	**104**		**48**	**152**	**63**	**168**		**231**		**305**	**328**	**633**
Background Growth 2008 to 2016	17.2%		17.2%		17.2%	17.2%				17.2%	17.2%	
2016 No-Build Volumes	**115**		**53**	**168**	**69**	**180**		**249**		**336**	**362**	**698**
Executive Park Phase I												
No-Build Shifted for New Alignment		**104**	**48**	**152**	**63**		**168**	**231**	**305**	**328**		**633**
Office*		2	1	3	9		0	9	0	16		16
Residential/Hotel		37	16	53	6		0	6	0	17		17
Retail/Civic		7	9	16	15		0	15	0	10		10
Retail Pass-by		0	0	0	0		0	0	0	0		0
Total Executive Park Trips Phase I		**46**	**26**	**72**	**30**		**0**	**30**	**0**	**43**		**43**
2011 Build Volumes		**150**	**74**	**224**	**93**		**168**	**261**	**305**	**371**		**676**
Executive Park Phase II (full build-out)**												
No-Build Shifted for New Alignment		**115**	**53**	**168**	**69**		**180**	**249**	**336**	**362**		**698**
Office*		39	3	42	21		0	21	0	265		265
Residential/Hotel		67	31	98	6		0	6	0	24		24
Retail/Civic		13	14	27	36		0	36	0	19		19
Retail Pass-by		0	0	0	0		0	0	0	0		0
Total Executive Park Trips Full Build Out		**119**	**48**	**167**	**63**		**0**	**63**	**0**	**308**		**308**
2016 Build Volumes		**234**	**101**	**335**	**132**		**180**	**312**	**336**	**670**		**1006**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Southbound Executive Park Drive				Eastbound Sheridan Road				Westbound Sheridan Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Wed, Feb 6, 2008)	**403**		**196**	**599**	**46**	**322**		**368**		**211**	**95**	**306**
The Gables site trips	0		0	0	0	32		32		40	0	40
Clifton Road DRI #1320	0		0	0	0	0		0		0	0	0
Background Growth 2008 to 2011	6.1%		6.1%		6.1%	6.1%				6.1%	6.1%	
2011 No-Build Volumes	**428**		**208**	**636**	**49**	**374**		**423**		**264**	**101**	**365**
Background Growth 2008 to 2016	17.2%		17.2%		17.2%	17.2%				17.2%	17.2%	
2016 No-Build Volumes	**472**		**230**	**702**	**54**	**409**		**463**		**287**	**111**	**399**
Executive Park Phase I												
No-Build Shifted for New Alignment		**428**	**208**	**636**	**49**		**374**	**423**	**264**	**101**		**365**
Office*		8	5	13	0		0	0	0	0		0
Residential/Hotel		17	7	24	12		0	12	0	33		33
Retail/Civic		37	51	88	50		0	50	0	36		36
Retail Pass-by		0	0	0	0		0	0	0	0		0
Total Executive Park Trips Phase I		**62**	**63**	**125**	**62**		**0**	**62**	**0**	**69**		**69**
2011 Build Volumes		**490**	**271**	**761**	**111**		**374**	**485**	**264**	**170**		**434**
Executive Park Phase II (full build-out)**												
No-Build Shifted for New Alignment		**472**	**230**	**702**	**54**		**409**	**463**	**287**	**111**		**399**
Office*		234	18	252	4		0	4	0	47		47
Residential/Hotel		24	11	35	14		0	14	0	58		58
Retail/Civic		66	125	191	116		0	116	0	62		62
Retail Pass-by		0	0	0	0		0	0	0	0		0
Total Executive Park Trips Full Build Out		**324**	**154**	**478**	**134**		**0**	**134**	**0**	**167**		**167**
2016 Build Volumes		**796**	**384**	**1180**	**188**		**409**	**597**	**287**	**278**		**566**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

Saturday Peak Hour

	Southbound Executive Park Drive				Eastbound Sheridan Road				Westbound Sheridan Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Sat, Jan 26, 2008)	**81**		**54**	**135**	**52**	**192**		**244**		**198**	**78**	**276**
The Gables site trips	0		0	0	0	38		38		25	0	25
Clifton Road DRI #1320	0		0	0	0	0		0		0	0	0
Background Growth 2008 to 2011	6.1%		6.1%		6.1%	6.1%				6.1%	6.1%	
2011 No-Build Volumes	**86**		**57**	**143**	**55**	**242**		**297**		**235**	**83**	**318**
Background Growth 2008 to 2016	17.2%		17.2%		17.2%	17.2%				17.2%	17.2%	
2016 No-Build Volumes	**95**		**63**	**158**	**61**	**263**		**324**		**257**	**91**	**348**
Executive Park Phase I												
No-Build Shifted for New Alignment		**86**	**57**	**143**	**55**		**242**	**297**	**235**	**83**		**318**
Office*		0	0	0	0		0	0	0	0		0
Residential/Hotel		21	9	30	10		0	10	0	27		27
Retail/Civic		48	67	115	76		0	76	0	55		55
Retail Pass-by		0	0	0	0		0	0	0	0		0
Total Executive Park Trips Phase I		**69**	**76**	**145**	**86**		**0**	**86**	**0**	**82**		**82**
2011 Build Volumes		**155**	**133**	**288**	**141**		**242**	**383**	**235**	**165**		**400**
Executive Park Phase II (full build-out)**												
No-Build Shifted for New Alignment		**95**	**63**	**158**	**61**		**263**	**324**	**257**	**91**		**348**
Office*		15	2	17	3		0	3	0	32		32
Residential/Hotel		39	18	57	9		0	9	0	39		39
Retail/Civic		87	162	249	182		0	182	0	96		96
Retail Pass-by		0	0	0	0		0	0	0	0		0
Total Executive Park Trips Full Build Out		**141**	**182**	**323**	**194**		**0**	**194**	**0**	**167**		**167**
2016 Build Volumes		**236**	**245**	**481**	**255**		**263**	**518**	**257**	**258**		**515**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Intersection 17: Sheridan Road and Chantilly Drive

A.M. Peak Hour

		Southbound Chantilly Drive			Eastbound Sheridan Road			Westbound Sheridan Road		
		L	R	Tot	L	T	Tot	T	R	Tot
Counted Volumes (Wed, Feb 6, 2008)		**18**	**31**	**49**	**16**	**150**	**166**	**271**	**45**	**316**
The Gables site trips		0	0	0	0	10	10	39	0	39
Clifton Road DRI #1320		0	0	0	0	0	0	0	0	0
Background Growth 2008 to 2011		6.1%	6.1%		6.1%	6.1%		6.1%	6.1%	
2011 No-Build Volumes		**19**	**33**	**52**	**17**	**169**	**186**	**327**	**48**	**374**
Background Growth 2008 to 2016		17.2%	17.2%		17.2%	17.2%		17.2%	17.2%	
2016 No-Build Volumes		**21**	**36**	**57**	**19**	**186**	**205**	**357**	**53**	**409**
Executive Park Phase I										
Office*		0	0	0	0	9	9	1	0	1
Residential/Hotel		0	0	0	0	6	6	16	0	16
Retail/Civic		0	0	0	0	15	15	9	0	9
Retail Pass-by		0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I		**0**	**0**	**0**	**0**	**30**	**30**	**26**	**0**	**26**
2011 Build Volumes		**19**	**33**	**52**	**17**	**199**	**216**	**353**	**48**	**400**
Executive Park Phase II (full build-out)**										
Office*		0	5	5	31	21	52	3	0	3
Residential/Hotel		0	0	0	0	6	6	31	0	31
Retail/Civic		0	0	0	0	36	36	14	0	14
Retail Pass-by		0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out		**0**	**5**	**5**	**31**	**63**	**94**	**48**	**0**	**48**
2016 Build Volumes		**21**	**41**	**62**	**50**	**249**	**299**	**405**	**53**	**457**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

		Southbound Chantilly Drive			Eastbound Sheridan Road			Westbound Sheridan Road		
		L	R	Tot	L	T	Tot	T	R	Tot
Counted Volumes (Wed, Feb 6, 2008)		**100**	**70**	**170**	**15**	**257**	**272**	**341**	**16**	**357**
The Gables site trips		0	0	0	0	39	39	20	0	20
Clifton Road DRI #1320		0	0	0	0	0	0	0	0	0
Background Growth 2008 to 2011		6.1%	6.1%		6.1%	6.1%		6.1%	6.1%	
2011 No-Build Volumes		**106**	**74**	**180**	**16**	**312**	**328**	**382**	**17**	**399**
Background Growth 2008 to 2016		17.2%	17.2%		17.2%	17.2%		17.2%	17.2%	
2016 No-Build Volumes		**117**	**82**	**199**	**18**	**340**	**358**	**420**	**19**	**438**
Executive Park Phase I										
Office*		0	0	0	0	0	0	5	0	5
Residential/Hotel		0	0	0	0	12	12	7	0	7
Retail/Civic		0	0	0	0	50	50	51	0	51
Retail Pass-by		0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I		**0**	**0**	**0**	**0**	**62**	**62**	**63**	**0**	**63**
2011 Build Volumes		**106**	**74**	**180**	**16**	**374**	**390**	**445**	**17**	**462**
Executive Park Phase II (full build-out)**										
Office*		0	27	27	5	4	9	18	0	18
Residential/Hotel		0	0	0	0	14	14	11	0	11
Retail/Civic		0	0	0	0	116	116	125	0	125
Retail Pass-by		0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out		**0**	**27**	**27**	**5**	**134**	**139**	**154**	**0**	**154**
2016 Build Volumes		**117**	**109**	**226**	**23**	**474**	**497**	**574**	**19**	**592**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

Saturday Peak Hour

		Southbound Chantilly Drive			Eastbound Sheridan Road			Westbound Sheridan Road		
		L	R	Tot	L	T	Tot	T	R	Tot
Counted Volumes (Sat, Jan 26, 2008)		**28**	**23**	**51**	**2**	**194**	**196**	**242**	**23**	**265**
The Gables site trips		0	0	0	0	24	24	24	0	24
Clifton Road DRI #1320		0	0	0	0	0	0	0	0	0
Background Growth 2008 to 2011		6.1%	6.1%		6.1%	6.1%		6.1%	6.1%	
2011 No-Build Volumes		**30**	**24**	**54**	**2**	**230**	**232**	**281**	**24**	**305**
Background Growth 2008 to 2016		17.2%	17.2%		17.2%	17.2%		17.2%	17.2%	
2016 No-Build Volumes		**33**	**27**	**60**	**2**	**251**	**254**	**308**	**27**	**335**
Executive Park Phase I										
Office*		0	0	0	0	0	0	0	0	0
Residential/Hotel		0	0	0	0	10	10	9	0	9
Retail/Civic		0	0	0	0	76	76	67	0	67
Retail Pass-by		0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I		**0**	**0**	**0**	**0**	**86**	**86**	**76**	**0**	**76**
2011 Build Volumes		**30**	**24**	**54**	**2**	**316**	**318**	**357**	**24**	**381**
Executive Park Phase II (full build-out)**										
Office*		0	4	4	4	3	7	2	0	2
Residential/Hotel		0	0	0	0	9	9	18	0	18
Retail/Civic		0	0	0	0	182	182	162	0	162
Retail Pass-by		0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out		**0**	**4**	**4**	**4**	**194**	**198**	**182**	**0**	**182**
2016 Build Volumes		**33**	**31**	**64**	**6**	**445**	**452**	**490**	**27**	**517**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Intersection 18: Buford Highway and Lenox Road

A.M. Peak Hour

	Northbound Lenox Road				Southbound Lenox Road				Eastbound Buford Highway				Westbound Buford Highway			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Wed, Feb 6, 2008)	**1070**	**749**	**121**	**1940**	**61**	**392**	**283**	**736**	**274**	**499**	**583**	**1356**	**118**	**798**	**62**	**978**
The Gables site trips	13	9	0	22	0	2	0	2	0	0	3	3	0	0	0	0
Clifton Road DRI #1320	2	2	0	4	0	0	0	0	0	0	1	1	0	0	0	0
Background Growth 2008 to 2011	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**1150**	**806**	**128**	**2085**	**65**	**418**	**300**	**783**	**291**	**530**	**623**	**1443**	**125**	**847**	**66**	**1038**
Background Growth 2008 to 2016	17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**1269**	**889**	**142**	**2299**	**71**	**461**	**332**	**864**	**321**	**585**	**687**	**1593**	**138**	**935**	**73**	**1146**
Executive Park Phase I																
Office*	3	1	0	4	0	5	0	5	0	0	20	20	2	0	0	2
Residential/Hotel	18	13	0	31	0	6	0	6	0	0	8	8	0	0	0	0
Retail/Civic	0	0	0	0	7	0	0	7	0	10	0	10	0	6	5	11
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**21**	**14**	**0**	**35**	**7**	**11**	**0**	**18**	**0**	**10**	**28**	**38**	**2**	**6**	**5**	**13**
2011 Build Volumes	**1171**	**820**	**128**	**2120**	**72**	**429**	**300**	**801**	**291**	**540**	**651**	**1481**	**127**	**853**	**71**	**1051**
Executive Park Phase II (full build-out)**																
Office*	18	5	2	25	0	34	0	34	0	0	125	125	11	0	0	11
Residential/Hotel	29	20	0	49	0	7	0	7	0	0	10	10	0	0	0	0
Retail/Civic	0	0	0	0	15	0	0	15	0	21	0	21	0	14	10	24
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**47**	**25**	**2**	**74**	**15**	**41**	**0**	**56**	**0**	**21**	**135**	**156**	**11**	**14**	**10**	**35**
2016 Build Volumes	**1316**	**914**	**144**	**2373**	**86**	**502**	**332**	**920**	**321**	**606**	**822**	**1749**	**149**	**949**	**83**	**1181**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound Lenox Road				Southbound Lenox Road				Eastbound Buford Highway				Westbound Buford Highway			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Wed, Feb 6, 2008)	**818**	**703**	**200**	**1721**	**68**	**847**	**229**	**1144**	**343**	**738**	**779**	**1860**	**184**	**657**	**124**	**965**
The Gables site trips	7	5	0	12	0	9	0	9	0	0	13	13	0	0	0	0
Clifton Road DRI #1320	1	1	0	2	0	1	0	1	0	0	1	1	0	0	0	0
Background Growth 2008 to 2011	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**876**	**752**	**212**	**1840**	**72**	**909**	**243**	**1224**	**364**	**783**	**841**	**1988**	**195**	**697**	**132**	**1024**
Background Growth 2008 to 2016	17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**966**	**830**	**234**	**2030**	**80**	**1002**	**268**	**1350**	**402**	**865**	**927**	**2193**	**216**	**770**	**145**	**1131**
Executive Park Phase I																
Office*	12	3	1	16	0	0	0	0	0	0	1	1	0	0	0	0
Residential/Hotel	9	6	0	15	0	11	0	11	0	0	16	16	0	0	0	0
Retail/Civic	0	0	0	0	25	0	0	25	0	35	0	35	0	36	26	62
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**21**	**9**	**1**	**31**	**25**	**11**	**0**	**36**	**0**	**35**	**17**	**52**	**0**	**36**	**26**	**62**
2011 Build Volumes	**897**	**761**	**213**	**1871**	**97**	**920**	**243**	**1260**	**364**	**818**	**858**	**2040**	**195**	**733**	**158**	**1086**
Executive Park Phase II (full build-out)**																
Office*	110	30	10	150	0	6	0	6	0	0	23	23	2	0	0	2
Residential/Hotel	10	7	0	17	0	17	0	17	0	0	25	25	0	0	0	0
Retail/Civic	0	0	0	0	48	0	0	48	0	68	0	68	0	72	52	124
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**120**	**37**	**10**	**167**	**48**	**23**	**0**	**71**	**0**	**68**	**48**	**116**	**2**	**72**	**52**	**126**
2016 Build Volumes	**1086**	**867**	**244**	**2197**	**128**	**1025**	**268**	**1421**	**402**	**933**	**975**	**2309**	**218**	**842**	**197**	**1257**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Intersection 19: Interstate 85 Southbound Off-Ramp and Lenox Road

A.M. Peak Hour

	Northbound Lenox Road		Southbound Lenox Road			Westbound I-85 Off-Ramp		
	T	Tot	T	Tot		L	R	Tot
Counted Volumes (Thurs, Feb 7, 2008)	**1082**	**1082**	**1127**	**1127**		**373**	**889**	**1262**
The Gables site trips	22	22	5	5		1	0	1
Clifton Road DRI #1320	4	4	1	1		0	0	0
Background Growth 2008 to 2011	6.1%		6.1%			6.1%	6.1%	
2011 No-Build Volumes	**1174**	**1174**	**1202**	**1202**		**397**	**943**	**1340**
Background Growth 2008 to 2016	17.2%		17.2%			17.2%	17.2%	
2016 No-Build Volumes	**1294**	**1294**	**1327**	**1327**		**438**	**1042**	**1480**
Executive Park Phase I								
Office*	4	4	27	27		0	0	0
Residential/Hotel	31	31	14	14		2	0	2
Retail/Civic	0	0	0	0		0	0	0
Retail Pass-by	0	0	0	0		0	0	0
Total Executive Park Trips Phase I	**35**	**35**	**41**	**41**		**2**	**0**	**2**
2011 Build Volumes	**1209**	**1209**	**1243**	**1243**		**399**	**943**	**1342**
Executive Park Phase II (full build-out)**								
Office*	25	25	170	170		0	0	0
Residential/Hotel	49	49	17	17		2	0	2
Retail/Civic	0	0	0	0		0	0	0
Retail Pass-by	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**74**	**74**	**187**	**187**		**2**	**0**	**2**
2016 Build Volumes	**1368**	**1368**	**1514**	**1514**		**440**	**1042**	**1482**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound Lenox Road		Southbound Lenox Road			Westbound I-85 Off-Ramp		
	T	Tot	T	Tot		L	R	Tot
Counted Volumes (Thurs, Feb 7, 2008)	**905**	**905**	**1731**	**1731**		**554**	**703**	**1257**
The Gables site trips	12	12	22	22		3	0	3
Clifton Road DRI #1320	2	2	2	2		0	0	0
Background Growth 2008 to 2011	6.1%		6.1%			6.1%	6.1%	
2011 No-Build Volumes	**974**	**974**	**1861**	**1861**		**591**	**746**	**1337**
Background Growth 2008 to 2016	17.2%		17.2%			17.2%	17.2%	
2016 No-Build Volumes	**1074**	**1074**	**2052**	**2052**		**652**	**824**	**1476**
Executive Park Phase I								
Office*	16	16	1	1		0	0	0
Residential/Hotel	14	14	27	27		3	0	3
Retail/Civic	0	0	0	0		0	0	0
Retail Pass-by	0	0	0	0		0	0	0
Total Executive Park Trips Phase I	**30**	**30**	**28**	**28**		**3**	**0**	**3**
2011 Build Volumes	**1004**	**1004**	**1889**	**1889**		**594**	**746**	**1340**
Executive Park Phase II (full build-out)**								
Office*	150	150	31	31		0	0	0
Residential/Hotel	17	17	42	42		5	0	5
Retail/Civic	0	0	0	0		0	0	0
Retail Pass-by	0	0	0	0		0	0	0
Total Executive Park Trips Full Build Out	**167**	**167**	**73**	**73**		**5**	**0**	**5**
2016 Build Volumes	**1241**	**1241**	**2125**	**2125**		**657**	**824**	**1481**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Intersection 20: Interstate 85 Northbound On-Ramp and Lenox Road

A.M. Peak Hour

	Northbound Lenox Road			Southbound Lenox Road				
	T	R	Tot	L	T	Tot		
Counted Volumes (Thurs, Feb 7, 2008)	**1161**	**350**	**1511**	**465**	**1084**	**1549**		
The Gables site trips	22	3	25	0	6	6		
Clifton Road DRI #1320	4	0	4	0	1	1		
Background Growth 2008 to 2011	6.1%	6.1%		6.1%	6.1%			
2011 No-Build Volumes	**1258**	**374**	**1632**	**493**	**1157**	**1651**		
Background Growth 2008 to 2016	17.2%	17.2%		17.2%	17.2%			
2016 No-Build Volumes	**1386**	**413**	**1799**	**545**	**1277**	**1822**		
Executive Park Phase I								
Office*	4	1	5	0	27	27		
Residential/Hotel	31	4	35	0	16	16		
Retail/Civic	0	0	0	0	0	0		
Retail Pass-by	0	0	0	0	0	0		
Total Executive Park Trips Phase I	**35**	**5**	**40**	**0**	**43**	**43**		
2011 Build Volumes	**1293**	**379**	**1672**	**493**	**1200**	**1694**		
Executive Park Phase II (full build-out)**								
Office*	25	5	30	0	170	170		
Residential/Hotel	49	6	55	0	19	19		
Retail/Civic	0	0	0	0	0	0		
Retail Pass-by	0	0	0	0	0	0		
Total Executive Park Trips Full Build Out	**74**	**11**	**85**	**0**	**189**	**189**		
2016 Build Volumes	**1460**	**424**	**1884**	**545**	**1466**	**2011**		

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound Lenox Road			Southbound Lenox Road				
	T	R	Tot	L	T	Tot		
Counted Volumes (Thurs, Feb 7, 2008)	**895**	**442**	**1337**	**780**	**1503**	**2283**		
The Gables site trips	12	1	13	0	25	25		
Clifton Road DRI #1320	2	0	2	0	2	2		
Background Growth 2008 to 2011	6.1%	6.1%		6.1%	6.1%			
2011 No-Build Volumes	**964**	**470**	**1434**	**828**	**1622**	**2450**		
Background Growth 2008 to 2016	17.2%	17.2%		17.2%	17.2%			
2016 No-Build Volumes	**1063**	**519**	**1582**	**914**	**1788**	**2702**		
Executive Park Phase I								
Office*	16	3	19	0	1	1		
Residential/Hotel	14	2	16	0	30	30		
Retail/Civic	0	0	0	0	0	0		
Retail Pass-by	0	0	0	0	0	0		
Total Executive Park Trips Phase I	**30**	**5**	**35**	**0**	**31**	**31**		
2011 Build Volumes	**994**	**475**	**1469**	**828**	**1653**	**2481**		
Executive Park Phase II (full build-out)**								
Office*	150	30	180	0	31	31		
Residential/Hotel	17	2	19	0	47	47		
Retail/Civic	0	0	0	0	0	0		
Retail Pass-by	0	0	0	0	0	0		
Total Executive Park Trips Full Build Out	**167**	**32**	**199**	**0**	**78**	**78**		
2016 Build Volumes	**1230**	**551**	**1781**	**914**	**1866**	**2780**		

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Intersection 21: Cheshire Bridge Road and Chantilly Drive

A.M. Peak Hour

	Northbound Cheshire Bridge Road			Southbound Cheshire Bridge Road				Westbound Chantilly Drive		
	T	R	Tot	L	T	Tot		L	R	Tot
Counted Volumes (Thurs, Feb 7, 2008)	**1419**	**43**	**1462**	**80**	**1051**	**1131**		**19**	**98**	**117**
The Gables site trips	25	0	25	0	6	6		0	0	0
Clifton Road DRI #1320	4	0	4	0	1	1		0	0	0
Background Growth 2008 to 2011	6.1%	6.1%		6.1%	6.1%			6.1%	6.1%	
2011 No-Build Volumes	**1535**	**46**	**1580**	**85**	**1122**	**1207**		**20**	**104**	**124**
Background Growth 2008 to 2016	17.2%	17.2%		17.2%	17.2%			17.2%	17.2%	
2016 No-Build Volumes	**1692**	**50**	**1742**	**94**	**1238**	**1332**		**22**	**115**	**137**
Executive Park Phase I										
Office*	0	8	8	27	0	27		0	5	5
Residential/Hotel	0	3	3	16	0	16		4	35	39
Retail/Civic	0	0	0	0	0	0		0	0	0
Retail Pass-by	0	0	0	0	0	0		0	0	0
Total Executive Park Trips Phase I	**0**	**11**	**11**	**43**	**0**	**43**		**4**	**40**	**44**
2011 Build Volumes	**1535**	**57**	**1591**	**128**	**1122**	**1250**		**24**	**144**	**168**
Executive Park Phase II (full build-out)**										
Office*	0	45	45	170	0	170		6	30	36
Residential/Hotel	0	5	5	19	0	19		0	55	55
Retail/Civic	0	0	0	0	0	0		0	0	0
Retail Pass-by	0	0	0	0	0	0		0	0	0
Total Executive Park Trips Full Build Out	**0**	**50**	**50**	**189**	**0**	**189**		**6**	**85**	**91**
2016 Build Volumes	**1692**	**100**	**1792**	**283**	**1238**	**1521**		**28**	**200**	**228**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound Cheshire Bridge Road			Southbound Cheshire Bridge Road				Westbound Chantilly Drive		
	T	R	Tot	L	T	Tot		L	R	Tot
Counted Volumes (Thurs, Feb 7, 2008)	**1182**	**57**	**1239**	**91**	**1372**	**1463**		**54**	**130**	**184**
The Gables site trips	13	0	13	0	25	25		0	0	0
Clifton Road DRI #1320	2	0	2	0	2	2		0	0	0
Background Growth 2008 to 2011	6.1%	6.1%		6.1%	6.1%			6.1%	6.1%	
2011 No-Build Volumes	**1269**	**60**	**1330**	**97**	**1483**	**1580**		**57**	**138**	**195**
Background Growth 2008 to 2016	17.2%	17.2%		17.2%	17.2%			17.2%	17.2%	
2016 No-Build Volumes	**1400**	**67**	**1467**	**107**	**1635**	**1741**		**63**	**152**	**216**
Executive Park Phase I										
Office*	0	0	0	1	0	1		4	19	23
Residential/Hotel	0	6	6	30	0	30		2	16	18
Retail/Civic	0	0	0	0	0	0		0	0	0
Retail Pass-by	0	0	0	0	0	0		0	0	0
Total Executive Park Trips Phase I	**0**	**6**	**6**	**31**	**0**	**31**		**6**	**35**	**41**
2011 Build Volumes	**1269**	**66**	**1336**	**128**	**1483**	**1611**		**63**	**173**	**236**
Executive Park Phase II (full build-out)**										
Office*	0	8	8	31	0	31		40	180	220
Residential/Hotel	0	13	13	47	0	47		0	19	19
Retail/Civic	0	0	0	0	0	0		0	0	0
Retail Pass-by	0	0	0	0	0	0		0	0	0
Total Executive Park Trips Full Build Out	**0**	**21**	**21**	**78**	**0**	**78**		**40**	**199**	**239**
2016 Build Volumes	**1400**	**88**	**1488**	**185**	**1635**	**1819**		**103**	**351**	**455**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

Saturday Peak Hour

	Northbound Cheshire Bridge Road			Southbound Cheshire Bridge Road				Westbound Chantilly Drive		
	T	R	Tot	L	T	Tot		L	R	Tot
Counted Volumes (Sat, Jan 26, 2008)	**1274**	**25**	**1299**	**40**	**1117**	**1157**		**10**	**52**	**62**
The Gables site trips	15	0	15	0	15	15		0	0	0
Clifton Road DRI #1320	2	0	2	0	2	2		0	0	0
Background Growth 2008 to 2011	6.1%	6.1%		6.1%	6.1%			6.1%	6.1%	
2011 No-Build Volumes	**1369**	**27**	**1395**	**42**	**1202**	**1245**		**11**	**55**	**66**
Background Growth 2008 to 2016	17.2%	17.2%		17.2%	17.2%			17.2%	17.2%	
2016 No-Build Volumes	**1510**	**29**	**1539**	**47**	**1326**	**1373**		**12**	**61**	**73**
Executive Park Phase I										
Office*	0	0	0	0	0	0		0	0	0
Residential/Hotel	0	5	5	25	0	25		2	20	22
Retail/Civic	0	0	0	0	0	0		0	0	0
Retail Pass-by	0	0	0	0	0	0		0	0	0
Total Executive Park Trips Phase I	**0**	**5**	**5**	**25**	**0**	**25**		**2**	**20**	**22**
2011 Build Volumes	**1369**	**32**	**1400**	**67**	**1202**	**1270**		**13**	**75**	**88**
Executive Park Phase II (full build-out)**										
Office*	0	5	5	21	0	21		5	21	26
Residential/Hotel	0	9	9	31	0	31		0	31	31
Retail/Civic	0	0	0	0	0	0		0	0	0
Retail Pass-by	0	0	0	0	0	0		0	0	0
Total Executive Park Trips Full Build Out	**0**	**14**	**14**	**52**	**0**	**52**		**5**	**52**	**57**
2016 Build Volumes	**1510**	**43**	**1553**	**99**	**1326**	**1425**		**17**	**113**	**130**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Intersection 22: Cheshire Bridge Road and Sheridan Road

A.M. Peak Hour

	Northbound Cheshire Bridge Road				Southbound Cheshire Bridge Road				Eastbound Driveway				Westbound Sheridan Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Wed, Feb 20, 2008)	**5**	**1145**	**74**	**1224**	**90**	**1094**	**1**	**1185**	**1**	**0**	**1**	**2**	**252**	**2**	**208**	**462**
The Gables site trips	0	0	4	4	6	0	0	6	0	0	0	0	14	0	25	39
Clifton Road DRI #1320	0	4	0	4	0	1	0	1	0	0	0	0	0	0	0	0
Background Growth 2008 to 2011	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**5**	**1219**	**83**	**1307**	**102**	**1162**	**1**	**1265**	**1**	**0**	**1**	**2**	**281**	**2**	**246**	**529**
Background Growth 2008 to 2016	17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**6**	**1346**	**91**	**1442**	**111**	**1283**	**1**	**1395**	**1**	**0**	**1**	**2**	**309**	**2**	**269**	**580**
Executive Park Phase I																
Office*	0	8	7	15	0	0	0	0	0	0	0	0	1	0	0	1
Residential/Hotel	0	3	6	9	0	4	0	4	0	0	0	0	16	0	0	16
Retail/Civic	0	0	12	12	0	0	0	0	0	0	0	0	7	0	0	7
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**0**	**11**	**25**	**36**	**0**	**4**	**0**	**4**	**0**	**0**	**0**	**0**	**24**	**0**	**0**	**24**
2011 Build Volumes	**5**	**1230**	**108**	**1343**	**102**	**1166**	**1**	**1269**	**1**	**0**	**1**	**2**	**305**	**2**	**246**	**553**
Executive Park Phase II (full build-out)**																
Office*	0	45	46	91	0	6	0	6	0	0	0	0	7	0	0	7
Residential/Hotel	0	5	6	11	0	0	0	0	0	0	0	0	31	0	0	31
Retail/Civic	0	0	31	31	0	0	0	0	0	0	0	0	11	0	0	11
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**0**	**50**	**83**	**133**	**0**	**6**	**0**	**6**	**0**	**0**	**0**	**0**	**49**	**0**	**0**	**49**
2016 Build Volumes	**6**	**1396**	**174**	**1575**	**111**	**1289**	**1**	**1401**	**1**	**0**	**1**	**2**	**358**	**2**	**269**	**629**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound Cheshire Bridge Road				Southbound Cheshire Bridge Road				Eastbound Driveway				Westbound Sheridan Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Wed, Feb 20, 2008)	**0**	**1216**	**164**	**1380**	**161**	**1268**	**0**	**1429**	**1**	**3**	**2**	**6**	**169**	**5**	**93**	**267**
The Gables site trips	0	0	14	14	25	0	0	25	0	0	0	0	7	0	13	20
Clifton Road DRI #1320	0	2	0	2	0	2	0	2	0	0	0	0	0	0	0	0
Background Growth 2008 to 2011	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**0**	**1292**	**188**	**1480**	**196**	**1348**	**0**	**1543**	**1**	**3**	**2**	**6**	**186**	**5**	**112**	**303**
Background Growth 2008 to 2016	17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**0**	**1427**	**206**	**1633**	**214**	**1488**	**0**	**1701**	**1**	**4**	**2**	**7**	**205**	**6**	**122**	**333**
Executive Park Phase I																
Office*	0	0	0	0	0	4	0	4	0	0	0	0	4	0	0	4
Residential/Hotel	0	6	12	18	0	2	0	2	0	0	0	0	7	0	0	7
Retail/Civic	0	0	40	40	0	0	0	0	0	0	0	0	41	0	0	41
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**0**	**6**	**52**	**58**	**0**	**6**	**0**	**6**	**0**	**0**	**0**	**0**	**52**	**0**	**0**	**52**
2011 Build Volumes	**0**	**1298**	**240**	**1538**	**196**	**1354**	**0**	**1549**	**1**	**3**	**2**	**6**	**238**	**5**	**112**	**355**
Executive Park Phase II (full build-out)**																
Office*	0	8	8	16	0	40	0	40	0	0	0	0	40	0	0	40
Residential/Hotel	0	13	14	27	0	0	0	0	0	0	0	0	11	0	0	11
Retail/Civic	0	0	101	101	0	0	0	0	0	0	0	0	109	0	0	109
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**0**	**21**	**123**	**144**	**0**	**40**	**0**	**40**	**0**	**0**	**0**	**0**	**160**	**0**	**0**	**160**
2016 Build Volumes	**0**	**1448**	**329**	**1777**	**214**	**1528**	**0**	**1741**	**1**	**4**	**2**	**7**	**365**	**6**	**122**	**493**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Intersection 23: Cheshire Bridge Road and Lindbergh Drive / Lavista Road

A.M. Peak Hour

	Northbound Cheshire Bridge Road				Southbound Cheshire Bridge Road				Eastbound Lindbergh Drive				Westbound Lavista Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Wed, Feb 20, 2008)	**102**	**620**	**64**	**786**	**354**	**657**	**297**	**1308**	**180**	**263**	**47**	**490**	**226**	**442**	**331**	**999**
The Gables site trips	0	2	0	2	0	8	6	14	2	0	0	2	0	0	0	0
Clifton Road DRI #1320	0	0	1	1	1	0	0	1	0	1	0	1	5	2	4	11
Background Growth 2008 to 2011	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**108**	**660**	**69**	**837**	**377**	**705**	**321**	**1403**	**193**	**280**	**50**	**523**	**245**	**471**	**355**	**1071**
Background Growth 2008 to 2016	17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**120**	**728**	**76**	**924**	**416**	**778**	**354**	**1548**	**213**	**309**	**55**	**577**	**270**	**520**	**392**	**1182**
Executive Park Phase I																
Office*	0	9	0	9	0	1	0	1	4	0	0	4	0	0	2	2
Residential/Hotel	0	5	0	5	0	11	9	20	4	0	0	4	0	0	0	0
Retail/Civic	0	6	2	8	2	3	2	7	3	1	0	4	2	1	3	6
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**0**	**20**	**2**	**22**	**2**	**15**	**11**	**28**	**11**	**1**	**0**	**12**	**2**	**1**	**5**	**8**
2011 Build Volumes	**108**	**680**	**71**	**859**	**379**	**720**	**332**	**1431**	**204**	**281**	**50**	**535**	**247**	**472**	**360**	**1079**
Executive Park Phase II (full build-out)**																
Office*	0	57	0	57	2	8	3	13	23	0	0	23	0	0	11	11
Residential/Hotel	0	6	0	6	0	17	14	31	5	0	0	5	0	0	0	0
Retail/Civic	0	16	2	18	4	1	6	11	9	2	0	11	11	1	6	18
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**0**	**79**	**2**	**81**	**6**	**26**	**23**	**55**	**37**	**2**	**0**	**39**	**11**	**1**	**17**	**29**
2016 Build Volumes	**120**	**807**	**78**	**1005**	**422**	**804**	**377**	**1603**	**250**	**311**	**55**	**616**	**281**	**521**	**409**	**1211**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound Cheshire Bridge Road				Southbound Cheshire Bridge Road				Eastbound Lindbergh Drive				Westbound Lavista Road			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Wed, Feb 20, 2008)	**58**	**666**	**125**	**849**	**369**	**811**	**159**	**1339**	**212**	**366**	**66**	**644**	**187**	**325**	**324**	**836**
The Gables site trips	0	8	0	8	0	4	3	7	6	0	0	6	0	0	0	0
Clifton Road DRI #1320	0	0	1	1	2	0	0	2	0	1	0	1	1	1	2	4
Background Growth 2008 to 2011	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**62**	**715**	**134**	**910**	**394**	**865**	**172**	**1430**	**231**	**389**	**70**	**690**	**199**	**346**	**346**	**891**
Background Growth 2008 to 2016	17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**68**	**788**	**147**	**1004**	**434**	**954**	**189**	**1578**	**254**	**430**	**77**	**762**	**220**	**382**	**382**	**984**
Executive Park Phase I																
Office*	0	0	0	0	1	5	2	8	0	0	0	0	0	0	0	0
Residential/Hotel	0	10	0	10	0	5	4	9	8	0	0	8	0	0	0	0
Retail/Civic	0	20	10	30	10	21	10	41	10	5	0	15	10	6	10	26
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**0**	**30**	**10**	**40**	**11**	**31**	**16**	**58**	**18**	**5**	**0**	**23**	**10**	**6**	**10**	**26**
2011 Build Volumes	**62**	**745**	**144**	**950**	**405**	**896**	**188**	**1488**	**249**	**394**	**70**	**713**	**209**	**352**	**356**	**917**
Executive Park Phase II (full build-out)**																
Office*	0	10	0	10	10	50	20	80	4	0	0	4	0	0	2	2
Residential/Hotel	0	15	0	15	0	6	5	11	12	0	0	12	0	0	0	0
Retail/Civic	0	53	5	58	21	57	31	109	29	5	0	34	5	5	19	29
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**0**	**78**	**5**	**83**	**31**	**113**	**56**	**200**	**45**	**5**	**0**	**50**	**5**	**5**	**21**	**31**
2016 Build Volumes	**68**	**866**	**152**	**1087**	**465**	**1067**	**245**	**1778**	**299**	**435**	**77**	**812**	**225**	**387**	**403**	**1015**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Intersection 24: Executive Park Drive and Executive Park South

A.M. Peak Hour

	Northbound Executive Park Drive				Southbound Executive Park Drive				Eastbound Executive Park South			Westbound Executive Park Dr (Build)		
	L	T	R	Tot	L	T	R	Tot	L	R	Tot	L	R	Tot
Counted Volumes (Thurs, Feb 7, 2008)	**90**	**315**		**405**		**290**	**319**	**609**	**131**	**52**	**183**			
The Gables site trips	0	50		50		11	0	11	0	0	0			
Clifton Road DRI #1320	0	0		0		0	0	0	0	0	0			
Background Growth 2008 to 2011	6.1%	6.1%				6.1%	6.1%		6.1%	6.1%				
2011 No-Build Volumes	**96**	**384**		**480**		**319**	**339**	**657**	**139**	**55**	**194**			
Background Growth 2008 to 2016	17.2%	17.2%				17.2%	17.2%		17.2%	17.2%				
2016 No-Build Volumes	**105**	**419**		**525**		**351**	**374**	**725**	**153**	**61**	**214**			
Executive Park Phase I														
2011 No-Build Reconfigured		**96**	**334**	**430**	**139**	**55**		**194**				**319**	**339**	**657**
Office*		0	88	88	198	0		198				12	26	38
Residential/Hotel		4	0	4	17	2		19				0	35	35
Retail/Civic		0	0	0	0	0		0				0	0	0
Retail Pass-by		0	0	0	0	0		0				0	0	0
Total Executive Park Trips Phase I		**4**	**88**	**92**	**215**	**2**		**217**				**12**	**61**	**73**
2011 Build Volumes		**100**	**422**	**522**	**354**	**57**		**411**				**331**	**400**	**730**
Executive Park Phase II (full build-out)**														
2016 No-Build Reconfigured		**105**	**369**	**475**	**153**	**61**		**214**				**351**	**61**	**412**
Office*		219	77	296	267	12		279				175	490	665
Residential/Hotel		39	0	39	7	17		24				0	16	16
Retail/Civic		0	0	0	0	0		0				0	0	0
Retail Pass-by		0	0	0	0	0		0				0	0	0
Total Executive Park Trips Full Build Out		**258**	**77**	**335**	**274**	**29**		**303**				**175**	**506**	**681**
2016 Build Volumes		**363**	**446**	**810**	**427**	**90**		**517**				**526**	**567**	**1093**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound Executive Park Drive				Southbound Executive Park Drive				Eastbound Executive Park South			Westbound Executive Park Dr (Build)		
	L	T	R	Tot	L	T	R	Tot	L	R	Tot	L	R	Tot
Counted Volumes (Thurs, Feb 7, 2008)	**32**	**229**		**261**		**364**	**80**	**444**	**249**	**90**	**339**			
The Gables site trips	0	28		28		50	0	50	0	0	0			
Clifton Road DRI #1320	0	0		0		0	0	0	0	0	0			
Background Growth 2008 to 2011	6.1%	6.1%				6.1%	6.1%		6.1%	6.1%				
2011 No-Build Volumes	**34**	**271**		**305**		**436**	**85**	**521**	**264**	**96**	**360**			
Background Growth 2008 to 2016	17.2%	17.2%				17.2%	17.2%		17.2%	17.2%				
2016 No-Build Volumes	**37**	**296**		**334**		**476**	**94**	**570**	**292**	**105**	**397**			
Executive Park Phase I														
2011 No-Build Reconfigured		**34**	**243**	**277**	**264**	**96**		**360**				**436**	**85**	**521**
Office*		0	15	15	33	0		33				80	180	260
Residential/Hotel		2	0	2	32	4		36				0	16	16
Retail/Civic		0	0	0	0	0		0				0	0	0
Retail Pass-by		0	0	0	0	0		0				0	0	0
Total Executive Park Trips Phase I		**2**	**15**	**17**	**65**	**4**		**69**				**80**	**196**	**276**
2011 Build Volumes		**36**	**258**	**294**	**329**	**100**		**429**				**516**	**281**	**797**
Executive Park Phase II (full build-out)**														
2016 No-Build Reconfigured		**37**	**268**	**306**	**292**	**105**		**397**				**476**	**105**	**582**
Office*		38	14	52	599	79		678				130	239	369
Residential/Hotel		13	0	13	18	42		60				0	6	6
Retail/Civic		0	0	0	0	0		0				0	0	0
Retail Pass-by		0	0	0	0	0		0				0	0	0
Total Executive Park Trips Full Build Out		**51**	**14**	**65**	**617**	**121**		**738**				**130**	**245**	**375**
2016 Build Volumes		**88**	**282**	**371**	**909**	**226**		**1135**				**606**	**350**	**957**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

Saturday Peak Hour

	Northbound Executive Park Drive				Southbound Executive Park Drive				Eastbound Executive Park South			Westbound Executive Park Dr (Build)		
	L	T	R	Tot	L	T	R	Tot	L	R	Tot	L	R	Tot
Counted Volumes (Sat, Jan 26, 2008)	**16**	**147**		**163**		**111**	**41**	**152**	**70**	**11**	**81**			
The Gables site trips	0	30		30		32	0	32	0	0	0			
Clifton Road DRI #1320	0	0		0		0	0	0	0	0	0			
Background Growth 2008 to 2011	6.1%	6.1%				6.1%	6.1%		6.1%	6.1%				
2011 No-Build Volumes	**17**	**186**		**203**		**150**	**44**	**193**	**74**	**12**	**86**			
Background Growth 2008 to 2016	17.2%	17.2%				17.2%	17.2%		17.2%	17.2%				
2016 No-Build Volumes	**19**	**202**		**221**		**162**	**48**	**210**	**82**	**13**	**95**			
Executive Park Phase I														
2011 No-Build Reconfigured		**17**	**156**	**173**	**74**	**12**		**86**				**150**	**44**	**193**
Office*		0	8	8	18	0		18				7	16	23
Residential/Hotel		2	0	2	27	3		30				0	20	20
Retail/Civic		0	0	0	0	0		0				0	0	0
Retail Pass-by		0	0	0	0	0		0				0	0	0
Total Executive Park Trips Phase I		**2**	**8**	**10**	**45**	**3**		**48**				**7**	**36**	**43**
2011 Build Volumes		**19**	**164**	**183**	**119**	**15**		**134**				**157**	**80**	**236**
Executive Park Phase II (full build-out)**														
2016 No-Build Reconfigured		**19**	**172**	**191**	**82**	**13**		**95**				**162**	**13**	**175**
Office*		22	9	31	72	8		80				29	62	91
Residential/Hotel		22	0	22	12	28		40				0	9	9
Retail/Civic		0	0	0	0	0		0				0	0	0
Retail Pass-by		0	0	0	0	0		0				0	0	0
Total Executive Park Trips Full Build Out		**44**	**9**	**53**	**84**	**36**		**120**				**29**	**71**	**100**
2016 Build Volumes		**63**	**181**	**244**	**166**	**49**		**215**				**191**	**84**	**275**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Intersection 25: Executive Park South and Chantilly Drive / Driveway

A.M. Peak Hour

	Northbound Chantilly Drive				Southbound Driveway				Eastbound Chantilly Drive				Westbound Executive Park South			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thurs, Feb 7, 2008)	**35**	**7**	**21**	**63**	**1**	**0**	**2**	**3**	**2**	**116**	**27**	**145**	**19**	**59**	**13**	**91**
The Gables site trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clifton Road DRI #1320	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Growth 2008 to 2011	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**37**	**7**	**22**	**67**	**1**	**0**	**2**	**3**	**2**	**123**	**29**	**154**	**20**	**63**	**14**	**97**
Background Growth 2008 to 2016	17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**41**	**8**	**25**	**74**	**1**	**0**	**2**	**4**	**2**	**136**	**32**	**170**	**22**	**69**	**15**	**107**
Executive Park Phase I																
Office*	0	0	0	0	0	0	0	0	0	35	0	35	0	5	0	5
Residential/Hotel	0	0	0	0	0	0	0	0	0	19	0	19	0	39	0	39
Retail/Civic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**54**	**0**	**54**	**0**	**44**	**0**	**44**
2011 Build Volumes	**37**	**7**	**22**	**67**	**1**	**0**	**2**	**3**	**2**	**177**	**29**	**208**	**20**	**107**	**14**	**141**
Executive Park Phase II (full build-out)**																
Office*	0	0	0	0	0	0	0	0	0	215	0	215	0	36	0	36
Residential/Hotel	0	0	0	0	0	0	0	0	0	24	0	24	0	55	0	55
Retail/Civic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**239**	**0**	**239**	**0**	**91**	**0**	**91**
2016 Build Volumes	**41**	**8**	**25**	**74**	**1**	**0**	**2**	**4**	**2**	**375**	**32**	**409**	**22**	**160**	**15**	**198**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound Chantilly Drive				Southbound Driveway				Eastbound Chantilly Drive				Westbound Executive Park South			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thurs, Feb 7, 2008)	**17**	**1**	**8**	**26**	**10**	**3**	**3**	**16**	**1**	**49**	**59**	**109**	**72**	**99**	**4**	**175**
The Gables site trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clifton Road DRI #1320	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Growth 2008 to 2011	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**18**	**1**	**8**	**28**	**11**	**3**	**3**	**17**	**1**	**52**	**63**	**116**	**76**	**105**	**4**	**186**
Background Growth 2008 to 2016	17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**20**	**1**	**9**	**30**	**12**	**4**	**4**	**19**	**1**	**57**	**69**	**128**	**84**	**116**	**5**	**205**
Executive Park Phase I																
Office*	0	0	0	0	0	0	0	0	0	1	0	1	0	23	0	23
Residential/Hotel	0	0	0	0	0	0	0	0	0	36	0	36	0	18	0	18
Retail/Civic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**37**	**0**	**37**	**0**	**41**	**0**	**41**
2011 Build Volumes	**18**	**1**	**8**	**28**	**11**	**3**	**3**	**17**	**1**	**89**	**63**	**153**	**76**	**146**	**4**	**227**
Executive Park Phase II (full build-out)**																
Office*	0	0	0	0	0	0	0	0	0	39	0	39	0	220	0	220
Residential/Hotel	0	0	0	0	0	0	0	0	0	60	0	60	0	19	0	19
Retail/Civic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**99**	**0**	**99**	**0**	**239**	**0**	**239**
2016 Build Volumes	**20**	**1**	**9**	**30**	**12**	**4**	**4**	**19**	**1**	**156**	**69**	**227**	**84**	**355**	**5**	**444**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

Saturday Peak Hour

	Northbound Chantilly Drive				Southbound Driveway				Eastbound Chantilly Drive				Westbound Executive Park South			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Sat, Jan 26, 2008)	**28**	**1**	**20**	**49**	**3**	**1**	**4**	**8**	**1**	**59**	**21**	**81**	**18**	**48**	**0**	**66**
The Gables site trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Clifton Road DRI #1320	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Growth 2008 to 2011	6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%		6.1%	6.1%	6.1%	
2011 No-Build Volumes	**30**	**1**	**21**	**52**	**3**	**1**	**4**	**8**	**1**	**63**	**22**	**86**	**19**	**51**	**0**	**70**
Background Growth 2008 to 2016	17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%		17.2%	17.2%	17.2%	
2016 No-Build Volumes	**33**	**1**	**23**	**57**	**4**	**1**	**5**	**9**	**1**	**69**	**25**	**95**	**21**	**56**	**0**	**77**
Executive Park Phase I																
Office*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential/Hotel	0	0	0	0	0	0	0	0	0	30	0	30	0	22	0	22
Retail/Civic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**30**	**0**	**30**	**0**	**22**	**0**	**22**
2011 Build Volumes	**30**	**1**	**21**	**52**	**3**	**1**	**4**	**8**	**1**	**93**	**22**	**116**	**19**	**73**	**0**	**92**
Executive Park Phase II (full build-out)**																
Office*	0	0	0	0	0	0	0	0	0	26	0	26	0	26	0	26
Residential/Hotel	0	0	0	0	0	0	0	0	0	40	0	40	0	31	0	31
Retail/Civic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**66**	**0**	**66**	**0**	**57**	**0**	**57**
2016 Build Volumes	**33**	**1**	**23**	**57**	**4**	**1**	**5**	**9**	**1**	**135**	**25**	**161**	**21**	**113**	**0**	**134**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Roundabout: Executive Park Drive and Streets 2 and 6

A.M. Peak Hour

	Northbound Street 6				Southbound Street 2				Eastbound Executive Park Drive				Westbound Executive Park Drive			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Tues, Feb 12, 2008)										**416**		**416**		**695**		**695**
The Gables site trips										0		0		11		11
Clifton Road DRI #1320										0		0		0		0
Background Growth 2008 to 2011										6.1%				6.1%		
2011 No-Build Volumes										**441**		**441**		**749**		**749**
Background Growth 2008 to 2016										17.2%				17.2%		
2016 No-Build Volumes										**487**		**487**		**825**		**825**
Executive Park Phase I																
Office*	0	0	0	0	35	0	27	62	199	28	0	227	0	207	264	471
Residential/Hotel	9	0	1	10	0	0	0	0	0	2	4	6	4	11	0	15
Retail/Civic	0	0	4	4	0	0	0	0	0	6	0	6	9	17	0	26
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**9**	**0**	**5**	**14**	**35**	**0**	**27**	**62**	**199**	**36**	**4**	**239**	**13**	**235**	**264**	**512**
2011 Build Volumes	**9**	**0**	**5**	**14**	**35**	**0**	**27**	**62**	**199**	**477**	**4**	**680**	**13**	**984**	**264**	**1261**
Executive Park Phase II (full build-out)**																
Office*	0	0	0	0	35	0	27	62	199	102	0	301	0	833	264	1097
Residential/Hotel	9	0	1	10	0	0	0	0	0	11	4	15	4	31	0	35
Retail/Civic	0	0	8	8	0	0	0	0	0	14	0	14	24	35	0	59
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**9**	**0**	**9**	**18**	**35**	**0**	**27**	**62**	**199**	**127**	**4**	**330**	**28**	**899**	**264**	**1191**
2016 Build Volumes	**9**	**0**	**9**	**18**	**35**	**0**	**27**	**62**	**199**	**614**	**4**	**817**	**28**	**1724**	**264**	**2016**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound Street 6				Southbound Street 2				Eastbound Executive Park Drive				Westbound Executive Park Drive			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Tues, Feb 12, 2008)										**509**		**509**		**522**		**522**
The Gables site trips										0		0		50		50
Clifton Road DRI #1320										0		0		0		0
Background Growth 2008 to 2011										6.1%				6.1%		
2011 No-Build Volumes										**540**		**540**		**604**		**604**
Background Growth 2008 to 2016										17.2%				17.2%		
2016 No-Build Volumes										**596**		**596**		**662**		**662**
Executive Park Phase I																
Office*	0	0	0	0	239	0	181	420	33	187	0	220	0	34	44	78
Residential/Hotel	4	0	1	5	0	0	0	0	0	1	8	9	8	22	0	30
Retail/Civic	0	0	18	18	0	0	0	0	0	35	0	35	32	64	0	96
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**4**	**0**	**19**	**23**	**239**	**0**	**181**	**420**	**33**	**223**	**8**	**264**	**40**	**120**	**44**	**204**
2011 Build Volumes	**4**	**0**	**19**	**23**	**239**	**0**	**181**	**420**	**33**	**763**	**8**	**804**	**40**	**724**	**44**	**808**
2016 No-Build Shifted for RIRO																
Office*	0	0	0	0	239	0	181	420	33	708	0	741	0	144	44	188
Residential/Hotel	4	0	0	4	0	0	0	0	0	4	8	12	10	77	0	87
Retail/Civic	0	0	40	40	0	0	0	0	0	70	0	70	76	114	0	190
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**4**	**0**	**40**	**44**	**239**	**0**	**181**	**420**	**33**	**782**	**8**	**823**	**86**	**335**	**44**	**465**
2016 Build Volumes	**4**	**0**	**40**	**44**	**239**	**0**	**181**	**420**	**33**	**1378**	**8**	**1419**	**86**	**997**	**44**	**1127**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

Saturday Peak Hour

	Northbound Street 6				Southbound Street 2				Eastbound Executive Park Drive				Westbound Executive Park Drive			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Sat, Feb 9, 2008)										**260**		**260**		**160**		**160**
The Gables site trips										0		0		32		32
Clifton Road DRI #1320										0		0		0		0
Background Growth 2008 to 2011										6.1%				6.1%		
2011 No-Build Volumes										**276**		**276**		**202**		**202**
Background Growth 2008 to 2016										17.2%				17.2%		
2016 No-Build Volumes										**305**		**305**		**219**		**219**
Executive Park Phase I																
Office*	0	0	0	0	22	0	16	38	18	17	0	35	0	19	24	43
Residential/Hotel	5	0	1	6	0	0	0	0	0	1	7	8	7	18	0	25
Retail/Civic	0	0	23	23	0	0	0	0	0	44	0	44	48	95	0	143
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**5**	**0**	**24**	**29**	**22**	**0**	**16**	**38**	**18**	**62**	**7**	**87**	**55**	**132**	**24**	**211**
2011 Build Volumes	**5**	**0**	**24**	**29**	**22**	**0**	**16**	**38**	**18**	**338**	**7**	**363**	**55**	**334**	**24**	**413**
Executive Park Phase II (full build-out)**																
Office*	0	0	0	0	22	0	16	38	18	67	0	85	0	87	24	111
Residential/Hotel	5	0	1	6	0	0	0	0	0	6	7	13	5	36	0	41
Retail/Civic	0	0	50	50	0	0	0	0	0	95	0	95	119	178	0	297
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**5**	**0**	**51**	**56**	**22**	**0**	**16**	**38**	**18**	**168**	**7**	**193**	**124**	**301**	**24**	**449**
2016 Build Volumes	**5**	**0**	**51**	**56**	**22**	**0**	**16**	**38**	**18**	**473**	**7**	**498**	**124**	**520**	**24**	**668**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Driveway B: Executive Park Drive and Street 7

A.M. Peak Hour

	Northbound Street 7					Eastbound Executive Park Drive				Westbound Executive Park Drive			
	L	T	R	Tot		L	T	R	Tot	L	T	R	Tot
Counted Volumes (Tues, Feb 12, 2008)							**416**		**416**		**695**		**695**
The Gables site trips							0		0		11		11
Clifton Road DRI #1320							0		0		0		0
Background Growth 2008 to 2011							6.1%				6.1%		
2011 No-Build Volumes							**441**		**441**		**749**		**749**
Background Growth 2008 to 2016							17.2%				17.2%		
2016 No-Build Volumes							**487**		**487**		**825**		**825**
Executive Park Phase I													
Office*	0		0	0			127	0	127	0	234		234
Residential/Hotel	16		2	18			4	7	11	7	12		19
Retail/Civic	0		3	3			3	0	3	9	8		17
Retail Pass-by	0		0	0			0	0	0	0	0		0
Total Executive Park Trips Phase I	**16**		**5**	**21**			**134**	**7**	**141**	**16**	**254**		**270**
2011 Build Volumes	**16**		**5**	**21**			**575**	**7**	**582**	**16**	**1003**		**1019**
Executive Park Phase II (full build-out)**													
Office*	0		0	0			301	0	301	0	860		860
Residential/Hotel	16		3	19			8	7	15	11	22		33
Retail/Civic	0		7	7			7	0	7	23	12		35
Retail Pass-by	0		0	0			0	0	0	0	0		0
Total Executive Park Trips Full Build Out	**16**		**10**	**26**			**316**	**7**	**323**	**34**	**894**		**928**
2016 Build Volumes	**16**		**10**	**26**			**803**	**7**	**810**	**34**	**1719**		**1753**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound Street 7					Eastbound Executive Park Drive				Westbound Executive Park Drive			
	L	T	R	Tot		L	T	R	Tot	L	T	R	Tot
Counted Volumes (Tues, Feb 12, 2008)							**509**		**509**		**522**		**522**
The Gables site trips							0		0		50		50
Clifton Road DRI #1320							0		0		0		0
Background Growth 2008 to 2011							6.1%				6.1%		
2011 No-Build Volumes							**540**		**540**		**604**		**604**
Background Growth 2008 to 2016							17.2%				17.2%		
2016 No-Build Volumes							**596**		**596**		**662**		**662**
Executive Park Phase I													
Office*	0		0	0			220	0	220	0	215		215
Residential/Hotel	8		1	9			8	14	22	13	11		24
Retail/Civic	0		18	18			17	0	17	32	32		64
Retail Pass-by	0		0	0			0	0	0	0	0		0
Total Executive Park Trips Phase I	**8**		**19**	**27**			**245**	**14**	**259**	**45**	**258**		**303**
2011 Build Volumes	**8**		**19**	**27**			**785**	**14**	**799**	**45**	**862**		**907**
2016 No-Build Shifted for RIRO													
Office*	0		0	0			741	0	741	0	325		325
Residential/Hotel	8		2	10			5	14	19	25	52		77
Retail/Civic	0		35	35			35	0	35	76	38		114
Retail Pass-by	0		0	0			0	0	0	0	0		0
Total Executive Park Trips Full Build Out	**8**		**37**	**45**			**781**	**14**	**795**	**101**	**415**		**516**
2016 Build Volumes	**8**		**37**	**45**			**1377**	**14**	**1391**	**101**	**1077**	**0**	**1178**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

Saturday Peak Hour

	Northbound Street 7					Eastbound Executive Park Drive				Westbound Executive Park Drive			
	L	T	R	Tot		L	T	R	Tot	L	T	R	Tot
Counted Volumes (Sat, Feb 9, 2008)							**260**		**260**		**160**		**160**
The Gables site trips							0		0		32		32
Clifton Road DRI #1320							0		0		0		0
Background Growth 2008 to 2011							6.1%				6.1%		
2011 No-Build Volumes							**276**		**276**		**202**		**202**
Background Growth 2008 to 2016							17.2%				17.2%		
2016 No-Build Volumes							**305**		**305**		**219**		**219**
Executive Park Phase I													
Office*	0		0	0			35	0	35	0	35		35
Residential/Hotel	10		1	11			7	11	18	5	17		22
Retail/Civic	0		22	22			22	0	22	48	47		95
Retail Pass-by	0		0	0			0	0	0	0	0		0
Total Executive Park Trips Phase I	**10**		**23**	**33**			**64**	**11**	**75**	**53**	**99**		**152**
2011 Build Volumes	**10**		**23**	**33**			**340**	**11**	**351**	**53**	**301**		**354**
Executive Park Phase II (full build-out)**													
Office*	0		0	0			85	0	85	0	103		103
Residential/Hotel	10		2	12			5	11	16	12	25		37
Retail/Civic	0		50	50			45	0	45	119	59		178
Retail Pass-by	0		0	0			0	0	0	0	0		0
Total Executive Park Trips Full Build Out	**10**		**52**	**62**			**135**	**11**	**146**	**131**	**187**		**318**
2016 Build Volumes	**10**		**52**	**62**			**440**	**11**	**451**	**131**	**406**		**537**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Driveway C: Executive Park Drive and Street 8

A.M. Peak Hour

	Northbound Street 8				Eastbound Executive Park Drive			Westbound Executive Park Drive		
	L	R	Tot		T	R	Tot	L	T	Tot
Counted Volumes (Thurs, Feb 7, 2008)					**446**		**446**		**609**	**609**
The Gables site trips					0		0		11	11
Clifton Road DRI #1320					0		0		0	0
Background Growth 2008 to 2011					6.1%				6.1%	
2011 No-Build Volumes					**473**		**473**		**657**	**657**
Background Growth 2008 to 2016					17.2%				17.2%	
2016 No-Build Volumes					**523**		**523**		**725**	**725**
Executive Park Phase I										
Office*	5	12	17		214	38	252	89	144	233
Residential/Hotel	9	0	9		11	5	16	3	25	28
Retail/Civic	0	3	3		0	0	0	8	0	8
Retail Pass-by	0	0	0		0	0	0	0	0	0
Total Executive Park Trips Phase I	**14**	**15**	**29**		**225**	**43**	**268**	**100**	**169**	**269**
2011 Build Volumes	**14**	**15**	**29**		**698**	**43**	**741**	**100**	**826**	**926**
Executive Park Phase II (full build-out)**										
Office*	5	12	17		289	38	327	89	771	860
Residential/Hotel	9	6	15		4	5	9	17	9	26
Retail/Civic	0	7	7		0	0	0	12	0	12
Retail Pass-by	0	0	0		0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**14**	**25**	**39**		**293**	**43**	**336**	**118**	**780**	**898**
2016 Build Volumes	**14**	**25**	**39**		**816**	**43**	**859**	**118**	**1505**	**1623**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound Street 8				Eastbound Executive Park Drive			Westbound Executive Park Drive		
	L	R	Tot		T	R	Tot	L	T	Tot
Counted Volumes (Thurs, Feb 7, 2008)					**478**		**478**		**444**	**444**
The Gables site trips					0		0		50	50
Clifton Road DRI #1320					0		0		0	0
Background Growth 2008 to 2011					6.1%				6.1%	
2011 No-Build Volumes					**507**		**507**		**521**	**521**
Background Growth 2008 to 2016					17.2%				17.2%	
2016 No-Build Volumes					**560**		**560**		**570**	**570**
Executive Park Phase I										
Office*	34	81	115		141	6	147	15	201	216
Residential/Hotel	4	0	4		22	8	30	7	12	19
Retail/Civic	0	17	17		0	0	0	32	0	32
Retail Pass-by	0	0	0		0	0	0	0	0	0
Total Executive Park Trips Phase I	**38**	**98**	**136**		**163**	**14**	**177**	**54**	**213**	**267**
2011 Build Volumes	**38**	**98**	**136**		**670**	**14**	**684**	**54**	**734**	**788**
2016 No-Build Shifted for RIRO										
Office*	34	81	115		660	6	666	15	310	325
Residential/Hotel	4	2	6		8	8	16	44	10	54
Retail/Civic	0	35	35		0	0	0	38	0	38
Retail Pass-by	0	0	0		0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**38**	**118**	**156**		**668**	**14**	**682**	**97**	**320**	**417**
2016 Build Volumes	**38**	**118**	**156**		**1228**	**14**	**1242**	**97**	**890**	**987**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

Saturday Peak Hour

	Northbound Street 8				Eastbound Executive Park Drive			Westbound Executive Park Drive		
	L	R	Tot		T	R	Tot	L	T	Tot
Counted Volumes (Sat, Jan 26, 2008)					**217**		**217**		**152**	**152**
The Gables site trips					0		0		32	32
Clifton Road DRI #1320					0		0		0	0
Background Growth 2008 to 2011					6.1%				6.1%	
2011 No-Build Volumes					**230**		**230**		**193**	**193**
Background Growth 2008 to 2016					17.2%				17.2%	
2016 No-Build Volumes					**254**		**254**		**210**	**210**
Executive Park Phase I										
Office*	3	7	10		28	3	31	8	27	35
Residential/Hotel	5	0	5		18	7	25	5	17	22
Retail/Civic	0	22	22		0	0	0	47	0	47
Retail Pass-by	0	0	0		0	0	0	0	0	0
Total Executive Park Trips Phase I	**8**	**29**	**37**		**46**	**10**	**56**	**60**	**44**	**104**
2011 Build Volumes	**8**	**29**	**37**		**276**	**10**	**286**	**60**	**237**	**297**
Executive Park Phase II (full build-out)**										
Office*	3	7	10		78	3	81	8	95	103
Residential/Hotel	5	3	8		6	7	13	20	8	28
Retail/Civic	0	45	45		0	0	0	59	0	59
Retail Pass-by	0	0	0		0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**8**	**55**	**63**		**84**	**10**	**94**	**87**	**103**	**190**
2016 Build Volumes	**8**	**55**	**63**		**338**	**10**	**348**	**87**	**313**	**400**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Driveway D: Executive Park Drive and Street 10

A.M. Peak Hour

	Northbound Street 10				Eastbound Executive Park Drive			Westbound Executive Park Drive		
	L	R	Tot		T	R	Tot	L	T	Tot
Counted Volumes (Thurs, Feb 7, 2008)					**446**		**446**		**609**	**609**
The Gables site trips					0		0		11	11
Clifton Road DRI #1320					0		0		0	0
Background Growth 2008 to 2011					6.1%				6.1%	
2011 No-Build Volumes					**473**		**473**		**657**	**657**
Background Growth 2008 to 2016					17.2%				17.2%	
2016 No-Build Volumes					**523**		**523**		**725**	**725**
Executive Park Phase I										
Office*	7	16	23		236	50	286	118	31	149
Residential/Hotel	2	0	2		16	1	17	1	33	34
Retail/Civic	0	0	0		0	0	0	0	0	0
Retail Pass-by	0	0	0		0	0	0	0	0	0
Total Executive Park Trips Phase I	**9**	**16**	**25**		**252**	**51**	**303**	**119**	**64**	**183**
2011 Build Volumes	**9**	**16**	**25**		**725**	**51**	**776**	**119**	**721**	**840**
Executive Park Phase II (full build-out)**										
Office*	7	16	23		311	50	361	118	658	776
Residential/Hotel	2	2	4		6	1	7	3	14	17
Retail/Civic	0	0	0		0	0	0	0	0	0
Retail Pass-by	0	0	0		0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**9**	**18**	**27**		**317**	**51**	**368**	**121**	**672**	**793**
2016 Build Volumes	**9**	**18**	**27**		**840**	**51**	**891**	**121**	**1397**	**1518**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound Street 10				Eastbound Executive Park Drive			Westbound Executive Park Drive		
	L	R	Tot		T	R	Tot	L	T	Tot
Counted Volumes (Thurs, Feb 7, 2008)					**478**		**478**		**444**	**444**
The Gables site trips					0		0		50	50
Clifton Road DRI #1320					0		0		0	0
Background Growth 2008 to 2011					6.1%				6.1%	
2011 No-Build Volumes					**507**		**507**		**521**	**521**
Background Growth 2008 to 2016					17.2%				17.2%	
2016 No-Build Volumes					**560**		**560**		**570**	**570**
Executive Park Phase I										
Office*	45	107	152		40	8	48	20	215	235
Residential/Hotel	1	0	1		30	2	32	2	15	17
Retail/Civic	0	0	0		0	0	0	0	0	0
Retail Pass-by	0	0	0		0	0	0	0	0	0
Total Executive Park Trips Phase I	**46**	**107**	**153**		**70**	**10**	**80**	**22**	**230**	**252**
2011 Build Volumes	**46**	**107**	**153**		**577**	**10**	**587**	**22**	**751**	**773**
2016 No-Build Shifted for RIRO										
Office*	45	107	152		553	8	561	20	324	344
Residential/Hotel	1	0	1		16	2	18	8	5	13
Retail/Civic	0	0	0		0	0	0	0	0	0
Retail Pass-by	0	0	0		0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**46**	**107**	**153**		**569**	**10**	**579**	**28**	**329**	**357**
2016 Build Volumes	**46**	**107**	**153**		**1129**	**10**	**1139**	**28**	**899**	**927**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

Saturday Peak Hour

	Northbound Street 10				Eastbound Executive Park Drive			Westbound Executive Park Drive		
	L	R	Tot		T	R	Tot	L	T	Tot
Counted Volumes (Sat, Jan 26, 2008)					**217**		**217**		**152**	**152**
The Gables site trips					0		0		32	32
Clifton Road DRI #1320					0		0		0	0
Background Growth 2008 to 2011					6.1%				6.1%	
2011 No-Build Volumes					**230**		**230**		**193**	**193**
Background Growth 2008 to 2016					17.2%				17.2%	
2016 No-Build Volumes					**254**		**254**		**210**	**210**
Executive Park Phase I										
Office*	4	10	14		21	5	26	11	19	30
Residential/Hotel	2	0	2		25	2	27	2	18	20
Retail/Civic	0	0	0		0	0	0	0	0	0
Retail Pass-by	0	0	0		0	0	0	0	0	0
Total Executive Park Trips Phase I	**6**	**10**	**16**		**46**	**7**	**53**	**13**	**37**	**50**
2011 Build Volumes	**6**	**10**	**16**		**276**	**7**	**283**	**13**	**230**	**243**
Executive Park Phase II (full build-out)**										
Office*	4	10	14		60	5	65	11	87	98
Residential/Hotel	2	1	3		11	1	12	4	8	12
Retail/Civic	0	0	0		0	0	0	0	0	0
Retail Pass-by	0	0	0		0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**6**	**11**	**17**		**71**	**6**	**77**	**15**	**95**	**110**
2016 Build Volumes	**6**	**11**	**17**		**325**	**6**	**331**	**15**	**305**	**320**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Driveway E: Executive Park Drive and Office C Access

A.M. Peak Hour

	Northbound Executive Park Drive		Southbound Executive Park Drive			Eastbound Office C Access		
	T	Tot	T	R	Tot	R	Tot	
Counted Volumes (Thurs, Feb 7, 2008)	**405**	**405**	**342**		**342**			
The Gables site trips	0	0	11		11			
Clifton Road DRI #1320	0	0	0		0			
Background Growth 2008 to 2011	6.1%		6.1%					
2011 No-Build Volumes	**430**	**430**	**374**		**374**			
Background Growth 2008 to 2016	17.2%		17.2%					
2016 No-Build Volumes	**475**	**475**	**412**		**412**			
Executive Park Phase I								
Office*	88	88	12	0	12	0	0	Driveway E not evaluated in 2011
Residential/Hotel	4	4	2	0	2	0	0	
Retail/Civic	0	0	0	0	0	0	0	
Retail Pass-by	0	0	0	0	0	0	0	
Total Executive Park Trips Phase I	**92**	**92**	**14**	**0**	**14**	**0**	**0**	
2011 Build Volumes	**522**	**522**	**388**	**0**	**388**	**0**	**0**	
Executive Park Phase II (full build-out)**								
Office*	296	296	21	192	213	16	16	
Residential/Hotel	39	39	17	0	17	0	0	
Retail/Civic	0	0	0	0	0	0	0	
Retail Pass-by	0	0	0	0	0	0	0	
Total Executive Park Trips Full Build Out	**335**	**335**	**38**	**192**	**230**	**16**	**16**	
2016 Build Volumes	**810**	**810**	**450**	**192**	**642**	**16**	**16**	

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound Executive Park Drive				Southbound Executive Park Drive				Eastbound Office C Access		
	L	T	R	Tot	L	T	R	Tot	R	Tot	
Counted Volumes (Thurs, Feb 7, 2008)		**261**		**261**		**454**		**454**			
The Gables site trips		0		0		50		50			
Clifton Road DRI #1320		0		0		0		0			
Background Growth 2008 to 2011		6.1%				6.1%					
2011 No-Build Volumes		**277**		**277**		**532**		**532**			
Background Growth 2008 to 2016		17.2%				17.2%					
2016 No-Build Volumes		**306**		**306**		**582**		**582**			
Executive Park Phase I											
Office*		15		15		80	0	80	0	0	Driveway E not evaluated in 2011
Residential/Hotel		2		2		4	0	4	0	0	
Retail/Civic		0		0		0	0	0	0	0	
Retail Pass-by		0		0		0	0	0	0	0	
Total Executive Park Trips Phase I		**17**		**17**		**84**	**0**	**84**	**0**	**0**	
2011 Build Volumes		**294**		**294**		**616**	**0**	**616**	**0**	**0**	
Executive Park Phase II (full build-out)**											
Office*		52		52		144	33	177	110	110	
Residential/Hotel		13		13		42	0	42	0	0	
Retail/Civic		0		0		0	0	0	0	0	
Retail Pass-by		0		0		0	0	0	0	0	
Total Executive Park Trips Full Build Out		**65**		**65**		**186**	**33**	**219**	**110**	**110**	
2016 Build Volumes		**371**		**371**		**768**	**33**	**801**	**110**	**110**	

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

Saturday Peak Hour

	Northbound Executive Park Drive				Southbound Executive Park Drive				Eastbound Office C Access		
	L	T	R	Tot	L	T	R	Tot	R	Tot	
Counted Volumes (Sat, Jan 26, 2008)		**163**		**163**		**122**		**122**			
The Gables site trips		0		0		32		32			
Clifton Road DRI #1320		0		0		0		0			
Background Growth 2008 to 2011		6.1%				6.1%					
2011 No-Build Volumes		**173**		**173**		**161**		**161**			
Background Growth 2008 to 2016		17.2%				17.2%					
2016 No-Build Volumes		**191**		**191**		**175**		**175**			
Executive Park Phase I											
Office*		8		8		7	0	7	0	0	Driveway E not evaluated in 2011
Residential/Hotel		2		2		3	0	3	0	0	
Retail/Civic		0		0		0	0	0	0	0	
Retail Pass-by		0		0		0	0	0	0	0	
Total Executive Park Trips Phase I		**10**		**10**		**10**	**0**	**10**	**0**	**0**	
2011 Build Volumes		**183**		**183**		**171**	**0**	**171**	**0**	**0**	
Executive Park Phase II (full build-out)**											
Office*		31		31		14	19	33	10	10	
Residential/Hotel		22		22		28	0	28	0	0	
Retail/Civic		0		0		0	0	0	0	0	
Retail Pass-by		0		0		0	0	0	0	0	
Total Executive Park Trips Full Build Out		**53**		**53**		**42**	**19**	**61**	**10**	**10**	
2016 Build Volumes		**244**		**244**		**217**	**19**	**236**	**10**	**10**	

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Driveway F: Executive Park Drive and Gables Access / Street 5

A.M. Peak Hour

	Northbound Executive Park Drive				Southbound Executive Park Drive				Eastbound Gables Access				Westbound Street 5			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thurs, Feb 7, 2008)		**405**		**405**		**342**		**342**								
The Gables site trips	10	0		10		0	11	11	50	0	0	50				
Clifton Road DRI #1320	0	0		0		0	0	0	0	0	0	0				
Background Growth 2008 to 2011	6.1%	6.1%				6.1%	6.1%		6.1%	6.1%	6.1%					
2011 No-Build Volumes	**10**	**430**		**440**		**363**	**11**	**374**	**50**	**0**	**0**	**50**				
Background Growth 2008 to 2016	17.2%	17.2%				17.2%	17.2%		17.2%	17.2%	17.2%					
2016 No-Build Volumes	**10**	**475**		**485**		**401**	**11**	**412**	**50**	**0**	**0**	**50**				
Executive Park Phase I																
Office*	0	88	69	157	0	12	0	12	0	0	0	0	9	0	0	9
Residential/Hotel	0	0	23	23	2	0	0	2	0	0	0	0	53	0	4	57
Retail/Civic	0	0	25	25	0	0	0	0	0	0	0	0	16	0	0	16
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**0**	**88**	**117**	**205**	**2**	**12**	**0**	**14**	**0**	**0**	**0**	**0**	**78**	**0**	**4**	**82**
2011 Build Volumes	**10**	**518**	**117**	**645**	**2**	**375**	**11**	**388**	**50**	**0**	**0**	**50**	**78**	**0**	**4**	**82**
Executive Park Phase II (full build-out)**																
Office*	0	296	69	365	0	37	0	37	0	0	0	0	9	0	0	9
Residential/Hotel	0	0	30	30	17	0	0	17	0	0	0	0	98	0	39	137
Retail/Civic	0	0	55	55	0	0	0	0	0	2	0	2	27	1	0	28
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**0**	**296**	**154**	**450**	**17**	**37**	**0**	**54**	**0**	**2**	**0**	**2**	**134**	**1**	**39**	**174**
2016 Build Volumes	**10**	**771**	**154**	**935**	**17**	**438**	**11**	**466**	**50**	**2**	**0**	**52**	**134**	**1**	**39**	**174**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound Executive Park Drive				Southbound Executive Park Drive				Eastbound Gables Access				Westbound Street 5			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thurs, Feb 7, 2008)		**261**		**261**		**454**		**454**								
The Gables site trips	40	0		40		0	50	50	28	0	0	28				
Clifton Road DRI #1320	0	0		0		0	0	0	0	0	0	0				
Background Growth 2008 to 2011	6.1%	6.1%				6.1%	6.1%		6.1%	6.1%	6.1%					
2011 No-Build Volumes	**40**	**277**		**317**		**482**	**50**	**532**	**28**	**0**	**0**	**28**				
Background Growth 2008 to 2016	17.2%	17.2%				17.2%	17.2%		17.2%	17.2%	17.2%					
2016 No-Build Volumes	**40**	**306**		**346**		**532**	**50**	**582**	**28**	**0**	**0**	**28**				
Executive Park Phase I																
Office*	0	15	11	26	0	80	0	80	0	0	0	0	62	0	0	62
Residential/Hotel	0	0	45	45	4	0	0	4	0	0	0	0	24	0	2	26
Retail/Civic	0	0	86	86	0	0	0	0	0	0	0	0	88	0	0	88
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**0**	**15**	**142**	**157**	**4**	**80**	**0**	**84**	**0**	**0**	**0**	**0**	**174**	**0**	**2**	**176**
2011 Build Volumes	**40**	**292**	**142**	**474**	**4**	**562**	**50**	**616**	**28**	**0**	**0**	**28**	**174**	**0**	**2**	**176**
Executive Park Phase II (full build-out)**																
Office*	0	52	11	63	0	254	0	254	0	0	0	0	62	0	0	62
Residential/Hotel	0	0	72	72	42	0	0	42	0	0	0	0	35	0	13	48
Retail/Civic	0	0	178	178	0	0	0	0	0	5	0	5	191	5	0	196
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**0**	**52**	**261**	**313**	**42**	**254**	**0**	**296**	**0**	**5**	**0**	**5**	**288**	**5**	**13**	**306**
2016 Build Volumes	**40**	**358**	**261**	**659**	**42**	**786**	**50**	**878**	**28**	**5**	**0**	**33**	**288**	**5**	**13**	**306**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

Saturday Peak Hour

	Northbound Executive Park Drive				Southbound Executive Park Drive				Eastbound Gables Access				Westbound Street 5			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Sat, Jan 26, 2008)		**163**		**163**		**122**		**122**								
The Gables site trips	25	0		25		0	32	32	30	0	0	30				
Clifton Road DRI #1320	0	0		0		0	0	0	0	0	0	0				
Background Growth 2008 to 2011	6.1%	6.1%				6.1%	6.1%		6.1%	6.1%	6.1%					
2011 No-Build Volumes	**25**	**173**		**198**		**129**	**32**	**161**	**30**	**0**	**0**	**30**				
Background Growth 2008 to 2016	17.2%	17.2%				17.2%	17.2%		17.2%	17.2%	17.2%					
2016 No-Build Volumes	**25**	**191**		**216**		**143**	**32**	**175**	**30**	**0**	**0**	**30**				
Executive Park Phase I																
Office*	0	8	6	14	0	7	0	7	0	0	0	0	6	0	0	6
Residential/Hotel	0	0	37	37	3	0	0	3	0	0	0	0	30	0	2	32
Retail/Civic	0	0	131	131	0	0	0	0	0	0	0	0	115	0	0	115
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**0**	**8**	**174**	**182**	**3**	**7**	**0**	**10**	**0**	**0**	**0**	**0**	**151**	**0**	**2**	**153**
2011 Build Volumes	**25**	**181**	**174**	**380**	**3**	**136**	**32**	**171**	**30**	**0**	**0**	**30**	**151**	**0**	**2**	**153**
Executive Park Phase II (full build-out)**																
Office*	0	31	6	37	0	24	0	24	0	0	0	0	6	0	0	6
Residential/Hotel	0	0	48	48	28	0	0	28	0	0	0	0	57	0	22	79
Retail/Civic	0	0	278	278	0	0	0	0	0	8	0	8	249	7	0	256
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**0**	**31**	**332**	**363**	**28**	**24**	**0**	**52**	**0**	**8**	**0**	**8**	**312**	**7**	**22**	**341**
2016 Build Volumes	**25**	**222**	**332**	**579**	**28**	**167**	**32**	**227**	**30**	**8**	**0**	**38**	**312**	**7**	**22**	**341**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

The Park Druid Hills Development of Regional Impact #1583
DeKalb County, Georgia

Intersection Volume Worksheet

May 2008

Driveway G: Executive Park South and Office D/C Access

A.M. Peak Hour

	Northbound Executive Park Drive				Southbound Executive Park Drive				Eastbound Executive Park South				Westbound Executive Park South			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Thurs, Feb 7, 2008)										**183**		**183**		**409**		
The Gables site trips										0		0		0		0
Clifton Road DRI #1320										0		0		0		0
Background Growth 2008 to 2011										6.1%				6.1%		
2011 No-Build Volumes										**194**		**194**		**434**		**434**
Background Growth 2008 to 2016										17.2%				17.2%		
2016 No-Build Volumes										**214**		**214**		**479**		**479**
Executive Park Phase I																
Office*	driveway G not evaluated in 2011				0	0	0	0	0	198	0	198	0	26	0	26
Residential/Hotel	0	0	0	0	0	0	0	0	0	19	0	19	0	39	0	39
Retail/Civic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**217**	**0**	**217**	**0**	**65**	**0**	**65**
2011 Build Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**411**	**0**	**411**	**0**	**499**	**0**	**499**
Executive Park Phase II (full build-out)**																
Office*	20	0	48	68	46	0	15	61	115	185	162	462	320	23	366	709
Residential/Hotel	0	0	0	0	0	0	0	0	0	24	0	24	0	55	0	55
Retail/Civic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**20**	**0**	**48**	**68**	**46**	**0**	**15**	**61**	**115**	**209**	**162**	**486**	**320**	**78**	**366**	**764**
2016 Build Volumes	**20**	**0**	**48**	**68**	**46**	**0**	**15**	**61**	**115**	**423**	**162**	**700**	**320**	**557**	**366**	**1243**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

P.M. Peak Hour

	Northbound Executive Park Drive				Southbound Executive Park Drive				Eastbound Office C Access				Westbound Executive Park Dr (Build)			
	L	T	R	Tot	L	T	R	Tot	L		R	Tot	L		R	Tot
Counted Volumes (Thurs, Feb 7, 2008)										**339**		**339**		**112**		
The Gables site trips										0		0		0		0
Clifton Road DRI #1320										0		0		0		0
Background Growth 2008 to 2011										6.1%				6.1%		
2011 No-Build Volumes										**360**		**360**		**119**		**119**
Background Growth 2008 to 2016										17.2%				17.2%		
2016 No-Build Volumes										**397**		**397**		**131**		**131**
Executive Park Phase I																
Office*	driveway G not evaluated in 2011				0	0	0	0	0	33	0	33	0	180	0	180
Residential/Hotel	0	0	0	0	0	0	0	0	0	36	0	36	0	18	0	18
Retail/Civic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**69**	**0**	**69**	**0**	**198**	**0**	**198**
2011 Build Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**429**	**0**	**429**	**0**	**317**	**0**	**317**
Executive Park Phase II (full build-out)**																
Office*	140	0	331	471	316	0	100	416	20	31	28	79	55	159	63	277
Residential/Hotel	0	0	0	0	0	0	0	0	0	60	0	60	0	19	0	19
Retail/Civic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**140**	**0**	**331**	**471**	**316**	**0**	**100**	**416**	**20**	**91**	**28**	**139**	**55**	**178**	**63**	**296**
2016 Build Volumes	**140**	**0**	**331**	**471**	**316**	**0**	**100**	**416**	**20**	**488**	**28**	**536**	**55**	**309**	**63**	**427**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

Saturday Peak Hour

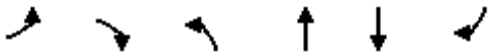
	Northbound Executive Park Drive				Southbound Executive Park Drive				Eastbound Office C Access				Westbound Executive Park Dr (Build)			
	L	T	R	Tot	L	T	R	Tot	L		R	Tot	L		R	Tot
Counted Volumes (Sat, Jan 26, 2008)										**81**		**81**		**57**		
The Gables site trips										0		0		0		0
Clifton Road DRI #1320										0		0		0		0
Background Growth 2008 to 2011										6.1%				6.1%		
2011 No-Build Volumes										**86**		**86**		**60**		**60**
Background Growth 2008 to 2016										17.2%				17.2%		
2016 No-Build Volumes										**95**		**95**		**67**		**67**
Executive Park Phase I																
Office*	driveway G not evaluated in 2011				0	0	0	0	0	18	0	18	0	16	0	16
Residential/Hotel	0	0	0	0	0	0	0	0	0	30	0	30	0	22	0	22
Retail/Civic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Phase I	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**48**	**0**	**48**	**0**	**38**	**0**	**38**
2011 Build Volumes	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**134**	**0**	**134**	**0**	**98**	**0**	**98**
Executive Park Phase II (full build-out)**																
Office*	13	0	31	44	30	0	9	39	12	19	16	47	32	15	37	84
Residential/Hotel	0	0	0	0	0	0	0	0	0	40	0	40	0	31	0	31
Retail/Civic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Retail Pass-by	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Executive Park Trips Full Build Out	**13**	**0**	**31**	**44**	**30**	**0**	**9**	**39**	**12**	**59**	**16**	**87**	**32**	**46**	**37**	**115**
2016 Build Volumes	**13**	**0**	**31**	**44**	**30**	**0**	**9**	**39**	**12**	**154**	**16**	**182**	**32**	**113**	**37**	**182**

* office trips include removal of existing-to-be-removed at 62% + existing space to remain at 100% + new space
** Phase II is entire Executive Park project, both Phase I and Phase II

Appendix E
Existing Condition Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	6	14	12	13	70	2	1132	7	5	675	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			0.95	
Frpb, ped/bikes		1.00			0.98			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.90			1.00			1.00	
Flt Protected		0.97			0.99			1.00			1.00	
Satd. Flow (prot)		1772			1667			1878			3569	
Flt Permitted		0.65			0.97			1.00			0.95	
Satd. Flow (perm)		1193			1627			1877			3391	
Peak-hour factor, PHF	0.82	0.82	0.82	0.90	0.90	0.90	0.97	0.97	0.97	0.91	0.91	0.91
Adj. Flow (vph)	32	7	17	13	14	78	2	1167	7	5	742	5
RTOR Reduction (vph)	0	16	0	0	73	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	40	0	0	32	0	0	1176	0	0	752	0
Confl. Peds. (#/hr)				2		2				1		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	14%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		4.8			4.8			67.2			67.2	
Effective Green, g (s)		4.8			4.8			67.2			67.2	
Actuated g/C Ratio		0.06			0.06			0.84			0.84	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		72			98			1577			2848	
v/s Ratio Prot												
v/s Ratio Perm		c0.03			0.02			c0.63			0.22	
v/c Ratio		0.56			0.32			0.75			0.26	
Uniform Delay, d1		36.6			36.0			2.7			1.3	
Progression Factor		1.00			0.93			0.65			1.00	
Incremental Delay, d2		9.0			1.8			1.4			0.2	
Delay (s)		45.5			35.4			3.2			1.5	
Level of Service		D			D			A			A	
Approach Delay (s)		45.5			35.4			3.2			1.5	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	5.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	13	6	72	593	759	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	0.95	
Frpb, ped/bikes	1.00			1.00	1.00	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.96			1.00	1.00	
Flt Protected	0.97			0.99	1.00	
Satd. Flow (prot)	1750			1857	3565	
Flt Permitted	0.97			0.86	1.00	
Satd. Flow (perm)	1750			1599	3565	
Peak-hour factor, PHF	0.75	0.75	0.97	0.97	0.97	0.97
Adj. Flow (vph)	17	8	74	611	782	12
RTOR Reduction (vph)	8	0	0	0	1	0
Lane Group Flow (vph)	17	0	0	685	793	0
Confl. Peds. (#/hr)	2	2	1			1
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	2.4			69.6	69.6	
Effective Green, g (s)	2.4			69.6	69.6	
Actuated g/C Ratio	0.03			0.87	0.87	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	53			1391	3102	
v/s Ratio Prot	c0.01				0.22	
v/s Ratio Perm				c0.43		
v/c Ratio	0.33			0.49	0.26	
Uniform Delay, d1	38.0			1.2	0.9	
Progression Factor	0.79			0.71	1.00	
Incremental Delay, d2	3.3			1.1	0.2	
Delay (s)	33.5			1.9	1.1	
Level of Service	C			A	A	
Approach Delay (s)	33.5			1.9	1.1	
Approach LOS	C			A	A	

Intersection Summary			
HCM Average Control Delay	2.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	1106	662	0	738	772	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		0.95	0.97	
Frpb, ped/bikes	1.00	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		1.00	0.95	
Satd. Flow (prot)	1881	1563		3574	3467	
Flt Permitted	1.00	1.00		1.00	0.95	
Satd. Flow (perm)	1881	1563		3574	3467	
Peak-hour factor, PHF	0.97	0.97	0.92	0.95	0.98	0.92
Adj. Flow (vph)	1140	682	0	777	788	0
RTOR Reduction (vph)	0	230	0	0	0	0
Lane Group Flow (vph)	1140	452	0	777	788	0
Confl. Peds. (#/hr)		1				
Heavy Vehicles (%)	1%	1%	2%	1%	1%	2%
Turn Type		Perm				
Protected Phases	2			6	8	
Permitted Phases		2				
Actuated Green, G (s)	53.0	53.0		53.0	19.0	
Effective Green, g (s)	53.0	53.0		53.0	19.0	
Actuated g/C Ratio	0.66	0.66		0.66	0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	1246	1035		2368	823	
v/s Ratio Prot	c0.61			0.22	c0.23	
v/s Ratio Perm		0.29				
v/c Ratio	0.91	0.44		0.33	0.96	
Uniform Delay, d1	11.6	6.4		5.8	30.1	
Progression Factor	1.00	1.00		0.82	0.98	
Incremental Delay, d2	11.9	1.3		0.4	21.2	
Delay (s)	23.4	7.8		5.1	50.6	
Level of Service	C	A		A	D	
Approach Delay (s)	17.6			5.1	50.6	
Approach LOS	B			A	D	

Intersection Summary			
HCM Average Control Delay	22.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	72	1060	275	482	1469	211	263	379	274	295	623	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		0.97	0.95		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.94		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	4959		3467	3496		1787	4770		1770	4823	
Flt Permitted	0.07	1.00		0.95	1.00		0.19	1.00		0.18	1.00	
Satd. Flow (perm)	132	4959		3467	3496		360	4770		328	4823	
Peak-hour factor, PHF	0.97	0.97	0.97	0.94	0.94	0.94	0.93	0.93	0.93	0.98	0.98	0.98
Adj. Flow (vph)	74	1093	284	513	1563	224	283	408	295	301	636	129
RTOR Reduction (vph)	0	32	0	0	8	0	0	93	0	0	22	0
Lane Group Flow (vph)	74	1345	0	513	1779	0	283	610	0	301	743	0
Confl. Peds. (#/hr)	2		2	1		1	2		2	21		21
Heavy Vehicles (%)	3%	1%	1%	1%	1%	2%	1%	2%	0%	2%	4%	2%
Turn Type	pm+pt			Prot			pm+pt			pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6						4			8		
Actuated Green, G (s)	59.7	55.7		25.3	77.0		41.2	20.9		44.8	22.7	
Effective Green, g (s)	59.7	55.7		25.3	77.0		41.2	20.9		44.8	22.7	
Actuated g/C Ratio	0.43	0.40		0.18	0.55		0.29	0.15		0.32	0.16	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	103	1973		627	1923		313	712		333	782	
v/s Ratio Prot	0.02	0.27		c0.15	c0.51		0.13	0.13		c0.14	c0.15	
v/s Ratio Perm	0.29						0.14			0.15		
v/c Ratio	0.72	0.68		0.82	0.93		0.90	0.86		0.90	0.95	
Uniform Delay, d1	31.8	34.8		55.1	28.9		42.5	58.1		40.4	58.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	21.2	1.0		8.2	9.1		27.7	12.7		26.5	20.9	
Delay (s)	53.0	35.8		63.3	38.0		70.3	70.8		66.9	79.0	
Level of Service	D	D		E	D		E	E		E	E	
Approach Delay (s)		36.7			43.6			70.6			75.6	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM Average Control Delay	52.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	1547	15	120	1928	20	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	5077		1804	3539	1805	1569
Flt Permitted	1.00		0.13	1.00	0.95	1.00
Satd. Flow (perm)	5077		255	3539	1805	1569
Peak-hour factor, PHF	0.95	0.95	0.96	0.96	0.83	0.83
Adj. Flow (vph)	1628	16	125	2008	24	59
RTOR Reduction (vph)	1	0	0	0	0	55
Lane Group Flow (vph)	1643	0	125	2008	24	4
Confl. Peds. (#/hr)		6	1		7	7
Heavy Vehicles (%)	2%	0%	0%	2%	0%	0%
Turn Type			Perm			Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	114.0		114.0	114.0	8.0	8.0
Effective Green, g (s)	114.0		114.0	114.0	8.0	8.0
Actuated g/C Ratio	0.88		0.88	0.88	0.06	0.06
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	4452		224	3103	111	97
v/s Ratio Prot	0.32			c0.57	c0.01	
v/s Ratio Perm			0.49			0.00
v/c Ratio	0.37		0.56	0.65	0.22	0.04
Uniform Delay, d1	1.5		1.9	2.3	58.0	57.4
Progression Factor	1.00		0.63	0.48	1.00	1.00
Incremental Delay, d2	0.1		2.2	0.3	4.4	0.7
Delay (s)	1.5		3.4	1.4	62.4	58.1
Level of Service	A		A	A	E	E
Approach Delay (s)	1.5			1.5	59.4	
Approach LOS	A			A	E	

Intersection Summary			
HCM Average Control Delay	2.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	965	661	649	1242	0	0	0	0	965	177	619
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00	0.99	1.00	1.00					1.00	1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.96	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		6471	1545	3467	3574					1626	3012	1417
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		6471	1545	3467	3574					1626	3012	1417
Peak-hour factor, PHF	0.92	0.68	0.68	0.95	0.95	0.92	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	0	1419	972	683	1307	0	0	0	0	1109	203	711
RTOR Reduction (vph)	0	0	169	0	0	0	0	0	0	0	21	47
Lane Group Flow (vph)	0	1419	803	683	1307	0	0	0	0	554	986	415
Confl. Peds. (#/hr)	1		1	1		1				2		2
Heavy Vehicles (%)	0%	1%	3%	1%	1%	0%	0%	0%	0%	1%	1%	2%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		56.0	56.0	22.0	82.0					40.0	40.0	40.0
Effective Green, g (s)		56.0	56.0	22.0	82.0					40.0	40.0	40.0
Actuated g/C Ratio		0.43	0.43	0.17	0.63					0.31	0.31	0.31
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2788	666	587	2254					500	927	436
v/s Ratio Prot		0.22		c0.20	0.37					c0.34	0.33	
v/s Ratio Perm			c0.52									0.29
v/c Ratio		0.51	1.21	1.16	0.58					1.11	1.06	0.95
Uniform Delay, d1		27.0	37.0	54.0	14.0					45.0	45.0	44.1
Progression Factor		0.97	0.96	1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		0.7	106.1	91.2	1.1					73.1	48.1	30.9
Delay (s)		26.7	141.6	145.2	15.1					118.1	93.1	74.9
Level of Service		C	F	F	B					F	F	E
Approach Delay (s)		73.4			59.7			0.0			95.8	
Approach LOS		E			E			A			F	

Intersection Summary			
HCM Average Control Delay	76.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	215	682	449	1325	0	0	1676	651	0	0	339
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.95			0.86	1.00			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	0.98			0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1770	2787	3433	3539			6536	1571			1572
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1770	2787	3433	3539			6536	1571			1572
Peak-hour factor, PHF	0.89	0.89	0.85	0.85	0.92	0.92	0.92	0.92	0.92	0.92	0.88
Adj. Flow (vph)	242	766	528	1559	0	0	1822	708	0	0	385
RTOR Reduction (vph)	0	60	0	0	0	0	0	115	0	0	226
Lane Group Flow (vph)	242	706	528	1559	0	0	1822	593	0	0	159
Confl. Peds. (#/hr)	3	3	3					2			8
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	1%	2%	2%	1%
Turn Type		Prot	Prot					Perm			custom
Protected Phases	4	4	1	6			2				
Permitted Phases								2			8
Actuated Green, G (s)	40.8	40.8	25.9	101.2			71.3	71.3			40.8
Effective Green, g (s)	40.8	40.8	25.9	101.2			71.3	71.3			40.8
Actuated g/C Ratio	0.27	0.27	0.17	0.67			0.48	0.48			0.27
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	481	758	593	2388			3107	747			428
v/s Ratio Prot	0.14	c0.25	c0.15	0.44			0.28				
v/s Ratio Perm								c0.38			0.10
v/c Ratio	0.50	0.93	0.89	0.65			0.59	0.79			0.37
Uniform Delay, d1	46.1	53.2	60.7	14.2			28.6	33.2			44.2
Progression Factor	1.00	1.00	1.00	1.00			0.57	0.44			1.00
Incremental Delay, d2	0.8	18.0	15.5	1.4			0.6	5.9			0.5
Delay (s)	46.9	71.2	76.1	15.6			16.9	20.4			44.8
Level of Service	D	E	E	B			B	C			D
Approach Delay (s)	65.4			30.9			17.9		44.8		
Approach LOS	E			C			B		D		

Intersection Summary			
HCM Average Control Delay	32.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	305	62	49	30	45	81	232	1388	545	105	1968	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1900	1397	1805	1900	1569	1736	4988	1567	1805	5163	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.05	1.00	1.00	0.15	1.00	
Satd. Flow (perm)	3433	1900	1397	1805	1900	1569	84	4988	1567	277	5163	
Peak-hour factor, PHF	0.83	0.83	0.83	0.76	0.76	0.76	0.91	0.91	0.91	0.96	0.96	0.96
Adj. Flow (vph)	367	75	59	39	59	107	255	1525	599	109	2050	54
RTOR Reduction (vph)	0	0	51	0	0	101	0	0	213	0	2	0
Lane Group Flow (vph)	367	75	8	39	59	6	255	1525	386	109	2102	0
Confl. Peds. (#/hr)	7		7	6		6	3		3	2		2
Heavy Vehicles (%)	2%	0%	12%	0%	0%	0%	4%	4%	1%	0%	0%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		Perm	pm+pt		
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	20.1	20.1	20.1	9.0	9.0	9.0	108.9	96.7	96.7	91.2	83.0	
Effective Green, g (s)	20.1	20.1	20.1	9.0	9.0	9.0	108.9	96.7	96.7	91.2	83.0	
Actuated g/C Ratio	0.13	0.13	0.13	0.06	0.06	0.06	0.73	0.64	0.64	0.61	0.55	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	460	255	187	108	114	94	302	3216	1010	252	2857	
v/s Ratio Prot	c0.11	0.04		0.02	c0.03		c0.12	0.31		0.02	0.41	
v/s Ratio Perm			0.01			0.00	c0.49		0.25	0.24		
v/c Ratio	0.80	0.29	0.04	0.36	0.52	0.07	0.84	0.47	0.38	0.43	0.74	
Uniform Delay, d1	63.0	58.6	56.6	67.7	68.4	66.5	49.0	13.6	12.6	12.5	25.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.13	0.81	0.90	1.00	1.00	
Incremental Delay, d2	9.3	0.6	0.1	2.1	3.9	0.3	13.6	0.3	0.7	1.2	1.7	
Delay (s)	72.3	59.2	56.7	69.8	72.3	66.9	68.8	11.4	12.1	13.7	27.0	
Level of Service	E	E	E	E	E	E	E	B	B	B	C	
Approach Delay (s)		68.5			69.0			17.7			26.3	
Approach LOS		E			E			B			C	

Intersection Summary			
HCM Average Control Delay	28.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	416	235	35	107	257	252	95	829	476	82	1365	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3367	3390		1770	1881	1615	1703	3505	1524	1770	3562	
Flt Permitted	0.95	1.00		0.58	1.00	1.00	0.06	1.00	1.00	0.24	1.00	
Satd. Flow (perm)	3367	3390		1073	1881	1615	105	3505	1524	450	3562	
Peak-hour factor, PHF	0.94	0.94	0.94	0.91	0.91	0.91	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	443	250	37	118	282	277	100	873	501	86	1437	19
RTOR Reduction (vph)	0	9	0	0	0	76	0	0	246	0	1	0
Lane Group Flow (vph)	443	278	0	118	282	201	100	873	255	86	1455	0
Confl. Peds. (#/hr)										1		1
Heavy Vehicles (%)	4%	3%	14%	2%	1%	0%	6%	3%	6%	2%	1%	11%
Turn Type	Prot			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases				8		8	6		6	2		
Actuated Green, G (s)	20.4	37.1		30.7	23.7	23.7	76.4	68.6	68.6	73.4	67.1	
Effective Green, g (s)	20.4	37.1		30.7	23.7	23.7	76.4	68.6	68.6	73.4	67.1	
Actuated g/C Ratio	0.15	0.27		0.23	0.18	0.18	0.57	0.51	0.51	0.54	0.50	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	509	932		280	330	284	152	1781	774	306	1770	
v/s Ratio Prot	c0.13	0.08		0.02	c0.15		c0.04	0.25		0.01	c0.41	
v/s Ratio Perm				0.07		0.12	0.34		0.17	0.14		
v/c Ratio	0.87	0.30		0.42	0.85	0.71	0.66	0.49	0.33	0.28	0.82	
Uniform Delay, d1	56.0	38.7		43.2	54.0	52.4	25.4	21.7	19.6	16.1	28.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	15.0	0.2		1.0	18.9	7.8	9.8	1.0	1.1	0.5	4.5	
Delay (s)	71.0	38.9		44.2	72.9	60.2	35.3	22.7	20.7	16.6	33.3	
Level of Service	E	D		D	E	E	D	C	C	B	C	
Approach Delay (s)		58.3			62.7			22.9			32.4	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM Average Control Delay	38.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	135.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	97	168	143	101	758	103	439	1481	41	58	639	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3574	1553	1758	3574	1526	1787	3558		1687	3433	
Flt Permitted	0.07	1.00	1.00	0.62	1.00	1.00	0.12	1.00		0.07	1.00	
Satd. Flow (perm)	139	3574	1553	1147	3574	1526	233	3558		129	3433	
Peak-hour factor, PHF	0.80	0.80	0.80	0.92	0.92	0.92	0.91	0.91	0.91	0.92	0.92	0.92
Adj. Flow (vph)	121	210	179	110	824	112	482	1627	45	63	695	188
RTOR Reduction (vph)	0	0	128	0	0	52	0	1	0	0	12	0
Lane Group Flow (vph)	121	210	51	110	824	60	482	1671	0	63	871	0
Confl. Peds. (#/hr)				4		4						
Heavy Vehicles (%)	0%	1%	4%	2%	1%	3%	1%	1%	3%	7%	2%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	67.4	57.4	57.4	56.5	50.5	50.5	124.6	113.5		76.8	69.7	
Effective Green, g (s)	67.4	57.4	57.4	56.5	50.5	50.5	124.6	113.5		76.8	69.7	
Actuated g/C Ratio	0.34	0.29	0.29	0.28	0.25	0.25	0.62	0.57		0.38	0.35	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	154	1026	446	342	902	385	541	2019		105	1196	
v/s Ratio Prot	c0.05	0.06		0.01	c0.23		c0.23	0.47		0.02	0.25	
v/s Ratio Perm	0.21		0.03	0.08		0.04	c0.33			0.21		
v/c Ratio	0.79	0.20	0.12	0.32	0.91	0.16	0.89	0.83		0.60	0.73	
Uniform Delay, d1	53.5	54.0	52.6	55.2	72.6	58.2	51.5	35.3		43.5	56.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	22.6	0.1	0.1	0.5	13.4	0.2	16.7	4.1		9.3	3.9	
Delay (s)	76.1	54.1	52.7	55.7	86.0	58.3	68.2	39.3		52.7	60.8	
Level of Service	E	D	D	E	F	E	E	D		D	E	
Approach Delay (s)		58.8			79.9			45.8			60.3	
Approach LOS		E			E			D			E	

Intersection Summary			
HCM Average Control Delay	57.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	200.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

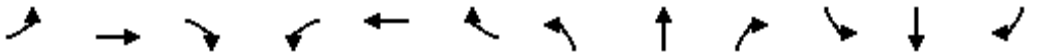
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	202	184	107	82	323	672	54	1020	7	151	922	251
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	1.00	0.85	1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3398		1745	1845	1559	1736	3570		1770	3449	
Flt Permitted	0.38	1.00		0.53	1.00	1.00	0.10	1.00		0.09	1.00	
Satd. Flow (perm)	708	3398		978	1845	1559	178	3570		166	3449	
Peak-hour factor, PHF	0.87	0.87	0.87	0.91	0.91	0.91	0.89	0.89	0.89	0.87	0.87	0.87
Adj. Flow (vph)	232	211	123	90	355	738	61	1146	8	174	1060	289
RTOR Reduction (vph)	0	69	0	0	0	83	0	1	0	0	20	0
Lane Group Flow (vph)	232	265	0	90	355	655	61	1153	0	174	1329	0
Confl. Peds. (#/hr)				6		6	7		7	1		1
Heavy Vehicles (%)	1%	0%	1%	3%	3%	1%	4%	1%	0%	2%	1%	1%
Turn Type	pm+pt			pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	56.0	50.0		52.0	48.0	48.0	44.2	41.0		54.0	46.8	
Effective Green, g (s)	56.0	50.0		52.0	48.0	48.0	44.2	41.0		54.0	46.8	
Actuated g/C Ratio	0.47	0.42		0.43	0.40	0.40	0.37	0.34		0.45	0.39	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	384	1416		449	738	624	107	1220		195	1345	
v/s Ratio Prot	c0.03	0.08		0.01	0.19		0.02	0.32		c0.07	c0.39	
v/s Ratio Perm	0.25			0.08		c0.42	0.19			0.34		
v/c Ratio	0.60	0.19		0.20	0.48	1.05	0.57	0.95		0.89	0.99	
Uniform Delay, d1	25.3	22.1		20.3	26.7	36.0	30.7	38.4		29.0	36.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.7	0.1		0.2	0.5	49.5	7.1	15.6		36.1	21.8	
Delay (s)	28.0	22.2		20.5	27.2	85.5	37.9	54.0		65.2	58.2	
Level of Service	C	C		C	C	F	D	D		E	E	
Approach Delay (s)		24.6			63.1			53.2			59.0	
Approach LOS		C			E			D			E	

Intersection Summary			
HCM Average Control Delay	54.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	86	159	363	682	620	239
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.97	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1719	1519	1770	1845	1845	1568
Flt Permitted	0.95	1.00	0.21	1.00	1.00	1.00
Satd. Flow (perm)	1719	1519	391	1845	1845	1568
Peak-hour factor, PHF	0.86	0.86	0.90	0.90	0.90	0.90
Adj. Flow (vph)	100	185	403	758	689	266
RTOR Reduction (vph)	0	167	0	0	0	124
Lane Group Flow (vph)	100	18	403	758	689	142
Confl. Peds. (#/hr)	6	6				
Heavy Vehicles (%)	5%	3%	2%	3%	3%	3%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	5.9	5.9	46.1	46.1	32.1	32.1
Effective Green, g (s)	5.9	5.9	46.1	46.1	32.1	32.1
Actuated g/C Ratio	0.10	0.10	0.77	0.77	0.54	0.54
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	169	149	530	1418	987	839
v/s Ratio Prot	c0.06		c0.13	0.41	0.37	
v/s Ratio Perm		0.01	c0.46			0.09
v/c Ratio	0.59	0.12	0.76	0.53	0.70	0.17
Uniform Delay, d1	25.9	24.7	7.8	2.7	10.4	7.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.5	0.4	6.4	1.4	4.1	0.4
Delay (s)	31.4	25.1	14.1	4.2	14.4	7.6
Level of Service	C	C	B	A	B	A
Approach Delay (s)	27.3			7.6	12.5	
Approach LOS	C			A	B	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

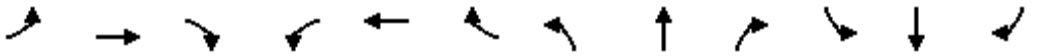


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	56	214	170	212	547	51	114	663	87	35	720	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1703	1677		1736	1835		1703	1827	1455	1597	1845	1508
Flt Permitted	0.10	1.00		0.13	1.00		0.07	1.00	1.00	0.15	1.00	1.00
Satd. Flow (perm)	174	1677		246	1835		131	1827	1455	248	1845	1508
Peak-hour factor, PHF	0.91	0.91	0.91	0.92	0.92	0.92	0.93	0.93	0.93	0.95	0.95	0.95
Adj. Flow (vph)	62	235	187	230	595	55	123	713	94	37	758	47
RTOR Reduction (vph)	0	19	0	0	3	0	0	0	34	0	0	16
Lane Group Flow (vph)	62	403	0	230	647	0	123	713	60	37	758	31
Confl. Peds. (#/hr)	7		7	3		3				4		4
Heavy Vehicles (%)	6%	2%	5%	4%	2%	1%	6%	4%	11%	13%	3%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	45.1	41.1		62.2	54.2		79.4	72.6	72.6	72.2	69.0	69.0
Effective Green, g (s)	45.1	41.1		62.2	54.2		79.4	72.6	72.6	72.2	69.0	69.0
Actuated g/C Ratio	0.30	0.27		0.41	0.36		0.53	0.48	0.48	0.48	0.46	0.46
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	93	459		272	663		141	884	704	148	849	694
v/s Ratio Prot	0.02	0.24		c0.10	c0.35		c0.04	0.39		0.01	0.41	
v/s Ratio Perm	0.18			0.25			c0.42		0.04	0.11		0.02
v/c Ratio	0.67	0.88		0.85	0.98		0.87	0.81	0.09	0.25	0.89	0.04
Uniform Delay, d1	42.8	52.1		34.5	47.3		31.9	32.8	20.8	27.2	37.1	22.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	16.6	17.1		20.8	28.8		40.5	7.8	0.2	0.9	13.7	0.1
Delay (s)	59.4	69.1		55.3	76.1		72.4	40.5	21.1	28.1	50.9	22.4
Level of Service	E	E		E	E		E	D	C	C	D	C
Approach Delay (s)		67.9			70.7			42.8			48.3	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM Average Control Delay	56.0	HCM Level of Service	E
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	92.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

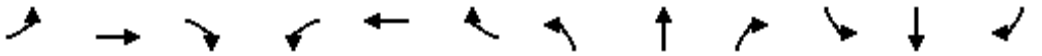
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	1	257	2	364	1	654	257	786	660	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00		0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00			1.00	0.98		1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Frt		0.86			1.00	0.85		1.00	0.85	1.00	1.00	
Flt Protected		1.00			0.95	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1644			1752	1446		3505	1559	1752	3505	
Flt Permitted		1.00			0.73	1.00		0.95	1.00	0.17	1.00	
Satd. Flow (perm)		1644			1334	1446		3345	1559	306	3505	
Peak-hour factor, PHF	0.25	0.25	0.25	0.89	0.89	0.89	0.97	0.97	0.97	0.92	0.92	0.92
Adj. Flow (vph)	0	0	4	289	2	409	1	674	265	854	717	0
RTOR Reduction (vph)	0	3	0	0	0	318	0	0	194	0	0	0
Lane Group Flow (vph)	0	1	0	0	291	91	0	675	71	854	717	0
Confl. Peds. (#/hr)				2		2	2		2	4		4
Heavy Vehicles (%)	0%	0%	0%	3%	0%	10%	0%	3%	2%	3%	3%	0%
Turn Type	Perm			Perm		Perm	Perm		Perm	pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)		20.0			20.0	20.0		24.0	24.0	62.0	62.0	
Effective Green, g (s)		20.0			20.0	20.0		24.0	24.0	62.0	62.0	
Actuated g/C Ratio		0.22			0.22	0.22		0.27	0.27	0.69	0.69	
Clearance Time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		365			296	321		892	416	757	2415	
v/s Ratio Prot		0.00								c0.43	0.20	
v/s Ratio Perm					c0.22	0.06		0.20	0.05	c0.35		
v/c Ratio		0.00			0.98	0.28		0.76	0.17	1.13	0.30	
Uniform Delay, d1		27.2			34.8	29.1		30.3	25.3	21.6	5.5	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0			47.4	0.5		6.0	0.9	74.0	0.3	
Delay (s)		27.2			82.2	29.5		36.3	26.2	95.6	5.8	
Level of Service		C			F	C		D	C	F	A	
Approach Delay (s)		27.2			51.4			33.4			54.6	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM Average Control Delay	47.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	92.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	517	24	19	13	10	30	31	713	13	49	510	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00			1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	0.96			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1684			1848	1471	1805	3531		1671	3505	
Flt Permitted	0.95	0.96			0.97	1.00	0.41	1.00		0.32	1.00	
Satd. Flow (perm)	1681	1684			1848	1471	780	3531		560	3505	
Peak-hour factor, PHF	0.91	0.91	0.91	0.98	0.98	0.98	0.97	0.97	0.97	0.91	0.91	0.91
Adj. Flow (vph)	568	26	21	13	10	31	32	735	13	54	560	0
RTOR Reduction (vph)	0	4	0	0	0	29	0	1	0	0	0	0
Lane Group Flow (vph)	307	304	0	0	23	2	32	747	0	54	560	0
Confl. Peds. (#/hr)	2		2	2		2						
Heavy Vehicles (%)	2%	0%	0%	0%	0%	7%	0%	2%	0%	8%	3%	1%
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases						8	2			6		
Actuated Green, G (s)	22.5	22.5			4.4	4.4	51.1	51.1		51.1	51.1	
Effective Green, g (s)	22.5	22.5			4.4	4.4	51.1	51.1		51.1	51.1	
Actuated g/C Ratio	0.25	0.25			0.05	0.05	0.57	0.57		0.57	0.57	
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	420	421			90	72	443	2005		318	1990	
v/s Ratio Prot	c0.18	0.18			c0.01			c0.21			0.16	
v/s Ratio Perm						0.00	0.04			0.10		
v/c Ratio	0.73	0.72			0.26	0.02	0.07	0.37		0.17	0.28	
Uniform Delay, d1	31.0	30.9			41.2	40.7	8.8	10.7		9.3	10.0	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.4	6.0			1.5	0.1	0.3	0.5		1.2	0.4	
Delay (s)	37.4	36.9			42.7	40.9	9.1	11.2		10.5	10.4	
Level of Service	D	D			D	D	A	B		B	B	
Approach Delay (s)		37.2			41.7			11.1			10.4	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM Average Control Delay	19.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	274	499	583	118	798	62	1070	749	121	61	392	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.97	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00		1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	3574	1554	1784	5076		3502	3574	1559	1770	3574	1585
Flt Permitted	0.10	1.00	1.00	0.45	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	191	3574	1554	845	5076		3502	3574	1559	1770	3574	1585
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.95	0.89	0.89	0.89
Adj. Flow (vph)	298	542	634	128	867	67	1126	788	127	69	440	318
RTOR Reduction (vph)	0	0	435	0	5	0	0	0	68	0	0	203
Lane Group Flow (vph)	298	542	199	128	929	0	1126	788	59	69	440	115
Confl. Peds. (#/hr)	5		5	3		3	1		1	2		2
Heavy Vehicles (%)	0%	1%	1%	1%	1%	0%	0%	1%	2%	2%	1%	0%
Turn Type	pm+pt		Perm	pm+pt			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4		4	8					2			6
Actuated Green, G (s)	68.7	54.8	54.8	45.6	35.7		67.3	67.3	67.3	27.0	27.0	27.0
Effective Green, g (s)	68.7	54.8	54.8	45.6	35.7		67.3	67.3	67.3	27.0	27.0	27.0
Actuated g/C Ratio	0.39	0.31	0.31	0.26	0.20		0.38	0.38	0.38	0.15	0.15	0.15
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	342	1119	487	273	1036		1347	1374	600	273	551	245
v/s Ratio Prot	c0.14	0.15		0.03	0.18		c0.32	0.22		0.04	c0.12	
v/s Ratio Perm	c0.20		0.13	0.10					0.04			0.07
v/c Ratio	0.87	0.48	0.41	0.47	0.90		0.84	0.57	0.10	0.25	0.80	0.47
Uniform Delay, d1	53.1	48.7	47.3	51.5	67.9		48.8	42.5	34.5	65.1	71.4	67.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	20.8	0.3	0.6	1.3	10.2		6.3	1.7	0.3	2.2	11.5	6.3
Delay (s)	73.9	49.0	47.9	52.8	78.1		55.1	44.3	34.8	67.3	82.9	73.8
Level of Service	E	D	D	D	E		E	D	C	E	F	E
Approach Delay (s)		53.5			75.0			49.7			78.1	
Approach LOS		D			E			D			E	

Intersection Summary			
HCM Average Control Delay	60.1	HCM Level of Service	E
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	175.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	373	889	1082	0	0	1127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	0.97	0.91	0.91			0.86
Frpb, ped/bikes	0.99	0.98	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	0.92	0.85	1.00			1.00
Flt Protected	0.98	1.00	1.00			1.00
Satd. Flow (prot)	3246	1430	5136			6471
Flt Permitted	0.98	1.00	1.00			1.00
Satd. Flow (perm)	3246	1430	5136			6471
Peak-hour factor, PHF	0.95	0.95	0.97	0.92	0.92	0.94
Adj. Flow (vph)	393	936	1115	0	0	1199
RTOR Reduction (vph)	12	12	0	0	0	0
Lane Group Flow (vph)	849	456	1115	0	0	1199
Confl. Peds. (#/hr)	2	2				
Heavy Vehicles (%)	1%	1%	1%	2%	2%	1%
Turn Type		Perm				
Protected Phases	8		2			6
Permitted Phases		8				
Actuated Green, G (s)	59.4	59.4	77.6			77.6
Effective Green, g (s)	59.4	59.4	77.6			77.6
Actuated g/C Ratio	0.41	0.41	0.54			0.54
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	1330	586	2749			3463
v/s Ratio Prot	0.26		c0.22			0.19
v/s Ratio Perm		c0.32				
v/c Ratio	0.64	0.78	0.41			0.35
Uniform Delay, d1	34.2	37.1	20.0			19.2
Progression Factor	1.00	1.00	0.96			1.00
Incremental Delay, d2	1.0	6.5	0.4			0.3
Delay (s)	35.2	43.6	19.6			19.5
Level of Service	D	D	B			B
Approach Delay (s)	38.2		19.6			19.5
Approach LOS	D		B			B

Intersection Summary			
HCM Average Control Delay	26.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	145.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	1161	350	465	1084
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0
Lane Util. Factor			0.91		0.97	0.91
Frpb, ped/bikes			1.00		1.00	1.00
Flpb, ped/bikes			1.00		1.00	1.00
Frt			0.97		1.00	1.00
Flt Protected			1.00		0.95	1.00
Satd. Flow (prot)			4937		3467	5136
Flt Permitted			1.00		0.95	1.00
Satd. Flow (perm)			4937		3467	5136
Peak-hour factor, PHF	0.92	0.92	0.91	0.91	0.96	0.96
Adj. Flow (vph)	0	0	1276	385	484	1129
RTOR Reduction (vph)	0	0	24	0	0	0
Lane Group Flow (vph)	0	0	1637	0	484	1129
Confl. Peds. (#/hr)				2	4	
Heavy Vehicles (%)	2%	2%	1%	1%	1%	1%
Turn Type					Prot	
Protected Phases			2		1	6
Permitted Phases						
Actuated Green, G (s)			111.1		25.9	145.0
Effective Green, g (s)			111.1		25.9	145.0
Actuated g/C Ratio			0.77		0.18	1.00
Clearance Time (s)			4.0		4.0	4.0
Vehicle Extension (s)			3.0		3.0	3.0
Lane Grp Cap (vph)			3783		619	5136
v/s Ratio Prot			c0.33		c0.14	0.22
v/s Ratio Perm						
v/c Ratio			0.43		0.78	0.22
Uniform Delay, d1			5.9		56.9	0.0
Progression Factor			1.00		0.79	1.00
Incremental Delay, d2			0.4		6.1	0.1
Delay (s)			6.3		51.0	0.1
Level of Service			A		D	A
Approach Delay (s)	0.0		6.3			15.4
Approach LOS	A		A			B

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	145.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

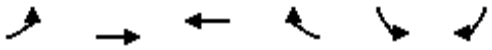
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	0	1	252	2	208	5	1145	74	90	1094	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.93			0.94			0.99			1.00	
Flt Protected		0.98			0.97			1.00			1.00	
Satd. Flow (prot)		1709			1701			3501			3528	
Flt Permitted		0.93			0.83			0.95			0.61	
Satd. Flow (perm)		1621			1449			3326			2172	
Peak-hour factor, PHF	0.75	0.75	0.75	0.94	0.94	0.94	0.99	0.99	0.99	0.95	0.95	0.95
Adj. Flow (vph)	1	0	1	268	2	221	5	1157	75	95	1152	1
RTOR Reduction (vph)	0	1	0	0	19	0	0	3	0	0	0	0
Lane Group Flow (vph)	0	1	0	0	472	0	0	1234	0	0	1248	0
Confl. Peds. (#/hr)	4		4	2		2	4		4			
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	2%	1%	1%	2%	0%
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		49.8			49.8			92.2			92.2	
Effective Green, g (s)		49.8			49.8			92.2			92.2	
Actuated g/C Ratio		0.33			0.33			0.61			0.61	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		538			481			2044			1335	
v/s Ratio Prot												
v/s Ratio Perm		0.00			c0.33			0.37			c0.57	
v/c Ratio		0.00			0.98			0.60			0.93	
Uniform Delay, d1		33.5			49.6			17.7			26.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.0			35.8			1.3			12.1	
Delay (s)		33.5			85.5			19.0			38.3	
Level of Service		C			F			B			D	
Approach Delay (s)		33.5			85.5			19.0			38.3	
Approach LOS		C			F			B			D	

Intersection Summary			
HCM Average Control Delay	38.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	110.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	180	263	47	226	442	331	102	620	64	354	657	297
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1724		1787	1863	1599	1752	3517		1752	3384	
Flt Permitted	0.10	1.00		0.26	1.00	1.00	0.19	1.00		0.12	1.00	
Satd. Flow (perm)	190	1724		491	1863	1599	343	3517		217	3384	
Peak-hour factor, PHF	0.91	0.91	0.91	0.87	0.87	0.87	0.87	0.87	0.87	0.85	0.85	0.85
Adj. Flow (vph)	198	289	52	260	508	380	117	713	74	416	773	349
RTOR Reduction (vph)	0	5	0	0	0	24	0	6	0	0	36	0
Lane Group Flow (vph)	198	336	0	260	508	356	117	781	0	416	1086	0
Heavy Vehicles (%)	3%	6%	17%	1%	2%	1%	3%	1%	3%	3%	2%	1%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	50.8	38.8		54.8	40.8	71.5	48.5	40.5		75.2	63.2	
Effective Green, g (s)	50.8	38.8		54.8	40.8	71.5	48.5	40.5		75.2	63.2	
Actuated g/C Ratio	0.36	0.28		0.39	0.29	0.51	0.35	0.29		0.54	0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	203	478		322	543	862	199	1017		453	1528	
v/s Ratio Prot	c0.08	0.19		c0.08	c0.27	0.09	0.03	0.22		c0.20	0.32	
v/s Ratio Perm	0.27			0.24		0.13	0.17			c0.29		
v/c Ratio	0.98	0.70		0.81	0.94	0.41	0.59	0.77		0.92	0.71	
Uniform Delay, d1	37.7	45.4		33.2	48.3	21.2	32.6	45.5		39.0	31.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	55.6	4.6		13.8	23.6	0.3	4.4	5.6		23.4	2.8	
Delay (s)	93.3	50.1		46.9	71.9	21.6	37.0	51.0		62.4	33.8	
Level of Service	F	D		D	E	C	D	D		E	C	
Approach Delay (s)		66.0			49.6			49.2			41.6	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM Average Control Delay	48.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.4%	ICU Level of Service	E
Analysis Period (min)	15		

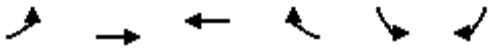
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	59	103	278	309	98	45
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.82	0.82	0.91	0.91
Hourly flow rate (vph)	69	120	339	377	108	49
Pedestrians		2	2			
Lane Width (ft)		12.0	12.0			
Walking Speed (ft/s)		4.0	4.0			
Percent Blockage		0	0			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			840			
pX, platoon unblocked						
vC, conflicting volume	716				786	529
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	716				786	529
tC, single (s)	4.1				6.5	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.3
p0 queue free %	92				67	91
cM capacity (veh/h)	894				325	543

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	188	716	108	49
Volume Left	69	0	108	0
Volume Right	0	377	0	49
cSH	894	1700	325	543
Volume to Capacity	0.08	0.42	0.33	0.09
Queue Length 95th (ft)	6	0	35	7
Control Delay (s)	3.9	0.0	21.5	12.3
Lane LOS	A		C	B
Approach Delay (s)	3.9	0.0	18.6	
Approach LOS			C	

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	16	150	271	45	18	31
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.85	0.85	0.96	0.96	0.85	0.85
Hourly flow rate (vph)	19	176	282	47	21	36
Pedestrians		2	2		4	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	333				526	312
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	333				526	312
tC, single (s)	4.1				6.4	6.3
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.4
p0 queue free %	98				96	95
cM capacity (veh/h)	1233				505	707

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	195	329	58
Volume Left	19	0	21
Volume Right	0	47	36
cSH	1233	1700	616
Volume to Capacity	0.02	0.19	0.09
Queue Length 95th (ft)	1	0	8
Control Delay (s)	0.9	0.0	11.4
Lane LOS	A		B
Approach Delay (s)	0.9	0.0	11.4
Approach LOS			B

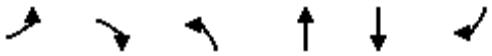
Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	31.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (veh/h)	1419	43	80	1051	19	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.97	0.97	0.95	0.95	0.79	0.92
Hourly flow rate (vph)	1463	44	84	1106	24	0
Pedestrians	3				2	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	872			236		
pX, platoon unblocked			0.90		0.90	0.90
vC, conflicting volume			1509		2027	512
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1180		1755	72
tC, single (s)			4.2		6.9	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.3
p0 queue free %			84		57	100
cM capacity (veh/h)			523		56	877

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4	SW 1
Volume Total	585	585	337	84	369	369	369	24
Volume Left	0	0	0	84	0	0	0	24
Volume Right	0	0	44	0	0	0	0	0
cSH	1700	1700	1700	523	1700	1700	1700	56
Volume to Capacity	0.34	0.34	0.20	0.16	0.22	0.22	0.22	0.43
Queue Length 95th (ft)	0	0	0	14	0	0	0	41
Control Delay (s)	0.0	0.0	0.0	13.2	0.0	0.0	0.0	112.2
Lane LOS				B				F
Approach Delay (s)	0.0			0.9				112.2
Approach LOS								F

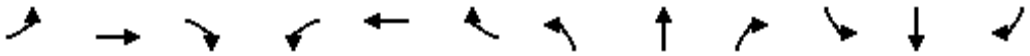
Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	46.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	131	52	90	315	290	319
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.82	0.82	0.99	0.99	0.95	0.95
Hourly flow rate (vph)	160	63	91	318	305	336
Pedestrians	8			11	11	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			1	1	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	833	340	649			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	833	340	649			
tC, single (s)	6.9	7.1	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.2			
p0 queue free %	41	90	90			
cM capacity (veh/h)	271	629	933			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	223	197	212	204	438
Volume Left	160	91	0	0	0
Volume Right	63	0	0	0	336
cSH	323	933	1700	1700	1700
Volume to Capacity	0.69	0.10	0.12	0.12	0.26
Queue Length 95th (ft)	121	8	0	0	0
Control Delay (s)	37.6	4.8	0.0	0.0	0.0
Lane LOS	E	A			
Approach Delay (s)	37.6	2.3		0.0	
Approach LOS	E				

Intersection Summary			
Average Delay	7.3		
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	2	116	27	19	59	13	35	7	21	1	1	2
Peak Hour Factor	0.86	0.86	0.86	0.89	0.89	0.89	0.73	0.73	0.73	0.75	0.75	0.75
Hourly flow rate (vph)	2	135	31	21	66	15	48	10	29	1	1	3

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	169	102	86	5
Volume Left (vph)	2	21	48	1
Volume Right (vph)	31	15	29	3
Hadj (s)	-0.06	0.03	-0.09	-0.25
Departure Headway (s)	4.2	4.3	4.4	4.4
Degree Utilization, x	0.20	0.12	0.11	0.01
Capacity (veh/h)	841	808	765	760
Control Delay (s)	8.2	7.9	7.9	7.4
Approach Delay (s)	8.2	7.9	7.9	7.4
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.0			
HCM Level of Service	A			
Intersection Capacity Utilization	30.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	98	1419	0	0	1131
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.91	0.97	0.92	0.92	0.95
Hourly flow rate (vph)	0	108	1463	0	0	1191
Pedestrians	2					3
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			983			125
pX, platoon unblocked	0.94	0.94			0.94	
vC, conflicting volume	1862	493			1465	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1687	227			1264	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	85			100	
cM capacity (veh/h)	79	727			511	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	108	488	488	488	397	397	397
Volume Left	0	0	0	0	0	0	0
Volume Right	108	0	0	0	0	0	0
cSH	727	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.15	0.29	0.29	0.29	0.23	0.23	0.23
Queue Length 95th (ft)	13	0	0	0	0	0	0
Control Delay (s)	10.8	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	10.8	0.0			0.0		
Approach LOS	B						

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	41.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	17	19	11	16	6	10	704	6	1	1120	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			0.95	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.98			1.00			1.00	
Flt Protected		0.98			0.98			1.00			1.00	
Satd. Flow (prot)		1770			1814			1878			3602	
Flt Permitted		0.88			0.92			0.98			0.95	
Satd. Flow (perm)		1583			1691			1847			3440	
Peak-hour factor, PHF	0.94	0.94	0.94	0.82	0.82	0.82	0.89	0.89	0.89	0.97	0.97	0.97
Adj. Flow (vph)	23	18	20	13	20	7	11	791	7	1	1155	14
RTOR Reduction (vph)	0	19	0	0	6	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	42	0	0	34	0	0	809	0	0	1169	0
Confl. Peds. (#/hr)	2		2	3		3	4		4	1		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		5.9			5.9			66.1			66.1	
Effective Green, g (s)		5.9			5.9			66.1			66.1	
Actuated g/C Ratio		0.07			0.07			0.83			0.83	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		117			125			1526			2842	
v/s Ratio Prot												
v/s Ratio Perm		c0.03			0.02			c0.44			0.34	
v/c Ratio		0.36			0.27			0.53			0.41	
Uniform Delay, d1		35.3			35.0			2.1			1.8	
Progression Factor		1.00			0.98			0.16			1.00	
Incremental Delay, d2		1.9			1.1			1.1			0.4	
Delay (s)		37.2			35.3			1.4			2.3	
Level of Service		D			D			A			A	
Approach Delay (s)		37.2			35.3			1.4			2.3	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	3.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	7	3	11	772	563	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	0.95	
Frpb, ped/bikes	1.00			1.00	1.00	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.96			1.00	0.99	
Flt Protected	0.97			1.00	1.00	
Satd. Flow (prot)	1746			1880	3552	
Flt Permitted	0.97			0.99	1.00	
Satd. Flow (perm)	1746			1866	3552	
Peak-hour factor, PHF	0.75	0.75	0.97	0.97	0.94	0.94
Adj. Flow (vph)	9	4	11	796	599	24
RTOR Reduction (vph)	4	0	0	0	3	0
Lane Group Flow (vph)	9	0	0	807	620	0
Confl. Peds. (#/hr)	2	2	2			2
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	0.8			71.2	71.2	
Effective Green, g (s)	0.8			71.2	71.2	
Actuated g/C Ratio	0.01			0.89	0.89	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	17			1661	3161	
v/s Ratio Prot	c0.01				0.17	
v/s Ratio Perm				c0.43		
v/c Ratio	0.53			0.49	0.20	
Uniform Delay, d1	39.4			0.9	0.6	
Progression Factor	0.41			0.60	1.00	
Incremental Delay, d2	26.8			0.8	0.1	
Delay (s)	42.9			1.3	0.7	
Level of Service	D			A	A	
Approach Delay (s)	42.9			1.3	0.7	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	1.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	735	752	0	1152	555	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		0.95	0.97	
Frpb, ped/bikes	1.00	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		1.00	0.95	
Satd. Flow (prot)	1881	1559		3574	3502	
Flt Permitted	1.00	1.00		1.00	0.95	
Satd. Flow (perm)	1881	1559		3574	3502	
Peak-hour factor, PHF	0.95	0.95	0.92	0.93	0.92	0.92
Adj. Flow (vph)	774	792	0	1239	603	0
RTOR Reduction (vph)	0	260	0	0	0	0
Lane Group Flow (vph)	774	532	0	1239	603	0
Confl. Peds. (#/hr)		2	1		1	
Heavy Vehicles (%)	1%	1%	2%	1%	0%	2%
Turn Type		Perm				
Protected Phases	2			6	8	
Permitted Phases		2				
Actuated Green, G (s)	53.7	53.7		53.7	18.3	
Effective Green, g (s)	53.7	53.7		53.7	18.3	
Actuated g/C Ratio	0.67	0.67		0.67	0.23	
Clearance Time (s)	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	1263	1046		2399	801	
v/s Ratio Prot	c0.41			0.35	c0.17	
v/s Ratio Perm		0.34				
v/c Ratio	0.61	0.51		0.52	0.75	
Uniform Delay, d1	7.3	6.6		6.6	28.7	
Progression Factor	1.00	1.00		0.77	0.99	
Incremental Delay, d2	2.2	1.8		0.8	4.0	
Delay (s)	9.6	8.3		5.8	32.4	
Level of Service	A	A		A	C	
Approach Delay (s)	8.9			5.8	32.4	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	90	1456	171	218	1055	372	320	701	293	222	501	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		0.97	0.95		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.96		1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	5047		3467	3447		1805	4835		1770	4880	
Flt Permitted	0.06	1.00		0.95	1.00		0.16	1.00		0.15	1.00	
Satd. Flow (perm)	123	5047		3467	3447		313	4835		274	4880	
Peak-hour factor, PHF	0.94	0.94	0.94	0.99	0.99	0.99	0.97	0.97	0.97	0.90	0.90	0.90
Adj. Flow (vph)	96	1549	182	220	1066	376	330	723	302	247	557	114
RTOR Reduction (vph)	0	11	0	0	25	0	0	53	0	0	22	0
Lane Group Flow (vph)	96	1720	0	220	1417	0	330	972	0	247	649	0
Confl. Peds. (#/hr)	1		1	1		1	19		19	12		12
Heavy Vehicles (%)	0%	1%	1%	1%	0%	1%	0%	1%	0%	2%	3%	2%
Turn Type	pm+pt			Prot			pm+pt			pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6						4			8		
Actuated Green, G (s)	69.0	62.0		11.0	66.0		55.0	32.7		45.5	27.2	
Effective Green, g (s)	69.0	62.0		11.0	66.0		55.0	32.7		45.5	27.2	
Actuated g/C Ratio	0.49	0.44		0.08	0.47		0.39	0.23		0.32	0.19	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	145	2235		272	1625		377	1129		285	948	
v/s Ratio Prot	0.03	0.34		c0.06	c0.41		c0.15	0.20		0.11	0.13	
v/s Ratio Perm	0.29						c0.19			0.17		
v/c Ratio	0.66	0.77		0.81	0.87		0.88	0.86		0.87	0.68	
Uniform Delay, d1	28.5	33.0		63.5	33.2		34.8	51.5		38.8	52.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.8	2.6		16.0	6.7		19.7	8.7		23.0	2.1	
Delay (s)	39.3	35.6		79.5	39.9		54.5	60.1		61.8	54.5	
Level of Service	D	D		E	D		D	E		E	D	
Approach Delay (s)		35.8			45.2			58.8			56.5	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM Average Control Delay	47.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	1850	14	56	1487	22	176
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	5079		1805	3539	1805	1553
Flt Permitted	1.00		0.07	1.00	0.95	1.00
Satd. Flow (perm)	5079		129	3539	1805	1553
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.64	0.64
Adj. Flow (vph)	1888	14	57	1517	34	275
RTOR Reduction (vph)	1	0	0	0	0	17
Lane Group Flow (vph)	1901	0	57	1517	34	258
Confl. Peds. (#/hr)		6	1		7	7
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Turn Type			Perm			Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	79.1		79.1	79.1	42.9	42.9
Effective Green, g (s)	79.1		79.1	79.1	42.9	42.9
Actuated g/C Ratio	0.61		0.61	0.61	0.33	0.33
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3090		78	2153	596	512
v/s Ratio Prot	0.37			0.43	0.02	
v/s Ratio Perm			c0.44			c0.17
v/c Ratio	0.62		0.73	0.70	0.06	0.50
Uniform Delay, d1	15.9		17.9	17.4	29.7	35.0
Progression Factor	1.00		0.55	0.53	1.00	1.00
Incremental Delay, d2	0.4		23.4	0.8	0.2	3.5
Delay (s)	16.3		33.2	10.0	29.9	38.5
Level of Service	B		C	A	C	D
Approach Delay (s)	16.3			10.8	37.5	
Approach LOS	B			B	D	

Intersection Summary			
HCM Average Control Delay	15.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	1774	442	462	1194	0	0	0	0	957	287	367
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.99	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		6471	1599	3433	3610					1643	3138	1445
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		6471	1599	3433	3610					1643	3138	1445
Peak-hour factor, PHF	0.92	0.98	0.98	0.92	0.92	0.92	0.92	0.92	0.92	0.97	0.97	0.97
Adj. Flow (vph)	0	1810	451	502	1298	0	0	0	0	987	296	378
RTOR Reduction (vph)	0	0	191	0	0	0	0	0	0	0	2	27
Lane Group Flow (vph)	0	1810	260	502	1298	0	0	0	0	493	826	313
Confl. Peds. (#/hr)										2		2
Heavy Vehicles (%)	0%	1%	1%	2%	0%	0%	0%	0%	0%	0%	1%	0%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		43.0	43.0	24.0	71.0					51.0	51.0	51.0
Effective Green, g (s)		43.0	43.0	24.0	71.0					51.0	51.0	51.0
Actuated g/C Ratio		0.33	0.33	0.18	0.55					0.39	0.39	0.39
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2140	529	634	1972					645	1231	567
v/s Ratio Prot		c0.28		c0.15	0.36					c0.30	0.26	
v/s Ratio Perm			0.16									0.22
v/c Ratio		0.85	0.49	0.79	0.66					0.76	0.67	0.55
Uniform Delay, d1		40.4	34.8	50.6	20.9					34.3	32.6	30.6
Progression Factor		0.70	0.46	1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		3.8	2.8	6.7	1.7					5.4	1.5	1.2
Delay (s)		31.9	18.8	57.3	22.6					39.7	34.0	31.8
Level of Service		C	B	E	C					D	C	C
Approach Delay (s)		29.3			32.3			0.0			35.2	
Approach LOS		C			C			A			D	

Intersection Summary			
HCM Average Control Delay	32.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	240	628	955	1614	0	0	1343	744	0	0	469
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.95			0.86	1.00			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1787	2814	3502	3610			6536	1599			1619
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1787	2814	3502	3610			6536	1599			1619
Peak-hour factor, PHF	0.92	0.92	0.97	0.97	0.92	0.92	0.98	0.98	0.92	0.92	0.84
Adj. Flow (vph)	261	683	985	1664	0	0	1370	759	0	0	558
RTOR Reduction (vph)	0	75	0	0	0	0	0	52	0	0	340
Lane Group Flow (vph)	261	608	985	1664	0	0	1370	707	0	0	218
Confl. Peds. (#/hr)	1	1	1								1
Heavy Vehicles (%)	1%	1%	0%	0%	2%	2%	0%	1%	2%	2%	0%
Turn Type		Prot	Prot					Perm			custom
Protected Phases	4	4	1	6			2				
Permitted Phases								2			8
Actuated Green, G (s)	31.0	31.0	41.0	111.0			66.0	66.0			31.0
Effective Green, g (s)	31.0	31.0	41.0	111.0			66.0	66.0			31.0
Actuated g/C Ratio	0.21	0.21	0.27	0.74			0.44	0.44			0.21
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	369	582	957	2671			2876	704			335
v/s Ratio Prot	0.15	c0.22	c0.28	0.46			0.21				
v/s Ratio Perm								c0.44			0.13
v/c Ratio	0.71	1.05	1.03	0.62			0.48	1.00			0.65
Uniform Delay, d1	55.3	59.5	54.5	9.4			29.8	42.0			54.6
Progression Factor	1.00	1.00	1.00	1.00			0.98	1.02			1.00
Incremental Delay, d2	6.1	49.7	36.8	1.1			0.5	32.7			4.5
Delay (s)	61.4	109.2	91.3	10.5			29.7	75.7			59.1
Level of Service	E	F	F	B			C	E			E
Approach Delay (s)	96.0			40.6			46.1		59.1		
Approach LOS	F			D			D		E		

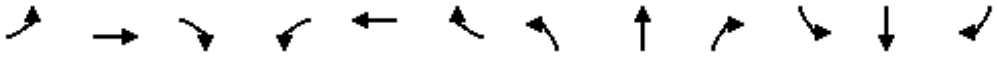
Intersection Summary			
HCM Average Control Delay	52.4	HCM Level of Service	D
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	374	35	100	36	44	127	62	1937	413	65	1416	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.99	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1743	1513	1805	1900	1591	1770	5136	1558	1805	5181	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.12	1.00	1.00	0.05	1.00	
Satd. Flow (perm)	3433	1743	1513	1805	1900	1591	228	5136	1558	102	5181	
Peak-hour factor, PHF	0.93	0.93	0.93	0.73	0.73	0.73	0.95	0.95	0.95	0.94	0.94	0.94
Adj. Flow (vph)	402	38	108	49	60	174	65	2039	435	69	1506	10
RTOR Reduction (vph)	0	0	92	0	0	81	0	0	126	0	0	0
Lane Group Flow (vph)	402	38	16	49	60	93	65	2039	309	69	1516	0
Confl. Peds. (#/hr)	5		5	1		1	5		5	4		4
Heavy Vehicles (%)	2%	9%	4%	0%	0%	0%	2%	1%	1%	0%	0%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		Perm	pm+pt		
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	22.7	22.7	22.7	13.5	13.5	13.5	97.3	91.7	91.7	98.3	92.2	
Effective Green, g (s)	22.7	22.7	22.7	13.5	13.5	13.5	97.3	91.7	91.7	98.3	92.2	
Actuated g/C Ratio	0.15	0.15	0.15	0.09	0.09	0.09	0.65	0.61	0.61	0.66	0.61	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	520	264	229	162	171	143	205	3140	952	136	3185	
v/s Ratio Prot	c0.12	0.02		0.03	0.03		0.01	c0.40		c0.02	0.29	
v/s Ratio Perm			0.01			c0.06	0.19		0.20	0.31		
v/c Ratio	0.77	0.14	0.07	0.30	0.35	0.65	0.32	0.65	0.32	0.51	0.48	
Uniform Delay, d1	61.2	55.2	54.6	63.8	64.1	66.0	11.5	18.8	14.1	17.2	15.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.86	1.00	0.79	1.00	1.00	
Incremental Delay, d2	7.0	0.3	0.1	1.1	1.2	10.1	0.6	0.8	0.6	3.0	0.5	
Delay (s)	68.2	55.5	54.7	64.9	65.4	76.1	10.6	19.6	11.8	20.2	16.3	
Level of Service	E	E	D	E	E	E	B	B	B	C	B	
Approach Delay (s)		64.7			71.9			18.1			16.4	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	475	512	66	112	227	111	329	1268	525	139	769	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	3479		1805	1900	1553	1805	3610	1599	1787	3555	
Flt Permitted	0.95	1.00		0.32	1.00	1.00	0.16	1.00	1.00	0.09	1.00	
Satd. Flow (perm)	3467	3479		600	1900	1553	313	3610	1599	164	3555	
Peak-hour factor, PHF	0.95	0.95	0.95	0.91	0.91	0.91	0.93	0.93	0.93	0.91	0.91	0.91
Adj. Flow (vph)	500	539	69	123	249	122	354	1363	565	153	845	34
RTOR Reduction (vph)	0	8	0	0	0	103	0	0	220	0	2	0
Lane Group Flow (vph)	500	600	0	123	249	19	354	1363	345	153	877	0
Confl. Peds. (#/hr)	2		2									
Heavy Vehicles (%)	1%	1%	8%	0%	0%	4%	0%	0%	1%	1%	1%	0%
Turn Type	Prot			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases				8		8	6		6	2		
Actuated Green, G (s)	22.2	33.7		30.7	21.1	21.1	79.7	65.5	65.5	63.7	53.5	
Effective Green, g (s)	22.2	33.7		30.7	21.1	21.1	79.7	65.5	65.5	63.7	53.5	
Actuated g/C Ratio	0.16	0.25		0.23	0.16	0.16	0.59	0.49	0.49	0.47	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	570	868		222	297	243	430	1752	776	200	1409	
v/s Ratio Prot	c0.14	0.17		0.04	c0.13		c0.14	0.38		0.06	0.25	
v/s Ratio Perm				0.09		0.01	c0.35		0.22	0.30		
v/c Ratio	0.88	0.69		0.55	0.84	0.08	0.82	0.78	0.44	0.76	0.62	
Uniform Delay, d1	55.1	45.9		43.4	55.3	48.6	24.3	28.7	22.8	26.2	32.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	14.2	2.4		3.0	18.3	0.1	12.1	3.5	1.8	15.9	2.1	
Delay (s)	69.3	48.3		46.3	73.6	48.8	36.3	32.2	24.7	42.1	34.7	
Level of Service	E	D		D	E	D	D	C	C	D	C	
Approach Delay (s)		57.8			60.7			31.0			35.8	
Approach LOS		E			E			C			D	

Intersection Summary			
HCM Average Control Delay	41.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	135.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	224	626	205	128	306	88	187	629	74	66	932	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1805	3491		1805	3535	
Flt Permitted	0.31	1.00	1.00	0.11	1.00	1.00	0.16	1.00		0.34	1.00	
Satd. Flow (perm)	582	3574	1599	215	3574	1599	302	3491		642	3535	
Peak-hour factor, PHF	0.96	0.96	0.96	0.92	0.92	0.92	0.96	0.96	0.96	0.92	0.92	0.92
Adj. Flow (vph)	233	652	214	139	333	96	195	655	77	72	1013	87
RTOR Reduction (vph)	0	0	131	0	0	79	0	4	0	0	3	0
Lane Group Flow (vph)	233	652	83	139	333	17	195	728	0	72	1097	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	2%	0%	0%	1%	0%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	63.7	43.2	43.2	52.8	36.3	36.3	128.3	116.6		115.9	108.2	
Effective Green, g (s)	63.7	43.2	43.2	52.8	36.3	36.3	128.3	116.6		115.9	108.2	
Actuated g/C Ratio	0.32	0.22	0.22	0.26	0.18	0.18	0.64	0.58		0.58	0.54	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	326	772	345	186	649	290	315	2035		417	1912	
v/s Ratio Prot	c0.08	c0.18		0.06	0.09		c0.05	0.21		0.01	0.31	
v/s Ratio Perm	0.14		0.05	0.14		0.01	c0.35			0.09		
v/c Ratio	0.71	0.84	0.24	0.75	0.51	0.06	0.62	0.36		0.17	0.57	
Uniform Delay, d1	54.4	75.2	64.8	60.8	73.9	67.7	22.2	22.0		18.7	30.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	7.3	8.4	0.4	15.1	0.7	0.1	3.6	0.5		0.2	1.3	
Delay (s)	61.7	83.6	65.2	75.9	74.6	67.8	25.8	22.5		18.9	31.8	
Level of Service	E	F	E	E	E	E	C	C		B	C	
Approach Delay (s)		75.4			73.7			23.2			31.0	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM Average Control Delay	48.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	200.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	187	536	225	93	139	112	72	750	80	451	1440	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3450		1787	1881	1538	1752	3518		1805	3543	
Flt Permitted	0.44	1.00		0.18	1.00	1.00	0.10	1.00		0.12	1.00	
Satd. Flow (perm)	834	3450		336	1881	1538	186	3518		227	3543	
Peak-hour factor, PHF	0.92	0.92	0.92	0.94	0.94	0.94	0.95	0.95	0.95	0.98	0.98	0.98
Adj. Flow (vph)	203	583	245	99	148	119	76	789	84	460	1469	172
RTOR Reduction (vph)	0	38	0	0	0	97	0	7	0	0	7	0
Lane Group Flow (vph)	203	790	0	99	148	22	76	866	0	460	1634	0
Confl. Peds. (#/hr)							1		1	7		7
Heavy Vehicles (%)	1%	0%	0%	1%	1%	5%	3%	1%	1%	0%	0%	0%
Turn Type	pm+pt			pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	39.6	29.6		28.4	22.4	22.4	43.6	39.6		72.4	64.4	
Effective Green, g (s)	39.6	29.6		28.4	22.4	22.4	43.6	39.6		72.4	64.4	
Actuated g/C Ratio	0.33	0.25		0.24	0.19	0.19	0.36	0.33		0.60	0.54	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	380	851		152	351	287	120	1161		516	1901	
v/s Ratio Prot	c0.06	c0.23		0.03	0.08		0.02	0.25		c0.21	0.46	
v/s Ratio Perm	0.12			0.12		0.01	0.21			c0.32		
v/c Ratio	0.53	0.93		0.65	0.42	0.08	0.63	0.75		0.89	0.86	
Uniform Delay, d1	30.8	44.2		38.4	43.1	40.3	28.0	35.7		31.6	23.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.4	15.9		9.6	0.8	0.1	10.4	4.4		17.4	5.3	
Delay (s)	32.2	60.1		48.0	43.9	40.4	38.4	40.1		49.0	29.2	
Level of Service	C	E		D	D	D	D	D		D	C	
Approach Delay (s)		54.6			43.9			40.0			33.6	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM Average Control Delay	40.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	244	435	142	925	666	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.97	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1558	1719	1881	1881	1583
Flt Permitted	0.95	1.00	0.20	1.00	1.00	1.00
Satd. Flow (perm)	1770	1558	360	1881	1881	1583
Peak-hour factor, PHF	0.94	0.94	0.93	0.93	0.93	0.93
Adj. Flow (vph)	260	463	153	995	716	135
RTOR Reduction (vph)	0	226	0	0	0	62
Lane Group Flow (vph)	260	237	153	995	716	73
Confl. Peds. (#/hr)	3	3				
Heavy Vehicles (%)	2%	1%	5%	1%	1%	2%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	12.0	12.0	40.0	40.0	32.6	32.6
Effective Green, g (s)	12.0	12.0	40.0	40.0	32.6	32.6
Actuated g/C Ratio	0.20	0.20	0.67	0.67	0.54	0.54
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	354	312	317	1254	1022	860
v/s Ratio Prot	0.15		0.03	c0.53	0.38	
v/s Ratio Perm		c0.15	0.29			0.05
v/c Ratio	0.73	0.76	0.48	0.79	0.70	0.09
Uniform Delay, d1	22.5	22.6	7.1	7.1	10.1	6.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.7	10.4	1.2	5.2	4.0	0.2
Delay (s)	30.2	33.1	8.3	12.3	14.1	6.8
Level of Service	C	C	A	B	B	A
Approach Delay (s)	32.0			11.8	12.9	
Approach LOS	C			B	B	

Intersection Summary			
HCM Average Control Delay	17.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	369	76	211	365	75	110	694	165	101	822	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.94	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1671	1802		1805	1821		1787	1881	1437	1770	1863	1568
Flt Permitted	0.19	1.00		0.10	1.00		0.05	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)	335	1802		181	1821		96	1881	1437	329	1863	1568
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.97	0.97	0.97	0.93	0.93	0.93
Adj. Flow (vph)	78	384	79	220	380	78	113	715	170	109	884	62
RTOR Reduction (vph)	0	5	0	0	5	0	0	0	63	0	0	18
Lane Group Flow (vph)	78	458	0	220	453	0	113	715	107	109	884	44
Confl. Peds. (#/hr)	7		7	4		4	8		8	2		2
Heavy Vehicles (%)	8%	2%	1%	0%	1%	1%	1%	1%	6%	2%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	44.0	38.0		56.0	46.0		83.0	78.0	78.0	81.0	77.0	77.0
Effective Green, g (s)	44.0	38.0		56.0	46.0		83.0	78.0	78.0	81.0	77.0	77.0
Actuated g/C Ratio	0.29	0.25		0.37	0.31		0.55	0.52	0.52	0.54	0.51	0.51
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	152	457		219	558		109	978	747	216	956	805
v/s Ratio Prot	0.02	0.25		c0.09	0.25		c0.03	0.38		0.01	0.47	
v/s Ratio Perm	0.13			c0.28			c0.53		0.07	0.26		0.03
v/c Ratio	0.51	1.00		1.00	0.81		1.04	0.73	0.14	0.50	0.92	0.05
Uniform Delay, d1	41.3	56.0		44.2	48.0		38.1	27.9	18.7	26.7	33.8	18.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.9	42.5		62.0	8.8		96.4	4.8	0.4	1.9	15.8	0.1
Delay (s)	44.2	98.5		106.2	56.8		134.5	32.7	19.1	28.5	49.6	18.4
Level of Service	D	F		F	E		F	C	B	C	D	B
Approach Delay (s)		90.7			72.8			41.9			45.6	
Approach LOS		F			E			D			D	

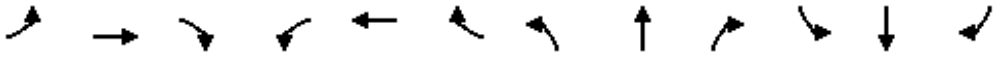
Intersection Summary			
HCM Average Control Delay	57.6	HCM Level of Service	E
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	98.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	0	1	346	6	661	0	788	258	373	930	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00		0.95	1.00	1.00	0.95	
Frpb, ped/bikes		0.99			1.00	0.96		1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00			0.98	1.00		1.00	1.00	1.00	1.00	
Frt		0.93			1.00	0.85		1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.95	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1714			1749	1540		3574	1572	1752	3539	
Flt Permitted		0.91			0.73	1.00		1.00	1.00	0.14	1.00	
Satd. Flow (perm)		1603			1335	1540		3574	1572	250	3539	
Peak-hour factor, PHF	0.50	0.50	0.50	0.94	0.94	0.94	0.89	0.89	0.89	0.97	0.97	0.97
Adj. Flow (vph)	2	0	2	368	6	703	0	885	290	385	959	0
RTOR Reduction (vph)	0	1	0	0	0	312	0	0	189	0	0	0
Lane Group Flow (vph)	0	3	0	0	374	391	0	885	101	385	959	0
Confl. Peds. (#/hr)	2		2	15		15	3		3	7		7
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	1%	1%	3%	2%	0%
Turn Type	Perm			Perm		Perm	Perm		Perm	pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)		29.3			29.3	29.3		31.4	31.4	52.7	52.7	
Effective Green, g (s)		29.3			29.3	29.3		31.4	31.4	52.7	52.7	
Actuated g/C Ratio		0.33			0.33	0.33		0.35	0.35	0.59	0.59	
Clearance Time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		522			435	501		1247	548	435	2072	
v/s Ratio Prot								0.25		c0.17	0.27	
v/s Ratio Perm		0.00			c0.28	0.25			0.06	c0.35		
v/c Ratio		0.01			0.86	0.78		0.71	0.18	0.89	0.46	
Uniform Delay, d1		20.5			28.4	27.5		25.4	20.4	21.8	10.6	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0			15.5	7.8		3.4	0.7	18.9	0.7	
Delay (s)		20.5			43.9	35.2		28.8	21.1	40.7	11.3	
Level of Service		C			D	D		C	C	D	B	
Approach Delay (s)		20.5			38.2			26.9			19.7	
Approach LOS		C			D			C			B	

Intersection Summary			
HCM Average Control Delay	27.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	554	83	24	71	52	28	35	637	49	68	989	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00			1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99			1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	0.97			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1698	1713			1847	1418	1805	3496		1752	3574	
Flt Permitted	0.95	0.97			0.97	1.00	0.17	1.00		0.29	1.00	
Satd. Flow (perm)	1698	1713			1847	1418	317	3496		533	3574	
Peak-hour factor, PHF	0.92	0.92	0.92	0.83	0.83	0.83	0.92	0.92	0.92	0.95	0.95	0.92
Adj. Flow (vph)	602	90	26	86	63	34	38	692	53	72	1041	0
RTOR Reduction (vph)	0	4	0	0	0	30	0	5	0	0	0	0
Lane Group Flow (vph)	361	353	0	0	149	4	38	740	0	72	1041	0
Confl. Peds. (#/hr)	2		2	2		2	1		1			
Heavy Vehicles (%)	1%	0%	0%	0%	0%	11%	0%	2%	2%	3%	1%	0%
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases						8	2			6		
Actuated Green, G (s)	24.0	24.0			11.4	11.4	42.6	42.6		42.6	42.6	
Effective Green, g (s)	24.0	24.0			11.4	11.4	42.6	42.6		42.6	42.6	
Actuated g/C Ratio	0.27	0.27			0.13	0.13	0.47	0.47		0.47	0.47	
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	453	457			234	180	150	1655		252	1692	
v/s Ratio Prot	c0.21	0.21			c0.08			0.21			c0.29	
v/s Ratio Perm						0.00	0.12			0.13		
v/c Ratio	0.80	0.77			0.64	0.02	0.25	0.45		0.29	0.62	
Uniform Delay, d1	30.7	30.5			37.3	34.4	14.2	15.8		14.4	17.6	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	9.4	7.9			5.6	0.1	4.0	0.9		2.8	1.7	
Delay (s)	40.1	38.4			42.9	34.5	18.2	16.7		17.3	19.3	
Level of Service	D	D			D	C	B	B		B	B	
Approach Delay (s)		39.3			41.3			16.8			19.2	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	343	738	779	184	657	124	818	708	200	68	847	229
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.97	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	3610	1615	1787	4998		3467	3610	1583	1770	3574	1585
Flt Permitted	0.11	1.00	1.00	0.23	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	211	3610	1615	427	4998		3467	3610	1583	1770	3574	1585
Peak-hour factor, PHF	0.98	0.98	0.98	0.95	0.95	0.95	0.96	0.96	0.96	0.99	0.99	0.99
Adj. Flow (vph)	350	753	795	194	692	131	852	738	208	69	856	231
RTOR Reduction (vph)	0	0	376	0	16	0	0	0	120	0	0	116
Lane Group Flow (vph)	350	753	419	194	807	0	852	738	88	69	856	115
Confl. Peds. (#/hr)				2		2				2		2
Heavy Vehicles (%)	1%	0%	0%	1%	1%	1%	1%	0%	2%	2%	1%	0%
Turn Type	pm+pt		Perm	pm+pt			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4		4	8					2			6
Actuated Green, G (s)	67.7	50.7	50.7	44.6	31.6		51.3	51.3	51.3	44.0	44.0	44.0
Effective Green, g (s)	67.7	50.7	50.7	44.6	31.6		51.3	51.3	51.3	44.0	44.0	44.0
Actuated g/C Ratio	0.39	0.29	0.29	0.25	0.18		0.29	0.29	0.29	0.25	0.25	0.25
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	371	1046	468	210	902		1016	1058	464	445	899	399
v/s Ratio Prot	c0.17	0.21		0.07	0.16		c0.25	0.20		0.04	c0.24	
v/s Ratio Perm	c0.19		0.26	0.17					0.06			0.07
v/c Ratio	0.94	0.72	0.90	0.92	0.90		0.84	0.70	0.19	0.16	0.95	0.29
Uniform Delay, d1	55.0	55.8	59.6	57.8	70.1		58.0	55.0	46.3	51.0	64.5	52.9
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	32.3	2.4	19.3	41.2	11.3		8.3	3.8	0.9	0.7	20.4	1.8
Delay (s)	87.3	58.2	78.9	98.9	81.4		66.2	58.8	47.2	51.8	84.9	54.7
Level of Service	F	E	E	F	F		E	E	D	D	F	D
Approach Delay (s)		72.2			84.7			61.0			76.9	
Approach LOS		E			F			E			E	

Intersection Summary			
HCM Average Control Delay	71.9	HCM Level of Service	E
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	175.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	554	703	905	0	0	1731
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	0.97	0.91	0.91			0.86
Frpb, ped/bikes	0.99	0.98	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	0.95	0.85	1.00			1.00
Flt Protected	0.97	1.00	1.00			1.00
Satd. Flow (prot)	3327	1430	5136			6471
Flt Permitted	0.97	1.00	1.00			1.00
Satd. Flow (perm)	3327	1430	5136			6471
Peak-hour factor, PHF	0.96	0.96	0.96	0.92	0.92	0.98
Adj. Flow (vph)	577	732	943	0	0	1766
RTOR Reduction (vph)	44	44	0	0	0	0
Lane Group Flow (vph)	848	373	943	0	0	1766
Confl. Peds. (#/hr)	2	2				
Heavy Vehicles (%)	1%	1%	1%	2%	2%	1%
Turn Type		Perm				
Protected Phases	8		2			6
Permitted Phases		8				
Actuated Green, G (s)	49.4	49.4	87.6			87.6
Effective Green, g (s)	49.4	49.4	87.6			87.6
Actuated g/C Ratio	0.34	0.34	0.60			0.60
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	1133	487	3103			3909
v/s Ratio Prot	0.25		0.18			c0.27
v/s Ratio Perm		c0.26				
v/c Ratio	0.75	0.77	0.30			0.45
Uniform Delay, d1	42.3	42.7	13.9			15.6
Progression Factor	1.00	1.00	0.96			1.00
Incremental Delay, d2	2.8	7.1	0.2			0.4
Delay (s)	45.1	49.8	13.5			16.0
Level of Service	D	D	B			B
Approach Delay (s)	46.6		13.5			16.0
Approach LOS	D		B			B

Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	145.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

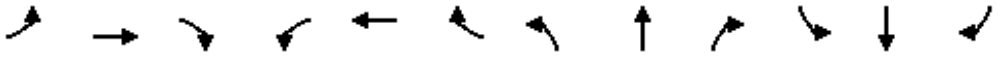


Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	895	442	780	1503
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0
Lane Util. Factor			0.91		0.97	0.91
Frpb, ped/bikes			0.99		1.00	1.00
Flpb, ped/bikes			1.00		1.00	1.00
Frt			0.95		1.00	1.00
Flt Protected			1.00		0.95	1.00
Satd. Flow (prot)			4849		3467	5136
Flt Permitted			1.00		0.95	1.00
Satd. Flow (perm)			4849		3467	5136
Peak-hour factor, PHF	0.92	0.92	0.96	0.96	0.99	0.99
Adj. Flow (vph)	0	0	932	460	788	1518
RTOR Reduction (vph)	0	0	34	0	0	0
Lane Group Flow (vph)	0	0	1358	0	788	1518
Confl. Peds. (#/hr)				3		
Heavy Vehicles (%)	2%	2%	1%	1%	1%	1%
Turn Type					Prot	
Protected Phases			2		1	6
Permitted Phases						
Actuated Green, G (s)			96.1		40.9	145.0
Effective Green, g (s)			96.1		40.9	145.0
Actuated g/C Ratio			0.66		0.28	1.00
Clearance Time (s)			4.0		4.0	4.0
Vehicle Extension (s)			3.0		3.0	3.0
Lane Grp Cap (vph)			3214		978	5136
v/s Ratio Prot			c0.28		c0.23	0.30
v/s Ratio Perm						
v/c Ratio			0.42		0.81	0.30
Uniform Delay, d1			11.5		48.4	0.0
Progression Factor			1.00		0.76	1.00
Incremental Delay, d2			0.4		4.4	0.1
Delay (s)			11.9		41.2	0.1
Level of Service			B		D	A
Approach Delay (s)	0.0		11.9			14.1
Approach LOS	A		B			B

Intersection Summary			
HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	145.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	3	2	169	5	93	0	1216	164	161	1268	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			0.99			1.00			1.00	
Frt		0.96			0.95			0.98			1.00	
Flt Protected		0.99			0.97			1.00			0.99	
Satd. Flow (prot)		1792			1707			3503			3554	
Flt Permitted		0.97			0.80			1.00			0.53	
Satd. Flow (perm)		1746			1403			3503			1897	
Peak-hour factor, PHF	0.31	0.31	0.31	0.84	0.84	0.84	0.94	0.94	0.94	0.93	0.93	0.93
Adj. Flow (vph)	3	10	6	201	6	111	0	1294	174	173	1363	0
RTOR Reduction (vph)	0	5	0	0	13	0	0	6	0	0	0	0
Lane Group Flow (vph)	0	14	0	0	305	0	0	1462	0	0	1536	0
Confl. Peds. (#/hr)	4		4	5		5	2		2	6		6
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	1%	0%	1%	1%	0%
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		29.0			29.0			113.0			113.0	
Effective Green, g (s)		29.0			29.0			113.0			113.0	
Actuated g/C Ratio		0.19			0.19			0.75			0.75	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		338			271			2639			1429	
v/s Ratio Prot								0.42				
v/s Ratio Perm		0.01			c0.22						c0.81	
v/c Ratio		0.04			1.13			0.55			1.07	
Uniform Delay, d1		49.2			60.5			7.8			18.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.1			92.9			0.8			46.7	
Delay (s)		49.3			153.4			8.7			65.2	
Level of Service		D			F			A			E	
Approach Delay (s)		49.3			153.4			8.7			65.2	
Approach LOS		D			F			A			E	

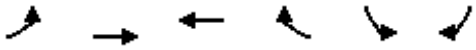
Intersection Summary			
HCM Average Control Delay	48.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	110.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	212	366	66	187	325	324	58	666	125	369	811	159
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	1802		1805	1863	1615	1752	3495		1805	3475	
Flt Permitted	0.27	1.00		0.10	1.00	1.00	0.26	1.00		0.09	1.00	
Satd. Flow (perm)	500	1802		189	1863	1615	485	3495		176	3475	
Peak-hour factor, PHF	0.88	0.88	0.88	0.91	0.91	0.91	0.89	0.89	0.89	0.98	0.98	0.98
Adj. Flow (vph)	241	416	75	205	357	356	65	748	140	377	828	162
RTOR Reduction (vph)	0	5	0	0	0	36	0	10	0	0	11	0
Lane Group Flow (vph)	241	486	0	205	357	320	65	878	0	377	979	0
Heavy Vehicles (%)	1%	3%	3%	0%	2%	0%	3%	1%	0%	0%	1%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	53.2	40.2		53.2	40.2	67.4	48.6	43.6		74.8	65.8	
Effective Green, g (s)	53.2	40.2		53.2	40.2	67.4	48.6	43.6		74.8	65.8	
Actuated g/C Ratio	0.38	0.29		0.38	0.29	0.48	0.35	0.31		0.53	0.47	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	310	517		222	535	824	214	1088		411	1633	
v/s Ratio Prot	0.07	c0.27		c0.09	0.19	0.08	0.01	0.25		c0.18	0.28	
v/s Ratio Perm	0.22			0.27		0.12	0.09			c0.31		
v/c Ratio	0.78	0.94		0.92	0.67	0.39	0.30	0.81		0.92	0.60	
Uniform Delay, d1	33.8	48.7		37.4	44.0	23.2	31.1	44.3		41.7	27.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	11.6	25.4		39.6	3.1	0.3	0.8	6.4		24.9	1.6	
Delay (s)	45.4	74.1		77.1	47.1	23.5	31.9	50.8		66.6	29.0	
Level of Service	D	E		E	D	C	C	D		E	C	
Approach Delay (s)		64.7			44.6			49.5			39.4	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM Average Control Delay	47.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.8%	ICU Level of Service	E
Analysis Period (min)	15		

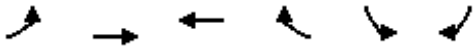
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	46	322	211	95	403	196
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.92	0.92	0.86	0.86
Hourly flow rate (vph)	51	354	229	103	469	228
Pedestrians		3	3		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			840			
pX, platoon unblocked						
vC, conflicting volume	335				741	286
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	335				741	286
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				0	70
cM capacity (veh/h)	1234				366	752

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	404	333	469	228
Volume Left	51	0	469	0
Volume Right	0	103	0	228
cSH	1234	1700	366	752
Volume to Capacity	0.04	0.20	1.28	0.30
Queue Length 95th (ft)	3	0	528	32
Control Delay (s)	1.4	0.0	175.5	11.9
Lane LOS	A		F	B
Approach Delay (s)	1.4	0.0	122.0	
Approach LOS			F	

Intersection Summary			
Average Delay	59.6		
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	15	257	341	16	100	70
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.91	0.91
Hourly flow rate (vph)	16	273	363	17	110	77
Pedestrians		4	4		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	382				683	377
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	382				683	377
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				73	89
cM capacity (veh/h)	1186				411	670

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	289	380	187
Volume Left	16	0	110
Volume Right	0	17	77
cSH	1186	1700	488
Volume to Capacity	0.01	0.22	0.38
Queue Length 95th (ft)	1	0	44
Control Delay (s)	0.6	0.0	16.9
Lane LOS	A		C
Approach Delay (s)	0.6	0.0	16.9
Approach LOS			C

Intersection Summary			
Average Delay	3.9		
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (veh/h)	1182	57	91	1372	54	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.97	0.97	0.98	0.98	0.90	0.92
Hourly flow rate (vph)	1219	59	93	1400	60	0
Pedestrians	4				1	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	872			236		
pX, platoon unblocked						
vC, conflicting volume			1278		1905	437
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1278		1905	437
tC, single (s)			4.1		6.9	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			83		0	100
cM capacity (veh/h)			544		49	567

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4	SW 1
Volume Total	487	487	302	93	467	467	467	60
Volume Left	0	0	0	93	0	0	0	60
Volume Right	0	0	59	0	0	0	0	0
cSH	1700	1700	1700	544	1700	1700	1700	49
Volume to Capacity	0.29	0.29	0.18	0.17	0.27	0.27	0.27	1.23
Queue Length 95th (ft)	0	0	0	15	0	0	0	137
Control Delay (s)	0.0	0.0	0.0	13.0	0.0	0.0	0.0	339.7
Lane LOS				B				F
Approach Delay (s)	0.0			0.8				339.7
Approach LOS								F

Intersection Summary			
Average Delay	7.6		
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	249	90	32	229	364	80
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.94	0.94	0.91	0.91
Hourly flow rate (vph)	286	103	34	244	400	88
Pedestrians	7			6	6	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	647	257	495			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	647	257	495			
tC, single (s)	6.8	7.0	4.4			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.3			
p0 queue free %	26	86	97			
cM capacity (veh/h)	388	731	986			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	390	115	162	267	221
Volume Left	286	34	0	0	0
Volume Right	103	0	0	0	88
cSH	443	986	1700	1700	1700
Volume to Capacity	0.88	0.03	0.10	0.16	0.13
Queue Length 95th (ft)	230	3	0	0	0
Control Delay (s)	48.9	2.8	0.0	0.0	0.0
Lane LOS	E	A			
Approach Delay (s)	48.9	1.2		0.0	
Approach LOS	E				

Intersection Summary				
Average Delay	16.8			
Intersection Capacity Utilization	49.5%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	49	59	72	99	4	17	1	8	10	3	3
Peak Hour Factor	0.86	0.86	0.86	0.81	0.81	0.81	0.68	0.68	0.68	0.71	0.71	0.71
Hourly flow rate (vph)	1	57	69	89	122	5	25	1	12	14	4	4

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	127	216	38	23
Volume Left (vph)	1	89	25	14
Volume Right (vph)	69	5	12	4
Hadj (s)	-0.29	0.09	0.01	0.01
Departure Headway (s)	4.0	4.3	4.7	4.7
Degree Utilization, x	0.14	0.26	0.05	0.03
Capacity (veh/h)	880	829	710	700
Control Delay (s)	7.6	8.7	7.9	7.8
Approach Delay (s)	7.6	8.7	7.9	7.8
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.3			
HCM Level of Service	A			
Intersection Capacity Utilization	26.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	130	1182	0	0	1463
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.88	0.97	0.92	0.92	0.98
Hourly flow rate (vph)	0	148	1219	0	0	1493
Pedestrians	1					4
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			983			125
pX, platoon unblocked						
vC, conflicting volume	1717	411			1220	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1717	411			1220	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	75			100	
cM capacity (veh/h)	81	590			567	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	148	406	406	406	498	498	498
Volume Left	0	0	0	0	0	0	0
Volume Right	148	0	0	0	0	0	0
cSH	590	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.25	0.24	0.24	0.24	0.29	0.29	0.29
Queue Length 95th (ft)	25	0	0	0	0	0	0
Control Delay (s)	13.1	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	13.1	0.0			0.0		
Approach LOS	B						

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	39.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	1050	332	564	1073	0	0	0	0	495	148	434
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00	0.98	1.00	1.00					1.00	0.99	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		6536	1588	3467	3574					1643	3006	1431
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.98	1.00
Satd. Flow (perm)		6536	1588	3467	3574					1643	3006	1431
Peak-hour factor, PHF	0.92	0.96	0.96	0.97	0.97	0.92	0.92	0.92	0.92	0.85	0.85	0.85
Adj. Flow (vph)	0	1094	346	581	1106	0	0	0	0	582	174	511
RTOR Reduction (vph)	0	0	264	0	0	0	0	0	0	0	40	50
Lane Group Flow (vph)	0	1094	82	581	1106	0	0	0	0	332	604	241
Confl. Peds. (#/hr)	2		2							2		2
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	1%	1%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		30.5	30.5	37.5	72.0					48.0	48.0	48.0
Effective Green, g (s)		30.5	30.5	37.5	72.0					48.0	48.0	48.0
Actuated g/C Ratio		0.24	0.24	0.29	0.56					0.38	0.38	0.38
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1557	378	1016	2010					616	1127	537
v/s Ratio Prot		c0.17		0.17	c0.31					c0.20	0.20	
v/s Ratio Perm			0.05									0.17
v/c Ratio		0.70	0.22	0.57	0.55					0.54	0.54	0.45
Uniform Delay, d1		44.6	39.2	38.4	17.7					31.3	31.3	30.1
Progression Factor		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		2.7	1.3	0.8	1.1					0.9	0.5	0.6
Delay (s)		47.3	40.5	39.2	18.8					32.2	31.8	30.7
Level of Service		D	D	D	B					C	C	C
Approach Delay (s)		45.6			25.9			0.0			31.6	
Approach LOS		D			C			A			C	

Intersection Summary			
HCM Average Control Delay	34.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	128.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	91	636	388	1131	0	0	1282	470	0	0	295
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.95			0.86	1.00			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1805	2814	3502	3574			6471	1583			1644
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1805	2814	3502	3574			6471	1583			1644
Peak-hour factor, PHF	0.93	0.93	0.97	0.97	0.92	0.92	0.98	0.98	0.92	0.92	0.92
Adj. Flow (vph)	98	684	400	1166	0	0	1308	480	0	0	321
RTOR Reduction (vph)	0	108	0	0	0	0	0	229	0	0	242
Lane Group Flow (vph)	98	576	400	1166	0	0	1308	251	0	0	79
Confl. Peds. (#/hr)	1	1	3		3						
Heavy Vehicles (%)	0%	1%	0%	1%	2%	2%	1%	2%	2%	2%	0%
Turn Type		Prot	Prot					Perm			custom
Protected Phases	4	4	1	6			2				
Permitted Phases								2			8
Actuated Green, G (s)	37.1	37.1	22.4	104.9			78.5	78.5			37.1
Effective Green, g (s)	37.1	37.1	22.4	104.9			78.5	78.5			37.1
Actuated g/C Ratio	0.25	0.25	0.15	0.70			0.52	0.52			0.25
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	446	696	523	2499			3386	828			407
v/s Ratio Prot	0.05	c0.20	c0.11	c0.33			0.20				
v/s Ratio Perm								0.16			0.05
v/c Ratio	0.22	0.83	0.76	0.47			0.39	0.30			0.20
Uniform Delay, d1	44.9	53.4	61.3	10.1			21.4	20.3			44.6
Progression Factor	1.00	1.00	1.00	1.00			0.78	4.28			1.00
Incremental Delay, d2	0.2	8.0	6.6	0.6			0.3	0.8			0.2
Delay (s)	45.2	61.5	67.8	10.7			17.0	87.5			44.9
Level of Service	D	E	E	B			B	F			D
Approach Delay (s)	59.4			25.3			35.9		44.9		
Approach LOS	E			C			D		D		

Intersection Summary			
HCM Average Control Delay	36.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	177	19	64	58	17	86	96	1549	103	40	1548	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1900	1530	1805	1900	1615	1805	5187	1582	1770	5130	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.11	1.00	1.00	0.11	1.00	
Satd. Flow (perm)	3433	1900	1530	1805	1900	1615	201	5187	1582	212	5130	
Peak-hour factor, PHF	0.92	0.92	0.92	0.94	0.94	0.94	0.93	0.93	0.93	0.94	0.94	0.94
Adj. Flow (vph)	192	21	70	62	18	91	103	1666	111	43	1647	14
RTOR Reduction (vph)	0	0	64	0	0	85	0	0	34	0	0	0
Lane Group Flow (vph)	192	21	6	62	18	6	103	1666	77	43	1661	0
Confl. Peds. (#/hr)	1		1				3		3			
Heavy Vehicles (%)	2%	0%	4%	0%	0%	0%	0%	0%	0%	2%	1%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		Perm	pm+pt		
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	13.7	13.7	13.7	10.5	10.5	10.5	112.6	104.5	104.5	107.0	101.7	
Effective Green, g (s)	13.7	13.7	13.7	10.5	10.5	10.5	112.6	104.5	104.5	107.0	101.7	
Actuated g/C Ratio	0.09	0.09	0.09	0.07	0.07	0.07	0.75	0.70	0.70	0.71	0.68	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	314	174	140	126	133	113	238	3614	1102	206	3478	
v/s Ratio Prot	c0.06	0.01		c0.03	0.01		c0.02	0.32		0.01	c0.32	
v/s Ratio Perm			0.00			0.00	0.30		0.05	0.14		
v/c Ratio	0.61	0.12	0.05	0.49	0.14	0.06	0.43	0.46	0.07	0.21	0.48	
Uniform Delay, d1	65.6	62.6	62.2	67.2	65.5	65.1	8.0	10.2	7.3	7.4	11.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.02	0.74	0.26	1.00	1.00	
Incremental Delay, d2	3.5	0.3	0.1	3.0	0.5	0.2	1.1	0.4	0.1	0.5	0.5	
Delay (s)	69.1	62.9	62.3	70.2	66.0	65.3	9.2	7.9	2.0	7.9	12.0	
Level of Service	E	E	E	E	E	E	A	A	A	A	B	
Approach Delay (s)		67.0			67.2			7.6			11.9	
Approach LOS		E			E			A			B	

Intersection Summary			
HCM Average Control Delay	16.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	472	337	133	90	333	260	224	819	371	175	853	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	3398		1787	1881	1599	1805	3574	1547	1787	3552	
Flt Permitted	0.95	1.00		0.46	1.00	1.00	0.12	1.00	1.00	0.19	1.00	
Satd. Flow (perm)	3467	3398		863	1881	1599	219	3574	1547	350	3552	
Peak-hour factor, PHF	0.90	0.90	0.90	0.91	0.91	0.91	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	524	374	148	99	366	286	243	890	403	186	907	38
RTOR Reduction (vph)	0	32	0	0	0	185	0	0	235	0	2	0
Lane Group Flow (vph)	524	490	0	99	366	101	243	890	168	186	943	0
Confl. Peds. (#/hr)							3		3	2		2
Heavy Vehicles (%)	1%	2%	1%	1%	1%	1%	0%	1%	1%	1%	1%	0%
Turn Type	Prot			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases				8		8	6		6	2		
Actuated Green, G (s)	23.2	46.8		35.6	29.6	29.6	70.2	53.3	53.3	61.9	49.0	
Effective Green, g (s)	23.2	46.8		35.6	29.6	29.6	70.2	53.3	53.3	61.9	49.0	
Actuated g/C Ratio	0.17	0.35		0.26	0.22	0.22	0.52	0.39	0.39	0.46	0.36	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	596	1178		269	412	351	316	1411	611	298	1289	
v/s Ratio Prot	c0.15	0.14		0.02	c0.19		c0.10	0.25		0.06	0.27	
v/s Ratio Perm				0.08		0.06	c0.30		0.11	0.23		
v/c Ratio	0.88	0.42		0.37	0.89	0.29	0.77	0.63	0.28	0.62	0.73	
Uniform Delay, d1	54.5	33.7		38.7	51.1	43.9	27.8	32.9	27.7	24.3	37.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	13.9	0.2		0.9	20.1	0.5	10.7	2.2	1.1	4.0	3.7	
Delay (s)	68.4	33.9		39.6	71.2	44.4	38.5	35.1	28.9	28.4	41.0	
Level of Service	E	C		D	E	D	D	D	C	C	D	
Approach Delay (s)		51.2			56.8			34.0			38.9	
Approach LOS		D			E			C			D	

Intersection Summary			
HCM Average Control Delay	43.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	135.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

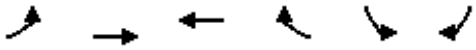


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	158	138	89	681	622	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1787	1564	1769	1881	1881	1599
Flt Permitted	0.95	1.00	0.26	1.00	1.00	1.00
Satd. Flow (perm)	1787	1564	475	1881	1881	1599
Peak-hour factor, PHF	0.92	0.92	0.93	0.93	0.94	0.94
Adj. Flow (vph)	172	150	96	732	662	159
RTOR Reduction (vph)	0	126	0	0	0	67
Lane Group Flow (vph)	172	25	96	732	662	92
Confl. Peds. (#/hr)	1	1	1			
Heavy Vehicles (%)	1%	1%	2%	1%	1%	1%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	9.8	9.8	42.2	42.2	34.6	34.6
Effective Green, g (s)	9.8	9.8	42.2	42.2	34.6	34.6
Actuated g/C Ratio	0.16	0.16	0.70	0.70	0.58	0.58
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	292	255	412	1323	1085	922
v/s Ratio Prot	c0.10		0.01	c0.39	c0.35	
v/s Ratio Perm		0.02	0.15			0.06
v/c Ratio	0.59	0.10	0.23	0.55	0.61	0.10
Uniform Delay, d1	23.2	21.3	4.9	4.3	8.3	5.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.0	0.2	0.3	1.7	2.6	0.2
Delay (s)	26.3	21.5	5.2	6.0	10.9	5.9
Level of Service	C	C	A	A	B	A
Approach Delay (s)	24.0			5.9	9.9	
Approach LOS	C			A	A	

Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	271	70	153	324	85	133	554	139	118	511	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.95	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1802		1805	1827		1719	1881	1516	1805	1900	1530
Flt Permitted	0.16	1.00		0.11	1.00		0.24	1.00	1.00	0.24	1.00	1.00
Satd. Flow (perm)	286	1802		217	1827		431	1881	1516	462	1900	1530
Peak-hour factor, PHF	0.84	0.84	0.84	0.90	0.90	0.90	0.95	0.95	0.95	0.89	0.89	0.89
Adj. Flow (vph)	89	323	83	170	360	94	140	583	146	133	574	111
RTOR Reduction (vph)	0	7	0	0	7	0	0	0	60	0	0	46
Lane Group Flow (vph)	89	399	0	170	447	0	140	583	86	133	574	65
Confl. Peds. (#/hr)	2		2				7		7	5		5
Heavy Vehicles (%)	3%	1%	4%	0%	1%	0%	5%	1%	1%	0%	0%	1%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	46.5	37.8		56.3	43.6		82.7	72.2	72.2	80.7	71.2	71.2
Effective Green, g (s)	46.5	37.8		56.3	43.6		82.7	72.2	72.2	80.7	71.2	71.2
Actuated g/C Ratio	0.31	0.25		0.38	0.29		0.55	0.48	0.48	0.54	0.47	0.47
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	174	454		235	531		328	905	730	334	902	726
v/s Ratio Prot	0.03	0.22		c0.07	c0.24		c0.03	c0.31		0.03	0.30	
v/s Ratio Perm	0.13			0.20			0.21		0.06	0.19		0.04
v/c Ratio	0.51	0.88		0.72	0.84		0.43	0.64	0.12	0.40	0.64	0.09
Uniform Delay, d1	40.1	53.9		36.6	50.0		21.1	29.2	21.4	21.4	29.7	21.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.5	17.4		10.5	11.5		0.9	3.5	0.3	0.8	3.4	0.2
Delay (s)	42.7	71.3		47.1	61.5		22.0	32.8	21.7	22.2	33.1	21.9
Level of Service	D	E		D	E		C	C	C	C	C	C
Approach Delay (s)		66.1			57.6			29.2			29.8	
Approach LOS		E			E			C			C	

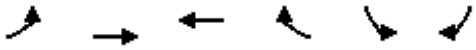
Intersection Summary			
HCM Average Control Delay	42.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	52	192	198	78	81	54
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.96	0.96	0.87	0.87
Hourly flow rate (vph)	57	211	206	81	93	62
Pedestrians		1	1		1	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			840			
pX, platoon unblocked						
vC, conflicting volume	288				574	249
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	288				574	249
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				80	92
cM capacity (veh/h)	1284				457	793

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	268	288	93	62
Volume Left	57	0	93	0
Volume Right	0	81	0	62
cSH	1284	1700	457	793
Volume to Capacity	0.04	0.17	0.20	0.08
Queue Length 95th (ft)	3	0	19	6
Control Delay (s)	2.0	0.0	14.9	9.9
Lane LOS	A		B	A
Approach Delay (s)	2.0	0.0	12.9	
Approach LOS			B	

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	43.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	2	194	242	23	28	23
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.94	0.94	0.95	0.95	0.86	0.86
Hourly flow rate (vph)	2	206	255	24	33	27
Pedestrians		4	4			
Lane Width (ft)		12.0	12.0			
Walking Speed (ft/s)		4.0	4.0			
Percent Blockage		0	0			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	279				481	271
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	279				481	271
tC, single (s)	5.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	3.1				3.5	3.3
p0 queue free %	100				94	96
cM capacity (veh/h)	880				537	761

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	209	279	59
Volume Left	2	0	33
Volume Right	0	24	27
cSH	880	1700	619
Volume to Capacity	0.00	0.16	0.10
Queue Length 95th (ft)	0	0	8
Control Delay (s)	0.1	0.0	11.4
Lane LOS	A		B
Approach Delay (s)	0.1	0.0	11.4
Approach LOS			B

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	25.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (veh/h)	1274	25	40	1117	10	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.94	0.94	0.83	0.92
Hourly flow rate (vph)	1327	26	43	1188	12	0
Pedestrians	2				1	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1354		1824	456
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1354		1824	456
tC, single (s)			4.3		7.2	6.9
tC, 2 stage (s)						
tF (s)			2.3		3.7	3.3
p0 queue free %			91		76	100
cM capacity (veh/h)			473		51	551

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4	SW 1
Volume Total	531	531	291	43	396	396	396	12
Volume Left	0	0	0	43	0	0	0	12
Volume Right	0	0	26	0	0	0	0	0
cSH	1700	1700	1700	473	1700	1700	1700	51
Volume to Capacity	0.31	0.31	0.17	0.09	0.23	0.23	0.23	0.24
Queue Length 95th (ft)	0	0	0	7	0	0	0	20
Control Delay (s)	0.0	0.0	0.0	13.4	0.0	0.0	0.0	96.4
Lane LOS				B				F
Approach Delay (s)	0.0			0.5				96.4
Approach LOS								F

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	70	11	16	147	111	41
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.73	0.73	0.66	0.66	0.96	0.96
Hourly flow rate (vph)	96	15	24	223	116	43
Pedestrians				1	1	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				4.0	4.0	
Percent Blockage				0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	298	80	158			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	298	80	158			
tC, single (s)	6.9	7.1	4.4			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.3			
p0 queue free %	85	98	98			
cM capacity (veh/h)	651	941	1342			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	111	98	148	77	81
Volume Left	96	24	0	0	0
Volume Right	15	0	0	0	43
cSH	680	1342	1700	1700	1700
Volume to Capacity	0.16	0.02	0.09	0.05	0.05
Queue Length 95th (ft)	15	1	0	0	0
Control Delay (s)	11.3	2.0	0.0	0.0	0.0
Lane LOS	B	A			
Approach Delay (s)	11.3	0.8		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	23.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	59	21	18	48	1	28	1	20	3	1	4
Peak Hour Factor	0.92	0.92	0.92	0.87	0.87	0.87	0.82	0.82	0.82	0.67	0.67	0.67
Hourly flow rate (vph)	1	64	23	21	55	1	34	1	24	4	1	6

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	88	77	60	12
Volume Left (vph)	1	21	34	4
Volume Right (vph)	23	1	24	6
Hadj (s)	-0.05	0.14	-0.10	-0.23
Departure Headway (s)	4.1	4.3	4.2	4.1
Degree Utilization, x	0.10	0.09	0.07	0.01
Capacity (veh/h)	858	820	821	836
Control Delay (s)	7.5	7.7	7.5	7.2
Approach Delay (s)	7.5	7.7	7.5	7.2
Approach LOS	A	A	A	A

Intersection Summary				
Delay		7.6		
HCM Level of Service		A		
Intersection Capacity Utilization		21.8%	ICU Level of Service	A
Analysis Period (min)		15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	52	1274	0	0	1157
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.87	0.96	0.92	0.92	0.94
Hourly flow rate (vph)	0	60	1327	0	0	1231
Pedestrians	1					2
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1738	445			1328	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1738	445			1328	
tC, single (s)	6.8	7.0			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	100	89			100	
cM capacity (veh/h)	78	548			515	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	60	442	442	442	410	410	410
Volume Left	0	0	0	0	0	0	0
Volume Right	60	0	0	0	0	0	0
cSH	548	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.11	0.26	0.26	0.26	0.24	0.24	0.24
Queue Length 95th (ft)	9	0	0	0	0	0	0
Control Delay (s)	12.4	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	12.4	0.0			0.0		
Approach LOS	B						

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	35.4%	ICU Level of Service	A
Analysis Period (min)	15		

Appendix F
2011 No-Build Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	6	15	13	14	74	2	1251	7	5	742	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			0.95	
Frpb, ped/bikes		1.00			0.98			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.90			1.00			1.00	
Flt Protected		0.97			0.99			1.00			1.00	
Satd. Flow (prot)		1771			1669			1878			3570	
Flt Permitted		0.50			0.96			1.00			0.95	
Satd. Flow (perm)		917			1618			1877			3389	
Peak-hour factor, PHF	0.82	0.82	0.82	0.90	0.90	0.90	0.98	0.98	0.98	0.93	0.93	0.93
Adj. Flow (vph)	34	7	18	14	16	82	2	1277	7	5	798	5
RTOR Reduction (vph)	0	17	0	0	76	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	42	0	0	36	0	0	1286	0	0	808	0
Confl. Peds. (#/hr)				2		2				1		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	14%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		6.9			6.9			81.1			81.1	
Effective Green, g (s)		6.9			6.9			81.1			81.1	
Actuated g/C Ratio		0.07			0.07			0.84			0.84	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		66			116			1586			2863	
v/s Ratio Prot												
v/s Ratio Perm		c0.05			0.02			c0.68			0.24	
v/c Ratio		0.64			0.31			0.81			0.28	
Uniform Delay, d1		43.3			42.3			3.7			1.5	
Progression Factor		1.00			0.88			0.83			1.00	
Incremental Delay, d2		19.3			1.4			1.4			0.2	
Delay (s)		62.6			38.6			4.5			1.8	
Level of Service		E			D			A			A	
Approach Delay (s)		62.6			38.6			4.5			1.8	
Approach LOS		E			D			A			A	

Intersection Summary			
HCM Average Control Delay	6.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	14	6	76	658	832	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	0.95	
Frpb, ped/bikes	1.00			1.00	1.00	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.96			1.00	1.00	
Flt Protected	0.97			0.99	1.00	
Satd. Flow (prot)	1751			1857	3566	
Flt Permitted	0.97			0.86	1.00	
Satd. Flow (perm)	1751			1609	3566	
Peak-hour factor, PHF	0.75	0.75	0.98	0.98	0.98	0.98
Adj. Flow (vph)	19	8	78	671	849	13
RTOR Reduction (vph)	8	0	0	0	2	0
Lane Group Flow (vph)	19	0	0	749	860	0
Confl. Peds. (#/hr)	2	2	1			1
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	0.4			39.6	39.6	
Effective Green, g (s)	0.4			39.6	39.6	
Actuated g/C Ratio	0.01			0.82	0.82	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	15			1327	2942	
v/s Ratio Prot	c0.01				0.24	
v/s Ratio Perm				c0.47		
v/c Ratio	1.27			0.56	0.29	
Uniform Delay, d1	23.8			1.4	1.0	
Progression Factor	1.03			1.08	1.00	
Incremental Delay, d2	318.4			1.4	0.3	
Delay (s)	342.8			2.9	1.2	
Level of Service	F			A	A	
Approach Delay (s)	342.8			2.9	1.2	
Approach LOS	F			A	A	

Intersection Summary			
HCM Average Control Delay	7.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	48.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	1223	733	0	809	847	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		0.95	0.97	
Frpb, ped/bikes	1.00	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		1.00	0.95	
Satd. Flow (prot)	1881	1562		3574	3467	
Flt Permitted	1.00	1.00		1.00	0.95	
Satd. Flow (perm)	1881	1562		3574	3467	
Peak-hour factor, PHF	0.98	0.98	0.92	0.96	0.99	0.92
Adj. Flow (vph)	1248	748	0	843	856	0
RTOR Reduction (vph)	0	247	0	0	0	0
Lane Group Flow (vph)	1248	501	0	843	856	0
Confl. Peds. (#/hr)		1				
Heavy Vehicles (%)	1%	1%	2%	1%	1%	2%
Turn Type		Perm				
Protected Phases	2			6	8	
Permitted Phases		2				
Actuated Green, G (s)	64.0	64.0		64.0	24.0	
Effective Green, g (s)	64.0	64.0		64.0	24.0	
Actuated g/C Ratio	0.67	0.67		0.67	0.25	
Clearance Time (s)	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	1254	1041		2383	867	
v/s Ratio Prot	c0.66			0.24	c0.25	
v/s Ratio Perm		0.32				
v/c Ratio	1.00	0.48		0.35	0.99	
Uniform Delay, d1	15.8	7.9		7.0	35.8	
Progression Factor	0.47	0.29		0.81	0.99	
Incremental Delay, d2	6.6	0.1		0.4	26.9	
Delay (s)	14.0	2.4		6.1	62.4	
Level of Service	B	A		A	E	
Approach Delay (s)	9.7			6.1	62.4	
Approach LOS	A			A	E	

Intersection Summary			
HCM Average Control Delay	21.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	76	1164	292	511	1629	229	279	402	291	314	661	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		0.97	0.95		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.94		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	4966		3467	3498		1787	4773		1766	4837	
Flt Permitted	0.11	1.00		0.95	1.00		0.33	1.00		0.29	1.00	
Satd. Flow (perm)	202	4966		3467	3498		627	4773		531	4837	
Peak-hour factor, PHF	0.98	0.98	0.98	0.96	0.96	0.96	0.94	0.94	0.94	0.99	0.99	0.99
Adj. Flow (vph)	78	1188	298	532	1697	239	297	428	310	317	668	135
RTOR Reduction (vph)	0	45	0	0	11	0	0	137	0	0	32	0
Lane Group Flow (vph)	78	1441	0	532	1925	0	297	602	0	317	771	0
Confl. Peds. (#/hr)	2		2	1		1	2		2	21		21
Heavy Vehicles (%)	3%	1%	1%	1%	1%	2%	1%	2%	0%	2%	4%	2%
Turn Type	pm+pt			Prot			pm+pt			pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6						4			8		
Actuated Green, G (s)	39.7	36.5		17.5	50.8		24.0	12.0		28.0	14.0	
Effective Green, g (s)	39.7	36.5		17.5	50.8		24.0	12.0		28.0	14.0	
Actuated g/C Ratio	0.41	0.38		0.18	0.53		0.25	0.12		0.29	0.15	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	135	1888		632	1851		302	597		335	705	
v/s Ratio Prot	0.02	0.29		c0.15	c0.55		0.12	0.13		c0.14	c0.16	
v/s Ratio Perm	0.22						0.12			0.14		
v/c Ratio	0.58	0.76		0.84	1.04		0.98	1.01		0.95	1.09	
Uniform Delay, d1	23.0	26.0		37.9	22.6		33.9	42.0		30.5	41.0	
Progression Factor	1.03	0.75		1.06	0.71		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.3	1.4		7.7	29.6		46.9	38.7		35.0	62.5	
Delay (s)	28.1	21.0		47.9	45.6		80.9	80.7		65.5	103.5	
Level of Service	C	C		D	D		F	F		E	F	
Approach Delay (s)		21.3			46.1			80.8			92.7	
Approach LOS		C			D			F			F	

Intersection Summary			
HCM Average Control Delay	54.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	101.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	1697	16	127	2136	21	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	5078		1805	3539	1805	1576
Flt Permitted	1.00		0.12	1.00	0.95	1.00
Satd. Flow (perm)	5078		219	3539	1805	1576
Peak-hour factor, PHF	0.97	0.97	0.98	0.98	0.83	0.83
Adj. Flow (vph)	1749	16	130	2180	25	63
RTOR Reduction (vph)	1	0	0	0	0	58
Lane Group Flow (vph)	1764	0	130	2180	25	5
Confl. Peds. (#/hr)		6	1		7	7
Heavy Vehicles (%)	2%	0%	0%	2%	0%	0%
Turn Type			Perm			Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	81.0		81.0	81.0	7.0	7.0
Effective Green, g (s)	81.0		81.0	81.0	7.0	7.0
Actuated g/C Ratio	0.84		0.84	0.84	0.07	0.07
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	4285		185	2986	132	115
v/s Ratio Prot	0.35			c0.62	c0.01	
v/s Ratio Perm			0.59			0.00
v/c Ratio	0.41		0.70	0.73	0.19	0.04
Uniform Delay, d1	1.8		2.9	3.1	41.8	41.4
Progression Factor	1.96		0.96	0.94	1.00	1.00
Incremental Delay, d2	0.0		7.7	0.6	3.2	0.7
Delay (s)	3.6		10.5	3.5	45.0	42.0
Level of Service	A		B	A	D	D
Approach Delay (s)	3.6			3.9	42.9	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	4.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	1061	701	713	1386	0	0	0	0	1034	188	657
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00	0.99	1.00	1.00					1.00	1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.96	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		6471	1546	3467	3574					1626	3014	1418
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		6471	1546	3467	3574					1626	3014	1418
Peak-hour factor, PHF	0.92	0.92	0.92	0.97	0.97	0.92	0.92	0.92	0.92	0.89	0.89	0.89
Adj. Flow (vph)	0	1153	762	735	1429	0	0	0	0	1162	211	738
RTOR Reduction (vph)	0	0	208	0	0	0	0	0	0	0	25	25
Lane Group Flow (vph)	0	1153	554	735	1429	0	0	0	0	581	1025	455
Confl. Peds. (#/hr)	1		1	1		1				2		2
Heavy Vehicles (%)	0%	1%	3%	1%	1%	0%	0%	0%	0%	1%	1%	2%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		31.0	31.0	20.0	55.0					33.0	33.0	33.0
Effective Green, g (s)		31.0	31.0	20.0	55.0					33.0	33.0	33.0
Actuated g/C Ratio		0.32	0.32	0.21	0.57					0.34	0.34	0.34
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2090	499	722	2048					559	1036	487
v/s Ratio Prot		0.18		c0.21	0.40					c0.36	0.34	
v/s Ratio Perm			c0.36									0.32
v/c Ratio		0.55	1.11	1.02	0.70					1.04	0.99	0.93
Uniform Delay, d1		26.8	32.5	38.0	14.6					31.5	31.3	30.5
Progression Factor		0.77	0.66	0.60	0.48					1.00	1.00	1.00
Incremental Delay, d2		1.0	72.9	33.2	1.5					48.7	25.1	25.2
Delay (s)		21.5	94.4	56.1	8.5					80.2	56.4	55.7
Level of Service		C	F	E	A					F	E	E
Approach Delay (s)		50.5			24.7			0.0			62.8	
Approach LOS		D			C			A			E	

Intersection Summary			
HCM Average Control Delay	45.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	228	733	476	1465	0	0	1883	717	0	0	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.95			0.86	1.00			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	0.98			0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1770	2787	3433	3539			6536	1574			1585
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1770	2787	3433	3539			6536	1574			1585
Peak-hour factor, PHF	0.90	0.90	0.92	0.92	0.92	0.92	0.94	0.94	0.92	0.92	0.90
Adj. Flow (vph)	253	814	517	1592	0	0	2003	763	0	0	400
RTOR Reduction (vph)	0	50	0	0	0	0	0	113	0	0	207
Lane Group Flow (vph)	253	764	517	1592	0	0	2003	650	0	0	193
Confl. Peds. (#/hr)	3	3	3					2			8
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	1%	2%	2%	1%
Turn Type		Prot	Prot					Perm			custom
Protected Phases	4	4	1	6			2				
Permitted Phases								2			8
Actuated Green, G (s)	26.0	26.0	15.0	62.0			43.0	43.0			26.0
Effective Green, g (s)	26.0	26.0	15.0	62.0			43.0	43.0			26.0
Actuated g/C Ratio	0.27	0.27	0.16	0.65			0.45	0.45			0.27
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	479	755	536	2286			2928	705			429
v/s Ratio Prot	0.14	c0.27	c0.15	0.45			0.31				
v/s Ratio Perm								c0.41			0.12
v/c Ratio	0.53	1.01	0.96	0.70			0.68	0.92			0.45
Uniform Delay, d1	29.8	35.0	40.2	10.9			21.1	24.9			29.1
Progression Factor	1.00	1.00	1.15	0.14			0.47	0.32			1.00
Incremental Delay, d2	1.1	35.6	21.6	1.1			0.6	10.5			0.8
Delay (s)	30.8	70.6	68.0	2.5			10.6	18.6			29.8
Level of Service	C	E	E	A			B	B			C
Approach Delay (s)	61.2			18.6			12.8		29.8		
Approach LOS	E			B			B		C		

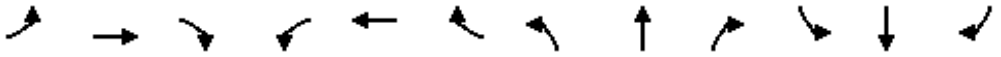
Intersection Summary			
HCM Average Control Delay	23.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	374	66	52	32	48	86	246	1532	589	111	2179	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1900	1407	1805	1900	1579	1736	4988	1571	1805	5164	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.08	1.00	1.00	0.10	1.00	
Satd. Flow (perm)	3433	1900	1407	1805	1900	1579	143	4988	1571	196	5164	
Peak-hour factor, PHF	0.85	0.85	0.85	0.76	0.76	0.76	0.93	0.93	0.93	0.97	0.97	0.97
Adj. Flow (vph)	440	78	61	42	63	113	265	1647	633	114	2246	57
RTOR Reduction (vph)	0	0	52	0	0	107	0	0	285	0	3	0
Lane Group Flow (vph)	440	78	9	42	63	6	265	1647	348	114	2300	0
Confl. Peds. (#/hr)	7		7	6		6	3		3	2		2
Heavy Vehicles (%)	2%	0%	12%	0%	0%	0%	4%	4%	1%	0%	0%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		Perm	pm+pt		
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	14.7	14.7	14.7	5.2	5.2	5.2	64.1	52.8	52.8	54.4	47.1	
Effective Green, g (s)	14.7	14.7	14.7	5.2	5.2	5.2	64.1	52.8	52.8	54.4	47.1	
Actuated g/C Ratio	0.15	0.15	0.15	0.05	0.05	0.05	0.67	0.55	0.55	0.57	0.49	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	526	291	215	98	103	86	311	2743	864	233	2534	
v/s Ratio Prot	c0.13	0.04		0.02	c0.03		c0.12	0.33		0.04	c0.45	
v/s Ratio Perm			0.01			0.00	0.45		0.22	0.24		
v/c Ratio	0.84	0.27	0.04	0.43	0.61	0.07	0.85	0.60	0.40	0.49	0.91	
Uniform Delay, d1	39.5	35.9	34.7	44.0	44.4	43.1	28.5	14.5	12.5	11.0	22.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.02	1.00	1.45	1.44	0.63	
Incremental Delay, d2	11.1	0.5	0.1	3.0	10.3	0.4	13.3	0.6	0.9	0.7	2.9	
Delay (s)	50.6	36.4	34.7	47.0	54.7	43.5	42.4	15.1	19.0	16.5	17.0	
Level of Service	D	D	C	D	D	D	D	B	B	B	B	
Approach Delay (s)		47.0			47.4			18.9			17.0	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM Average Control Delay	22.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

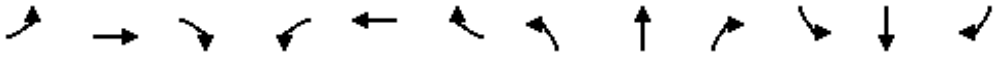
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	470	269	49	114	281	267	101	906	520	90	1492	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3367	3367		1770	1881	1615	1703	3505	1524	1770	3562	
Flt Permitted	0.95	1.00		0.55	1.00	1.00	0.09	1.00	1.00	0.19	1.00	
Satd. Flow (perm)	3367	3367		1024	1881	1615	162	3505	1524	357	3562	
Peak-hour factor, PHF	0.95	0.95	0.95	0.92	0.92	0.92	0.96	0.96	0.96	0.97	0.97	0.97
Adj. Flow (vph)	495	283	52	124	305	290	105	944	542	93	1538	20
RTOR Reduction (vph)	0	16	0	0	0	73	0	0	271	0	1	0
Lane Group Flow (vph)	495	319	0	124	305	218	105	944	271	93	1557	0
Confl. Peds. (#/hr)										1		1
Heavy Vehicles (%)	4%	3%	14%	2%	1%	0%	6%	3%	6%	2%	1%	11%
Turn Type	Prot			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases				8		8	6		6	2		
Actuated Green, G (s)	15.0	24.0		23.0	16.0	16.0	48.2	44.2	44.2	49.8	45.0	
Effective Green, g (s)	15.0	24.0		23.0	16.0	16.0	48.2	44.2	44.2	49.8	45.0	
Actuated g/C Ratio	0.16	0.25		0.24	0.17	0.17	0.50	0.46	0.46	0.52	0.47	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	526	842		300	314	269	146	1614	702	256	1670	
v/s Ratio Prot	c0.15	0.09		0.03	c0.16		c0.03	0.27		0.02	c0.44	
v/s Ratio Perm				0.07		0.13	0.33		0.18	0.17		
v/c Ratio	0.94	0.38		0.41	0.97	0.81	0.72	0.58	0.39	0.36	0.93	
Uniform Delay, d1	40.1	29.8		29.8	39.8	38.5	20.9	19.1	17.0	13.4	24.1	
Progression Factor	0.89	0.93		1.00	1.00	1.00	1.05	0.72	3.81	0.28	0.31	
Incremental Delay, d2	22.3	0.2		0.9	42.8	16.2	13.0	1.3	1.3	0.3	4.9	
Delay (s)	58.0	27.8		30.8	82.6	54.7	34.8	15.1	66.0	4.1	12.2	
Level of Service	E	C		C	F	D	C	B	E	A	B	
Approach Delay (s)		45.8			62.4			33.8			11.7	
Approach LOS		D			E			C			B	

Intersection Summary			
HCM Average Control Delay	32.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	103	188	163	107	810	110	473	1620	44	66	707	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3574	1553	1765	3574	1538	1787	3558		1687	3436	
Flt Permitted	0.18	1.00	1.00	0.52	1.00	1.00	0.12	1.00		0.14	1.00	
Satd. Flow (perm)	345	3574	1553	976	3574	1538	228	3558		245	3436	
Peak-hour factor, PHF	0.82	0.82	0.82	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	126	229	199	115	871	118	509	1742	47	71	760	198
RTOR Reduction (vph)	0	0	153	0	0	78	0	2	0	0	24	0
Lane Group Flow (vph)	126	229	46	115	871	40	509	1787	0	71	934	0
Confl. Peds. (#/hr)				4		4						
Heavy Vehicles (%)	0%	1%	4%	2%	1%	3%	1%	1%	3%	7%	2%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	26.0	22.0	22.0	30.0	24.0	24.0	56.0	48.8		32.2	29.0	
Effective Green, g (s)	26.0	22.0	22.0	30.0	24.0	24.0	56.0	48.8		32.2	29.0	
Actuated g/C Ratio	0.27	0.23	0.23	0.31	0.25	0.25	0.58	0.51		0.34	0.30	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	154	819	356	354	894	385	507	1809		130	1038	
v/s Ratio Prot	c0.03	0.06		c0.02	c0.24		c0.24	0.50		0.02	0.27	
v/s Ratio Perm	0.19		0.03	0.08		0.03	c0.35			0.16		
v/c Ratio	0.82	0.28	0.13	0.32	0.97	0.10	1.00	0.99		0.55	0.90	
Uniform Delay, d1	32.6	30.5	29.4	24.3	35.7	27.7	28.0	23.3		25.5	32.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		0.80	0.45	
Incremental Delay, d2	27.4	0.2	0.2	0.5	23.8	0.1	40.9	18.5		3.9	10.6	
Delay (s)	60.0	30.7	29.5	24.9	59.5	27.8	69.0	41.8		24.5	25.1	
Level of Service	E	C	C	C	E	C	E	D		C	C	
Approach Delay (s)		36.9			52.5			47.8			25.1	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM Average Control Delay	42.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	228	200	115	87	345	713	57	1082	7	160	978	272
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3400		1745	1845	1555	1736	3570		1770	3447	
Flt Permitted	0.36	1.00		0.51	1.00	1.00	0.08	1.00		0.07	1.00	
Satd. Flow (perm)	669	3400		932	1845	1555	147	3570		138	3447	
Peak-hour factor, PHF	0.89	0.89	0.89	0.92	0.92	0.92	0.91	0.91	0.91	0.89	0.89	0.89
Adj. Flow (vph)	256	225	129	95	375	775	63	1189	8	180	1099	306
RTOR Reduction (vph)	0	59	0	0	0	90	0	1	0	0	18	0
Lane Group Flow (vph)	256	295	0	95	375	685	63	1196	0	180	1387	0
Confl. Peds. (#/hr)				6		6	7		7	1		1
Heavy Vehicles (%)	1%	0%	1%	3%	3%	1%	4%	1%	0%	2%	1%	1%
Turn Type	pm+pt			pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	66.0	59.0		62.0	57.0	57.0	53.0	49.8		64.8	57.6	
Effective Green, g (s)	66.0	59.0		62.0	57.0	57.0	53.0	49.8		64.8	57.6	
Actuated g/C Ratio	0.47	0.42		0.44	0.40	0.40	0.38	0.35		0.46	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	369	1425		439	747	630	91	1263		191	1410	
v/s Ratio Prot	c0.03	0.09		0.01	0.20		0.02	0.34		c0.07	c0.40	
v/s Ratio Perm	0.29			0.09		c0.44	0.24			0.36		
v/c Ratio	0.69	0.21		0.22	0.50	1.09	0.69	0.95		0.94	0.98	
Uniform Delay, d1	32.0	26.0		23.4	31.3	41.9	37.1	44.2		39.9	41.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.6	0.1		0.2	0.5	61.9	20.3	15.5		48.5	20.4	
Delay (s)	37.6	26.1		23.6	31.8	103.8	57.4	59.7		88.5	61.6	
Level of Service	D	C		C	C	F	E	E		F	E	
Approach Delay (s)		30.9			76.0			59.6			64.6	
Approach LOS		C			E			E			E	

Intersection Summary			
HCM Average Control Delay	61.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	140.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	97.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	110	189	391	766	680	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.96	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1719	1509	1770	1845	1845	1568
Flt Permitted	0.95	1.00	0.21	1.00	1.00	1.00
Satd. Flow (perm)	1719	1509	383	1845	1845	1568
Peak-hour factor, PHF	0.88	0.88	0.91	0.91	0.91	0.91
Adj. Flow (vph)	125	215	430	842	747	284
RTOR Reduction (vph)	0	191	0	0	0	117
Lane Group Flow (vph)	125	24	430	842	747	167
Confl. Peds. (#/hr)	6	6				
Heavy Vehicles (%)	5%	3%	2%	3%	3%	3%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	10.8	10.8	77.2	77.2	56.6	56.6
Effective Green, g (s)	10.8	10.8	77.2	77.2	56.6	56.6
Actuated g/C Ratio	0.11	0.11	0.80	0.80	0.59	0.59
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	193	170	548	1484	1088	924
v/s Ratio Prot	c0.07		c0.14	0.46	0.40	
v/s Ratio Perm		0.02	c0.50			0.11
v/c Ratio	0.65	0.14	0.78	0.57	0.69	0.18
Uniform Delay, d1	40.8	38.4	14.2	3.4	13.6	9.1
Progression Factor	1.00	1.00	1.00	1.00	0.45	0.62
Incremental Delay, d2	7.3	0.4	7.3	1.6	2.8	0.3
Delay (s)	48.1	38.8	21.4	5.0	8.9	6.0
Level of Service	D	D	C	A	A	A
Approach Delay (s)	42.2			10.5	8.1	
Approach LOS	D			B	A	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	227	186	225	580	54	134	752	92	37	806	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1703	1679		1736	1836		1703	1827	1455	1597	1845	1513
Flt Permitted	0.12	1.00		0.11	1.00		0.07	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	220	1679		200	1836		123	1827	1455	133	1845	1513
Peak-hour factor, PHF	0.92	0.92	0.92	0.93	0.93	0.93	0.94	0.94	0.94	0.96	0.96	0.96
Adj. Flow (vph)	64	247	202	242	624	58	143	800	98	39	840	50
RTOR Reduction (vph)	0	25	0	0	3	0	0	0	39	0	0	19
Lane Group Flow (vph)	64	424	0	242	679	0	143	800	59	39	840	31
Confl. Peds. (#/hr)	7		7	3		3				4		4
Heavy Vehicles (%)	6%	2%	5%	4%	2%	1%	6%	4%	11%	13%	3%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	35.8	32.6		48.6	41.4		64.3	58.3	58.3	57.1	54.7	54.7
Effective Green, g (s)	35.8	32.6		48.6	41.4		64.3	58.3	58.3	57.1	54.7	54.7
Actuated g/C Ratio	0.30	0.27		0.40	0.34		0.53	0.48	0.48	0.47	0.45	0.45
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	104	451		232	627		143	878	699	92	832	682
v/s Ratio Prot	0.02	0.25		c0.10	c0.37		c0.05	0.44		0.01	0.46	
v/s Ratio Perm	0.17			0.32			c0.48		0.04	0.19		0.02
v/c Ratio	0.62	0.94		1.04	1.08		1.00	0.91	0.08	0.42	1.01	0.05
Uniform Delay, d1	35.7	43.4		33.3	39.9		32.0	29.1	17.1	25.5	33.3	18.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.3	27.9		70.8	60.7		75.3	15.2	0.2	3.1	33.6	0.1
Delay (s)	46.0	71.3		104.1	100.6		107.3	44.3	17.3	28.6	66.9	18.8
Level of Service	D	E		F	F		F	D	B	C	E	B
Approach Delay (s)		68.2			101.5			50.4			62.7	
Approach LOS		E			F			D			E	

Intersection Summary			
HCM Average Control Delay	70.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	121.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	1	308	2	462	1	698	306	885	712	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00		0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00			1.00	0.99		1.00	0.99	1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Frt		0.86			1.00	0.85		1.00	0.85	1.00	1.00	
Flt Protected		1.00			0.95	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1644			1752	1446		3505	1560	1752	3505	
Flt Permitted		1.00			0.73	1.00		0.95	1.00	0.18	1.00	
Satd. Flow (perm)		1644			1334	1446		3345	1560	335	3505	
Peak-hour factor, PHF	0.25	0.25	0.25	0.90	0.90	0.90	0.98	0.98	0.98	0.94	0.94	0.94
Adj. Flow (vph)	0	0	4	342	2	513	1	712	312	941	757	0
RTOR Reduction (vph)	0	3	0	0	0	391	0	0	242	0	0	0
Lane Group Flow (vph)	0	1	0	0	344	122	0	713	70	941	757	0
Confl. Peds. (#/hr)				2		2	2		2	4		4
Heavy Vehicles (%)	0%	0%	0%	3%	0%	10%	0%	3%	2%	3%	3%	0%
Turn Type	Perm			Perm		Perm	Perm		Perm	pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)		19.0			19.0	19.0		18.0	18.0	53.0	53.0	
Effective Green, g (s)		19.0			19.0	19.0		18.0	18.0	53.0	53.0	
Actuated g/C Ratio		0.24			0.24	0.24		0.22	0.22	0.66	0.66	
Clearance Time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		390			317	343		753	351	771	2322	
v/s Ratio Prot		0.00								c0.47	0.22	
v/s Ratio Perm					c0.26	0.08		0.21	0.05	c0.34		
v/c Ratio		0.00			1.09	0.36		0.95	0.20	1.22	0.33	
Uniform Delay, d1		23.3			30.5	25.4		30.5	25.2	19.1	5.8	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0			75.2	0.6		22.1	1.3	110.8	0.4	
Delay (s)		23.3			105.7	26.0		52.7	26.4	129.9	6.2	
Level of Service		C			F	C		D	C	F	A	
Approach Delay (s)		23.3			58.0			44.7			74.7	
Approach LOS		C			E			D			E	

Intersection Summary			
HCM Average Control Delay	62.1	HCM Level of Service	E
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	102.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	555	25	20	14	11	32	33	778	14	52	576	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	0.96			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1684			1848	1475	1805	3531		1671	3505	
Flt Permitted	0.95	0.96			0.97	1.00	0.38	1.00		0.28	1.00	
Satd. Flow (perm)	1681	1684			1848	1475	718	3531		488	3505	
Peak-hour factor, PHF	0.93	0.93	0.93	0.98	0.98	0.98	0.98	0.98	0.98	0.92	0.92	0.92
Adj. Flow (vph)	597	27	22	14	11	33	34	794	14	57	626	0
RTOR Reduction (vph)	0	6	0	0	0	32	0	2	0	0	0	0
Lane Group Flow (vph)	322	318	0	0	25	1	34	806	0	57	626	0
Confl. Peds. (#/hr)	2		2	2		2						
Heavy Vehicles (%)	2%	0%	0%	0%	0%	7%	0%	2%	0%	8%	3%	1%
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases						8	2			6		
Actuated Green, G (s)	12.4	12.4			1.1	1.1	19.4	19.4		19.4	19.4	
Effective Green, g (s)	12.4	12.4			1.1	1.1	19.4	19.4		19.4	19.4	
Actuated g/C Ratio	0.28	0.28			0.02	0.02	0.43	0.43		0.43	0.43	
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	464	465			45	36	310	1526		211	1514	
v/s Ratio Prot	c0.19	0.19			c0.01			c0.23			0.18	
v/s Ratio Perm						0.00	0.05			0.12		
v/c Ratio	0.69	0.68			0.56	0.02	0.11	0.53		0.27	0.41	
Uniform Delay, d1	14.6	14.5			21.7	21.4	7.6	9.4		8.2	8.8	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.5	4.1			14.0	0.3	0.7	1.3		3.1	0.8	
Delay (s)	19.0	18.6			35.7	21.6	8.3	10.7		11.3	9.7	
Level of Service	B	B			D	C	A	B		B	A	
Approach Delay (s)		18.8			27.7			10.6			9.8	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	44.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	291	530	623	125	847	66	1150	806	128	65	418	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.97	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	3574	1570	1786	5078		3502	3574	1562	1770	3574	1592
Flt Permitted	0.24	1.00	1.00	0.37	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	458	3574	1570	689	5078		3502	3574	1562	1770	3574	1592
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.96	0.96	0.96	0.91	0.91	0.91
Adj. Flow (vph)	313	570	670	134	911	71	1198	840	133	71	459	330
RTOR Reduction (vph)	0	0	501	0	13	0	0	0	90	0	0	104
Lane Group Flow (vph)	313	570	169	134	969	0	1198	840	43	71	459	226
Confl. Peds. (#/hr)	5		5	3		3	1		1	2		2
Heavy Vehicles (%)	0%	1%	1%	1%	1%	0%	0%	1%	2%	2%	1%	0%
Turn Type	pm+pt		Perm	pm+pt			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4		4	8					2			6
Actuated Green, G (s)	23.6	16.6	16.6	16.0	12.8		21.2	21.2	21.2	9.0	9.0	9.0
Effective Green, g (s)	23.6	16.6	16.6	16.0	12.8		21.2	21.2	21.2	9.0	9.0	9.0
Actuated g/C Ratio	0.36	0.25	0.25	0.24	0.19		0.32	0.32	0.32	0.14	0.14	0.14
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	307	899	395	220	985		1125	1148	502	241	487	217
v/s Ratio Prot	c0.11	0.16		0.03	0.19		c0.34	0.24		0.04	0.13	
v/s Ratio Perm	c0.26		0.11	0.12					0.03			c0.14
v/c Ratio	1.02	0.63	0.43	0.61	0.98		1.06	0.73	0.09	0.29	0.94	1.04
Uniform Delay, d1	19.7	22.0	20.7	21.0	26.5		22.4	19.9	15.6	25.6	28.2	28.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.89	0.89	1.21	1.00	1.00	1.00
Incremental Delay, d2	56.4	1.5	0.7	4.7	24.6		43.9	3.5	0.3	3.1	28.7	72.9
Delay (s)	76.2	23.5	21.5	25.7	51.1		63.9	21.1	19.2	28.7	57.0	101.4
Level of Service	E	C	C	C	D		E	C	B	C	E	F
Approach Delay (s)		33.2			48.0			44.6			71.7	
Approach LOS		C			D			D			E	

Intersection Summary			
HCM Average Control Delay	46.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	66.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	397	943	1174	0	0	1202
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	0.97	0.91	0.91			0.86
Frpb, ped/bikes	0.99	0.99	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	0.92	0.85	1.00			1.00
Flt Protected	0.98	1.00	1.00			1.00
Satd. Flow (prot)	3252	1434	5136			6471
Flt Permitted	0.98	1.00	1.00			1.00
Satd. Flow (perm)	3252	1434	5136			6471
Peak-hour factor, PHF	0.97	0.97	0.98	0.92	0.92	0.96
Adj. Flow (vph)	409	972	1198	0	0	1252
RTOR Reduction (vph)	6	6	0	0	0	0
Lane Group Flow (vph)	889	480	1198	0	0	1252
Confl. Peds. (#/hr)	2	2				
Heavy Vehicles (%)	1%	1%	1%	2%	2%	1%
Turn Type		Perm				
Protected Phases	8		2			6
Permitted Phases		8				
Actuated Green, G (s)	29.4	29.4	28.6			28.6
Effective Green, g (s)	29.4	29.4	28.6			28.6
Actuated g/C Ratio	0.45	0.45	0.43			0.43
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	1449	639	2226			2804
v/s Ratio Prot	0.27		c0.23			0.19
v/s Ratio Perm		c0.34				
v/c Ratio	0.61	0.75	0.54			0.45
Uniform Delay, d1	14.0	15.3	13.8			13.1
Progression Factor	1.00	1.00	0.39			0.64
Incremental Delay, d2	0.8	5.0	0.8			0.3
Delay (s)	14.7	20.2	6.2			8.7
Level of Service	B	C	A			A
Approach Delay (s)	16.7		6.2			8.7
Approach LOS	B		A			A

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	66.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	1258	374	493	1157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0
Lane Util. Factor			0.91		0.97	0.91
Frpb, ped/bikes			1.00		1.00	1.00
Flpb, ped/bikes			1.00		1.00	1.00
Frt			0.97		1.00	1.00
Flt Protected			1.00		0.95	1.00
Satd. Flow (prot)			4943		3467	5136
Flt Permitted			1.00		0.95	1.00
Satd. Flow (perm)			4943		3467	5136
Peak-hour factor, PHF	0.92	0.92	0.93	0.93	0.97	0.97
Adj. Flow (vph)	0	0	1353	402	508	1193
RTOR Reduction (vph)	0	0	36	0	0	0
Lane Group Flow (vph)	0	0	1719	0	508	1193
Confl. Peds. (#/hr)				2	4	
Heavy Vehicles (%)	2%	2%	1%	1%	1%	1%
Turn Type					Prot	
Protected Phases			2		1	6
Permitted Phases						
Actuated Green, G (s)			43.1		14.9	66.0
Effective Green, g (s)			43.1		14.9	66.0
Actuated g/C Ratio			0.65		0.23	1.00
Clearance Time (s)			4.0		4.0	4.0
Vehicle Extension (s)			3.0		3.0	3.0
Lane Grp Cap (vph)			3228		783	5136
v/s Ratio Prot			c0.35		c0.15	0.23
v/s Ratio Perm						
v/c Ratio			0.53		0.65	0.23
Uniform Delay, d1			6.1		23.2	0.0
Progression Factor			0.37		0.81	1.00
Incremental Delay, d2			0.5		1.7	0.1
Delay (s)			2.7		20.5	0.1
Level of Service			A		C	A
Approach Delay (s)	0.0		2.7			6.2
Approach LOS	A		A			A

Intersection Summary			
HCM Average Control Delay	4.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	66.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

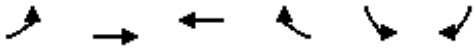
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	0	1	281	2	246	5	1219	83	102	1162	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.93			0.94			0.99			1.00	
Flt Protected		0.98			0.97			1.00			1.00	
Satd. Flow (prot)		1713			1704			3501			3527	
Flt Permitted		0.89			0.83			0.95			0.65	
Satd. Flow (perm)		1567			1456			3329			2315	
Peak-hour factor, PHF	0.75	0.75	0.75	0.95	0.95	0.95	0.99	0.99	0.99	0.96	0.96	0.96
Adj. Flow (vph)	1	0	1	296	2	259	5	1231	84	106	1210	1
RTOR Reduction (vph)	0	1	0	0	48	0	0	6	0	0	0	0
Lane Group Flow (vph)	0	1	0	0	509	0	0	1314	0	0	1317	0
Confl. Peds. (#/hr)	4		4	2		2	4		4			
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	2%	1%	1%	2%	0%
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		21.0			21.0			37.0			37.0	
Effective Green, g (s)		21.0			21.0			37.0			37.0	
Actuated g/C Ratio		0.32			0.32			0.56			0.56	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		499			463			1866			1298	
v/s Ratio Prot												
v/s Ratio Perm		0.00			c0.35			0.39			c0.57	
v/c Ratio		0.00			1.10			0.70			1.01	
Uniform Delay, d1		15.4			22.5			10.5			14.5	
Progression Factor		1.00			1.00			0.94			0.78	
Incremental Delay, d2		0.0			71.8			1.2			28.5	
Delay (s)		15.4			94.3			11.1			39.8	
Level of Service		B			F			B			D	
Approach Delay (s)		15.4			94.3			11.1			39.8	
Approach LOS		B			F			B			D	

Intersection Summary			
HCM Average Control Delay	37.4	HCM Level of Service	D
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	66.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	119.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	193	280	50	245	471	355	108	660	69	377	705	321
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1725		1787	1863	1599	1752	3517		1752	3383	
Flt Permitted	0.24	1.00		0.25	1.00	1.00	0.27	1.00		0.21	1.00	
Satd. Flow (perm)	434	1725		479	1863	1599	492	3517		388	3383	
Peak-hour factor, PHF	0.92	0.92	0.92	0.89	0.89	0.89	0.89	0.89	0.89	0.88	0.88	0.88
Adj. Flow (vph)	210	304	54	275	529	399	121	742	78	428	801	365
RTOR Reduction (vph)	0	10	0	0	0	26	0	12	0	0	79	0
Lane Group Flow (vph)	210	348	0	275	529	373	121	808	0	428	1087	0
Heavy Vehicles (%)	3%	6%	17%	1%	2%	1%	3%	1%	3%	3%	2%	1%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	22.0	17.0		26.0	19.0	30.0	18.2	15.0		30.0	22.8	
Effective Green, g (s)	22.0	17.0		26.0	19.0	30.0	18.2	15.0		30.0	22.8	
Actuated g/C Ratio	0.33	0.26		0.39	0.29	0.45	0.28	0.23		0.45	0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	245	444		327	536	824	197	799		404	1169	
v/s Ratio Prot	0.07	0.20		c0.09	c0.28	0.08	0.03	0.23		c0.18	0.32	
v/s Ratio Perm	0.22			0.24		0.16	0.14			c0.30		
v/c Ratio	0.86	0.78		0.84	0.99	0.45	0.61	1.01		1.06	0.93	
Uniform Delay, d1	19.7	22.8		15.7	23.4	12.4	20.3	25.5		15.5	20.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		0.92	0.59	
Incremental Delay, d2	24.3	8.8		17.4	35.2	0.4	5.6	34.5		41.2	5.0	
Delay (s)	44.0	31.6		33.1	58.5	12.8	25.9	60.0		55.5	17.3	
Level of Service	D	C		C	E	B	C	E		E	B	
Approach Delay (s)		36.2			37.6			55.6			27.5	
Approach LOS		D			D			E			C	

Intersection Summary			
HCM Average Control Delay	37.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	66.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.1%	ICU Level of Service	E
Analysis Period (min)	15		

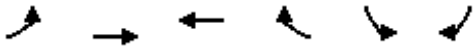
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	63	168	305	328	104	48
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.87	0.87	0.84	0.84	0.92	0.92
Hourly flow rate (vph)	72	193	363	390	113	52
Pedestrians		2	2			
Lane Width (ft)		12.0	12.0			
Walking Speed (ft/s)		4.0	4.0			
Percent Blockage		0	0			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			840			
pX, platoon unblocked						
vC, conflicting volume	754				898	560
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	754				898	560
tC, single (s)	4.1				6.5	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.3
p0 queue free %	92				59	90
cM capacity (veh/h)	866				277	521

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	266	754	113	52
Volume Left	72	0	113	0
Volume Right	0	390	0	52
cSH	866	1700	277	521
Volume to Capacity	0.08	0.44	0.41	0.10
Queue Length 95th (ft)	7	0	47	8
Control Delay (s)	3.3	0.0	26.7	12.7
Lane LOS	A		D	B
Approach Delay (s)	3.3	0.0	22.3	
Approach LOS			C	

Intersection Summary			
Average Delay	3.8		
Intersection Capacity Utilization	64.7%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	17	169	327	48	19	33
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.97	0.97	0.85	0.85
Hourly flow rate (vph)	20	197	337	49	22	39
Pedestrians		2	2		4	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	391				604	368
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	391				604	368
tC, single (s)	4.1				6.4	6.3
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.4
p0 queue free %	98				95	94
cM capacity (veh/h)	1175				455	657

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	216	387	61
Volume Left	20	0	22
Volume Right	0	49	39
cSH	1175	1700	565
Volume to Capacity	0.02	0.23	0.11
Queue Length 95th (ft)	1	0	9
Control Delay (s)	0.9	0.0	12.1
Lane LOS	A		B
Approach Delay (s)	0.9	0.0	12.1
Approach LOS			B

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (veh/h)	1535	46	85	1122	20	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.96	0.96	0.80	0.92
Hourly flow rate (vph)	1566	47	89	1169	25	0
Pedestrians	3				2	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	872			236		
pX, platoon unblocked						
vC, conflicting volume			1615		2161	548
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1615		2161	548
tC, single (s)			4.2		6.9	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.3
p0 queue free %			78		17	100
cM capacity (veh/h)			394		30	480

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4	SW 1
Volume Total	627	627	360	89	390	390	390	25
Volume Left	0	0	0	89	0	0	0	25
Volume Right	0	0	47	0	0	0	0	0
cSH	1700	1700	1700	394	1700	1700	1700	30
Volume to Capacity	0.37	0.37	0.21	0.22	0.23	0.23	0.23	0.83
Queue Length 95th (ft)	0	0	0	21	0	0	0	69
Control Delay (s)	0.0	0.0	0.0	16.7	0.0	0.0	0.0	301.7
Lane LOS				C				F
Approach Delay (s)	0.0			1.2				301.7
Approach LOS								F

Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	139	55	96	384	319	339
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.83	0.83	0.99	0.99	0.96	0.96
Hourly flow rate (vph)	167	66	97	388	332	353
Pedestrians	8			11	11	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			1	1	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	916	362	693			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	916	362	693			
tC, single (s)	6.9	7.1	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.2			
p0 queue free %	29	89	89			
cM capacity (veh/h)	237	608	899			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	234	226	259	222	464
Volume Left	167	97	0	0	0
Volume Right	66	0	0	0	353
cSH	287	899	1700	1700	1700
Volume to Capacity	0.82	0.11	0.15	0.13	0.27
Queue Length 95th (ft)	166	9	0	0	0
Control Delay (s)	55.7	4.7	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	55.7	2.2		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	10.0		
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	2	123	29	20	63	14	37	7	22	1	1	2
Peak Hour Factor	0.87	0.87	0.87	0.90	0.90	0.90	0.73	0.73	0.73	0.75	0.75	0.75
Hourly flow rate (vph)	2	141	33	22	70	16	51	10	30	1	1	3

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	177	108	90	5
Volume Left (vph)	2	22	51	1
Volume Right (vph)	33	16	30	3
Hadj (s)	-0.06	0.03	-0.09	-0.25
Departure Headway (s)	4.2	4.3	4.4	4.4
Degree Utilization, x	0.21	0.13	0.11	0.01
Capacity (veh/h)	837	793	758	751
Control Delay (s)	8.3	8.0	8.0	7.4
Approach Delay (s)	8.3	8.0	8.0	7.4
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.1			
HCM Level of Service	A			
Intersection Capacity Utilization	31.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	104	1535	0	0	1207
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.98	0.92	0.92	0.96
Hourly flow rate (vph)	0	113	1566	0	0	1257
Pedestrians	2					3
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			983			125
pX, platoon unblocked						
vC, conflicting volume	1987	527			1568	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1987	527			1568	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	77			100	
cM capacity (veh/h)	53	496			416	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	113	522	522	522	419	419	419
Volume Left	0	0	0	0	0	0	0
Volume Right	113	0	0	0	0	0	0
cSH	496	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.23	0.31	0.31	0.31	0.25	0.25	0.25
Queue Length 95th (ft)	22	0	0	0	0	0	0
Control Delay (s)	14.4	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	14.4	0.0			0.0		
Approach LOS	B						

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	6	15	13	14	74	2	1251	7	5	742	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			0.95	
Frpb, ped/bikes		1.00			0.98			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.90			1.00			1.00	
Flt Protected		0.97			0.99			1.00			1.00	
Satd. Flow (prot)		1771			1669			1878			3570	
Flt Permitted		0.50			0.96			1.00			0.95	
Satd. Flow (perm)		917			1618			1877			3389	
Peak-hour factor, PHF	0.82	0.82	0.82	0.90	0.90	0.90	0.98	0.98	0.98	0.93	0.93	0.93
Adj. Flow (vph)	34	7	18	14	16	82	2	1277	7	5	798	5
RTOR Reduction (vph)	0	17	0	0	76	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	42	0	0	36	0	0	1286	0	0	808	0
Confl. Peds. (#/hr)				2		2				1		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	14%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		6.9			6.9			81.1			81.1	
Effective Green, g (s)		6.9			6.9			81.1			81.1	
Actuated g/C Ratio		0.07			0.07			0.84			0.84	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		66			116			1586			2863	
v/s Ratio Prot												
v/s Ratio Perm		c0.05			0.02			c0.68			0.24	
v/c Ratio		0.64			0.31			0.81			0.28	
Uniform Delay, d1		43.3			42.3			3.7			1.5	
Progression Factor		1.00			0.88			0.81			1.00	
Incremental Delay, d2		19.3			1.4			1.4			0.2	
Delay (s)		62.6			38.6			4.4			1.8	
Level of Service		E			D			A			A	
Approach Delay (s)		62.6			38.6			4.4			1.8	
Approach LOS		E			D			A			A	

Intersection Summary			
HCM Average Control Delay	6.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	14	6	76	658	832	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	0.95	
Frpb, ped/bikes	1.00			1.00	1.00	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.96			1.00	1.00	
Flt Protected	0.97			0.99	1.00	
Satd. Flow (prot)	1751			1857	3566	
Flt Permitted	0.97			0.86	1.00	
Satd. Flow (perm)	1751			1609	3566	
Peak-hour factor, PHF	0.75	0.75	0.98	0.98	0.98	0.98
Adj. Flow (vph)	19	8	78	671	849	13
RTOR Reduction (vph)	8	0	0	0	2	0
Lane Group Flow (vph)	19	0	0	749	860	0
Confl. Peds. (#/hr)	2	2	1			1
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	0.4			39.6	39.6	
Effective Green, g (s)	0.4			39.6	39.6	
Actuated g/C Ratio	0.01			0.82	0.82	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	15			1327	2942	
v/s Ratio Prot	c0.01				0.24	
v/s Ratio Perm				c0.47		
v/c Ratio	1.27			0.56	0.29	
Uniform Delay, d1	23.8			1.4	1.0	
Progression Factor	1.02			1.01	1.00	
Incremental Delay, d2	318.4			1.4	0.3	
Delay (s)	342.8			2.8	1.2	
Level of Service	F			A	A	
Approach Delay (s)	342.8			2.8	1.2	
Approach LOS	F			A	A	

Intersection Summary			
HCM Average Control Delay	7.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	48.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	1223	733	0	809	847	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		0.95	0.97	
Frpb, ped/bikes	1.00	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		1.00	0.95	
Satd. Flow (prot)	1881	1562		3574	3467	
Flt Permitted	1.00	1.00		1.00	0.95	
Satd. Flow (perm)	1881	1562		3574	3467	
Peak-hour factor, PHF	0.98	0.98	0.92	0.96	0.99	0.92
Adj. Flow (vph)	1248	748	0	843	856	0
RTOR Reduction (vph)	0	247	0	0	0	0
Lane Group Flow (vph)	1248	501	0	843	856	0
Confl. Peds. (#/hr)		1				
Heavy Vehicles (%)	1%	1%	2%	1%	1%	2%
Turn Type		Perm				
Protected Phases	2			6	8	
Permitted Phases		2				
Actuated Green, G (s)	64.0	64.0		64.0	24.0	
Effective Green, g (s)	64.0	64.0		64.0	24.0	
Actuated g/C Ratio	0.67	0.67		0.67	0.25	
Clearance Time (s)	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	1254	1041		2383	867	
v/s Ratio Prot	c0.66			0.24	c0.25	
v/s Ratio Perm		0.32				
v/c Ratio	1.00	0.48		0.35	0.99	
Uniform Delay, d1	15.8	7.9		7.0	35.8	
Progression Factor	0.47	0.30		0.81	1.00	
Incremental Delay, d2	6.6	0.1		0.4	26.9	
Delay (s)	14.0	2.5		6.1	62.8	
Level of Service	B	A		A	E	
Approach Delay (s)	9.7			6.1	62.8	
Approach LOS	A			A	E	

Intersection Summary			
HCM Average Control Delay	21.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	76	1164	292	511	1629	229	279	402	291	314	661	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		0.97	0.95		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.94		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	4966		3467	3498		1787	4773		1766	4837	
Flt Permitted	0.11	1.00		0.95	1.00		0.33	1.00		0.29	1.00	
Satd. Flow (perm)	202	4966		3467	3498		627	4773		531	4837	
Peak-hour factor, PHF	0.98	0.98	0.98	0.96	0.96	0.96	0.94	0.94	0.94	0.99	0.99	0.99
Adj. Flow (vph)	78	1188	298	532	1697	239	297	428	310	317	668	135
RTOR Reduction (vph)	0	45	0	0	11	0	0	137	0	0	32	0
Lane Group Flow (vph)	78	1441	0	532	1925	0	297	602	0	317	771	0
Confl. Peds. (#/hr)	2		2	1		1	2		2	21		21
Heavy Vehicles (%)	3%	1%	1%	1%	1%	2%	1%	2%	0%	2%	4%	2%
Turn Type	pm+pt			Prot			pm+pt			pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6						4			8		
Actuated Green, G (s)	39.7	36.5		17.5	50.8		24.0	12.0		28.0	14.0	
Effective Green, g (s)	39.7	36.5		17.5	50.8		24.0	12.0		28.0	14.0	
Actuated g/C Ratio	0.41	0.38		0.18	0.53		0.25	0.12		0.29	0.15	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	135	1888		632	1851		302	597		335	705	
v/s Ratio Prot	0.02	0.29		c0.15	c0.55		0.12	0.13		c0.14	c0.16	
v/s Ratio Perm	0.22						0.12			0.14		
v/c Ratio	0.58	0.76		0.84	1.04		0.98	1.01		0.95	1.09	
Uniform Delay, d1	23.0	26.0		37.9	22.6		33.9	42.0		30.5	41.0	
Progression Factor	1.03	0.75		1.06	0.64		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.3	1.4		7.7	29.6		46.9	38.7		35.0	62.5	
Delay (s)	28.0	21.0		48.0	43.9		80.9	80.7		65.5	103.5	
Level of Service	C	C		D	D		F	F		E	F	
Approach Delay (s)		21.3			44.8			80.8			92.7	
Approach LOS		C			D			F			F	

Intersection Summary			
HCM Average Control Delay	53.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	101.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	1697	16	127	2136	21	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	5078		1805	3539	1805	1576
Flt Permitted	1.00		0.12	1.00	0.95	1.00
Satd. Flow (perm)	5078		219	3539	1805	1576
Peak-hour factor, PHF	0.97	0.97	0.98	0.98	0.83	0.83
Adj. Flow (vph)	1749	16	130	2180	25	63
RTOR Reduction (vph)	1	0	0	0	0	58
Lane Group Flow (vph)	1764	0	130	2180	25	5
Confl. Peds. (#/hr)		6	1		7	7
Heavy Vehicles (%)	2%	0%	0%	2%	0%	0%
Turn Type			Perm			Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	81.0		81.0	81.0	7.0	7.0
Effective Green, g (s)	81.0		81.0	81.0	7.0	7.0
Actuated g/C Ratio	0.84		0.84	0.84	0.07	0.07
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	4285		185	2986	132	115
v/s Ratio Prot	0.35			c0.62	c0.01	
v/s Ratio Perm			0.59			0.00
v/c Ratio	0.41		0.70	0.73	0.19	0.04
Uniform Delay, d1	1.8		2.9	3.1	41.8	41.4
Progression Factor	1.53		1.04	0.77	1.00	1.00
Incremental Delay, d2	0.0		7.7	0.6	3.2	0.7
Delay (s)	2.8		10.7	3.0	45.0	42.0
Level of Service	A		B	A	D	D
Approach Delay (s)	2.8			3.4	42.9	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	4.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	1061	701	713	1386	0	0	0	0	1034	188	657
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00	0.99	1.00	1.00					1.00	1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.96	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		6471	1546	3467	3574					1626	3014	1418
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		6471	1546	3467	3574					1626	3014	1418
Peak-hour factor, PHF	0.92	0.92	0.92	0.97	0.97	0.92	0.92	0.92	0.92	0.89	0.89	0.89
Adj. Flow (vph)	0	1153	762	735	1429	0	0	0	0	1162	211	738
RTOR Reduction (vph)	0	0	208	0	0	0	0	0	0	0	25	25
Lane Group Flow (vph)	0	1153	554	735	1429	0	0	0	0	581	1025	455
Confl. Peds. (#/hr)	1		1	1		1				2		2
Heavy Vehicles (%)	0%	1%	3%	1%	1%	0%	0%	0%	0%	1%	1%	2%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		31.0	31.0	20.0	55.0					33.0	33.0	33.0
Effective Green, g (s)		31.0	31.0	20.0	55.0					33.0	33.0	33.0
Actuated g/C Ratio		0.32	0.32	0.21	0.57					0.34	0.34	0.34
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2090	499	722	2048					559	1036	487
v/s Ratio Prot		0.18		c0.21	0.40					c0.36	0.34	
v/s Ratio Perm			c0.36									0.32
v/c Ratio		0.55	1.11	1.02	0.70					1.04	0.99	0.93
Uniform Delay, d1		26.8	32.5	38.0	14.6					31.5	31.3	30.5
Progression Factor		0.75	0.75	0.51	0.29					1.00	1.00	1.00
Incremental Delay, d2		1.0	72.9	31.5	1.3					48.7	25.1	25.2
Delay (s)		21.0	97.4	50.8	5.5					80.2	56.4	55.7
Level of Service		C	F	D	A					F	E	E
Approach Delay (s)		51.4			20.9			0.0			62.8	
Approach LOS		D			C			A			E	

Intersection Summary			
HCM Average Control Delay	44.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	228	733	476	1465	0	0	1883	717	0	0	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.95			0.86	0.88			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	0.97			0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1770	2787	3433	3539			6536	2741			1585
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1770	2787	3433	3539			6536	2741			1585
Peak-hour factor, PHF	0.90	0.90	0.92	0.92	0.92	0.92	0.94	0.94	0.92	0.92	0.90
Adj. Flow (vph)	253	814	517	1592	0	0	2003	763	0	0	400
RTOR Reduction (vph)	0	35	0	0	0	0	0	277	0	0	241
Lane Group Flow (vph)	253	779	517	1592	0	0	2003	486	0	0	159
Confl. Peds. (#/hr)	3	3	3					2			8
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	1%	2%	2%	1%
Turn Type		Prot	Prot					Perm			custom
Protected Phases	4	4	1	6			2				
Permitted Phases								2			8
Actuated Green, G (s)	29.9	29.9	16.7	58.1			37.4	37.4			29.9
Effective Green, g (s)	29.9	29.9	16.7	58.1			37.4	37.4			29.9
Actuated g/C Ratio	0.31	0.31	0.17	0.61			0.39	0.39			0.31
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	551	868	597	2142			2546	1068			494
v/s Ratio Prot	0.14	c0.28	c0.15	c0.45			0.31				
v/s Ratio Perm								0.18			0.10
v/c Ratio	0.46	0.90	0.87	0.74			0.79	0.46			0.32
Uniform Delay, d1	26.6	31.6	38.6	13.6			25.8	21.7			25.3
Progression Factor	1.00	1.00	1.24	0.33			0.54	0.27			1.00
Incremental Delay, d2	0.6	11.9	8.0	1.4			1.2	0.6			0.4
Delay (s)	27.2	43.5	55.7	6.0			15.2	6.6			25.7
Level of Service	C	D	E	A			B	A			C
Approach Delay (s)	39.6			18.2			12.8		25.7		
Approach LOS	D			B			B		C		

Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	374	66	52	32	48	86	246	1532	589	111	2179	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1900	1407	1805	1900	1579	1736	4988	1571	1805	5164	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.08	1.00	1.00	0.10	1.00	
Satd. Flow (perm)	3433	1900	1407	1805	1900	1579	143	4988	1571	196	5164	
Peak-hour factor, PHF	0.85	0.85	0.85	0.76	0.76	0.76	0.93	0.93	0.93	0.97	0.97	0.97
Adj. Flow (vph)	440	78	61	42	63	113	265	1647	633	114	2246	57
RTOR Reduction (vph)	0	0	52	0	0	107	0	0	285	0	3	0
Lane Group Flow (vph)	440	78	9	42	63	6	265	1647	348	114	2300	0
Confl. Peds. (#/hr)	7		7	6		6	3		3	2		2
Heavy Vehicles (%)	2%	0%	12%	0%	0%	0%	4%	4%	1%	0%	0%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		Perm	pm+pt		
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	14.7	14.7	14.7	5.2	5.2	5.2	64.1	52.8	52.8	54.4	47.1	
Effective Green, g (s)	14.7	14.7	14.7	5.2	5.2	5.2	64.1	52.8	52.8	54.4	47.1	
Actuated g/C Ratio	0.15	0.15	0.15	0.05	0.05	0.05	0.67	0.55	0.55	0.57	0.49	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	526	291	215	98	103	86	311	2743	864	233	2534	
v/s Ratio Prot	c0.13	0.04		0.02	c0.03		c0.12	0.33		0.04	c0.45	
v/s Ratio Perm			0.01			0.00	0.45		0.22	0.24		
v/c Ratio	0.84	0.27	0.04	0.43	0.61	0.07	0.85	0.60	0.40	0.49	0.91	
Uniform Delay, d1	39.5	35.9	34.7	44.0	44.4	43.1	28.5	14.5	12.5	11.0	22.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.04	2.15	1.44	0.63	
Incremental Delay, d2	11.1	0.5	0.1	3.0	10.3	0.4	13.6	0.6	0.9	0.7	2.9	
Delay (s)	50.6	36.4	34.7	47.0	54.7	43.5	41.1	15.7	27.7	16.5	17.0	
Level of Service	D	D	C	D	D	D	D	B	C	B	B	
Approach Delay (s)		47.0			47.4			21.3			17.0	
Approach LOS		D			D			C			B	

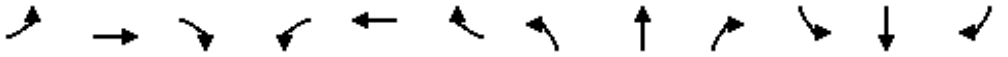
Intersection Summary			
HCM Average Control Delay	23.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	470	269	49	114	281	267	101	906	520	90	1492	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3367	3367		1770	1881	1615	1703	3505	1524	1770	3562	
Flt Permitted	0.95	1.00		0.55	1.00	1.00	0.09	1.00	1.00	0.19	1.00	
Satd. Flow (perm)	3367	3367		1024	1881	1615	162	3505	1524	357	3562	
Peak-hour factor, PHF	0.95	0.95	0.95	0.92	0.92	0.92	0.96	0.96	0.96	0.97	0.97	0.97
Adj. Flow (vph)	495	283	52	124	305	290	105	944	542	93	1538	20
RTOR Reduction (vph)	0	16	0	0	0	73	0	0	271	0	1	0
Lane Group Flow (vph)	495	319	0	124	305	218	105	944	271	93	1557	0
Confl. Peds. (#/hr)										1		1
Heavy Vehicles (%)	4%	3%	14%	2%	1%	0%	6%	3%	6%	2%	1%	11%
Turn Type	Prot			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases				8		8	6		6	2		
Actuated Green, G (s)	15.0	24.0		23.0	16.0	16.0	48.2	44.2	44.2	49.8	45.0	
Effective Green, g (s)	15.0	24.0		23.0	16.0	16.0	48.2	44.2	44.2	49.8	45.0	
Actuated g/C Ratio	0.16	0.25		0.24	0.17	0.17	0.50	0.46	0.46	0.52	0.47	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	526	842		300	314	269	146	1614	702	256	1670	
v/s Ratio Prot	c0.15	0.09		0.03	c0.16		c0.03	0.27		0.02	c0.44	
v/s Ratio Perm				0.07		0.13	0.33		0.18	0.17		
v/c Ratio	0.94	0.38		0.41	0.97	0.81	0.72	0.58	0.39	0.36	0.93	
Uniform Delay, d1	40.1	29.8		29.8	39.8	38.5	20.9	19.1	17.0	13.4	24.1	
Progression Factor	0.89	0.93		1.00	1.00	1.00	1.04	0.72	3.80	0.28	0.31	
Incremental Delay, d2	22.3	0.2		0.9	42.8	16.2	13.0	1.3	1.3	0.3	4.9	
Delay (s)	58.0	27.8		30.8	82.6	54.7	34.8	15.1	65.9	4.1	12.2	
Level of Service	E	C		C	F	D	C	B	E	A	B	
Approach Delay (s)		45.8			62.4			33.7			11.7	
Approach LOS		D			E			C			B	

Intersection Summary			
HCM Average Control Delay	32.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	103	188	163	107	810	110	473	1620	44	66	707	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3574	1553	1765	3574	1538	1787	3558		1687	3436	
Flt Permitted	0.18	1.00	1.00	0.52	1.00	1.00	0.12	1.00		0.14	1.00	
Satd. Flow (perm)	345	3574	1553	976	3574	1538	228	3558		245	3436	
Peak-hour factor, PHF	0.82	0.82	0.82	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	126	229	199	115	871	118	509	1742	47	71	760	198
RTOR Reduction (vph)	0	0	153	0	0	78	0	2	0	0	24	0
Lane Group Flow (vph)	126	229	46	115	871	40	509	1787	0	71	934	0
Confl. Peds. (#/hr)				4		4						
Heavy Vehicles (%)	0%	1%	4%	2%	1%	3%	1%	1%	3%	7%	2%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	26.0	22.0	22.0	30.0	24.0	24.0	56.0	48.8		32.2	29.0	
Effective Green, g (s)	26.0	22.0	22.0	30.0	24.0	24.0	56.0	48.8		32.2	29.0	
Actuated g/C Ratio	0.27	0.23	0.23	0.31	0.25	0.25	0.58	0.51		0.34	0.30	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	154	819	356	354	894	385	507	1809		130	1038	
v/s Ratio Prot	c0.03	0.06		c0.02	c0.24		c0.24	0.50		0.02	0.27	
v/s Ratio Perm	0.19		0.03	0.08		0.03	c0.35			0.16		
v/c Ratio	0.82	0.28	0.13	0.32	0.97	0.10	1.00	0.99		0.55	0.90	
Uniform Delay, d1	32.6	30.5	29.4	24.3	35.7	27.7	28.0	23.3		25.5	32.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		0.77	0.37	
Incremental Delay, d2	27.4	0.2	0.2	0.5	23.8	0.1	40.9	18.5		3.9	10.6	
Delay (s)	60.0	30.7	29.5	24.9	59.5	27.8	69.0	41.8		23.7	22.5	
Level of Service	E	C	C	C	E	C	E	D		C	C	
Approach Delay (s)		36.9			52.5			47.8			22.6	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM Average Control Delay	42.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	228	200	115	87	345	713	57	1082	7	160	978	272
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1787	3400		1748	1845	1564	1736	3570		1770	3574	1577
Flt Permitted	0.38	1.00		0.50	1.00	1.00	0.14	1.00		0.13	1.00	1.00
Satd. Flow (perm)	709	3400		928	1845	1564	254	3570		243	3574	1577
Peak-hour factor, PHF	0.89	0.89	0.89	0.92	0.92	0.92	0.91	0.91	0.91	0.89	0.89	0.89
Adj. Flow (vph)	256	225	129	95	375	775	63	1189	8	180	1099	306
RTOR Reduction (vph)	0	79	0	0	0	91	0	1	0	0	0	199
Lane Group Flow (vph)	256	275	0	95	375	684	63	1196	0	180	1099	107
Confl. Peds. (#/hr)				6		6	7		7	1		1
Heavy Vehicles (%)	1%	0%	1%	3%	3%	1%	4%	1%	0%	2%	1%	1%
Turn Type	pm+pt			pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	37.8	33.8		37.8	33.8	33.8	32.0	28.8		35.6	30.6	30.6
Effective Green, g (s)	37.8	33.8		37.8	33.8	33.8	32.0	28.8		35.6	30.6	30.6
Actuated g/C Ratio	0.43	0.39		0.43	0.39	0.39	0.37	0.33		0.41	0.35	0.35
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	355	1312		438	712	603	147	1174		186	1248	551
v/s Ratio Prot	c0.03	0.08		0.01	0.20		0.02	0.34		c0.06	0.31	
v/s Ratio Perm	0.28			0.08		c0.44	0.14			c0.34		0.07
v/c Ratio	0.72	0.21		0.22	0.53	1.13	0.43	1.02		0.97	0.88	0.19
Uniform Delay, d1	22.0	18.0		15.0	20.7	26.9	21.1	29.4		24.3	26.8	19.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	7.1	0.1		0.3	0.7	79.7	2.0	31.1		56.0	9.1	0.8
Delay (s)	29.0	18.1		15.3	21.4	106.6	23.1	60.5		80.3	35.9	20.7
Level of Service	C	B		B	C	F	C	E		F	D	C
Approach Delay (s)		22.7			74.0			58.7			38.0	
Approach LOS		C			E			E			D	

Intersection Summary			
HCM Average Control Delay	51.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	87.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	97.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	110	189	391	766	680	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.96	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1719	1509	1770	1845	1845	1568
Flt Permitted	0.95	1.00	0.21	1.00	1.00	1.00
Satd. Flow (perm)	1719	1509	383	1845	1845	1568
Peak-hour factor, PHF	0.88	0.88	0.91	0.91	0.91	0.91
Adj. Flow (vph)	125	215	430	842	747	284
RTOR Reduction (vph)	0	191	0	0	0	117
Lane Group Flow (vph)	125	24	430	842	747	167
Confl. Peds. (#/hr)	6	6				
Heavy Vehicles (%)	5%	3%	2%	3%	3%	3%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	10.8	10.8	77.2	77.2	56.6	56.6
Effective Green, g (s)	10.8	10.8	77.2	77.2	56.6	56.6
Actuated g/C Ratio	0.11	0.11	0.80	0.80	0.59	0.59
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	193	170	548	1484	1088	924
v/s Ratio Prot	c0.07		c0.14	0.46	0.40	
v/s Ratio Perm		0.02	c0.50			0.11
v/c Ratio	0.65	0.14	0.78	0.57	0.69	0.18
Uniform Delay, d1	40.8	38.4	14.2	3.4	13.6	9.1
Progression Factor	1.00	1.00	1.00	1.00	0.45	0.62
Incremental Delay, d2	7.3	0.4	7.3	1.6	2.8	0.3
Delay (s)	48.1	38.8	21.4	5.0	8.9	6.0
Level of Service	D	D	C	A	A	A
Approach Delay (s)	42.2			10.5	8.1	
Approach LOS	D			B	A	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	59	227	186	225	580	54	134	752	92	37	806	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1703	1679		1736	1836		1703	1827	1455	1597	1845	1513
Flt Permitted	0.12	1.00		0.11	1.00		0.07	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	220	1679		200	1836		123	1827	1455	133	1845	1513
Peak-hour factor, PHF	0.92	0.92	0.92	0.93	0.93	0.93	0.94	0.94	0.94	0.96	0.96	0.96
Adj. Flow (vph)	64	247	202	242	624	58	143	800	98	39	840	50
RTOR Reduction (vph)	0	25	0	0	3	0	0	0	39	0	0	19
Lane Group Flow (vph)	64	424	0	242	679	0	143	800	59	39	840	31
Confl. Peds. (#/hr)	7		7	3		3				4		4
Heavy Vehicles (%)	6%	2%	5%	4%	2%	1%	6%	4%	11%	13%	3%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	35.8	32.6		48.6	41.4		64.3	58.3	58.3	57.1	54.7	54.7
Effective Green, g (s)	35.8	32.6		48.6	41.4		64.3	58.3	58.3	57.1	54.7	54.7
Actuated g/C Ratio	0.30	0.27		0.40	0.34		0.53	0.48	0.48	0.47	0.45	0.45
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	104	451		232	627		143	878	699	92	832	682
v/s Ratio Prot	0.02	0.25		c0.10	c0.37		c0.05	0.44		0.01	0.46	
v/s Ratio Perm	0.17			0.32			c0.48		0.04	0.19		0.02
v/c Ratio	0.62	0.94		1.04	1.08		1.00	0.91	0.08	0.42	1.01	0.05
Uniform Delay, d1	35.7	43.4		33.3	39.9		32.0	29.1	17.1	25.5	33.3	18.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.3	27.9		70.8	60.7		75.3	15.2	0.2	3.1	33.6	0.1
Delay (s)	46.0	71.3		104.1	100.6		107.3	44.3	17.3	28.6	66.9	18.8
Level of Service	D	E		F	F		F	D	B	C	E	B
Approach Delay (s)		68.2			101.5			50.4			62.7	
Approach LOS		E			F			D			E	

Intersection Summary			
HCM Average Control Delay	70.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	121.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	1	308	2	462	1	698	306	885	712	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00		0.95	1.00	0.97	1.00	
Frpb, ped/bikes		1.00			1.00	0.99		1.00	0.99	1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Frt		0.86			1.00	0.85		1.00	0.85	1.00	1.00	
Flt Protected		1.00			0.95	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1644			1753	1446		3505	1560	3400	1845	
Flt Permitted		1.00			0.73	1.00		0.95	1.00	0.95	1.00	
Satd. Flow (perm)		1644			1334	1446		3345	1560	3400	1845	
Peak-hour factor, PHF	0.25	0.25	0.25	0.90	0.90	0.90	0.98	0.98	0.98	0.94	0.94	0.94
Adj. Flow (vph)	0	0	4	342	2	513	1	712	312	941	757	0
RTOR Reduction (vph)	0	3	0	0	0	373	0	0	225	0	0	0
Lane Group Flow (vph)	0	1	0	0	344	140	0	713	87	941	757	0
Confl. Peds. (#/hr)				2		2	2		2	4		4
Heavy Vehicles (%)	0%	0%	0%	3%	0%	10%	0%	3%	2%	3%	3%	0%
Turn Type	Perm			Perm		Perm	Perm		Perm	Prot		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2			
Actuated Green, G (s)		20.7			20.7	20.7		21.0	21.0	22.0	47.0	
Effective Green, g (s)		20.7			20.7	20.7		21.0	21.0	22.0	47.0	
Actuated g/C Ratio		0.27			0.27	0.27		0.28	0.28	0.29	0.62	
Clearance Time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		450			365	395		928	433	988	1146	
v/s Ratio Prot		0.00								c0.28	0.41	
v/s Ratio Perm					c0.26	0.10		c0.21	0.06			
v/c Ratio		0.00			0.94	0.36		0.77	0.20	0.95	0.66	
Uniform Delay, d1		20.0			26.9	22.1		25.1	20.9	26.3	9.2	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0			32.4	0.6		6.1	1.0	18.2	3.0	
Delay (s)		20.0			59.3	22.7		31.2	22.0	44.5	12.2	
Level of Service		B			E	C		C	C	D	B	
Approach Delay (s)		20.0			37.4			28.4			30.1	
Approach LOS		B			D			C			C	

Intersection Summary			
HCM Average Control Delay	31.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	75.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	555	25	20	14	11	32	33	778	14	52	576	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	0.96			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1684			1848	1475	1805	3531		1671	3505	
Flt Permitted	0.95	0.96			0.97	1.00	0.38	1.00		0.28	1.00	
Satd. Flow (perm)	1681	1684			1848	1475	718	3531		488	3505	
Peak-hour factor, PHF	0.93	0.93	0.93	0.98	0.98	0.98	0.98	0.98	0.98	0.92	0.92	0.92
Adj. Flow (vph)	597	27	22	14	11	33	34	794	14	57	626	0
RTOR Reduction (vph)	0	6	0	0	0	32	0	2	0	0	0	0
Lane Group Flow (vph)	322	318	0	0	25	1	34	806	0	57	626	0
Confl. Peds. (#/hr)	2		2	2		2						
Heavy Vehicles (%)	2%	0%	0%	0%	0%	7%	0%	2%	0%	8%	3%	1%
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases						8	2			6		
Actuated Green, G (s)	12.4	12.4			1.1	1.1	19.4	19.4		19.4	19.4	
Effective Green, g (s)	12.4	12.4			1.1	1.1	19.4	19.4		19.4	19.4	
Actuated g/C Ratio	0.28	0.28			0.02	0.02	0.43	0.43		0.43	0.43	
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	464	465			45	36	310	1526		211	1514	
v/s Ratio Prot	c0.19	0.19			c0.01			c0.23			0.18	
v/s Ratio Perm						0.00	0.05			0.12		
v/c Ratio	0.69	0.68			0.56	0.02	0.11	0.53		0.27	0.41	
Uniform Delay, d1	14.6	14.5			21.7	21.4	7.6	9.4		8.2	8.8	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.5	4.1			14.0	0.3	0.7	1.3		3.1	0.8	
Delay (s)	19.0	18.6			35.7	21.6	8.3	10.7		11.3	9.7	
Level of Service	B	B			D	C	A	B		B	A	
Approach Delay (s)		18.8			27.7			10.6			9.8	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	44.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	291	530	623	125	847	66	1150	806	128	65	418	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.97	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	3574	1568	1786	5078		3502	3574	1562	1770	3574	1591
Flt Permitted	0.21	1.00	1.00	0.39	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	400	3574	1568	724	5078		3502	3574	1562	1770	3574	1591
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.96	0.96	0.96	0.91	0.91	0.91
Adj. Flow (vph)	313	570	670	134	911	71	1198	840	133	71	459	330
RTOR Reduction (vph)	0	0	494	0	11	0	0	0	86	0	0	121
Lane Group Flow (vph)	313	570	176	134	971	0	1198	840	47	71	459	209
Confl. Peds. (#/hr)	5		5	3		3	1		1	2		2
Heavy Vehicles (%)	0%	1%	1%	1%	1%	0%	0%	1%	2%	2%	1%	0%
Turn Type	pm+pt		Perm	pm+pt			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4		4	8					2			6
Actuated Green, G (s)	29.0	21.0	21.0	19.0	15.0		28.0	28.0	28.0	11.0	11.0	11.0
Effective Green, g (s)	29.0	21.0	21.0	19.0	15.0		28.0	28.0	28.0	11.0	11.0	11.0
Actuated g/C Ratio	0.36	0.26	0.26	0.24	0.19		0.35	0.35	0.35	0.14	0.14	0.14
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	321	938	412	225	952		1226	1251	547	243	491	219
v/s Ratio Prot	c0.12	0.16		0.03	0.19		c0.34	0.24		0.04	0.13	
v/s Ratio Perm	c0.23		0.11	0.11					0.03			c0.13
v/c Ratio	0.98	0.61	0.43	0.60	1.02		0.98	0.67	0.09	0.29	0.93	0.96
Uniform Delay, d1	22.1	25.9	24.5	25.6	32.5		25.7	22.1	17.4	31.0	34.1	34.3
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.85	0.86	0.96	1.00	1.00	1.00
Incremental Delay, d2	43.1	1.1	0.7	4.2	34.2		18.9	2.5	0.3	3.0	27.3	50.3
Delay (s)	65.2	27.0	25.2	29.8	66.7		40.8	21.4	16.9	34.0	61.4	84.5
Level of Service	E	C	C	C	E		D	C	B	C	E	F
Approach Delay (s)		33.9			62.2			31.8			68.0	
Approach LOS		C			E			C			E	

Intersection Summary			
HCM Average Control Delay	43.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	397	943	1174	0	0	1202
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	0.97	0.91	0.91			0.86
Frpb, ped/bikes	0.99	0.99	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	0.92	0.85	1.00			1.00
Flt Protected	0.98	1.00	1.00			1.00
Satd. Flow (prot)	3251	1433	5136			6471
Flt Permitted	0.98	1.00	1.00			1.00
Satd. Flow (perm)	3251	1433	5136			6471
Peak-hour factor, PHF	0.97	0.97	0.98	0.92	0.92	0.96
Adj. Flow (vph)	409	972	1198	0	0	1252
RTOR Reduction (vph)	7	7	0	0	0	0
Lane Group Flow (vph)	888	479	1198	0	0	1252
Confl. Peds. (#/hr)	2	2				
Heavy Vehicles (%)	1%	1%	1%	2%	2%	1%
Turn Type		Perm				
Protected Phases	8		2			6
Permitted Phases		8				
Actuated Green, G (s)	35.2	35.2	36.8			36.8
Effective Green, g (s)	35.2	35.2	36.8			36.8
Actuated g/C Ratio	0.44	0.44	0.46			0.46
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	1430	631	2363			2977
v/s Ratio Prot	0.27		c0.23			0.19
v/s Ratio Perm		c0.33				
v/c Ratio	0.62	0.76	0.51			0.42
Uniform Delay, d1	17.3	18.8	15.2			14.5
Progression Factor	1.00	1.00	0.32			0.66
Incremental Delay, d2	0.8	5.2	0.7			0.3
Delay (s)	18.1	24.1	5.6			9.7
Level of Service	B	C	A			A
Approach Delay (s)	20.2		5.6			9.7
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	1258	374	493	1157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0
Lane Util. Factor			0.91		0.97	0.91
Frpb, ped/bikes			1.00		1.00	1.00
Flpb, ped/bikes			1.00		1.00	1.00
Frt			0.97		1.00	1.00
Flt Protected			1.00		0.95	1.00
Satd. Flow (prot)			4942		3467	5136
Flt Permitted			1.00		0.95	1.00
Satd. Flow (perm)			4942		3467	5136
Peak-hour factor, PHF	0.92	0.92	0.93	0.93	0.97	0.97
Adj. Flow (vph)	0	0	1353	402	508	1193
RTOR Reduction (vph)	0	0	36	0	0	0
Lane Group Flow (vph)	0	0	1719	0	508	1193
Confl. Peds. (#/hr)				2	4	
Heavy Vehicles (%)	2%	2%	1%	1%	1%	1%
Turn Type					Prot	
Protected Phases			2		1	6
Permitted Phases						
Actuated Green, G (s)			54.9		17.1	80.0
Effective Green, g (s)			54.9		17.1	80.0
Actuated g/C Ratio			0.69		0.21	1.00
Clearance Time (s)			4.0		4.0	4.0
Vehicle Extension (s)			3.0		3.0	3.0
Lane Grp Cap (vph)			3391		741	5136
v/s Ratio Prot			c0.35		c0.15	0.23
v/s Ratio Perm						
v/c Ratio			0.51		0.69	0.23
Uniform Delay, d1			6.0		29.0	0.0
Progression Factor			0.34		0.91	1.00
Incremental Delay, d2			0.4		2.4	0.1
Delay (s)			2.4		28.9	0.1
Level of Service			A		C	A
Approach Delay (s)	0.0		2.4			8.7
Approach LOS	A		A			A

Intersection Summary			
HCM Average Control Delay	5.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

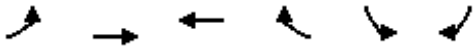
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	0	1	281	2	246	5	1219	83	102	1162	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.93			0.94			0.99		1.00	1.00	
Flt Protected		0.98			0.97			1.00		0.95	1.00	
Satd. Flow (prot)		1713			1703			3501		1787	3539	
Flt Permitted		0.91			0.83			0.95		0.10	1.00	
Satd. Flow (perm)		1601			1456			3329		191	3539	
Peak-hour factor, PHF	0.75	0.75	0.75	0.95	0.95	0.95	0.99	0.99	0.99	0.96	0.96	0.96
Adj. Flow (vph)	1	0	1	296	2	259	5	1231	84	106	1210	1
RTOR Reduction (vph)	0	1	0	0	40	0	0	6	0	0	0	0
Lane Group Flow (vph)	0	1	0	0	517	0	0	1314	0	106	1211	0
Confl. Peds. (#/hr)	4		4	2		2	4		4			
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	2%	1%	1%	2%	0%
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		29.5			29.5			35.3		42.5	42.5	
Effective Green, g (s)		29.5			29.5			35.3		42.5	42.5	
Actuated g/C Ratio		0.37			0.37			0.44		0.53	0.53	
Clearance Time (s)		4.0			4.0			4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		590			537			1469		165	1880	
v/s Ratio Prot										0.03	c0.34	
v/s Ratio Perm		0.00			c0.36			c0.39		0.31		
v/c Ratio		0.00			0.96			0.89		0.64	0.64	
Uniform Delay, d1		16.0			24.7			20.6		15.2	13.4	
Progression Factor		1.00			1.00			0.91		0.89	0.87	
Incremental Delay, d2		0.0			29.5			5.5		8.2	1.7	
Delay (s)		16.0			54.2			24.2		21.7	13.3	
Level of Service		B			D			C		C	B	
Approach Delay (s)		16.0			54.2			24.2			14.0	
Approach LOS		B			D			C			B	

Intersection Summary			
HCM Average Control Delay	25.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	116.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	193	280	50	245	471	355	108	660	69	377	705	321
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1725		1787	1863	1599	1752	3517		1752	3383	
Flt Permitted	0.19	1.00		0.25	1.00	1.00	0.20	1.00		0.17	1.00	
Satd. Flow (perm)	351	1725		463	1863	1599	369	3517		307	3383	
Peak-hour factor, PHF	0.92	0.92	0.92	0.89	0.89	0.89	0.89	0.89	0.89	0.88	0.88	0.88
Adj. Flow (vph)	210	304	54	275	529	399	121	742	78	428	801	365
RTOR Reduction (vph)	0	8	0	0	0	23	0	10	0	0	66	0
Lane Group Flow (vph)	210	350	0	275	529	376	121	810	0	428	1100	0
Heavy Vehicles (%)	3%	6%	17%	1%	2%	1%	3%	1%	3%	3%	2%	1%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	27.0	21.0		31.0	23.0	38.0	24.0	20.0		39.0	31.0	
Effective Green, g (s)	27.0	21.0		31.0	23.0	38.0	24.0	20.0		39.0	31.0	
Actuated g/C Ratio	0.34	0.26		0.39	0.29	0.48	0.30	0.25		0.49	0.39	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	224	453		312	536	839	180	879		421	1311	
v/s Ratio Prot	0.07	0.20		c0.09	c0.28	0.08	0.03	0.23		c0.19	0.33	
v/s Ratio Perm	0.25			0.25		0.15	0.17			c0.30		
v/c Ratio	0.94	0.77		0.88	0.99	0.45	0.67	0.92		1.02	0.84	
Uniform Delay, d1	24.1	27.3		20.2	28.4	14.0	22.2	29.2		21.3	22.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		0.69	0.99	
Incremental Delay, d2	42.6	8.0		23.9	35.2	0.4	9.5	16.4		41.9	4.9	
Delay (s)	66.7	35.3		44.1	63.5	14.4	31.7	45.7		56.7	27.0	
Level of Service	E	D		D	E	B	C	D		E	C	
Approach Delay (s)		46.9			42.8			43.9			35.0	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	40.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.1%	ICU Level of Service	E
Analysis Period (min)	15		

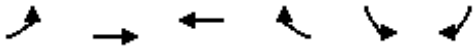
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	63	168	305	328	104	48
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.87	0.87	0.84	0.84	0.92	0.92
Hourly flow rate (vph)	72	193	363	390	113	52
Pedestrians		2	2			
Lane Width (ft)		12.0	12.0			
Walking Speed (ft/s)		4.0	4.0			
Percent Blockage		0	0			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			840			
pX, platoon unblocked						
vC, conflicting volume	754				898	560
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	754				898	560
tC, single (s)	4.1				6.5	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.3
p0 queue free %	92				59	90
cM capacity (veh/h)	866				277	521

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	266	754	113	52
Volume Left	72	0	113	0
Volume Right	0	390	0	52
cSH	866	1700	277	521
Volume to Capacity	0.08	0.44	0.41	0.10
Queue Length 95th (ft)	7	0	47	8
Control Delay (s)	3.3	0.0	26.7	12.7
Lane LOS	A		D	B
Approach Delay (s)	3.3	0.0	22.3	
Approach LOS			C	

Intersection Summary			
Average Delay	3.8		
Intersection Capacity Utilization	64.7%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	17	169	327	48	19	33
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.97	0.97	0.85	0.85
Hourly flow rate (vph)	20	197	337	49	22	39
Pedestrians		2	2		4	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	391				604	368
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	391				604	368
tC, single (s)	4.1				6.4	6.3
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.4
p0 queue free %	98				95	94
cM capacity (veh/h)	1175				455	657

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	216	387	61
Volume Left	20	0	22
Volume Right	0	49	39
cSH	1175	1700	565
Volume to Capacity	0.02	0.23	0.11
Queue Length 95th (ft)	1	0	9
Control Delay (s)	0.9	0.0	12.1
Lane LOS	A		B
Approach Delay (s)	0.9	0.0	12.1
Approach LOS			B

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (veh/h)	1535	46	85	1122	20	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.96	0.96	0.80	0.92
Hourly flow rate (vph)	1566	47	89	1169	25	0
Pedestrians	3				2	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	872			236		
pX, platoon unblocked			0.88		0.88	0.88
vC, conflicting volume			1615		2161	548
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1204		1828	0
tC, single (s)			4.2		6.9	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.3
p0 queue free %			82		47	100
cM capacity (veh/h)			498		47	948

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4	SW 1
Volume Total	627	627	360	89	390	390	390	25
Volume Left	0	0	0	89	0	0	0	25
Volume Right	0	0	47	0	0	0	0	0
cSH	1700	1700	1700	498	1700	1700	1700	47
Volume to Capacity	0.37	0.37	0.21	0.18	0.23	0.23	0.23	0.53
Queue Length 95th (ft)	0	0	0	16	0	0	0	49
Control Delay (s)	0.0	0.0	0.0	13.8	0.0	0.0	0.0	147.0
Lane LOS				B				F
Approach Delay (s)	0.0			1.0				147.0
Approach LOS								F

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	139	55	96	384	319	339
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.83	0.83	0.99	0.99	0.96	0.96
Hourly flow rate (vph)	167	66	97	388	332	353
Pedestrians	8			11	11	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			1	1	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	916	362	693			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	916	362	693			
tC, single (s)	6.9	7.1	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.2			
p0 queue free %	29	89	89			
cM capacity (veh/h)	237	608	899			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	234	226	259	222	464
Volume Left	167	97	0	0	0
Volume Right	66	0	0	0	353
cSH	287	899	1700	1700	1700
Volume to Capacity	0.82	0.11	0.15	0.13	0.27
Queue Length 95th (ft)	166	9	0	0	0
Control Delay (s)	55.7	4.7	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	55.7	2.2		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	10.0		
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	2	123	29	20	63	14	37	7	22	1	1	2
Peak Hour Factor	0.87	0.87	0.87	0.90	0.90	0.90	0.73	0.73	0.73	0.75	0.75	0.75
Hourly flow rate (vph)	2	141	33	22	70	16	51	10	30	1	1	3

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	177	108	90	5
Volume Left (vph)	2	22	51	1
Volume Right (vph)	33	16	30	3
Hadj (s)	-0.06	0.03	-0.09	-0.25
Departure Headway (s)	4.2	4.3	4.4	4.4
Degree Utilization, x	0.21	0.13	0.11	0.01
Capacity (veh/h)	837	793	758	751
Control Delay (s)	8.3	8.0	8.0	7.4
Approach Delay (s)	8.3	8.0	8.0	7.4
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.1			
HCM Level of Service	A			
Intersection Capacity Utilization	31.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	104	1535	0	0	1207
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.98	0.92	0.92	0.96
Hourly flow rate (vph)	0	113	1566	0	0	1257
Pedestrians	2					3
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			983			125
pX, platoon unblocked	0.95	0.95			0.95	
vC, conflicting volume	1987	527			1568	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1851	311			1409	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	83			100	
cM capacity (veh/h)	62	649			455	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	113	522	522	522	419	419	419
Volume Left	0	0	0	0	0	0	0
Volume Right	113	0	0	0	0	0	0
cSH	649	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.17	0.31	0.31	0.31	0.25	0.25	0.25
Queue Length 95th (ft)	16	0	0	0	0	0	0
Control Delay (s)	11.7	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	11.7	0.0			0.0		
Approach LOS	B						

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	18	20	12	17	6	11	778	6	1	1237	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			0.95	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.98			1.00			1.00	
Flt Protected		0.98			0.98			1.00			1.00	
Satd. Flow (prot)		1772			1817			1878			3603	
Flt Permitted		0.92			0.96			0.98			0.95	
Satd. Flow (perm)		1655			1781			1843			3440	
Peak-hour factor, PHF	0.94	0.94	0.94	0.82	0.82	0.82	0.91	0.91	0.91	0.98	0.98	0.98
Adj. Flow (vph)	24	19	21	15	21	7	12	855	7	1	1262	15
RTOR Reduction (vph)	0	20	0	0	7	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	44	0	0	36	0	0	874	0	0	1277	0
Confl. Peds. (#/hr)	2		2	3		3	4		4	1		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		3.0			3.0			49.0			49.0	
Effective Green, g (s)		3.0			3.0			49.0			49.0	
Actuated g/C Ratio		0.05			0.05			0.82			0.82	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		83			89			1505			2809	
v/s Ratio Prot												
v/s Ratio Perm		c0.03			0.02			c0.47			0.37	
v/c Ratio		0.53			0.41			0.58			0.45	
Uniform Delay, d1		27.8			27.6			1.9			1.6	
Progression Factor		1.00			0.97			0.16			1.00	
Incremental Delay, d2		6.4			3.0			1.2			0.5	
Delay (s)		34.2			29.7			1.5			2.1	
Level of Service		C			C			A			A	
Approach Delay (s)		34.2			29.7			1.5			2.1	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	3.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	7	3	12	849	623	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	0.95	
Frpb, ped/bikes	1.00			1.00	1.00	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.96			1.00	0.99	
Flt Protected	0.97			1.00	1.00	
Satd. Flow (prot)	1748			1880	3553	
Flt Permitted	0.97			0.99	1.00	
Satd. Flow (perm)	1748			1865	3553	
Peak-hour factor, PHF	0.75	0.75	0.98	0.98	0.95	0.95
Adj. Flow (vph)	9	4	12	866	656	25
RTOR Reduction (vph)	4	0	0	0	4	0
Lane Group Flow (vph)	9	0	0	878	678	0
Confl. Peds. (#/hr)	2	2	2			2
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	0.4			51.6	51.6	
Effective Green, g (s)	0.4			51.6	51.6	
Actuated g/C Ratio	0.01			0.86	0.86	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	12			1604	3056	
v/s Ratio Prot	c0.01				0.19	
v/s Ratio Perm				c0.47		
v/c Ratio	0.75			0.55	0.22	
Uniform Delay, d1	29.8			1.1	0.7	
Progression Factor	0.39			0.66	1.00	
Incremental Delay, d2	121.3			1.0	0.2	
Delay (s)	133.0			1.8	0.9	
Level of Service	F			A	A	
Approach Delay (s)	133.0			1.8	0.9	
Approach LOS	F			A	A	

Intersection Summary			
HCM Average Control Delay	2.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	812	827	0	1272	615	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		0.95	0.97	
Frpb, ped/bikes	1.00	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		1.00	0.95	
Satd. Flow (prot)	1881	1561		3574	3502	
Flt Permitted	1.00	1.00		1.00	0.95	
Satd. Flow (perm)	1881	1561		3574	3502	
Peak-hour factor, PHF	0.96	0.96	0.92	0.94	0.93	0.92
Adj. Flow (vph)	846	861	0	1353	661	0
RTOR Reduction (vph)	0	321	0	0	0	0
Lane Group Flow (vph)	846	540	0	1353	661	0
Confl. Peds. (#/hr)		2	1		1	
Heavy Vehicles (%)	1%	1%	2%	1%	0%	2%
Turn Type		Perm				
Protected Phases	2			6	8	
Permitted Phases		2				
Actuated Green, G (s)	37.6	37.6		37.6	14.4	
Effective Green, g (s)	37.6	37.6		37.6	14.4	
Actuated g/C Ratio	0.63	0.63		0.63	0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	1179	978		2240	840	
v/s Ratio Prot	c0.45			0.38	c0.19	
v/s Ratio Perm		0.35				
v/c Ratio	0.72	0.55		0.60	0.79	
Uniform Delay, d1	7.6	6.4		6.7	21.4	
Progression Factor	1.00	1.00		0.82	0.99	
Incremental Delay, d2	3.8	2.2		1.1	4.9	
Delay (s)	11.4	8.6		6.6	25.9	
Level of Service	B	A		A	C	
Approach Delay (s)	10.0			6.6	25.9	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	96	1612	181	231	1167	398	340	744	311	241	532	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		0.97	0.95		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.96		1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	5051		3467	3452		1802	4865		1768	4891	
Flt Permitted	0.12	1.00		0.95	1.00		0.25	1.00		0.31	1.00	
Satd. Flow (perm)	238	5051		3467	3452		474	4865		573	4891	
Peak-hour factor, PHF	0.95	0.95	0.95	0.99	0.99	0.99	0.98	0.98	0.98	0.91	0.91	0.91
Adj. Flow (vph)	101	1697	191	233	1179	402	347	759	317	265	585	120
RTOR Reduction (vph)	0	17	0	0	41	0	0	94	0	0	39	0
Lane Group Flow (vph)	101	1871	0	233	1540	0	347	982	0	265	666	0
Confl. Peds. (#/hr)	1		1	1		1	19		19	12		12
Heavy Vehicles (%)	0%	1%	1%	1%	0%	1%	0%	1%	0%	2%	3%	2%
Turn Type	pm+pt			Prot			pm+pt			pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6						4			8		
Actuated Green, G (s)	35.2	32.0		7.0	35.8		28.0	16.0		22.0	13.0	
Effective Green, g (s)	35.2	32.0		7.0	35.8		28.0	16.0		22.0	13.0	
Actuated g/C Ratio	0.44	0.40		0.09	0.45		0.35	0.20		0.28	0.16	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	2020		303	1545		365	973		292	795	
v/s Ratio Prot	0.02	0.37		c0.07	c0.45		c0.14	c0.20		0.10	0.14	
v/s Ratio Perm	0.24						0.19			0.15		
v/c Ratio	0.60	0.93		0.77	1.00		0.95	1.01		0.91	0.84	
Uniform Delay, d1	18.5	22.9		35.7	22.0		22.1	32.0		26.2	32.5	
Progression Factor	1.00	1.00		1.35	0.49		1.23	0.48		1.00	1.00	
Incremental Delay, d2	6.1	8.8		8.6	19.1		30.7	28.6		29.7	7.7	
Delay (s)	24.5	31.7		56.8	29.8		57.9	43.9		55.9	40.2	
Level of Service	C	C		E	C		E	D		E	D	
Approach Delay (s)		31.3			33.3			47.3			44.5	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	37.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	98.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	2048	15	59	1644	23	187
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	5079		1805	3539	1805	1563
Flt Permitted	1.00		0.08	1.00	0.95	1.00
Satd. Flow (perm)	5079		154	3539	1805	1563
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.64	0.64
Adj. Flow (vph)	2069	15	60	1661	36	292
RTOR Reduction (vph)	1	0	0	0	0	11
Lane Group Flow (vph)	2083	0	60	1661	36	281
Confl. Peds. (#/hr)		6	1		7	7
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Turn Type			Perm			Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	49.3		49.3	49.3	22.7	22.7
Effective Green, g (s)	49.3		49.3	49.3	22.7	22.7
Actuated g/C Ratio	0.62		0.62	0.62	0.28	0.28
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3130		95	2181	512	444
v/s Ratio Prot	0.41			c0.47	0.02	
v/s Ratio Perm			0.39			c0.18
v/c Ratio	0.67		0.63	0.76	0.07	0.63
Uniform Delay, d1	10.0		9.6	11.1	20.9	25.0
Progression Factor	0.48		1.21	1.09	1.00	1.00
Incremental Delay, d2	0.2		9.1	1.1	0.3	6.7
Delay (s)	4.9		20.7	13.2	21.2	31.7
Level of Service	A		C	B	C	C
Approach Delay (s)	4.9			13.5	30.6	
Approach LOS	A			B	C	

Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	1965	469	505	1322	0	0	0	0	1042	305	389
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	0.99
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.99	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		6471	1599	3433	3610					1643	3138	1448
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		6471	1599	3433	3610					1643	3138	1448
Peak-hour factor, PHF	0.92	0.99	0.99	0.93	0.93	0.92	0.92	0.92	0.92	0.98	0.98	0.98
Adj. Flow (vph)	0	1985	474	543	1422	0	0	0	0	1063	311	397
RTOR Reduction (vph)	0	0	156	0	0	0	0	0	0	0	4	21
Lane Group Flow (vph)	0	1985	318	543	1422	0	0	0	0	531	879	336
Confl. Peds. (#/hr)										2		2
Heavy Vehicles (%)	0%	1%	1%	2%	0%	0%	0%	0%	0%	0%	1%	0%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		27.0	27.0	13.0	44.0					28.0	28.0	28.0
Effective Green, g (s)		27.0	27.0	13.0	44.0					28.0	28.0	28.0
Actuated g/C Ratio		0.34	0.34	0.16	0.55					0.35	0.35	0.35
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2184	540	558	1986					575	1098	507
v/s Ratio Prot		c0.31		c0.16	0.39					c0.32	0.28	
v/s Ratio Perm			0.20									0.23
v/c Ratio		0.91	0.59	0.97	0.72					0.92	0.92dl	0.66
Uniform Delay, d1		25.3	21.9	33.3	13.4					25.0	23.5	22.0
Progression Factor		0.78	0.66	0.64	0.79					1.00	1.00	1.00
Incremental Delay, d2		5.8	3.8	26.3	1.7					20.6	4.3	3.2
Delay (s)		25.5	18.3	47.8	12.2					45.6	27.8	25.2
Level of Service		C	B	D	B					D	C	C
Approach Delay (s)		24.1			22.1			0.0			32.6	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	25.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	255	691	1013	1817	0	0	1499	805	0	0	498
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.95			0.86	1.00			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1787	2814	3502	3610			6536	1599			1621
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1787	2814	3502	3610			6536	1599			1621
Peak-hour factor, PHF	0.93	0.93	0.98	0.98	0.92	0.92	0.99	0.99	0.92	0.92	0.86
Adj. Flow (vph)	274	743	1034	1854	0	0	1514	813	0	0	579
RTOR Reduction (vph)	0	42	0	0	0	0	0	49	0	0	322
Lane Group Flow (vph)	274	701	1034	1854	0	0	1514	764	0	0	257
Confl. Peds. (#/hr)	1	1	1								1
Heavy Vehicles (%)	1%	1%	0%	0%	2%	2%	0%	1%	2%	2%	0%
Turn Type		Prot	Prot					Perm			custom
Protected Phases	4	4	1	6			2				
Permitted Phases								2			8
Actuated Green, G (s)	16.0	16.0	19.0	56.0			33.0	33.0			16.0
Effective Green, g (s)	16.0	16.0	19.0	56.0			33.0	33.0			16.0
Actuated g/C Ratio	0.20	0.20	0.24	0.70			0.41	0.41			0.20
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	357	563	832	2527			2696	660			324
v/s Ratio Prot	0.15	c0.25	c0.30	0.51			0.23				
v/s Ratio Perm								c0.48			0.16
v/c Ratio	0.77	1.24	1.24	0.73			0.56	1.16			0.79
Uniform Delay, d1	30.2	32.0	30.5	7.4			18.0	23.5			30.4
Progression Factor	1.00	1.00	1.13	0.54			0.67	0.68			1.00
Incremental Delay, d2	9.5	124.4	113.8	0.8			0.6	83.7			12.4
Delay (s)	39.8	156.4	148.2	4.8			12.8	99.6			42.9
Level of Service	D	F	F	A			B	F			D
Approach Delay (s)	125.0			56.2			43.1		42.9		
Approach LOS	F			E			D		D		

Intersection Summary			
HCM Average Control Delay	60.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	425	37	106	38	47	135	66	2145	488	69	1566	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1743	1523	1805	1900	1593	1770	5136	1568	1805	5181	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.10	1.00	1.00	0.10	1.00	
Satd. Flow (perm)	3433	1743	1523	1805	1900	1593	182	5136	1568	189	5181	
Peak-hour factor, PHF	0.94	0.94	0.94	0.75	0.75	0.75	0.96	0.96	0.96	0.95	0.95	0.95
Adj. Flow (vph)	452	39	113	51	63	180	69	2234	508	73	1648	11
RTOR Reduction (vph)	0	0	95	0	0	83	0	0	248	0	1	0
Lane Group Flow (vph)	452	39	18	51	63	97	69	2234	260	73	1658	0
Confl. Peds. (#/hr)	5		5	1		1	5		5	4		4
Heavy Vehicles (%)	2%	9%	4%	0%	0%	0%	2%	1%	1%	0%	0%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		Perm	pm+pt		
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	12.8	12.8	12.8	7.0	7.0	7.0	45.0	41.0	41.0	43.4	40.2	
Effective Green, g (s)	12.8	12.8	12.8	7.0	7.0	7.0	45.0	41.0	41.0	43.4	40.2	
Actuated g/C Ratio	0.16	0.16	0.16	0.09	0.09	0.09	0.56	0.51	0.51	0.54	0.50	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	549	279	244	158	166	139	182	2632	804	167	2603	
v/s Ratio Prot	c0.13	0.02		0.03	0.03		c0.02	c0.43		0.02	0.32	
v/s Ratio Perm			0.01			c0.06	0.19		0.17	0.22		
v/c Ratio	0.82	0.14	0.07	0.32	0.38	0.70	0.38	0.85	0.32	0.44	0.64	
Uniform Delay, d1	32.5	28.9	28.6	34.3	34.5	35.5	10.3	16.8	11.4	14.2	14.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.84	0.92	1.39	1.25	0.23	
Incremental Delay, d2	9.7	0.2	0.1	1.2	1.5	14.2	0.7	2.1	0.6	1.1	0.8	
Delay (s)	42.2	29.1	28.7	35.5	35.9	49.6	9.4	17.5	16.5	18.9	4.0	
Level of Service	D	C	C	D	D	D	A	B	B	B	A	
Approach Delay (s)		38.8			44.2			17.1			4.7	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM Average Control Delay	17.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	523	558	77	119	260	118	349	1386	585	161	840	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	3474		1805	1900	1553	1805	3610	1599	1787	3555	
Flt Permitted	0.95	1.00		0.34	1.00	1.00	0.14	1.00	1.00	0.16	1.00	
Satd. Flow (perm)	3467	3474		646	1900	1553	260	3610	1599	299	3555	
Peak-hour factor, PHF	0.96	0.96	0.96	0.92	0.92	0.92	0.94	0.94	0.94	0.92	0.92	0.92
Adj. Flow (vph)	545	581	80	129	283	128	371	1474	622	175	913	36
RTOR Reduction (vph)	0	13	0	0	0	108	0	0	260	0	3	0
Lane Group Flow (vph)	545	648	0	129	283	20	371	1474	362	175	946	0
Confl. Peds. (#/hr)	2		2									
Heavy Vehicles (%)	1%	1%	8%	0%	0%	4%	0%	0%	1%	1%	1%	0%
Turn Type	Prot			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases				8		8	6		6	2		
Actuated Green, G (s)	13.0	21.0		17.6	12.8	12.8	42.2	34.2	34.2	29.2	25.2	
Effective Green, g (s)	13.0	21.0		17.6	12.8	12.8	42.2	34.2	34.2	29.2	25.2	
Actuated g/C Ratio	0.16	0.26		0.22	0.16	0.16	0.53	0.43	0.43	0.36	0.32	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	563	912		212	304	248	388	1543	684	184	1120	
v/s Ratio Prot	c0.16	0.19		0.04	c0.15		c0.16	0.41		0.05	0.27	
v/s Ratio Perm				0.10		0.01	c0.35		0.23	0.30		
v/c Ratio	0.97	0.71		0.61	0.93	0.08	0.96	0.96	0.53	0.95	0.84	
Uniform Delay, d1	33.3	26.7		26.2	33.2	28.6	20.8	22.2	16.9	25.0	25.6	
Progression Factor	1.09	1.07		1.00	1.00	1.00	1.59	0.31	0.14	0.71	0.85	
Incremental Delay, d2	21.0	1.5		4.9	33.9	0.1	25.0	10.1	1.8	48.5	7.0	
Delay (s)	57.5	30.2		31.1	67.1	28.7	58.1	16.9	4.1	66.3	28.8	
Level of Service	E	C		C	E	C	E	B	A	E	C	
Approach Delay (s)		42.5			49.4			19.8			34.7	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM Average Control Delay	31.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	238	672	227	136	336	97	210	696	79	72	1023	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1805	3492		1805	3536	
Flt Permitted	0.29	1.00	1.00	0.31	1.00	1.00	0.11	1.00		0.29	1.00	
Satd. Flow (perm)	543	3574	1599	574	3574	1599	218	3492		560	3536	
Peak-hour factor, PHF	0.97	0.97	0.97	0.93	0.93	0.93	0.97	0.97	0.97	0.93	0.93	0.93
Adj. Flow (vph)	245	693	234	146	361	104	216	718	81	77	1100	91
RTOR Reduction (vph)	0	0	141	0	0	87	0	11	0	0	7	0
Lane Group Flow (vph)	245	693	93	146	361	17	216	788	0	77	1184	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	2%	0%	0%	1%	0%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	28.4	18.4	18.4	19.1	13.1	13.1	43.6	35.6		34.9	30.9	
Effective Green, g (s)	28.4	18.4	18.4	19.1	13.1	13.1	43.6	35.6		34.9	30.9	
Actuated g/C Ratio	0.36	0.23	0.23	0.24	0.16	0.16	0.55	0.44		0.44	0.39	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	368	822	368	228	585	262	291	1554		307	1366	
v/s Ratio Prot	c0.09	c0.19		0.05	0.10		c0.08	0.23		0.01	c0.33	
v/s Ratio Perm	0.14		0.06	0.10		0.01	0.32			0.10		
v/c Ratio	0.67	0.84	0.25	0.64	0.62	0.06	0.74	0.51		0.25	0.87	
Uniform Delay, d1	19.8	29.4	25.2	25.5	31.1	28.3	15.1	15.9		13.4	22.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		0.33	0.32	
Incremental Delay, d2	4.5	7.9	0.4	6.0	1.9	0.1	9.8	1.2		0.2	3.4	
Delay (s)	24.3	37.3	25.5	31.5	33.1	28.4	24.9	17.1		4.6	10.6	
Level of Service	C	D	C	C	C	C	C	B		A	B	
Approach Delay (s)		32.2			31.9			18.8			10.3	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	22.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	208	573	240	99	153	119	77	796	85	479	1528	192
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3450		1787	1881	1538	1752	3518		1805	3540	
Flt Permitted	0.38	1.00		0.29	1.00	1.00	0.14	1.00		0.13	1.00	
Satd. Flow (perm)	717	3450		545	1881	1538	264	3518		238	3540	
Peak-hour factor, PHF	0.93	0.93	0.93	0.95	0.95	0.95	0.96	0.96	0.96	0.99	0.99	0.99
Adj. Flow (vph)	224	616	258	104	161	125	80	829	89	484	1543	194
RTOR Reduction (vph)	0	51	0	0	0	106	0	9	0	0	10	0
Lane Group Flow (vph)	224	823	0	104	161	19	80	909	0	484	1727	0
Confl. Peds. (#/hr)							1		1	7		7
Heavy Vehicles (%)	1%	0%	0%	1%	1%	5%	3%	1%	1%	0%	0%	0%
Turn Type	pm+pt			pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	29.2	22.1		16.9	13.8	13.8	31.0	27.9		52.4	45.3	
Effective Green, g (s)	29.2	22.1		16.9	13.8	13.8	31.0	27.9		52.4	45.3	
Actuated g/C Ratio	0.33	0.25		0.19	0.15	0.15	0.35	0.31		0.58	0.51	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	370	851		146	290	237	143	1095		498	1790	
v/s Ratio Prot	c0.08	c0.24		0.02	0.09		0.02	0.26		c0.22	0.49	
v/s Ratio Perm	0.12			0.11		0.01	0.17			c0.35		
v/c Ratio	0.61	0.97		0.71	0.56	0.08	0.56	0.83		0.97	0.96	
Uniform Delay, d1	23.7	33.4		34.5	35.1	32.5	23.4	28.6		25.1	21.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.8	22.8		15.1	2.3	0.1	4.7	7.3		33.0	14.4	
Delay (s)	26.4	56.2		49.6	37.4	32.6	28.1	36.0		58.1	35.8	
Level of Service	C	E		D	D	C	C	D		E	D	
Approach Delay (s)		50.1			39.1			35.4			40.6	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	41.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	89.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	271	472	171	1011	747	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.97	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1555	1719	1881	1881	1583
Flt Permitted	0.95	1.00	0.15	1.00	1.00	1.00
Satd. Flow (perm)	1770	1555	267	1881	1881	1583
Peak-hour factor, PHF	0.95	0.95	0.94	0.94	0.94	0.94
Adj. Flow (vph)	285	497	182	1076	795	164
RTOR Reduction (vph)	0	223	0	0	0	74
Lane Group Flow (vph)	285	274	182	1076	795	90
Confl. Peds. (#/hr)	3	3				
Heavy Vehicles (%)	2%	1%	5%	1%	1%	2%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	17.1	17.1	54.9	54.9	43.9	43.9
Effective Green, g (s)	17.1	17.1	54.9	54.9	43.9	43.9
Actuated g/C Ratio	0.21	0.21	0.69	0.69	0.55	0.55
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	378	332	310	1291	1032	869
v/s Ratio Prot	0.16		0.05	c0.57	0.42	
v/s Ratio Perm		c0.18	0.35			0.06
v/c Ratio	0.75	0.83	0.59	0.83	0.77	0.10
Uniform Delay, d1	29.5	30.0	11.4	9.2	14.1	8.6
Progression Factor	0.98	0.98	1.00	1.00	0.53	0.75
Incremental Delay, d2	8.0	15.0	2.8	6.4	3.4	0.1
Delay (s)	36.8	44.3	14.3	15.6	10.9	6.6
Level of Service	D	D	B	B	B	A
Approach Delay (s)	41.6			15.4	10.2	
Approach LOS	D			B	B	

Intersection Summary			
HCM Average Control Delay	20.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	392	92	224	387	80	124	785	175	107	922	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.95	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1671	1798		1805	1822		1787	1881	1452	1770	1863	1572
Flt Permitted	0.16	1.00		0.13	1.00		0.07	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	278	1798		239	1822		139	1881	1452	156	1863	1572
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.98	0.98	0.98	0.94	0.94	0.94
Adj. Flow (vph)	83	408	96	233	403	83	127	801	179	114	981	66
RTOR Reduction (vph)	0	7	0	0	7	0	0	0	81	0	0	25
Lane Group Flow (vph)	83	497	0	233	479	0	127	801	98	114	981	41
Confl. Peds. (#/hr)	7		7	4		4	8		8	2		2
Heavy Vehicles (%)	8%	2%	1%	0%	1%	1%	1%	1%	6%	2%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	27.8		40.8	33.6		58.0	54.0	54.0	58.0	54.0	54.0
Effective Green, g (s)	31.0	27.8		40.8	33.6		58.0	54.0	54.0	58.0	54.0	54.0
Actuated g/C Ratio	0.28	0.25		0.37	0.30		0.52	0.49	0.49	0.52	0.49	0.49
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	118	451		215	553		132	917	708	140	908	766
v/s Ratio Prot	0.02	0.28		c0.09	0.26		c0.03	0.43		0.03	c0.53	
v/s Ratio Perm	0.18			c0.31			0.47		0.07	0.40		0.03
v/c Ratio	0.70	1.10		1.08	0.87		0.96	0.87	0.14	0.81	1.08	0.05
Uniform Delay, d1	35.6	41.5		30.0	36.5		25.9	25.4	15.6	22.8	28.4	15.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	17.3	72.6		85.5	13.4		66.3	11.3	0.4	29.1	54.0	0.1
Delay (s)	52.9	114.1		115.5	49.9		92.2	36.7	16.0	51.9	82.4	15.1
Level of Service	D	F		F	D		F	D	B	D	F	B
Approach Delay (s)		105.5			71.1			39.7			75.6	
Approach LOS		F			E			D			E	

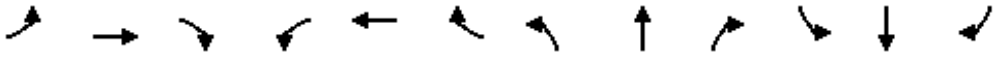
Intersection Summary			
HCM Average Control Delay	68.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	110.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	107.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	0	1	401	6	767	0	848	314	475	993	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00		0.95	1.00	1.00	0.95	
Frpb, ped/bikes		0.99			1.00	0.97		1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00			0.98	1.00		1.00	1.00	1.00	1.00	
Frt		0.93			1.00	0.85		1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.95	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1715			1758	1549		3574	1574	1752	3539	
Flt Permitted		0.90			0.73	1.00		1.00	1.00	0.17	1.00	
Satd. Flow (perm)		1580			1341	1549		3574	1574	307	3539	
Peak-hour factor, PHF	0.50	0.50	0.50	0.95	0.95	0.95	0.90	0.90	0.90	0.98	0.98	0.98
Adj. Flow (vph)	2	0	2	422	6	807	0	942	349	485	1013	0
RTOR Reduction (vph)	0	1	0	0	0	318	0	0	249	0	0	0
Lane Group Flow (vph)	0	3	0	0	428	489	0	942	100	485	1013	0
Confl. Peds. (#/hr)	2		2	15		15	3		3	7		7
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	1%	1%	3%	2%	0%
Turn Type	Perm			Perm		Perm	Perm		Perm	pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)		23.0			23.0	23.0		20.0	20.0	39.0	39.0	
Effective Green, g (s)		23.0			23.0	23.0		20.0	20.0	39.0	39.0	
Actuated g/C Ratio		0.33			0.33	0.33		0.29	0.29	0.56	0.56	
Clearance Time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		519			441	509		1021	450	481	1972	
v/s Ratio Prot								0.26		c0.22	0.29	
v/s Ratio Perm		0.00			c0.32	0.32			0.06	c0.35		
v/c Ratio		0.01			0.97	0.96		0.92	0.22	1.01	0.51	
Uniform Delay, d1		15.8			23.2	23.1		24.2	19.1	18.5	9.6	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0			35.1	29.9		14.8	1.1	43.1	1.0	
Delay (s)		15.8			58.3	53.0		39.0	20.2	61.6	10.6	
Level of Service		B			E	D		D	C	E	B	
Approach Delay (s)		15.8			54.8			33.9			27.1	
Approach LOS		B			D			C			C	

Intersection Summary			
HCM Average Control Delay	37.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	90.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	601	88	25	75	55	30	37	715	52	72	1081	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99			1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	0.97			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1698	1714			1847	1421	1805	3498		1752	3574	
Flt Permitted	0.95	0.97			0.97	1.00	0.17	1.00		0.25	1.00	
Satd. Flow (perm)	1698	1714			1847	1421	325	3498		461	3574	
Peak-hour factor, PHF	0.93	0.93	0.93	0.83	0.83	0.83	0.93	0.93	0.93	0.96	0.96	0.92
Adj. Flow (vph)	646	95	27	90	66	36	40	769	56	75	1126	0
RTOR Reduction (vph)	0	4	0	0	0	33	0	9	0	0	0	0
Lane Group Flow (vph)	381	383	0	0	156	3	40	816	0	75	1126	0
Confl. Peds. (#/hr)	2		2	2		2	1		1			
Heavy Vehicles (%)	1%	0%	0%	0%	0%	11%	0%	2%	2%	3%	1%	0%
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases						8	2			6		
Actuated Green, G (s)	14.9	14.9			5.3	5.3	23.4	23.4		23.4	23.4	
Effective Green, g (s)	14.9	14.9			5.3	5.3	23.4	23.4		23.4	23.4	
Actuated g/C Ratio	0.27	0.27			0.10	0.10	0.42	0.42		0.42	0.42	
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	455	459			176	135	137	1472		194	1504	
v/s Ratio Prot	c0.22	0.22			c0.08			0.23			c0.32	
v/s Ratio Perm						0.00	0.12			0.16		
v/c Ratio	0.84	0.83			0.89	0.03	0.29	0.55		0.39	0.75	
Uniform Delay, d1	19.2	19.2			24.9	22.8	10.6	12.2		11.1	13.6	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	12.6	12.3			37.3	0.1	5.3	1.5		5.7	3.5	
Delay (s)	31.9	31.5			62.1	22.9	16.0	13.7		16.9	17.1	
Level of Service	C	C			E	C	B	B		B	B	
Approach Delay (s)		31.7			54.8			13.8			17.1	
Approach LOS		C			D			B			B	

Intersection Summary			
HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	55.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	364	783	841	195	697	132	876	752	212	72	909	243
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.97	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	3610	1615	1787	5001		3467	3610	1583	1770	3574	1591
Flt Permitted	0.22	1.00	1.00	0.29	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	418	3610	1615	537	5001		3467	3610	1583	1770	3574	1591
Peak-hour factor, PHF	0.99	0.99	0.99	0.96	0.96	0.96	0.97	0.97	0.97	0.99	0.99	0.99
Adj. Flow (vph)	368	791	849	203	726	138	903	775	219	73	918	245
RTOR Reduction (vph)	0	0	383	0	35	0	0	0	164	0	0	146
Lane Group Flow (vph)	368	791	467	203	829	0	903	775	55	73	918	99
Confl. Peds. (#/hr)				2		2				2		2
Heavy Vehicles (%)	1%	0%	0%	1%	1%	1%	1%	0%	2%	2%	1%	0%
Turn Type	pm+pt		Perm	pm+pt			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4		4	8					2			6
Actuated Green, G (s)	29.0	20.0	20.0	19.0	14.0		20.0	20.0	20.0	19.0	19.0	19.0
Effective Green, g (s)	29.0	20.0	20.0	19.0	14.0		20.0	20.0	20.0	19.0	19.0	19.0
Actuated g/C Ratio	0.36	0.25	0.25	0.24	0.18		0.25	0.25	0.25	0.24	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	340	903	404	206	875		867	903	396	420	849	378
v/s Ratio Prot	c0.15	0.22		0.06	0.17		c0.26	0.21		0.04	c0.26	
v/s Ratio Perm	0.24		c0.29	0.17					0.03			0.06
v/c Ratio	1.08	0.88	1.15	0.99	0.95		1.04	0.86	0.14	0.17	1.08	0.26
Uniform Delay, d1	22.5	28.8	30.0	29.5	32.6		30.0	28.6	23.3	24.3	30.5	24.8
Progression Factor	1.00	1.00	1.00	1.27	0.51		0.99	0.98	1.73	1.00	1.00	1.00
Incremental Delay, d2	72.6	9.5	94.2	43.4	12.7		40.5	9.5	0.7	0.9	55.2	1.7
Delay (s)	95.0	38.3	124.2	81.0	29.2		70.1	37.7	41.0	25.2	85.7	26.5
Level of Service	F	D	F	F	C		E	D	D	C	F	C
Approach Delay (s)		85.0			39.0			53.5			70.4	
Approach LOS		F			D			D			E	

Intersection Summary			
HCM Average Control Delay	64.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	591	746	974	0	0	1861
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	0.97	0.91	0.91			0.86
Frpb, ped/bikes	0.99	0.99	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	0.95	0.85	1.00			1.00
Flt Protected	0.97	1.00	1.00			1.00
Satd. Flow (prot)	3331	1433	5136			6471
Flt Permitted	0.97	1.00	1.00			1.00
Satd. Flow (perm)	3331	1433	5136			6471
Peak-hour factor, PHF	0.97	0.97	0.97	0.92	0.92	0.99
Adj. Flow (vph)	609	769	1004	0	0	1880
RTOR Reduction (vph)	28	28	0	0	0	0
Lane Group Flow (vph)	912	410	1004	0	0	1880
Confl. Peds. (#/hr)	2	2				
Heavy Vehicles (%)	1%	1%	1%	2%	2%	1%
Turn Type		Perm				
Protected Phases	8		2			6
Permitted Phases		8				
Actuated Green, G (s)	31.4	31.4	40.6			40.6
Effective Green, g (s)	31.4	31.4	40.6			40.6
Actuated g/C Ratio	0.39	0.39	0.51			0.51
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	1307	562	2607			3284
v/s Ratio Prot	0.27		0.20			c0.29
v/s Ratio Perm		c0.29				
v/c Ratio	0.70	0.73	0.39			0.57
Uniform Delay, d1	20.3	20.7	12.1			13.7
Progression Factor	1.00	1.00	0.20			0.66
Incremental Delay, d2	1.6	4.7	0.4			0.1
Delay (s)	22.0	25.4	2.8			9.1
Level of Service	C	C	A			A
Approach Delay (s)	23.1		2.8			9.1
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	964	470	828	1622
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0
Lane Util. Factor			0.91		0.97	0.91
Frpb, ped/bikes			0.99		1.00	1.00
Flpb, ped/bikes			1.00		1.00	1.00
Frt			0.95		1.00	1.00
Flt Protected			1.00		0.95	1.00
Satd. Flow (prot)			4857		3467	5136
Flt Permitted			1.00		0.95	1.00
Satd. Flow (perm)			4857		3467	5136
Peak-hour factor, PHF	0.92	0.92	0.97	0.97	0.99	0.99
Adj. Flow (vph)	0	0	994	485	836	1638
RTOR Reduction (vph)	0	0	31	0	0	0
Lane Group Flow (vph)	0	0	1448	0	836	1638
Confl. Peds. (#/hr)				3		
Heavy Vehicles (%)	2%	2%	1%	1%	1%	1%
Turn Type					Prot	
Protected Phases			2		1	6
Permitted Phases						
Actuated Green, G (s)			46.2		25.8	80.0
Effective Green, g (s)			46.2		25.8	80.0
Actuated g/C Ratio			0.58		0.32	1.00
Clearance Time (s)			4.0		4.0	4.0
Vehicle Extension (s)			3.0		3.0	3.0
Lane Grp Cap (vph)			2805		1118	5136
v/s Ratio Prot			c0.30		c0.24	0.32
v/s Ratio Perm						
v/c Ratio			0.52		0.75	0.32
Uniform Delay, d1			10.2		24.2	0.0
Progression Factor			0.55		0.96	1.00
Incremental Delay, d2			0.6		2.3	0.1
Delay (s)			6.1		25.6	0.1
Level of Service			A		C	A
Approach Delay (s)	0.0		6.1			8.7
Approach LOS	A		A			A

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	3	2	186	5	112	0	1292	188	196	1348	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.95			0.98			1.00	
Flt Protected		0.99			0.97			1.00			0.99	
Satd. Flow (prot)		1794			1714			3499			3552	
Flt Permitted		0.97			0.80			1.00			0.52	
Satd. Flow (perm)		1749			1416			3499			1843	
Peak-hour factor, PHF	0.31	0.31	0.31	0.85	0.85	0.85	0.95	0.95	0.95	0.94	0.94	0.94
Adj. Flow (vph)	3	10	6	219	6	132	0	1360	198	209	1434	0
RTOR Reduction (vph)	0	5	0	0	26	0	0	11	0	0	0	0
Lane Group Flow (vph)	0	14	0	0	331	0	0	1547	0	0	1643	0
Confl. Peds. (#/hr)	4		4	5		5	2		2	6		6
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	1%	0%	1%	1%	0%
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		16.0			16.0			56.0			56.0	
Effective Green, g (s)		16.0			16.0			56.0			56.0	
Actuated g/C Ratio		0.20			0.20			0.70			0.70	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		350			283			2449			1290	
v/s Ratio Prot								0.44				
v/s Ratio Perm		0.01			c0.23						c0.89	
v/c Ratio		0.04			1.17			0.63			1.36dl	
Uniform Delay, d1		25.8			32.0			6.5			12.0	
Progression Factor		1.00			0.93			0.55			1.01	
Incremental Delay, d2		0.0			106.8			0.8			129.2	
Delay (s)		25.9			136.5			4.3			141.2	
Level of Service		C			F			A			F	
Approach Delay (s)		25.9			136.5			4.3			141.2	
Approach LOS		C			F			A			F	

Intersection Summary			
HCM Average Control Delay	80.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	119.0%	ICU Level of Service	H
Analysis Period (min)	15		

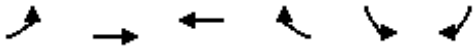
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	231	389	70	199	346	346	62	715	134	394	865	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	1802		1805	1863	1615	1752	3495		1805	3474	
Flt Permitted	0.20	1.00		0.20	1.00	1.00	0.19	1.00		0.16	1.00	
Satd. Flow (perm)	375	1802		380	1863	1615	351	3495		304	3474	
Peak-hour factor, PHF	0.89	0.89	0.89	0.92	0.92	0.92	0.90	0.90	0.90	0.99	0.99	0.99
Adj. Flow (vph)	260	437	79	216	376	376	69	794	149	398	874	174
RTOR Reduction (vph)	0	8	0	0	0	29	0	19	0	0	20	0
Lane Group Flow (vph)	260	508	0	216	376	347	69	924	0	398	1028	0
Heavy Vehicles (%)	1%	3%	3%	0%	2%	0%	3%	1%	0%	0%	1%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	31.0	22.0		27.0	20.0	34.0	24.2	21.0		39.0	31.8	
Effective Green, g (s)	31.0	22.0		27.0	20.0	34.0	24.2	21.0		39.0	31.8	
Actuated g/C Ratio	0.39	0.28		0.34	0.25	0.42	0.30	0.26		0.49	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	304	496		253	466	767	162	917		411	1381	
v/s Ratio Prot	c0.10	c0.28		0.07	0.20	0.08	0.02	0.26		c0.17	0.30	
v/s Ratio Perm	0.23			0.21		0.14	0.11			c0.30		
v/c Ratio	0.86	1.02		0.85	0.81	0.45	0.43	1.01		0.97	0.74	
Uniform Delay, d1	19.2	29.0		22.1	28.2	16.4	20.6	29.5		20.9	20.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		0.80	0.95	
Incremental Delay, d2	20.3	46.7		23.3	9.9	0.4	1.8	31.6		7.4	0.3	
Delay (s)	39.5	75.7		45.4	38.0	16.8	22.4	61.1		24.2	19.9	
Level of Service	D	E		D	D	B	C	E		C	B	
Approach Delay (s)		63.6			31.4			58.4			21.0	
Approach LOS		E			C			E			C	

Intersection Summary			
HCM Average Control Delay	40.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.9%	ICU Level of Service	F
Analysis Period (min)	15		

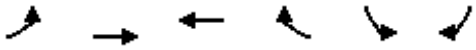
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	49	374	264	101	428	208
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.93	0.93	0.87	0.87
Hourly flow rate (vph)	53	407	284	109	492	239
Pedestrians		3	3		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			840			
pX, platoon unblocked						
vC, conflicting volume	394				856	343
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	394				856	343
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				0	66
cM capacity (veh/h)	1173				312	699

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	460	392	492	239
Volume Left	53	0	492	0
Volume Right	0	109	0	239
cSH	1173	1700	312	699
Volume to Capacity	0.05	0.23	1.58	0.34
Queue Length 95th (ft)	4	0	722	38
Control Delay (s)	1.4	0.0	304.8	12.8
Lane LOS	A		F	B
Approach Delay (s)	1.4	0.0	209.3	
Approach LOS			F	

Intersection Summary			
Average Delay	97.0		
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	16	312	382	17	106	74
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	17	328	402	18	115	80
Pedestrians		4	4		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	422				779	417
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	422				779	417
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				68	87
cM capacity (veh/h)	1146				360	637

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	345	420	196
Volume Left	17	0	115
Volume Right	0	18	80
cSH	1146	1700	438
Volume to Capacity	0.01	0.25	0.45
Queue Length 95th (ft)	1	0	56
Control Delay (s)	0.5	0.0	19.7
Lane LOS	A		C
Approach Delay (s)	0.5	0.0	19.7
Approach LOS			C

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (veh/h)	1269	60	97	1483	57	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.99	0.99	0.91	0.92
Hourly flow rate (vph)	1295	61	98	1498	63	0
Pedestrians	4				1	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	872			236		
pX, platoon unblocked						
vC, conflicting volume			1357		2026	463
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1357		2026	463
tC, single (s)			4.1		6.9	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			81		0	100
cM capacity (veh/h)			508		39	545

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4	SW 1
Volume Total	518	518	320	98	499	499	499	63
Volume Left	0	0	0	98	0	0	0	63
Volume Right	0	0	61	0	0	0	0	0
cSH	1700	1700	1700	508	1700	1700	1700	39
Volume to Capacity	0.30	0.30	0.19	0.19	0.29	0.29	0.29	1.60
Queue Length 95th (ft)	0	0	0	18	0	0	0	163
Control Delay (s)	0.0	0.0	0.0	13.8	0.0	0.0	0.0	520.1
Lane LOS				B				F
Approach Delay (s)	0.0			0.8				520.1
Approach LOS								F

Intersection Summary			
Average Delay	11.3		
Intersection Capacity Utilization	44.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	264	96	34	271	436	85
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	300	109	36	285	474	92
Pedestrians	7			6	6	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	747	296	573			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	747	296	573			
tC, single (s)	6.8	7.0	4.4			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.3			
p0 queue free %	10	84	96			
cM capacity (veh/h)	333	690	918			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	409	131	190	316	250
Volume Left	300	36	0	0	0
Volume Right	109	0	0	0	92
cSH	387	918	1700	1700	1700
Volume to Capacity	1.06	0.04	0.11	0.19	0.15
Queue Length 95th (ft)	347	3	0	0	0
Control Delay (s)	95.3	2.8	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	95.3	1.1		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	30.4		
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	52	63	76	105	4	18	1	8	11	3	3
Peak Hour Factor	0.86	0.86	0.86	0.81	0.81	0.81	0.68	0.68	0.68	0.71	0.71	0.71
Hourly flow rate (vph)	1	60	73	94	130	5	26	1	12	15	4	4

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	135	228	40	24
Volume Left (vph)	1	94	26	15
Volume Right (vph)	73	5	12	4
Hadj (s)	-0.29	0.09	0.02	0.02
Departure Headway (s)	4.0	4.3	4.7	4.8
Degree Utilization, x	0.15	0.27	0.05	0.03
Capacity (veh/h)	873	825	699	689
Control Delay (s)	7.7	8.9	8.0	7.9
Approach Delay (s)	7.7	8.9	8.0	7.9
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.4			
HCM Level of Service	A			
Intersection Capacity Utilization	27.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	138	1269	0	0	1580
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.89	0.98	0.92	0.92	0.99
Hourly flow rate (vph)	0	155	1295	0	0	1596
Pedestrians	1					4
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			983			125
pX, platoon unblocked						
vC, conflicting volume	1828	437			1296	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1828	437			1296	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	73			100	
cM capacity (veh/h)	68	568			530	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	155	432	432	432	532	532	532
Volume Left	0	0	0	0	0	0	0
Volume Right	155	0	0	0	0	0	0
cSH	568	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.27	0.25	0.25	0.25	0.31	0.31	0.31
Queue Length 95th (ft)	28	0	0	0	0	0	0
Control Delay (s)	13.7	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	13.7	0.0			0.0		
Approach LOS	B						

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	18	20	12	17	6	11	778	6	1	1237	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			0.95	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.98			1.00			1.00	
Flt Protected		0.98			0.98			1.00			1.00	
Satd. Flow (prot)		1772			1817			1878			3603	
Flt Permitted		0.92			0.96			0.98			0.95	
Satd. Flow (perm)		1655			1781			1843			3440	
Peak-hour factor, PHF	0.94	0.94	0.94	0.82	0.82	0.82	0.91	0.91	0.91	0.98	0.98	0.98
Adj. Flow (vph)	24	19	21	15	21	7	12	855	7	1	1262	15
RTOR Reduction (vph)	0	20	0	0	7	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	44	0	0	36	0	0	874	0	0	1277	0
Confl. Peds. (#/hr)	2		2	3		3	4		4	1		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		3.0			3.0			49.0			49.0	
Effective Green, g (s)		3.0			3.0			49.0			49.0	
Actuated g/C Ratio		0.05			0.05			0.82			0.82	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		83			89			1505			2809	
v/s Ratio Prot												
v/s Ratio Perm		c0.03			0.02			c0.47			0.37	
v/c Ratio		0.53			0.41			0.58			0.45	
Uniform Delay, d1		27.8			27.6			1.9			1.6	
Progression Factor		1.00			0.97			0.16			1.00	
Incremental Delay, d2		6.4			3.0			1.2			0.5	
Delay (s)		34.2			29.7			1.5			2.1	
Level of Service		C			C			A			A	
Approach Delay (s)		34.2			29.7			1.5			2.1	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	3.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	7	3	12	849	623	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	0.95	
Frpb, ped/bikes	1.00			1.00	1.00	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.96			1.00	0.99	
Flt Protected	0.97			1.00	1.00	
Satd. Flow (prot)	1748			1880	3553	
Flt Permitted	0.97			0.99	1.00	
Satd. Flow (perm)	1748			1865	3553	
Peak-hour factor, PHF	0.75	0.75	0.98	0.98	0.95	0.95
Adj. Flow (vph)	9	4	12	866	656	25
RTOR Reduction (vph)	4	0	0	0	4	0
Lane Group Flow (vph)	9	0	0	878	678	0
Confl. Peds. (#/hr)	2	2	2			2
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	0.4			51.6	51.6	
Effective Green, g (s)	0.4			51.6	51.6	
Actuated g/C Ratio	0.01			0.86	0.86	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	12			1604	3056	
v/s Ratio Prot	c0.01				0.19	
v/s Ratio Perm				c0.47		
v/c Ratio	0.75			0.55	0.22	
Uniform Delay, d1	29.8			1.1	0.7	
Progression Factor	0.39			0.66	1.00	
Incremental Delay, d2	121.3			1.0	0.2	
Delay (s)	133.0			1.8	0.9	
Level of Service	F			A	A	
Approach Delay (s)	133.0			1.8	0.9	
Approach LOS	F			A	A	

Intersection Summary			
HCM Average Control Delay	2.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	812	827	0	1272	615	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		0.95	0.97	
Frpb, ped/bikes	1.00	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		1.00	0.95	
Satd. Flow (prot)	1881	1561		3574	3502	
Flt Permitted	1.00	1.00		1.00	0.95	
Satd. Flow (perm)	1881	1561		3574	3502	
Peak-hour factor, PHF	0.96	0.96	0.92	0.94	0.93	0.92
Adj. Flow (vph)	846	861	0	1353	661	0
RTOR Reduction (vph)	0	321	0	0	0	0
Lane Group Flow (vph)	846	540	0	1353	661	0
Confl. Peds. (#/hr)		2	1		1	
Heavy Vehicles (%)	1%	1%	2%	1%	0%	2%
Turn Type		Perm				
Protected Phases	2			6	8	
Permitted Phases		2				
Actuated Green, G (s)	37.6	37.6		37.6	14.4	
Effective Green, g (s)	37.6	37.6		37.6	14.4	
Actuated g/C Ratio	0.63	0.63		0.63	0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	1179	978		2240	840	
v/s Ratio Prot	c0.45			0.38	c0.19	
v/s Ratio Perm		0.35				
v/c Ratio	0.72	0.55		0.60	0.79	
Uniform Delay, d1	7.6	6.4		6.7	21.4	
Progression Factor	1.00	1.00		0.82	0.99	
Incremental Delay, d2	3.8	2.2		1.1	4.9	
Delay (s)	11.4	8.6		6.6	25.9	
Level of Service	B	A		A	C	
Approach Delay (s)	10.0			6.6	25.9	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	11.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	96	1612	181	231	1167	398	340	744	311	241	532	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		0.97	0.95		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.96		1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	5051		3467	3452		1802	4865		1768	4891	
Flt Permitted	0.12	1.00		0.95	1.00		0.25	1.00		0.31	1.00	
Satd. Flow (perm)	238	5051		3467	3452		474	4865		573	4891	
Peak-hour factor, PHF	0.95	0.95	0.95	0.99	0.99	0.99	0.98	0.98	0.98	0.91	0.91	0.91
Adj. Flow (vph)	101	1697	191	233	1179	402	347	759	317	265	585	120
RTOR Reduction (vph)	0	17	0	0	41	0	0	94	0	0	39	0
Lane Group Flow (vph)	101	1871	0	233	1540	0	347	982	0	265	666	0
Confl. Peds. (#/hr)	1		1	1		1	19		19	12		12
Heavy Vehicles (%)	0%	1%	1%	1%	0%	1%	0%	1%	0%	2%	3%	2%
Turn Type	pm+pt			Prot			pm+pt			pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6						4			8		
Actuated Green, G (s)	35.2	32.0		7.0	35.8		28.0	16.0		22.0	13.0	
Effective Green, g (s)	35.2	32.0		7.0	35.8		28.0	16.0		22.0	13.0	
Actuated g/C Ratio	0.44	0.40		0.09	0.45		0.35	0.20		0.28	0.16	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	2020		303	1545		365	973		292	795	
v/s Ratio Prot	0.02	0.37		c0.07	c0.45		c0.14	c0.20		0.10	0.14	
v/s Ratio Perm	0.24						0.19			0.15		
v/c Ratio	0.60	0.93		0.77	1.00		0.95	1.01		0.91	0.84	
Uniform Delay, d1	18.5	22.9		35.7	22.0		22.1	32.0		26.2	32.5	
Progression Factor	1.00	1.00		1.34	0.51		1.15	0.50		1.00	1.00	
Incremental Delay, d2	6.1	7.9		8.6	19.1		30.7	28.6		29.7	7.7	
Delay (s)	24.5	30.7		56.5	30.3		56.1	44.6		55.9	40.2	
Level of Service	C	C		E	C		E	D		E	D	
Approach Delay (s)		30.4			33.7			47.4			44.5	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	37.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	98.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	2048	15	59	1644	23	187
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	5079		1805	3539	1805	1563
Flt Permitted	1.00		0.08	1.00	0.95	1.00
Satd. Flow (perm)	5079		154	3539	1805	1563
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.64	0.64
Adj. Flow (vph)	2069	15	60	1661	36	292
RTOR Reduction (vph)	1	0	0	0	0	11
Lane Group Flow (vph)	2083	0	60	1661	36	281
Confl. Peds. (#/hr)		6	1		7	7
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Turn Type			Perm			Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	49.3		49.3	49.3	22.7	22.7
Effective Green, g (s)	49.3		49.3	49.3	22.7	22.7
Actuated g/C Ratio	0.62		0.62	0.62	0.28	0.28
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3130		95	2181	512	444
v/s Ratio Prot	0.41			c0.47	0.02	
v/s Ratio Perm			0.39			c0.18
v/c Ratio	0.67		0.63	0.76	0.07	0.63
Uniform Delay, d1	10.0		9.6	11.1	20.9	25.0
Progression Factor	0.48		0.88	0.70	1.00	1.00
Incremental Delay, d2	0.2		9.1	1.1	0.3	6.7
Delay (s)	4.9		17.6	8.9	21.2	31.7
Level of Service	A		B	A	C	C
Approach Delay (s)	4.9			9.2	30.6	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	8.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	1965	469	505	1322	0	0	0	0	1042	305	389
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	0.99
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.99	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		6471	1599	3433	3610					1643	3138	1448
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		6471	1599	3433	3610					1643	3138	1448
Peak-hour factor, PHF	0.92	0.99	0.99	0.93	0.93	0.92	0.92	0.92	0.92	0.98	0.98	0.98
Adj. Flow (vph)	0	1985	474	543	1422	0	0	0	0	1063	311	397
RTOR Reduction (vph)	0	0	156	0	0	0	0	0	0	0	4	21
Lane Group Flow (vph)	0	1985	318	543	1422	0	0	0	0	531	879	336
Confl. Peds. (#/hr)										2		2
Heavy Vehicles (%)	0%	1%	1%	2%	0%	0%	0%	0%	0%	0%	1%	0%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		27.0	27.0	13.0	44.0					28.0	28.0	28.0
Effective Green, g (s)		27.0	27.0	13.0	44.0					28.0	28.0	28.0
Actuated g/C Ratio		0.34	0.34	0.16	0.55					0.35	0.35	0.35
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2184	540	558	1986					575	1098	507
v/s Ratio Prot		c0.31		c0.16	0.39					c0.32	0.28	
v/s Ratio Perm			0.20									0.23
v/c Ratio		0.91	0.59	0.97	0.72					0.92	0.92dl	0.66
Uniform Delay, d1		25.3	21.9	33.3	13.4					25.0	23.5	22.0
Progression Factor		0.87	0.87	0.48	0.56					1.00	1.00	1.00
Incremental Delay, d2		5.8	3.8	23.2	1.4					20.6	4.3	3.2
Delay (s)		27.9	22.9	39.3	8.9					45.6	27.8	25.2
Level of Service		C	C	D	A					D	C	C
Approach Delay (s)		26.9			17.3			0.0			32.6	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	25.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	255	691	1013	1817	0	0	1499	805	0	0	498
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.95			0.86	0.88			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1787	2814	3502	3610			6536	2814			1621
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1787	2814	3502	3610			6536	2814			1621
Peak-hour factor, PHF	0.93	0.93	0.98	0.98	0.92	0.92	0.99	0.99	0.92	0.92	0.86
Adj. Flow (vph)	274	743	1034	1854	0	0	1514	813	0	0	579
RTOR Reduction (vph)	0	27	0	0	0	0	0	169	0	0	411
Lane Group Flow (vph)	274	716	1034	1854	0	0	1514	644	0	0	168
Confl. Peds. (#/hr)	1	1	1								1
Heavy Vehicles (%)	1%	1%	0%	0%	2%	2%	0%	1%	2%	2%	0%
Turn Type		Prot	Prot					Perm			custom
Protected Phases	4	4	1	6			2				
Permitted Phases								2			8
Actuated Green, G (s)	21.0	21.0	24.0	51.0			23.0	23.0			21.0
Effective Green, g (s)	21.0	21.0	24.0	51.0			23.0	23.0			21.0
Actuated g/C Ratio	0.26	0.26	0.30	0.64			0.29	0.29			0.26
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	469	739	1051	2301			1879	809			426
v/s Ratio Prot	0.15	c0.25	c0.30	c0.51			0.23				
v/s Ratio Perm								0.23			0.10
v/c Ratio	0.58	0.97	0.98	0.81			0.81	0.80			0.39
Uniform Delay, d1	25.7	29.2	27.8	10.8			26.4	26.3			24.3
Progression Factor	1.00	1.00	1.15	1.38			0.77	0.73			1.00
Incremental Delay, d2	1.9	25.2	14.4	1.4			2.9	6.1			0.6
Delay (s)	27.6	54.4	46.5	16.3			23.1	25.2			24.9
Level of Service	C	D	D	B			C	C			C
Approach Delay (s)	47.2			27.1			23.9		24.9		
Approach LOS	D			C			C		C		

Intersection Summary			
HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	425	37	106	38	47	135	66	2145	488	69	1566	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1743	1523	1805	1900	1593	1770	5136	1568	1805	5181	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.10	1.00	1.00	0.10	1.00	
Satd. Flow (perm)	3433	1743	1523	1805	1900	1593	182	5136	1568	189	5181	
Peak-hour factor, PHF	0.94	0.94	0.94	0.75	0.75	0.75	0.96	0.96	0.96	0.95	0.95	0.95
Adj. Flow (vph)	452	39	113	51	63	180	69	2234	508	73	1648	11
RTOR Reduction (vph)	0	0	95	0	0	83	0	0	248	0	1	0
Lane Group Flow (vph)	452	39	18	51	63	97	69	2234	260	73	1658	0
Confl. Peds. (#/hr)	5		5	1		1	5		5	4		4
Heavy Vehicles (%)	2%	9%	4%	0%	0%	0%	2%	1%	1%	0%	0%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		Perm	pm+pt		
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	12.8	12.8	12.8	7.0	7.0	7.0	45.0	41.0	41.0	43.4	40.2	
Effective Green, g (s)	12.8	12.8	12.8	7.0	7.0	7.0	45.0	41.0	41.0	43.4	40.2	
Actuated g/C Ratio	0.16	0.16	0.16	0.09	0.09	0.09	0.56	0.51	0.51	0.54	0.50	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	549	279	244	158	166	139	182	2632	804	167	2603	
v/s Ratio Prot	c0.13	0.02		0.03	0.03		c0.02	c0.43		0.02	0.32	
v/s Ratio Perm			0.01			c0.06	0.19		0.17	0.22		
v/c Ratio	0.82	0.14	0.07	0.32	0.38	0.70	0.38	0.85	0.32	0.44	0.64	
Uniform Delay, d1	32.5	28.9	28.6	34.3	34.5	35.5	10.3	16.8	11.4	14.2	14.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.10	0.95	1.57	1.27	0.25	
Incremental Delay, d2	9.7	0.2	0.1	1.2	1.5	14.2	0.8	2.2	0.6	1.1	0.8	
Delay (s)	42.2	29.1	28.7	35.5	35.9	49.6	12.1	18.2	18.5	19.2	4.4	
Level of Service	D	C	C	D	D	D	B	B	B	B	A	
Approach Delay (s)		38.8			44.2			18.1			5.0	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM Average Control Delay	17.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	523	558	77	119	260	118	349	1386	585	161	840	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	3474		1805	1900	1553	1805	3610	1599	1787	3555	
Flt Permitted	0.95	1.00		0.34	1.00	1.00	0.14	1.00	1.00	0.16	1.00	
Satd. Flow (perm)	3467	3474		646	1900	1553	260	3610	1599	299	3555	
Peak-hour factor, PHF	0.96	0.96	0.96	0.92	0.92	0.92	0.94	0.94	0.94	0.92	0.92	0.92
Adj. Flow (vph)	545	581	80	129	283	128	371	1474	622	175	913	36
RTOR Reduction (vph)	0	13	0	0	0	108	0	0	260	0	3	0
Lane Group Flow (vph)	545	648	0	129	283	20	371	1474	362	175	946	0
Confl. Peds. (#/hr)	2		2									
Heavy Vehicles (%)	1%	1%	8%	0%	0%	4%	0%	0%	1%	1%	1%	0%
Turn Type	Prot			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases				8		8	6		6	2		
Actuated Green, G (s)	13.0	21.0		17.6	12.8	12.8	42.2	34.2	34.2	29.2	25.2	
Effective Green, g (s)	13.0	21.0		17.6	12.8	12.8	42.2	34.2	34.2	29.2	25.2	
Actuated g/C Ratio	0.16	0.26		0.22	0.16	0.16	0.53	0.43	0.43	0.36	0.32	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	563	912		212	304	248	388	1543	684	184	1120	
v/s Ratio Prot	c0.16	0.19		0.04	c0.15		c0.16	0.41		0.05	0.27	
v/s Ratio Perm				0.10		0.01	c0.35		0.23	0.30		
v/c Ratio	0.97	0.71		0.61	0.93	0.08	0.96	0.96	0.53	0.95	0.84	
Uniform Delay, d1	33.3	26.7		26.2	33.2	28.6	20.8	22.2	16.9	25.0	25.6	
Progression Factor	0.92	0.90		0.84	0.84	0.67	1.61	0.37	0.14	0.71	0.85	
Incremental Delay, d2	21.0	1.5		4.8	33.3	0.1	25.0	10.1	1.8	48.5	7.0	
Delay (s)	51.8	25.5		26.7	61.3	19.3	58.4	18.2	4.1	66.3	28.8	
Level of Service	D	C		C	E	B	E	B	A	E	C	
Approach Delay (s)		37.4			43.1			20.7			34.7	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	29.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	238	672	227	136	336	97	210	696	79	72	1023	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1805	3492		1805	3536	
Flt Permitted	0.29	1.00	1.00	0.31	1.00	1.00	0.11	1.00		0.29	1.00	
Satd. Flow (perm)	543	3574	1599	574	3574	1599	218	3492		560	3536	
Peak-hour factor, PHF	0.97	0.97	0.97	0.93	0.93	0.93	0.97	0.97	0.97	0.93	0.93	0.93
Adj. Flow (vph)	245	693	234	146	361	104	216	718	81	77	1100	91
RTOR Reduction (vph)	0	0	141	0	0	87	0	11	0	0	7	0
Lane Group Flow (vph)	245	693	93	146	361	17	216	788	0	77	1184	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	2%	0%	0%	1%	0%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	28.4	18.4	18.4	19.1	13.1	13.1	43.6	35.6		34.9	30.9	
Effective Green, g (s)	28.4	18.4	18.4	19.1	13.1	13.1	43.6	35.6		34.9	30.9	
Actuated g/C Ratio	0.36	0.23	0.23	0.24	0.16	0.16	0.55	0.44		0.44	0.39	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	368	822	368	228	585	262	291	1554		307	1366	
v/s Ratio Prot	c0.09	c0.19		0.05	0.10		c0.08	0.23		0.01	c0.33	
v/s Ratio Perm	0.14		0.06	0.10		0.01	0.32			0.10		
v/c Ratio	0.67	0.84	0.25	0.64	0.62	0.06	0.74	0.51		0.25	0.87	
Uniform Delay, d1	19.8	29.4	25.2	25.5	31.1	28.3	15.1	15.9		13.4	22.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		0.31	0.31	
Incremental Delay, d2	4.5	7.9	0.4	6.0	1.9	0.1	9.8	1.2		0.2	3.4	
Delay (s)	24.3	37.3	25.5	31.5	33.1	28.4	24.9	17.1		4.4	10.5	
Level of Service	C	D	C	C	C	C	C	B		A	B	
Approach Delay (s)		32.2			31.9			18.8			10.1	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	21.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	208	573	240	99	153	119	77	796	85	479	1528	192
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1787	3450		1787	1881	1538	1752	3518		1805	3610	1579
Flt Permitted	0.45	1.00		0.25	1.00	1.00	0.17	1.00		0.15	1.00	1.00
Satd. Flow (perm)	848	3450		476	1881	1538	318	3518		279	3610	1579
Peak-hour factor, PHF	0.93	0.93	0.93	0.95	0.95	0.95	0.96	0.96	0.96	0.99	0.99	0.99
Adj. Flow (vph)	224	616	258	104	161	125	80	829	89	484	1543	194
RTOR Reduction (vph)	0	56	0	0	0	100	0	11	0	0	0	102
Lane Group Flow (vph)	224	818	0	104	161	25	80	907	0	484	1543	92
Confl. Peds. (#/hr)							1		1	7		7
Heavy Vehicles (%)	1%	0%	0%	1%	1%	5%	3%	1%	1%	0%	0%	0%
Turn Type	pm+pt			pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	26.6	19.6		19.0	15.8	15.8	26.4	23.2		45.2	38.0	38.0
Effective Green, g (s)	26.6	19.6		19.0	15.8	15.8	26.4	23.2		45.2	38.0	38.0
Actuated g/C Ratio	0.33	0.25		0.24	0.20	0.20	0.33	0.29		0.57	0.48	0.48
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	364	845		165	371	304	162	1020		501	1715	750
v/s Ratio Prot	c0.05	c0.24		0.03	0.09		0.02	0.26		c0.22	0.43	
v/s Ratio Perm	0.15			0.12		0.02	0.14			c0.33		0.06
v/c Ratio	0.62	0.97		0.63	0.43	0.08	0.49	0.89		0.97	0.90	0.12
Uniform Delay, d1	21.1	29.9		27.1	28.2	26.2	20.5	27.2		21.5	19.3	11.7
Progression Factor	0.54	0.63		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.1	18.0		7.6	0.8	0.1	2.4	11.5		31.4	8.0	0.3
Delay (s)	13.4	36.8		34.7	29.0	26.3	22.9	38.7		52.8	27.3	12.0
Level of Service	B	D		C	C	C	C	D		D	C	B
Approach Delay (s)		32.0			29.6			37.4			31.5	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM Average Control Delay	32.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	271	472	171	1011	747	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.97	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1555	1719	1881	1881	1583
Flt Permitted	0.95	1.00	0.15	1.00	1.00	1.00
Satd. Flow (perm)	1770	1555	267	1881	1881	1583
Peak-hour factor, PHF	0.95	0.95	0.94	0.94	0.94	0.94
Adj. Flow (vph)	285	497	182	1076	795	164
RTOR Reduction (vph)	0	223	0	0	0	74
Lane Group Flow (vph)	285	274	182	1076	795	90
Confl. Peds. (#/hr)	3	3				
Heavy Vehicles (%)	2%	1%	5%	1%	1%	2%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	17.1	17.1	54.9	54.9	43.9	43.9
Effective Green, g (s)	17.1	17.1	54.9	54.9	43.9	43.9
Actuated g/C Ratio	0.21	0.21	0.69	0.69	0.55	0.55
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	378	332	310	1291	1032	869
v/s Ratio Prot	0.16		0.05	c0.57	0.42	
v/s Ratio Perm		c0.18	0.35			0.06
v/c Ratio	0.75	0.83	0.59	0.83	0.77	0.10
Uniform Delay, d1	29.5	30.0	11.4	9.2	14.1	8.6
Progression Factor	1.00	1.00	1.00	1.00	1.08	1.94
Incremental Delay, d2	8.1	15.1	2.8	6.4	3.4	0.1
Delay (s)	37.6	45.2	14.3	15.6	18.6	16.9
Level of Service	D	D	B	B	B	B
Approach Delay (s)	42.4			15.4	18.3	
Approach LOS	D			B	B	

Intersection Summary			
HCM Average Control Delay	23.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	392	92	224	387	80	124	785	175	107	922	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.95	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1671	1798		1805	1822		1787	1881	1452	1770	1863	1572
Flt Permitted	0.16	1.00		0.13	1.00		0.07	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	278	1798		239	1822		139	1881	1452	156	1863	1572
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.98	0.98	0.98	0.94	0.94	0.94
Adj. Flow (vph)	83	408	96	233	403	83	127	801	179	114	981	66
RTOR Reduction (vph)	0	7	0	0	7	0	0	0	81	0	0	25
Lane Group Flow (vph)	83	497	0	233	479	0	127	801	98	114	981	41
Confl. Peds. (#/hr)	7		7	4		4	8		8	2		2
Heavy Vehicles (%)	8%	2%	1%	0%	1%	1%	1%	1%	6%	2%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.0	27.8		40.8	33.6		58.0	54.0	54.0	58.0	54.0	54.0
Effective Green, g (s)	31.0	27.8		40.8	33.6		58.0	54.0	54.0	58.0	54.0	54.0
Actuated g/C Ratio	0.28	0.25		0.37	0.30		0.52	0.49	0.49	0.52	0.49	0.49
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	118	451		215	553		132	917	708	140	908	766
v/s Ratio Prot	0.02	0.28		c0.09	0.26		c0.03	0.43		0.03	c0.53	
v/s Ratio Perm	0.18			c0.31			0.47		0.07	0.40		0.03
v/c Ratio	0.70	1.10		1.08	0.87		0.96	0.87	0.14	0.81	1.08	0.05
Uniform Delay, d1	35.6	41.5		30.0	36.5		25.9	25.4	15.6	22.8	28.4	15.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	17.3	72.6		85.5	13.4		66.3	11.3	0.4	29.1	54.0	0.1
Delay (s)	52.9	114.1		115.5	49.9		92.2	36.7	16.0	51.9	82.4	15.1
Level of Service	D	F		F	D		F	D	B	D	F	B
Approach Delay (s)		105.5			71.1			39.7			75.6	
Approach LOS		F			E			D			E	

Intersection Summary			
HCM Average Control Delay	68.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	110.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	107.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	0	1	401	6	767	0	848	314	475	993	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00		0.95	1.00	0.97	1.00	
Frpb, ped/bikes		0.99			1.00	0.97		1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00			0.98	1.00		1.00	1.00	1.00	1.00	
Frt		0.93			1.00	0.85		1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.95	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1715			1761	1551		3574	1574	3400	1863	
Flt Permitted		0.89			0.73	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1572			1343	1551		3574	1574	3400	1863	
Peak-hour factor, PHF	0.50	0.50	0.50	0.95	0.95	0.95	0.90	0.90	0.90	0.98	0.98	0.98
Adj. Flow (vph)	2	0	2	422	6	807	0	942	349	485	1013	0
RTOR Reduction (vph)	0	1	0	0	0	284	0	0	241	0	0	0
Lane Group Flow (vph)	0	3	0	0	428	523	0	942	108	485	1013	0
Confl. Peds. (#/hr)	2		2	15		15	3		3	7		7
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	1%	1%	3%	2%	0%
Turn Type	Perm			Perm		Perm	Perm		Perm	Prot		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2			
Actuated Green, G (s)		21.0			21.0	21.0		20.2	20.2	11.8	36.0	
Effective Green, g (s)		21.0			21.0	21.0		20.2	20.2	11.8	36.0	
Actuated g/C Ratio		0.32			0.32	0.32		0.31	0.31	0.18	0.55	
Clearance Time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		508			434	501		1111	489	617	1032	
v/s Ratio Prot								0.26		0.14	c0.54	
v/s Ratio Perm		0.00			0.32	c0.34			0.07			
v/c Ratio		0.01			0.99	1.04		0.85	0.22	0.79	0.98	
Uniform Delay, d1		14.9			21.9	22.0		21.0	16.6	25.4	14.2	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0			39.2	52.4		8.1	1.0	6.5	23.9	
Delay (s)		14.9			61.1	74.4		29.0	17.6	31.9	38.1	
Level of Service		B			E	E		C	B	C	D	
Approach Delay (s)		14.9			69.7			26.0			36.1	
Approach LOS		B			E			C			D	

Intersection Summary			
HCM Average Control Delay	43.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	601	88	25	75	55	30	37	715	52	72	1081	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99			1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	0.97			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1698	1714			1847	1421	1805	3498		1752	3574	
Flt Permitted	0.95	0.97			0.97	1.00	0.17	1.00		0.25	1.00	
Satd. Flow (perm)	1698	1714			1847	1421	325	3498		461	3574	
Peak-hour factor, PHF	0.93	0.93	0.93	0.83	0.83	0.83	0.93	0.93	0.93	0.96	0.96	0.92
Adj. Flow (vph)	646	95	27	90	66	36	40	769	56	75	1126	0
RTOR Reduction (vph)	0	4	0	0	0	33	0	9	0	0	0	0
Lane Group Flow (vph)	381	383	0	0	156	3	40	816	0	75	1126	0
Confl. Peds. (#/hr)	2		2	2		2	1		1			
Heavy Vehicles (%)	1%	0%	0%	0%	0%	11%	0%	2%	2%	3%	1%	0%
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases						8	2			6		
Actuated Green, G (s)	14.9	14.9			5.3	5.3	23.4	23.4		23.4	23.4	
Effective Green, g (s)	14.9	14.9			5.3	5.3	23.4	23.4		23.4	23.4	
Actuated g/C Ratio	0.27	0.27			0.10	0.10	0.42	0.42		0.42	0.42	
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	455	459			176	135	137	1472		194	1504	
v/s Ratio Prot	c0.22	0.22			c0.08			0.23			c0.32	
v/s Ratio Perm						0.00	0.12			0.16		
v/c Ratio	0.84	0.83			0.89	0.03	0.29	0.55		0.39	0.75	
Uniform Delay, d1	19.2	19.2			24.9	22.8	10.6	12.2		11.1	13.6	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	12.6	12.3			37.3	0.1	5.3	1.5		5.7	3.5	
Delay (s)	31.9	31.5			62.1	22.9	16.0	13.7		16.9	17.1	
Level of Service	C	C			E	C	B	B		B	B	
Approach Delay (s)		31.7			54.8			13.8			17.1	
Approach LOS		C			D			B			B	

Intersection Summary			
HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	55.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

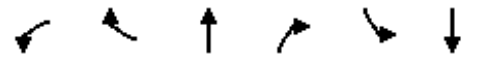
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	364	783	841	195	697	132	876	752	212	72	909	243
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.97	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	3610	1615	1787	5001		3467	3610	1583	1770	3574	1591
Flt Permitted	0.22	1.00	1.00	0.29	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	418	3610	1615	537	5001		3467	3610	1583	1770	3574	1591
Peak-hour factor, PHF	0.99	0.99	0.99	0.96	0.96	0.96	0.97	0.97	0.97	0.99	0.99	0.99
Adj. Flow (vph)	368	791	849	203	726	138	903	775	219	73	918	245
RTOR Reduction (vph)	0	0	383	0	35	0	0	0	164	0	0	146
Lane Group Flow (vph)	368	791	467	203	829	0	903	775	55	73	918	99
Confl. Peds. (#/hr)				2		2				2		2
Heavy Vehicles (%)	1%	0%	0%	1%	1%	1%	1%	0%	2%	2%	1%	0%
Turn Type	pm+pt		Perm	pm+pt			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4		4	8					2			6
Actuated Green, G (s)	29.0	20.0	20.0	19.0	14.0		20.0	20.0	20.0	19.0	19.0	19.0
Effective Green, g (s)	29.0	20.0	20.0	19.0	14.0		20.0	20.0	20.0	19.0	19.0	19.0
Actuated g/C Ratio	0.36	0.25	0.25	0.24	0.18		0.25	0.25	0.25	0.24	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	340	903	404	206	875		867	903	396	420	849	378
v/s Ratio Prot	c0.15	0.22		0.06	0.17		c0.26	0.21		0.04	c0.26	
v/s Ratio Perm	0.24		c0.29	0.17					0.03			0.06
v/c Ratio	1.08	0.88	1.15	0.99	0.95		1.04	0.86	0.14	0.17	1.08	0.26
Uniform Delay, d1	22.5	28.8	30.0	29.5	32.6		30.0	28.6	23.3	24.3	30.5	24.8
Progression Factor	1.00	1.00	1.00	1.23	0.52		0.91	0.91	1.39	1.00	1.00	1.00
Incremental Delay, d2	72.6	9.5	94.2	43.4	12.7		40.5	9.5	0.7	0.9	55.2	1.7
Delay (s)	95.0	38.3	124.2	79.7	29.5		67.9	35.7	33.0	25.2	85.7	26.5
Level of Service	F	D	F	E	C		E	D	C	C	F	C
Approach Delay (s)		85.0			39.1			50.7			70.4	
Approach LOS		F			D			D			E	

Intersection Summary			
HCM Average Control Delay	63.7	HCM Level of Service	E
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	591	746	974	0	0	1861
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	0.97	0.91	0.91			0.86
Frpb, ped/bikes	0.99	0.99	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	0.95	0.85	1.00			1.00
Flt Protected	0.97	1.00	1.00			1.00
Satd. Flow (prot)	3331	1433	5136			6471
Flt Permitted	0.97	1.00	1.00			1.00
Satd. Flow (perm)	3331	1433	5136			6471
Peak-hour factor, PHF	0.97	0.97	0.97	0.92	0.92	0.99
Adj. Flow (vph)	609	769	1004	0	0	1880
RTOR Reduction (vph)	28	28	0	0	0	0
Lane Group Flow (vph)	912	410	1004	0	0	1880
Confl. Peds. (#/hr)	2	2				
Heavy Vehicles (%)	1%	1%	1%	2%	2%	1%
Turn Type		Perm				
Protected Phases	8		2			6
Permitted Phases		8				
Actuated Green, G (s)	31.4	31.4	40.6			40.6
Effective Green, g (s)	31.4	31.4	40.6			40.6
Actuated g/C Ratio	0.39	0.39	0.51			0.51
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	1307	562	2607			3284
v/s Ratio Prot	0.27		0.20			c0.29
v/s Ratio Perm		c0.29				
v/c Ratio	0.70	0.73	0.39			0.57
Uniform Delay, d1	20.3	20.7	12.1			13.7
Progression Factor	1.00	1.00	0.16			0.66
Incremental Delay, d2	1.6	4.7	0.4			0.1
Delay (s)	22.0	25.4	2.3			9.1
Level of Service	C	C	A			A
Approach Delay (s)	23.1		2.3			9.1
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	964	470	828	1622
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0
Lane Util. Factor			0.91		0.97	0.91
Frpb, ped/bikes			0.99		1.00	1.00
Flpb, ped/bikes			1.00		1.00	1.00
Frt			0.95		1.00	1.00
Flt Protected			1.00		0.95	1.00
Satd. Flow (prot)			4857		3467	5136
Flt Permitted			1.00		0.95	1.00
Satd. Flow (perm)			4857		3467	5136
Peak-hour factor, PHF	0.92	0.92	0.97	0.97	0.99	0.99
Adj. Flow (vph)	0	0	994	485	836	1638
RTOR Reduction (vph)	0	0	31	0	0	0
Lane Group Flow (vph)	0	0	1448	0	836	1638
Confl. Peds. (#/hr)				3		
Heavy Vehicles (%)	2%	2%	1%	1%	1%	1%
Turn Type					Prot	
Protected Phases			2		1	6
Permitted Phases						
Actuated Green, G (s)			46.2		25.8	80.0
Effective Green, g (s)			46.2		25.8	80.0
Actuated g/C Ratio			0.58		0.32	1.00
Clearance Time (s)			4.0		4.0	4.0
Vehicle Extension (s)			3.0		3.0	3.0
Lane Grp Cap (vph)			2805		1118	5136
v/s Ratio Prot			c0.30		c0.24	0.32
v/s Ratio Perm						
v/c Ratio			0.52		0.75	0.32
Uniform Delay, d1			10.2		24.2	0.0
Progression Factor			0.25		0.96	1.00
Incremental Delay, d2			0.4		2.3	0.1
Delay (s)			3.0		25.4	0.1
Level of Service			A		C	A
Approach Delay (s)	0.0		3.0			8.7
Approach LOS	A		A			A

Intersection Summary			
HCM Average Control Delay	6.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

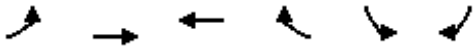
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	3	2	186	5	112	0	1292	188	196	1348	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.96			0.95			0.98		1.00	1.00	
Flt Protected		0.99			0.97			1.00		0.95	1.00	
Satd. Flow (prot)		1794			1714			3499		1787	3574	
Flt Permitted		0.96			0.80			1.00		0.09	1.00	
Satd. Flow (perm)		1739			1416			3499		167	3574	
Peak-hour factor, PHF	0.31	0.31	0.31	0.85	0.85	0.85	0.95	0.95	0.95	0.94	0.94	0.94
Adj. Flow (vph)	3	10	6	219	6	132	0	1360	198	209	1434	0
RTOR Reduction (vph)	0	5	0	0	26	0	0	14	0	0	0	0
Lane Group Flow (vph)	0	14	0	0	331	0	0	1544	0	209	1434	0
Confl. Peds. (#/hr)	4		4	5		5	2		2	6		6
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	1%	0%	1%	1%	0%
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		19.8			19.8			41.0		52.2	52.2	
Effective Green, g (s)		19.8			19.8			41.0		52.2	52.2	
Actuated g/C Ratio		0.25			0.25			0.51		0.65	0.65	
Clearance Time (s)		4.0			4.0			4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		430			350			1793		255	2332	
v/s Ratio Prot								0.44		c0.07	0.40	
v/s Ratio Perm		0.01			c0.23					c0.46		
v/c Ratio		0.03			0.94			0.86		0.82	0.61	
Uniform Delay, d1		22.8			29.6			17.0		19.0	8.1	
Progression Factor		1.00			0.96			0.66		1.48	0.66	
Incremental Delay, d2		0.0			33.6			3.6		17.8	1.2	
Delay (s)		22.9			61.9			14.9		45.8	6.5	
Level of Service		C			E			B		D	A	
Approach Delay (s)		22.9			61.9			14.9			11.5	
Approach LOS		C			E			B			B	

Intersection Summary			
HCM Average Control Delay	18.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	113.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	231	389	70	199	346	346	62	715	134	394	865	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	1802		1805	1863	1615	1752	3495		1805	3474	
Flt Permitted	0.20	1.00		0.20	1.00	1.00	0.19	1.00		0.16	1.00	
Satd. Flow (perm)	375	1802		380	1863	1615	351	3495		304	3474	
Peak-hour factor, PHF	0.89	0.89	0.89	0.92	0.92	0.92	0.90	0.90	0.90	0.99	0.99	0.99
Adj. Flow (vph)	260	437	79	216	376	376	69	794	149	398	874	174
RTOR Reduction (vph)	0	8	0	0	0	29	0	19	0	0	20	0
Lane Group Flow (vph)	260	508	0	216	376	347	69	924	0	398	1028	0
Heavy Vehicles (%)	1%	3%	3%	0%	2%	0%	3%	1%	0%	0%	1%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	31.0	22.0		27.0	20.0	34.0	24.2	21.0		39.0	31.8	
Effective Green, g (s)	31.0	22.0		27.0	20.0	34.0	24.2	21.0		39.0	31.8	
Actuated g/C Ratio	0.39	0.28		0.34	0.25	0.42	0.30	0.26		0.49	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	304	496		253	466	767	162	917		411	1381	
v/s Ratio Prot	c0.10	c0.28		0.07	0.20	0.08	0.02	0.26		c0.17	0.30	
v/s Ratio Perm	0.23			0.21		0.14	0.11			c0.30		
v/c Ratio	0.86	1.02		0.85	0.81	0.45	0.43	1.01		0.97	0.74	
Uniform Delay, d1	19.2	29.0		22.1	28.2	16.4	20.6	29.5		20.9	20.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.76	0.81	
Incremental Delay, d2	20.3	46.7		23.3	9.9	0.4	1.8	31.6		30.2	2.8	
Delay (s)	39.5	75.7		45.4	38.0	16.8	22.4	61.1		66.9	19.4	
Level of Service	D	E		D	D	B	C	E		E	B	
Approach Delay (s)		63.6			31.4			58.4			32.5	
Approach LOS		E			C			E			C	

Intersection Summary			
HCM Average Control Delay	44.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.9%	ICU Level of Service	F
Analysis Period (min)	15		

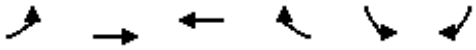
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	49	374	264	101	428	208
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.93	0.93	0.87	0.87
Hourly flow rate (vph)	53	407	284	109	492	239
Pedestrians		3	3		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			840			
pX, platoon unblocked						
vC, conflicting volume	394				856	343
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	394				856	343
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				0	66
cM capacity (veh/h)	1173				312	699

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	460	392	492	239
Volume Left	53	0	492	0
Volume Right	0	109	0	239
cSH	1173	1700	312	699
Volume to Capacity	0.05	0.23	1.58	0.34
Queue Length 95th (ft)	4	0	722	38
Control Delay (s)	1.4	0.0	304.8	12.8
Lane LOS	A		F	B
Approach Delay (s)	1.4	0.0	209.3	
Approach LOS			F	

Intersection Summary			
Average Delay	97.0		
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	16	312	382	17	106	74
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	17	328	402	18	115	80
Pedestrians		4	4		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	422				779	417
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	422				779	417
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				68	87
cM capacity (veh/h)	1146				360	637

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	345	420	196
Volume Left	17	0	115
Volume Right	0	18	80
cSH	1146	1700	438
Volume to Capacity	0.01	0.25	0.45
Queue Length 95th (ft)	1	0	56
Control Delay (s)	0.5	0.0	19.7
Lane LOS	A		C
Approach Delay (s)	0.5	0.0	19.7
Approach LOS			C

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (veh/h)	1269	60	97	1483	57	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.99	0.99	0.91	0.92
Hourly flow rate (vph)	1295	61	98	1498	63	0
Pedestrians	4				1	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	872			236		
pX, platoon unblocked						
vC, conflicting volume			1357		2026	463
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1357		2026	463
tC, single (s)			4.1		6.9	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			81		0	100
cM capacity (veh/h)			508		39	545

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4	SW 1
Volume Total	518	518	320	98	499	499	499	63
Volume Left	0	0	0	98	0	0	0	63
Volume Right	0	0	61	0	0	0	0	0
cSH	1700	1700	1700	508	1700	1700	1700	39
Volume to Capacity	0.30	0.30	0.19	0.19	0.29	0.29	0.29	1.60
Queue Length 95th (ft)	0	0	0	18	0	0	0	163
Control Delay (s)	0.0	0.0	0.0	13.8	0.0	0.0	0.0	520.1
Lane LOS				B				F
Approach Delay (s)	0.0			0.8				520.1
Approach LOS								F

Intersection Summary			
Average Delay	11.3		
Intersection Capacity Utilization	44.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	264	96	34	271	436	85
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	300	109	36	285	474	92
Pedestrians	7			6	6	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	747	296	573			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	747	296	573			
tC, single (s)	6.8	7.0	4.4			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.3			
p0 queue free %	10	84	96			
cM capacity (veh/h)	333	690	918			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	409	131	190	316	250
Volume Left	300	36	0	0	0
Volume Right	109	0	0	0	92
cSH	387	918	1700	1700	1700
Volume to Capacity	1.06	0.04	0.11	0.19	0.15
Queue Length 95th (ft)	347	3	0	0	0
Control Delay (s)	95.3	2.8	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	95.3	1.1		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	30.4		
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	52	63	76	105	4	18	1	8	11	3	3
Peak Hour Factor	0.86	0.86	0.86	0.81	0.81	0.81	0.68	0.68	0.68	0.71	0.71	0.71
Hourly flow rate (vph)	1	60	73	94	130	5	26	1	12	15	4	4

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	135	228	40	24
Volume Left (vph)	1	94	26	15
Volume Right (vph)	73	5	12	4
Hadj (s)	-0.29	0.09	0.02	0.02
Departure Headway (s)	4.0	4.3	4.7	4.8
Degree Utilization, x	0.15	0.27	0.05	0.03
Capacity (veh/h)	873	825	699	689
Control Delay (s)	7.7	8.9	8.0	7.9
Approach Delay (s)	7.7	8.9	8.0	7.9
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.4			
HCM Level of Service	A			
Intersection Capacity Utilization	27.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	138	1269	0	0	1580
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.89	0.98	0.92	0.92	0.99
Hourly flow rate (vph)	0	155	1295	0	0	1596
Pedestrians	1					4
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			983			125
pX, platoon unblocked						
vC, conflicting volume	1828	437			1296	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1828	437			1296	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	73			100	
cM capacity (veh/h)	68	568			530	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	155	432	432	432	532	532	532
Volume Left	0	0	0	0	0	0	0
Volume Right	155	0	0	0	0	0	0
cSH	568	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.27	0.25	0.25	0.25	0.31	0.31	0.31
Queue Length 95th (ft)	28	0	0	0	0	0	0
Control Delay (s)	13.7	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	13.7	0.0			0.0		
Approach LOS	B						

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	1166	352	616	1190	0	0	0	0	542	157	461
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00	0.99	1.00	1.00					1.00	1.00	0.99
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		6536	1591	3467	3574					1643	3012	1433
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.98	1.00
Satd. Flow (perm)		6536	1591	3467	3574					1643	3012	1433
Peak-hour factor, PHF	0.92	0.97	0.97	0.98	0.98	0.92	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	0	1202	363	629	1214	0	0	0	0	623	180	530
RTOR Reduction (vph)	0	0	254	0	0	0	0	0	0	0	37	37
Lane Group Flow (vph)	0	1202	109	629	1214	0	0	0	0	349	640	270
Confl. Peds. (#/hr)	2		2							2		2
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	1%	1%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		20.0	20.0	20.0	44.0					28.0	28.0	28.0
Effective Green, g (s)		20.0	20.0	20.0	44.0					28.0	28.0	28.0
Actuated g/C Ratio		0.25	0.25	0.25	0.55					0.35	0.35	0.35
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1634	398	867	1966					575	1054	502
v/s Ratio Prot		c0.18		c0.18	0.34					0.21	c0.21	
v/s Ratio Perm			0.07									0.19
v/c Ratio		0.74	0.27	0.73	0.62					0.61	0.61	0.54
Uniform Delay, d1		27.6	24.1	27.5	12.3					21.5	21.5	20.8
Progression Factor		1.00	1.00	0.44	0.28					1.00	1.00	1.00
Incremental Delay, d2		3.0	1.7	2.6	1.3					1.8	1.0	1.1
Delay (s)		30.6	25.8	14.8	4.7					23.3	22.5	21.9
Level of Service		C	C	B	A					C	C	C
Approach Delay (s)		29.5			8.1			0.0			22.6	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	19.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	97	692	412	1272	0	0	1436	513	0	0	313
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.95			0.86	1.00			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1805	2814	3502	3574			6471	1583			1644
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1805	2814	3502	3574			6471	1583			1644
Peak-hour factor, PHF	0.94	0.94	0.98	0.98	0.92	0.92	0.99	0.99	0.92	0.92	0.93
Adj. Flow (vph)	103	736	420	1298	0	0	1451	518	0	0	337
RTOR Reduction (vph)	0	70	0	0	0	0	0	285	0	0	238
Lane Group Flow (vph)	103	666	420	1298	0	0	1451	233	0	0	99
Confl. Peds. (#/hr)	1	1	3		3						
Heavy Vehicles (%)	0%	1%	0%	1%	2%	2%	1%	2%	2%	2%	0%
Turn Type		Prot	Prot					Perm			custom
Protected Phases	4	4	1	6			2				
Permitted Phases								2			8
Actuated Green, G (s)	22.9	22.9	12.7	49.1			32.4	32.4			22.9
Effective Green, g (s)	22.9	22.9	12.7	49.1			32.4	32.4			22.9
Actuated g/C Ratio	0.29	0.29	0.16	0.61			0.40	0.40			0.29
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	517	806	556	2194			2621	641			471
v/s Ratio Prot	0.06	c0.24	c0.12	c0.36			0.22				
v/s Ratio Perm								0.15			0.06
v/c Ratio	0.20	0.83	0.76	0.59			0.55	0.36			0.21
Uniform Delay, d1	21.6	26.7	32.2	9.4			18.3	16.6			21.7
Progression Factor	1.00	1.00	1.21	1.10			0.53	0.99			1.00
Incremental Delay, d2	0.2	6.9	4.2	0.8			0.7	1.3			0.2
Delay (s)	21.8	33.6	43.2	11.1			10.4	17.7			21.9
Level of Service	C	C	D	B			B	B			C
Approach Delay (s)	32.2			18.9			12.3		21.9		
Approach LOS	C			B			B		C		

Intersection Summary			
HCM Average Control Delay	18.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	218	20	68	62	18	91	102	1714	141	42	1710	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1900	1532	1805	1900	1615	1805	5187	1588	1770	5130	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.09	1.00	1.00	0.09	1.00	
Satd. Flow (perm)	3433	1900	1532	1805	1900	1615	163	5187	1588	171	5130	
Peak-hour factor, PHF	0.93	0.93	0.93	0.94	0.94	0.94	0.94	0.94	0.94	0.95	0.95	0.95
Adj. Flow (vph)	234	22	73	66	19	97	109	1823	150	44	1800	15
RTOR Reduction (vph)	0	0	64	0	0	90	0	0	63	0	1	0
Lane Group Flow (vph)	234	22	9	66	19	7	109	1823	87	44	1814	0
Confl. Peds. (#/hr)	1		1				3		3			
Heavy Vehicles (%)	2%	0%	4%	0%	0%	0%	0%	0%	0%	2%	1%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		Perm	pm+pt		
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	9.4	9.4	9.4	5.6	5.6	5.6	52.1	46.6	46.6	45.9	43.5	
Effective Green, g (s)	9.4	9.4	9.4	5.6	5.6	5.6	52.1	46.6	46.6	45.9	43.5	
Actuated g/C Ratio	0.12	0.12	0.12	0.07	0.07	0.07	0.65	0.58	0.58	0.57	0.54	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	403	223	180	126	133	113	219	3021	925	146	2789	
v/s Ratio Prot	c0.07	0.01		c0.04	0.01		c0.03	0.35		0.01	c0.35	
v/s Ratio Perm			0.01			0.00	0.29		0.06	0.16		
v/c Ratio	0.58	0.10	0.05	0.52	0.14	0.06	0.50	0.60	0.09	0.30	0.65	
Uniform Delay, d1	33.4	31.5	31.3	35.9	34.9	34.7	9.4	10.8	7.4	8.7	12.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.09	0.77	1.05	0.52	0.28	
Incremental Delay, d2	2.1	0.2	0.1	3.9	0.5	0.2	1.4	0.7	0.2	0.5	0.5	
Delay (s)	35.6	31.7	31.4	39.8	35.4	35.0	11.5	9.0	7.9	5.0	4.2	
Level of Service	D	C	C	D	D	C	B	A	A	A	A	
Approach Delay (s)		34.4			36.8			9.1			4.2	
Approach LOS		C			D			A			A	

Intersection Summary			
HCM Average Control Delay	10.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	520	372	148	96	367	276	238	895	415	193	932	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	3397		1787	1881	1599	1805	3574	1555	1787	3553	
Flt Permitted	0.95	1.00		0.44	1.00	1.00	0.17	1.00	1.00	0.17	1.00	
Satd. Flow (perm)	3467	3397		822	1881	1599	314	3574	1555	324	3553	
Peak-hour factor, PHF	0.91	0.91	0.91	0.92	0.92	0.92	0.93	0.93	0.93	0.95	0.95	0.95
Adj. Flow (vph)	571	409	163	104	399	300	256	962	446	203	981	40
RTOR Reduction (vph)	0	51	0	0	0	150	0	0	278	0	4	0
Lane Group Flow (vph)	571	521	0	104	399	150	256	962	168	203	1017	0
Confl. Peds. (#/hr)							3		3	2		2
Heavy Vehicles (%)	1%	2%	1%	1%	1%	1%	0%	1%	1%	1%	1%	0%
Turn Type	Prot			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases				8		8	6		6	2		
Actuated Green, G (s)	14.0	28.0		23.6	18.8	18.8	32.2	24.2	24.2	30.2	23.2	
Effective Green, g (s)	14.0	28.0		23.6	18.8	18.8	32.2	24.2	24.2	30.2	23.2	
Actuated g/C Ratio	0.18	0.35		0.30	0.24	0.24	0.40	0.30	0.30	0.38	0.29	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	607	1189		300	442	376	275	1081	470	250	1030	
v/s Ratio Prot	c0.16	0.15		0.02	c0.21		c0.09	0.27		0.07	c0.29	
v/s Ratio Perm				0.08		0.09	0.28		0.11	0.23		
v/c Ratio	0.94	0.44		0.35	0.90	0.40	0.93	0.89	0.36	0.81	0.99	
Uniform Delay, d1	32.6	20.0		21.1	29.7	25.8	19.6	26.6	21.8	19.6	28.3	
Progression Factor	0.93	0.70		1.00	1.00	1.00	1.10	0.58	1.31	1.00	1.00	
Incremental Delay, d2	21.0	0.2		0.7	21.3	0.7	32.2	9.5	1.8	17.9	25.3	
Delay (s)	51.3	14.2		21.8	51.1	26.5	53.8	24.8	30.3	37.5	53.5	
Level of Service	D	B		C	D	C	D	C	C	D	D	
Approach Delay (s)		32.7			38.1			30.8			50.9	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM Average Control Delay	37.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

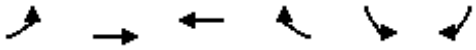


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	180	159	107	751	690	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1787	1563	1770	1881	1881	1599
Flt Permitted	0.95	1.00	0.24	1.00	1.00	1.00
Satd. Flow (perm)	1787	1563	449	1881	1881	1599
Peak-hour factor, PHF	0.93	0.93	0.94	0.94	0.95	0.95
Adj. Flow (vph)	194	171	114	799	726	179
RTOR Reduction (vph)	0	143	0	0	0	68
Lane Group Flow (vph)	194	28	114	799	726	111
Confl. Peds. (#/hr)	1	1	1			
Heavy Vehicles (%)	1%	1%	2%	1%	1%	1%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	13.2	13.2	58.8	58.8	49.7	49.7
Effective Green, g (s)	13.2	13.2	58.8	58.8	49.7	49.7
Actuated g/C Ratio	0.16	0.16	0.74	0.74	0.62	0.62
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	295	258	414	1383	1169	993
v/s Ratio Prot	c0.11		0.02	c0.42	c0.39	
v/s Ratio Perm		0.02	0.18			0.07
v/c Ratio	0.66	0.11	0.28	0.58	0.62	0.11
Uniform Delay, d1	31.3	28.4	6.1	4.9	9.3	6.2
Progression Factor	1.00	1.00	0.49	0.41	0.81	1.47
Incremental Delay, d2	5.2	0.2	0.2	1.2	1.6	0.1
Delay (s)	36.5	28.6	3.2	3.2	9.1	9.2
Level of Service	D	C	A	A	A	A
Approach Delay (s)	32.8			3.2	9.1	
Approach LOS	C			A	A	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	288	83	162	344	90	150	629	148	125	585	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1796		1805	1826		1719	1881	1540	1805	1900	1547
Flt Permitted	0.19	1.00		0.17	1.00		0.13	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	348	1796		330	1826		244	1881	1540	252	1900	1547
Peak-hour factor, PHF	0.86	0.86	0.86	0.91	0.91	0.91	0.96	0.96	0.96	0.90	0.90	0.90
Adj. Flow (vph)	93	335	97	178	378	99	156	655	154	139	650	117
RTOR Reduction (vph)	0	13	0	0	11	0	0	0	90	0	0	68
Lane Group Flow (vph)	93	419	0	178	466	0	156	655	64	139	650	49
Confl. Peds. (#/hr)	2		2				7		7	5		5
Heavy Vehicles (%)	3%	1%	4%	0%	1%	0%	5%	1%	1%	0%	0%	1%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	24.4	21.2		28.0	23.0		37.9	33.3	33.3	37.7	33.2	33.2
Effective Green, g (s)	24.4	21.2		28.0	23.0		37.9	33.3	33.3	37.7	33.2	33.2
Actuated g/C Ratio	0.30	0.26		0.35	0.29		0.47	0.42	0.42	0.47	0.42	0.42
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	162	476		208	525		200	783	641	206	789	642
v/s Ratio Prot	0.02	0.23		c0.05	c0.25		c0.04	c0.35		0.04	0.34	
v/s Ratio Perm	0.15			0.25			0.32		0.04	0.28		0.03
v/c Ratio	0.57	0.88		0.86	0.89		0.78	0.84	0.10	0.67	0.82	0.08
Uniform Delay, d1	21.9	28.2		22.3	27.3		16.2	20.9	14.2	16.0	20.8	14.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.28	0.57	0.18
Incremental Delay, d2	4.8	16.7		27.4	16.4		17.7	10.3	0.3	7.1	8.1	0.2
Delay (s)	26.7	44.9		49.7	43.7		33.8	31.2	14.5	27.6	19.9	2.7
Level of Service	C	D		D	D		C	C	B	C	B	A
Approach Delay (s)		41.7			45.3			29.0			18.9	
Approach LOS		D			D			C			B	

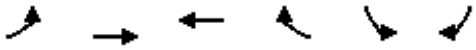
Intersection Summary			
HCM Average Control Delay	31.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	55	242	235	83	86	57
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.97	0.97	0.88	0.88
Hourly flow rate (vph)	60	263	242	86	98	65
Pedestrians		1	1		1	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			840			
pX, platoon unblocked						
vC, conflicting volume	329				670	287
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	329				670	287
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				76	91
cM capacity (veh/h)	1241				400	756

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	323	328	98	65
Volume Left	60	0	98	0
Volume Right	0	86	0	65
cSH	1241	1700	400	756
Volume to Capacity	0.05	0.19	0.24	0.09
Queue Length 95th (ft)	4	0	24	7
Control Delay (s)	1.9	0.0	16.9	10.2
Lane LOS	A		C	B
Approach Delay (s)	1.9	0.0	14.2	
Approach LOS			B	

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	2	230	281	24	30	24
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.96	0.96	0.86	0.86
Hourly flow rate (vph)	2	242	293	25	35	28
Pedestrians		4	4			
Lane Width (ft)		12.0	12.0			
Walking Speed (ft/s)		4.0	4.0			
Percent Blockage		0	0			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	318				556	309
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	318				556	309
tC, single (s)	5.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	3.1				3.5	3.3
p0 queue free %	100				93	96
cM capacity (veh/h)	846				486	724

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	244	318	63
Volume Left	2	0	35
Volume Right	0	25	28
cSH	846	1700	569
Volume to Capacity	0.00	0.19	0.11
Queue Length 95th (ft)	0	0	9
Control Delay (s)	0.1	0.0	12.1
Lane LOS	A		B
Approach Delay (s)	0.1	0.0	12.1
Approach LOS			B

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	27.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (veh/h)	1369	27	42	1202	11	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.97	0.97	0.95	0.95	0.83	0.92
Hourly flow rate (vph)	1411	28	44	1265	13	0
Pedestrians	2				1	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1440		1938	485
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1440		1938	485
tC, single (s)			4.3		7.2	6.9
tC, 2 stage (s)						
tF (s)			2.3		3.7	3.3
p0 queue free %			90		68	100
cM capacity (veh/h)			438		42	527

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4	SW 1
Volume Total	565	565	310	44	422	422	422	13
Volume Left	0	0	0	44	0	0	0	13
Volume Right	0	0	28	0	0	0	0	0
cSH	1700	1700	1700	438	1700	1700	1700	42
Volume to Capacity	0.33	0.33	0.18	0.10	0.25	0.25	0.25	0.32
Queue Length 95th (ft)	0	0	0	8	0	0	0	27
Control Delay (s)	0.0	0.0	0.0	14.2	0.0	0.0	0.0	127.4
Lane LOS				B				F
Approach Delay (s)	0.0			0.5				127.4
Approach LOS								F

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	74	12	17	186	150	44
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.73	0.73	0.70	0.70	0.97	0.97
Hourly flow rate (vph)	101	16	24	266	155	45
Pedestrians				1	1	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				4.0	4.0	
Percent Blockage				0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	360	101	200			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	360	101	200			
tC, single (s)	6.9	7.1	4.4			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.3			
p0 queue free %	83	98	98			
cM capacity (veh/h)	595	912	1293			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	118	113	177	103	97
Volume Left	101	24	0	0	0
Volume Right	16	0	0	0	45
cSH	626	1293	1700	1700	1700
Volume to Capacity	0.19	0.02	0.10	0.06	0.06
Queue Length 95th (ft)	17	1	0	0	0
Control Delay (s)	12.1	1.8	0.0	0.0	0.0
Lane LOS	B	A			
Approach Delay (s)	12.1	0.7		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	26.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	63	22	19	51	1	30	1	21	3	1	4
Peak Hour Factor	0.92	0.92	0.92	0.87	0.87	0.87	0.82	0.82	0.82	0.67	0.67	0.67
Hourly flow rate (vph)	1	68	24	22	59	1	37	1	26	4	1	6

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	93	82	63	12
Volume Left (vph)	1	22	37	4
Volume Right (vph)	24	1	26	6
Hadj (s)	-0.05	0.14	-0.09	-0.23
Departure Headway (s)	4.1	4.3	4.2	4.1
Degree Utilization, x	0.11	0.10	0.07	0.01
Capacity (veh/h)	854	816	814	828
Control Delay (s)	7.6	7.8	7.5	7.2
Approach Delay (s)	7.6	7.8	7.5	7.2
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.6			
HCM Level of Service	A			
Intersection Capacity Utilization	22.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	55	1369	0	0	1245
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.88	0.97	0.92	0.92	0.95
Hourly flow rate (vph)	0	62	1411	0	0	1311
Pedestrians	1					2
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1849	473			1412	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1849	473			1412	
tC, single (s)	6.8	7.0			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	100	88			100	
cM capacity (veh/h)	66	525			478	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	62	470	470	470	437	437	437
Volume Left	0	0	0	0	0	0	0
Volume Right	62	0	0	0	0	0	0
cSH	525	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.12	0.28	0.28	0.28	0.26	0.26	0.26
Queue Length 95th (ft)	10	0	0	0	0	0	0
Control Delay (s)	12.8	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	12.8	0.0			0.0		
Approach LOS	B						

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	37.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	1166	352	616	1190	0	0	0	0	542	157	461
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00	0.99	1.00	1.00					1.00	1.00	0.99
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		6536	1591	3467	3574					1643	3012	1433
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.98	1.00
Satd. Flow (perm)		6536	1591	3467	3574					1643	3012	1433
Peak-hour factor, PHF	0.92	0.97	0.97	0.98	0.98	0.92	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	0	1202	363	629	1214	0	0	0	0	623	180	530
RTOR Reduction (vph)	0	0	254	0	0	0	0	0	0	0	37	37
Lane Group Flow (vph)	0	1202	109	629	1214	0	0	0	0	349	640	270
Confl. Peds. (#/hr)	2		2							2		2
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	1%	1%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		20.0	20.0	20.0	44.0					28.0	28.0	28.0
Effective Green, g (s)		20.0	20.0	20.0	44.0					28.0	28.0	28.0
Actuated g/C Ratio		0.25	0.25	0.25	0.55					0.35	0.35	0.35
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1634	398	867	1966					575	1054	502
v/s Ratio Prot		c0.18		c0.18	0.34					0.21	c0.21	
v/s Ratio Perm			0.07									0.19
v/c Ratio		0.74	0.27	0.73	0.62					0.61	0.61	0.54
Uniform Delay, d1		27.6	24.1	27.5	12.3					21.5	21.5	20.8
Progression Factor		1.00	1.00	0.39	0.34					1.00	1.00	1.00
Incremental Delay, d2		3.0	1.7	2.6	1.2					1.8	1.0	1.1
Delay (s)		30.6	25.8	13.4	5.4					23.3	22.5	21.9
Level of Service		C	C	B	A					C	C	C
Approach Delay (s)		29.5			8.1			0.0			22.6	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	19.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	97	692	412	1272	0	0	1436	513	0	0	313
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.95			0.86	0.88			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1805	2814	3502	3574			6471	2787			1644
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1805	2814	3502	3574			6471	2787			1644
Peak-hour factor, PHF	0.94	0.94	0.98	0.98	0.92	0.92	0.99	0.99	0.92	0.92	0.93
Adj. Flow (vph)	103	736	420	1298	0	0	1451	518	0	0	337
RTOR Reduction (vph)	0	60	0	0	0	0	0	321	0	0	237
Lane Group Flow (vph)	103	676	420	1298	0	0	1451	197	0	0	100
Confl. Peds. (#/hr)	1	1	3		3						
Heavy Vehicles (%)	0%	1%	0%	1%	2%	2%	1%	2%	2%	2%	0%
Turn Type		Prot	Prot					Perm			custom
Protected Phases	4	4	1	6			2				
Permitted Phases								2			8
Actuated Green, G (s)	23.8	23.8	13.7	48.2			30.5	30.5			23.8
Effective Green, g (s)	23.8	23.8	13.7	48.2			30.5	30.5			23.8
Actuated g/C Ratio	0.30	0.30	0.17	0.60			0.38	0.38			0.30
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	537	837	600	2153			2467	1063			489
v/s Ratio Prot	0.06	c0.24	c0.12	c0.36			0.22				
v/s Ratio Perm								0.07			0.06
v/c Ratio	0.19	0.81	0.70	0.60			0.59	0.19			0.21
Uniform Delay, d1	20.9	26.0	31.2	9.9			19.7	16.5			21.0
Progression Factor	1.00	1.00	1.21	1.17			0.52	0.87			1.00
Incremental Delay, d2	0.2	5.7	2.6	0.9			0.8	0.3			0.2
Delay (s)	21.1	31.7	40.3	12.6			11.2	14.7			21.2
Level of Service	C	C	D	B			B	B			C
Approach Delay (s)	30.4			19.3			12.1		21.2		
Approach LOS	C			B			B		C		

Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	218	20	68	62	18	91	102	1714	141	42	1710	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1900	1532	1805	1900	1615	1805	5187	1588	1770	5130	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.09	1.00	1.00	0.09	1.00	
Satd. Flow (perm)	3433	1900	1532	1805	1900	1615	163	5187	1588	171	5130	
Peak-hour factor, PHF	0.93	0.93	0.93	0.94	0.94	0.94	0.94	0.94	0.94	0.95	0.95	0.95
Adj. Flow (vph)	234	22	73	66	19	97	109	1823	150	44	1800	15
RTOR Reduction (vph)	0	0	64	0	0	90	0	0	63	0	1	0
Lane Group Flow (vph)	234	22	9	66	19	7	109	1823	87	44	1814	0
Confl. Peds. (#/hr)	1		1				3		3			
Heavy Vehicles (%)	2%	0%	4%	0%	0%	0%	0%	0%	0%	2%	1%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		Perm	pm+pt		
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	9.4	9.4	9.4	5.6	5.6	5.6	52.1	46.6	46.6	45.9	43.5	
Effective Green, g (s)	9.4	9.4	9.4	5.6	5.6	5.6	52.1	46.6	46.6	45.9	43.5	
Actuated g/C Ratio	0.12	0.12	0.12	0.07	0.07	0.07	0.65	0.58	0.58	0.57	0.54	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	403	223	180	126	133	113	219	3021	925	146	2789	
v/s Ratio Prot	c0.07	0.01		c0.04	0.01		c0.03	0.35		0.01	c0.35	
v/s Ratio Perm			0.01			0.00	0.29		0.06	0.16		
v/c Ratio	0.58	0.10	0.05	0.52	0.14	0.06	0.50	0.60	0.09	0.30	0.65	
Uniform Delay, d1	33.4	31.5	31.3	35.9	34.9	34.7	9.4	10.8	7.4	8.7	12.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.10	0.78	1.03	0.57	0.29	
Incremental Delay, d2	2.1	0.2	0.1	3.9	0.5	0.2	1.4	0.7	0.2	0.5	0.5	
Delay (s)	35.6	31.7	31.4	39.8	35.4	35.0	11.6	9.1	7.8	5.5	4.3	
Level of Service	D	C	C	D	D	C	B	A	A	A	A	
Approach Delay (s)		34.4			36.8			9.1			4.3	
Approach LOS		C			D			A			A	

Intersection Summary			
HCM Average Control Delay	10.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	520	372	148	96	367	276	238	895	415	193	932	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	3397		1787	1881	1599	1805	3574	1555	1787	3553	
Flt Permitted	0.95	1.00		0.44	1.00	1.00	0.17	1.00	1.00	0.17	1.00	
Satd. Flow (perm)	3467	3397		822	1881	1599	314	3574	1555	324	3553	
Peak-hour factor, PHF	0.91	0.91	0.91	0.92	0.92	0.92	0.93	0.93	0.93	0.95	0.95	0.95
Adj. Flow (vph)	571	409	163	104	399	300	256	962	446	203	981	40
RTOR Reduction (vph)	0	51	0	0	0	150	0	0	278	0	4	0
Lane Group Flow (vph)	571	521	0	104	399	150	256	962	168	203	1017	0
Confl. Peds. (#/hr)							3		3	2		2
Heavy Vehicles (%)	1%	2%	1%	1%	1%	1%	0%	1%	1%	1%	1%	0%
Turn Type	Prot			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases				8		8	6		6	2		
Actuated Green, G (s)	14.0	28.0		23.6	18.8	18.8	32.2	24.2	24.2	30.2	23.2	
Effective Green, g (s)	14.0	28.0		23.6	18.8	18.8	32.2	24.2	24.2	30.2	23.2	
Actuated g/C Ratio	0.18	0.35		0.30	0.24	0.24	0.40	0.30	0.30	0.38	0.29	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	607	1189		300	442	376	275	1081	470	250	1030	
v/s Ratio Prot	c0.16	0.15		0.02	c0.21		c0.09	0.27		0.07	c0.29	
v/s Ratio Perm				0.08		0.09	0.28		0.11	0.23		
v/c Ratio	0.94	0.44		0.35	0.90	0.40	0.93	0.89	0.36	0.81	0.99	
Uniform Delay, d1	32.6	20.0		21.1	29.7	25.8	19.6	26.6	21.8	19.6	28.3	
Progression Factor	0.93	0.70		1.00	1.00	1.00	1.16	0.58	1.18	1.00	1.00	
Incremental Delay, d2	21.0	0.2		0.7	21.3	0.7	32.2	9.5	1.8	17.9	25.3	
Delay (s)	51.2	14.2		21.8	51.1	26.5	54.9	24.9	27.6	37.5	53.5	
Level of Service	D	B		C	D	C	D	C	C	D	D	
Approach Delay (s)		32.7			38.1			30.2			50.9	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM Average Control Delay	37.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

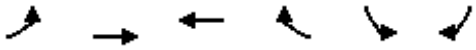


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	180	159	107	751	690	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1787	1563	1770	1881	1881	1599
Flt Permitted	0.95	1.00	0.24	1.00	1.00	1.00
Satd. Flow (perm)	1787	1563	449	1881	1881	1599
Peak-hour factor, PHF	0.93	0.93	0.94	0.94	0.95	0.95
Adj. Flow (vph)	194	171	114	799	726	179
RTOR Reduction (vph)	0	143	0	0	0	68
Lane Group Flow (vph)	194	28	114	799	726	111
Confl. Peds. (#/hr)	1	1	1			
Heavy Vehicles (%)	1%	1%	2%	1%	1%	1%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	13.2	13.2	58.8	58.8	49.7	49.7
Effective Green, g (s)	13.2	13.2	58.8	58.8	49.7	49.7
Actuated g/C Ratio	0.16	0.16	0.74	0.74	0.62	0.62
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	295	258	414	1383	1169	993
v/s Ratio Prot	c0.11		0.02	c0.42	c0.39	
v/s Ratio Perm		0.02	0.18			0.07
v/c Ratio	0.66	0.11	0.28	0.58	0.62	0.11
Uniform Delay, d1	31.3	28.4	6.1	4.9	9.3	6.2
Progression Factor	1.00	1.00	0.51	0.40	0.85	1.58
Incremental Delay, d2	5.2	0.2	0.2	1.2	1.6	0.1
Delay (s)	36.5	28.6	3.4	3.1	9.5	9.9
Level of Service	D	C	A	A	A	A
Approach Delay (s)	32.8			3.1	9.6	
Approach LOS	C			A	A	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	288	83	162	344	90	150	629	148	125	585	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1796		1805	1826		1719	1881	1540	1805	1900	1547
Flt Permitted	0.19	1.00		0.17	1.00		0.13	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	348	1796		330	1826		244	1881	1540	252	1900	1547
Peak-hour factor, PHF	0.86	0.86	0.86	0.91	0.91	0.91	0.96	0.96	0.96	0.90	0.90	0.90
Adj. Flow (vph)	93	335	97	178	378	99	156	655	154	139	650	117
RTOR Reduction (vph)	0	13	0	0	11	0	0	0	90	0	0	68
Lane Group Flow (vph)	93	419	0	178	466	0	156	655	64	139	650	49
Confl. Peds. (#/hr)	2		2				7		7	5		5
Heavy Vehicles (%)	3%	1%	4%	0%	1%	0%	5%	1%	1%	0%	0%	1%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	24.4	21.2		28.0	23.0		37.9	33.3	33.3	37.7	33.2	33.2
Effective Green, g (s)	24.4	21.2		28.0	23.0		37.9	33.3	33.3	37.7	33.2	33.2
Actuated g/C Ratio	0.30	0.26		0.35	0.29		0.47	0.42	0.42	0.47	0.42	0.42
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	162	476		208	525		200	783	641	206	789	642
v/s Ratio Prot	0.02	0.23		c0.05	c0.25		c0.04	c0.35		0.04	0.34	
v/s Ratio Perm	0.15			0.25			0.32		0.04	0.28		0.03
v/c Ratio	0.57	0.88		0.86	0.89		0.78	0.84	0.10	0.67	0.82	0.08
Uniform Delay, d1	21.9	28.2		22.3	27.3		16.2	20.9	14.2	16.0	20.8	14.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.34	0.55	0.13
Incremental Delay, d2	4.8	16.7		27.4	16.4		17.7	10.3	0.3	7.1	8.1	0.2
Delay (s)	26.7	44.9		49.7	43.7		33.8	31.2	14.5	28.6	19.5	2.0
Level of Service	C	D		D	D		C	C	B	C	B	A
Approach Delay (s)		41.7			45.3			29.0			18.7	
Approach LOS		D			D			C			B	

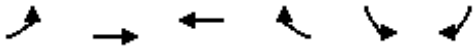
Intersection Summary			
HCM Average Control Delay	31.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	55	242	235	83	86	57
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.97	0.97	0.88	0.88
Hourly flow rate (vph)	60	263	242	86	98	65
Pedestrians		1	1		1	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			840			
pX, platoon unblocked						
vC, conflicting volume	329				670	287
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	329				670	287
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				76	91
cM capacity (veh/h)	1241				400	756

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	323	328	98	65
Volume Left	60	0	98	0
Volume Right	0	86	0	65
cSH	1241	1700	400	756
Volume to Capacity	0.05	0.19	0.24	0.09
Queue Length 95th (ft)	4	0	24	7
Control Delay (s)	1.9	0.0	16.9	10.2
Lane LOS	A		C	B
Approach Delay (s)	1.9	0.0	14.2	
Approach LOS			B	

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	2	230	281	24	30	24
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.96	0.96	0.86	0.86
Hourly flow rate (vph)	2	242	293	25	35	28
Pedestrians		4	4			
Lane Width (ft)		12.0	12.0			
Walking Speed (ft/s)		4.0	4.0			
Percent Blockage		0	0			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	318				556	309
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	318				556	309
tC, single (s)	5.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	3.1				3.5	3.3
p0 queue free %	100				93	96
cM capacity (veh/h)	846				486	724

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	244	318	63
Volume Left	2	0	35
Volume Right	0	25	28
cSH	846	1700	569
Volume to Capacity	0.00	0.19	0.11
Queue Length 95th (ft)	0	0	9
Control Delay (s)	0.1	0.0	12.1
Lane LOS	A		B
Approach Delay (s)	0.1	0.0	12.1
Approach LOS			B

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	27.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (veh/h)	1369	27	42	1202	11	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.97	0.97	0.95	0.95	0.83	0.92
Hourly flow rate (vph)	1411	28	44	1265	13	0
Pedestrians	2				1	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1440		1938	485
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1440		1938	485
tC, single (s)			4.3		7.2	6.9
tC, 2 stage (s)						
tF (s)			2.3		3.7	3.3
p0 queue free %			90		68	100
cM capacity (veh/h)			438		42	527

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4	SW 1
Volume Total	565	565	310	44	422	422	422	13
Volume Left	0	0	0	44	0	0	0	13
Volume Right	0	0	28	0	0	0	0	0
cSH	1700	1700	1700	438	1700	1700	1700	42
Volume to Capacity	0.33	0.33	0.18	0.10	0.25	0.25	0.25	0.32
Queue Length 95th (ft)	0	0	0	8	0	0	0	27
Control Delay (s)	0.0	0.0	0.0	14.2	0.0	0.0	0.0	127.4
Lane LOS				B				F
Approach Delay (s)	0.0			0.5				127.4
Approach LOS								F

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	74	12	17	186	150	44
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.73	0.73	0.70	0.70	0.97	0.97
Hourly flow rate (vph)	101	16	24	266	155	45
Pedestrians				1	1	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				4.0	4.0	
Percent Blockage				0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	360	101	200			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	360	101	200			
tC, single (s)	6.9	7.1	4.4			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.3			
p0 queue free %	83	98	98			
cM capacity (veh/h)	595	912	1293			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	118	113	177	103	97
Volume Left	101	24	0	0	0
Volume Right	16	0	0	0	45
cSH	626	1293	1700	1700	1700
Volume to Capacity	0.19	0.02	0.10	0.06	0.06
Queue Length 95th (ft)	17	1	0	0	0
Control Delay (s)	12.1	1.8	0.0	0.0	0.0
Lane LOS	B	A			
Approach Delay (s)	12.1	0.7		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	26.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	63	22	19	51	1	30	1	21	3	1	4
Peak Hour Factor	0.92	0.92	0.92	0.87	0.87	0.87	0.82	0.82	0.82	0.67	0.67	0.67
Hourly flow rate (vph)	1	68	24	22	59	1	37	1	26	4	1	6

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	93	82	63	12
Volume Left (vph)	1	22	37	4
Volume Right (vph)	24	1	26	6
Hadj (s)	-0.05	0.14	-0.09	-0.23
Departure Headway (s)	4.1	4.3	4.2	4.1
Degree Utilization, x	0.11	0.10	0.07	0.01
Capacity (veh/h)	854	816	814	828
Control Delay (s)	7.6	7.8	7.5	7.2
Approach Delay (s)	7.6	7.8	7.5	7.2
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.6			
HCM Level of Service	A			
Intersection Capacity Utilization	22.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	55	1369	0	0	1245
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.88	0.97	0.92	0.92	0.95
Hourly flow rate (vph)	0	62	1411	0	0	1311
Pedestrians	1					2
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1849	473			1412	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1849	473			1412	
tC, single (s)	6.8	7.0			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	100	88			100	
cM capacity (veh/h)	66	525			478	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	62	470	470	470	437	437	437
Volume Left	0	0	0	0	0	0	0
Volume Right	62	0	0	0	0	0	0
cSH	525	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.12	0.28	0.28	0.28	0.26	0.26	0.26
Queue Length 95th (ft)	10	0	0	0	0	0	0
Control Delay (s)	12.8	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	12.8	0.0			0.0		
Approach LOS	B						

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	37.4%	ICU Level of Service	A
Analysis Period (min)	15		

Appendix G
2016 No-Build Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	7	16	14	15	82	2	1448	8	6	859	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			0.95	
Frpb, ped/bikes		1.00			0.98			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.90			1.00			1.00	
Flt Protected		0.97			0.99			1.00			1.00	
Satd. Flow (prot)		1773			1668			1878			3570	
Flt Permitted		0.78			0.96			1.00			0.95	
Satd. Flow (perm)		1422			1607			1877			3380	
Peak-hour factor, PHF	0.82	0.82	0.82	0.90	0.90	0.90	0.98	0.98	0.98	0.93	0.93	0.93
Adj. Flow (vph)	37	9	20	16	17	91	2	1478	8	6	924	6
RTOR Reduction (vph)	0	16	0	0	87	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	50	0	0	37	0	0	1488	0	0	936	0
Confl. Peds. (#/hr)				2		2				1		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	14%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		4.0			4.0			84.0			84.0	
Effective Green, g (s)		4.0			4.0			84.0			84.0	
Actuated g/C Ratio		0.04			0.04			0.88			0.88	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		59			67			1642			2958	
v/s Ratio Prot												
v/s Ratio Perm		c0.03			0.02			c0.79			0.28	
v/c Ratio		0.84			0.55			0.91			0.32	
Uniform Delay, d1		45.7			45.1			3.6			1.0	
Progression Factor		1.00			0.86			1.65			1.00	
Incremental Delay, d2		63.9			8.1			0.9			0.3	
Delay (s)		109.6			46.7			6.9			1.3	
Level of Service		F			D			A			A	
Approach Delay (s)		109.6			46.7			6.9			1.3	
Approach LOS		F			D			A			A	

Intersection Summary			
HCM Average Control Delay	9.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	94.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	15	7	84	761	965	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	0.95	
Frpb, ped/bikes	1.00			1.00	1.00	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.96			1.00	1.00	
Flt Protected	0.97			1.00	1.00	
Satd. Flow (prot)	1751			1857	3566	
Flt Permitted	0.97			0.82	1.00	
Satd. Flow (perm)	1751			1525	3566	
Peak-hour factor, PHF	0.75	0.75	0.98	0.98	0.98	0.98
Adj. Flow (vph)	20	9	86	777	985	14
RTOR Reduction (vph)	9	0	0	0	1	0
Lane Group Flow (vph)	20	0	0	863	998	0
Confl. Peds. (#/hr)	2	2	1			1
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	2.4			85.6	85.6	
Effective Green, g (s)	2.4			85.6	85.6	
Actuated g/C Ratio	0.02			0.89	0.89	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	44			1360	3180	
v/s Ratio Prot	c0.01				0.28	
v/s Ratio Perm				c0.57		
v/c Ratio	0.46			0.63	0.31	
Uniform Delay, d1	46.2			1.3	0.8	
Progression Factor	0.99			0.05	1.00	
Incremental Delay, d2	6.1			1.7	0.3	
Delay (s)	51.9			1.8	1.0	
Level of Service	D			A	A	
Approach Delay (s)	51.9			1.8	1.0	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	2.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	1415	849	0	938	981	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		0.95	0.97	
Frpb, ped/bikes	1.00	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		1.00	0.95	
Satd. Flow (prot)	1881	1562		3574	3467	
Flt Permitted	1.00	1.00		1.00	0.95	
Satd. Flow (perm)	1881	1562		3574	3467	
Peak-hour factor, PHF	0.98	0.98	0.92	0.96	0.99	0.92
Adj. Flow (vph)	1444	866	0	977	991	0
RTOR Reduction (vph)	0	247	0	0	0	0
Lane Group Flow (vph)	1444	619	0	977	991	0
Confl. Peds. (#/hr)		1				
Heavy Vehicles (%)	1%	1%	2%	1%	1%	2%
Turn Type		Perm				
Protected Phases	2			6	8	
Permitted Phases		2				
Actuated Green, G (s)	65.0	65.0		65.0	23.0	
Effective Green, g (s)	65.0	65.0		65.0	23.0	
Actuated g/C Ratio	0.68	0.68		0.68	0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	1274	1058		2420	831	
v/s Ratio Prot	c0.77			0.27	c0.29	
v/s Ratio Perm		0.40				
v/c Ratio	1.13	0.58		0.40	1.19	
Uniform Delay, d1	15.5	8.3		6.9	36.5	
Progression Factor	0.87	2.84		0.88	0.98	
Incremental Delay, d2	61.1	0.2		0.5	98.1	
Delay (s)	74.6	23.7		6.5	134.0	
Level of Service	E	C		A	F	
Approach Delay (s)	55.5			6.5	134.0	
Approach LOS	E			A	F	

Intersection Summary			
HCM Average Control Delay	62.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	109.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	84	1349	322	565	1885	252	308	444	321	347	730	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		0.97	0.95		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.94		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	4972		3467	3501		1787	4774		1766	4837	
Flt Permitted	0.10	1.00		0.95	1.00		0.31	1.00		0.29	1.00	
Satd. Flow (perm)	194	4972		3467	3501		579	4774		531	4837	
Peak-hour factor, PHF	0.98	0.98	0.98	0.96	0.96	0.96	0.94	0.94	0.94	0.99	0.99	0.99
Adj. Flow (vph)	86	1377	329	589	1964	262	328	472	341	351	737	149
RTOR Reduction (vph)	0	42	0	0	11	0	0	136	0	0	32	0
Lane Group Flow (vph)	86	1664	0	589	2215	0	328	677	0	351	854	0
Confl. Peds. (#/hr)	2		2	1		1	2		2	21		21
Heavy Vehicles (%)	3%	1%	1%	1%	1%	2%	1%	2%	0%	2%	4%	2%
Turn Type	pm+pt			Prot			pm+pt			pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6						4			8		
Actuated Green, G (s)	41.3	38.1		17.9	52.8		23.0	13.0		25.0	14.0	
Effective Green, g (s)	41.3	38.1		17.9	52.8		23.0	13.0		25.0	14.0	
Actuated g/C Ratio	0.43	0.40		0.19	0.55		0.24	0.14		0.26	0.15	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	135	1973		646	1926		265	646		280	705	
v/s Ratio Prot	0.02	0.33		c0.17	c0.63		0.13	0.14		c0.14	0.18	
v/s Ratio Perm	0.25						0.17			c0.18		
v/c Ratio	0.64	0.84		0.91	1.15		1.24	1.05		1.25	1.21	
Uniform Delay, d1	22.7	26.2		38.3	21.6		34.8	41.5		33.4	41.0	
Progression Factor	1.09	0.53		1.09	0.69		0.54	0.58		1.00	1.00	
Incremental Delay, d2	5.5	2.0		12.7	72.1		133.3	47.5		140.0	108.2	
Delay (s)	30.3	15.9		54.5	87.1		152.2	71.8		173.4	149.2	
Level of Service	C	B		D	F		F	E		F	F	
Approach Delay (s)		16.6			80.3			94.9			156.1	
Approach LOS		B			F			F			F	

Intersection Summary			
HCM Average Control Delay	79.7	HCM Level of Service	E
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	113.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	1967	18	141	2471	23	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	5077		1805	3539	1805	1576
Flt Permitted	1.00		0.09	1.00	0.95	1.00
Satd. Flow (perm)	5077		163	3539	1805	1576
Peak-hour factor, PHF	0.97	0.97	0.98	0.98	0.83	0.83
Adj. Flow (vph)	2028	19	144	2521	28	69
RTOR Reduction (vph)	1	0	0	0	0	48
Lane Group Flow (vph)	2046	0	144	2521	28	21
Confl. Peds. (#/hr)		6	1		7	7
Heavy Vehicles (%)	2%	0%	0%	2%	0%	0%
Turn Type			Perm			Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	85.0		85.0	85.0	3.0	3.0
Effective Green, g (s)	85.0		85.0	85.0	3.0	3.0
Actuated g/C Ratio	0.89		0.89	0.89	0.03	0.03
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	4495		144	3133	56	49
v/s Ratio Prot	0.40			0.71	c0.02	
v/s Ratio Perm			c0.88			0.01
v/c Ratio	0.46		1.00	0.80	0.50	0.42
Uniform Delay, d1	1.1		5.5	2.2	45.8	45.6
Progression Factor	2.40		1.20	0.55	1.00	1.00
Incremental Delay, d2	0.0		54.7	0.8	28.5	24.3
Delay (s)	2.6		61.3	2.0	74.3	69.9
Level of Service	A		E	A	E	E
Approach Delay (s)	2.6			5.2	71.2	
Approach LOS	A			A	E	

Intersection Summary			
HCM Average Control Delay	5.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	1229	774	784	1602	0	0	0	0	1141	207	725
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00	0.99	1.00	1.00					1.00	1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.96	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		6471	1546	3467	3574					1626	3014	1418
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		6471	1546	3467	3574					1626	3014	1418
Peak-hour factor, PHF	0.92	0.92	0.92	0.97	0.97	0.92	0.92	0.92	0.92	0.89	0.89	0.89
Adj. Flow (vph)	0	1336	841	808	1652	0	0	0	0	1282	233	815
RTOR Reduction (vph)	0	0	191	0	0	0	0	0	0	0	14	14
Lane Group Flow (vph)	0	1336	650	808	1652	0	0	0	0	641	1145	516
Confl. Peds. (#/hr)	1		1	1		1				2		2
Heavy Vehicles (%)	0%	1%	3%	1%	1%	0%	0%	0%	0%	1%	1%	2%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		32.0	32.0	19.0	55.0					33.0	33.0	33.0
Effective Green, g (s)		32.0	32.0	19.0	55.0					33.0	33.0	33.0
Actuated g/C Ratio		0.33	0.33	0.20	0.57					0.34	0.34	0.34
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2157	515	686	2048					559	1036	487
v/s Ratio Prot		0.21		c0.23	0.46					c0.39	0.38	
v/s Ratio Perm			c0.42									0.36
v/c Ratio		0.62	1.26	1.18	0.81					1.15	1.10	1.06
Uniform Delay, d1		26.9	32.0	38.5	16.3					31.5	31.5	31.5
Progression Factor		0.74	0.66	0.43	0.42					1.00	1.00	1.00
Incremental Delay, d2		1.2	132.0	87.3	1.7					85.5	61.3	57.2
Delay (s)		21.2	153.1	104.0	8.5					117.0	92.8	88.7
Level of Service		C	F	F	A					F	F	F
Approach Delay (s)		72.2			39.9			0.0			98.5	
Approach LOS		E			D			A			F	

Intersection Summary			
HCM Average Control Delay	69.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	112.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	252	808	526	1696	0	0	2175	789	0	0	397
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.95			0.86	0.88			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	0.97			1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1770	2787	3433	3539			6536	2741			1627
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1770	2787	3433	3539			6536	2741			1627
Peak-hour factor, PHF	0.90	0.90	0.92	0.92	0.92	0.92	0.94	0.94	0.92	0.92	0.90
Adj. Flow (vph)	280	898	572	1843	0	0	2314	839	0	0	441
RTOR Reduction (vph)	0	21	0	0	0	0	0	235	0	0	363
Lane Group Flow (vph)	280	877	572	1843	0	0	2314	604	0	0	78
Confl. Peds. (#/hr)	3	3	3					2			8
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	1%	2%	2%	1%
Turn Type		Prot	Prot					Perm			Over
Protected Phases	4	4	1	6			2				1
Permitted Phases								2			
Actuated Green, G (s)	30.0	30.0	17.0	58.0			37.0	37.0			17.0
Effective Green, g (s)	30.0	30.0	17.0	58.0			37.0	37.0			17.0
Actuated g/C Ratio	0.31	0.31	0.18	0.60			0.39	0.39			0.18
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	553	871	608	2138			2519	1056			288
v/s Ratio Prot	0.16	c0.31	c0.17	c0.52			0.35				0.05
v/s Ratio Perm								0.22			
v/c Ratio	0.51	1.01	0.94	0.86			0.92	0.57			0.27
Uniform Delay, d1	27.0	33.0	39.0	15.7			28.1	23.3			34.1
Progression Factor	1.00	1.00	1.22	0.45			0.55	0.29			1.00
Incremental Delay, d2	0.7	32.3	13.3	2.4			1.9	0.6			0.5
Delay (s)	27.7	65.3	60.9	9.5			17.4	7.3			34.7
Level of Service	C	E	E	A			B	A			C
Approach Delay (s)	56.4			21.7			14.7		34.7		
Approach LOS	E			C			B		C		

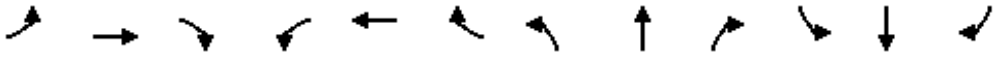
Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	407	73	57	35	53	95	272	1773	650	123	2522	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1900	1407	1805	1900	1579	1736	4988	1571	1805	5165	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.08	1.00	1.00	0.08	1.00	
Satd. Flow (perm)	3433	1900	1407	1805	1900	1579	138	4988	1571	155	5165	
Peak-hour factor, PHF	0.85	0.85	0.85	0.76	0.76	0.76	0.93	0.93	0.93	0.97	0.97	0.97
Adj. Flow (vph)	479	86	67	46	70	125	292	1906	699	127	2600	63
RTOR Reduction (vph)	0	0	57	0	0	120	0	0	300	0	2	0
Lane Group Flow (vph)	479	86	10	46	70	5	292	1906	399	127	2661	0
Confl. Peds. (#/hr)	7		7	6		6	3		3	2		2
Heavy Vehicles (%)	2%	0%	12%	0%	0%	0%	4%	4%	1%	0%	0%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		Perm	pm+pt		
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	14.0	14.0	14.0	4.0	4.0	4.0	66.0	54.2	54.2	56.8	49.0	
Effective Green, g (s)	14.0	14.0	14.0	4.0	4.0	4.0	66.0	54.2	54.2	56.8	49.0	
Actuated g/C Ratio	0.15	0.15	0.15	0.04	0.04	0.04	0.69	0.56	0.56	0.59	0.51	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	501	277	205	75	79	66	311	2816	887	226	2636	
v/s Ratio Prot	c0.14	0.05		0.03	c0.04		c0.13	0.38		0.05	c0.52	
v/s Ratio Perm			0.01			0.00	0.52		0.25	0.29		
v/c Ratio	0.96	0.31	0.05	0.61	0.89	0.08	0.94	0.68	0.45	0.56	1.01	
Uniform Delay, d1	40.7	36.7	35.3	45.2	45.8	44.2	31.1	14.7	12.2	11.9	23.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.42	1.00	1.00	
Incremental Delay, d2	29.1	0.6	0.1	14.0	63.8	0.5	21.4	0.6	0.8	3.2	19.8	
Delay (s)	69.8	37.3	35.4	59.2	109.6	44.7	52.4	15.4	18.1	15.1	43.3	
Level of Service	E	D	D	E	F	D	D	B	B	B	D	
Approach Delay (s)		61.7			66.3			19.8			42.0	
Approach LOS		E			E			B			D	

Intersection Summary			
HCM Average Control Delay	35.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	93.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

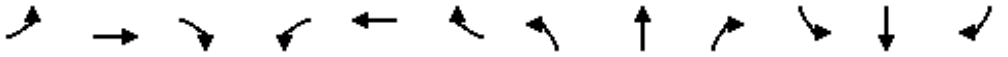
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	516	295	53	125	309	295	111	1050	573	99	1729	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3367	3370		1770	1881	1615	1703	3505	1524	1770	3563	
Flt Permitted	0.95	1.00		0.53	1.00	1.00	0.08	1.00	1.00	0.12	1.00	
Satd. Flow (perm)	3367	3370		993	1881	1615	145	3505	1524	230	3563	
Peak-hour factor, PHF	0.95	0.95	0.95	0.92	0.92	0.92	0.96	0.96	0.96	0.97	0.97	0.97
Adj. Flow (vph)	543	311	56	136	336	321	116	1094	597	102	1782	22
RTOR Reduction (vph)	0	13	0	0	0	60	0	0	274	0	1	0
Lane Group Flow (vph)	543	354	0	136	336	261	116	1094	323	102	1803	0
Confl. Peds. (#/hr)										1		1
Heavy Vehicles (%)	4%	3%	14%	2%	1%	0%	6%	3%	6%	2%	1%	11%
Turn Type	Prot			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases				8		8	6		6	2		
Actuated Green, G (s)	18.0	29.1		26.9	19.0	19.0	53.5	49.5	49.5	60.5	53.0	
Effective Green, g (s)	18.0	29.1		26.9	19.0	19.0	53.5	49.5	49.5	60.5	53.0	
Actuated g/C Ratio	0.16	0.26		0.24	0.17	0.17	0.49	0.45	0.45	0.55	0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	551	892		299	325	279	127	1577	686	232	1717	
v/s Ratio Prot	c0.16	0.10		0.03	c0.18		c0.03	0.31		0.03	c0.51	
v/s Ratio Perm				0.08		0.16	0.41		0.21	0.21		
v/c Ratio	0.99	0.40		0.45	1.03	0.94	0.91	0.69	0.47	0.44	1.05	
Uniform Delay, d1	45.9	33.2		34.0	45.5	44.9	26.4	24.2	21.1	16.3	28.5	
Progression Factor	0.79	0.81		0.77	0.88	0.83	1.00	1.00	1.00	0.70	0.34	
Incremental Delay, d2	30.0	0.2		1.0	55.9	34.1	53.8	2.5	2.3	0.1	24.5	
Delay (s)	66.3	27.3		27.2	95.9	71.6	80.2	26.7	23.4	11.6	34.1	
Level of Service	E	C		C	F	E	F	C	C	B	C	
Approach Delay (s)		50.5			74.3			29.1			32.9	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM Average Control Delay	40.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	98.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	207	179	118	894	122	521	1878	48	72	818	203
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3574	1553	1765	3574	1536	1787	3559		1687	3441	
Flt Permitted	0.15	1.00	1.00	0.51	1.00	1.00	0.11	1.00		0.12	1.00	
Satd. Flow (perm)	292	3574	1553	956	3574	1536	198	3559		209	3441	
Peak-hour factor, PHF	0.82	0.82	0.82	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	139	252	218	127	961	131	560	2019	52	77	880	218
RTOR Reduction (vph)	0	0	166	0	0	63	0	1	0	0	20	0
Lane Group Flow (vph)	139	252	52	127	961	68	560	2070	0	77	1078	0
Confl. Peds. (#/hr)				4		4						
Heavy Vehicles (%)	0%	1%	4%	2%	1%	3%	1%	1%	3%	7%	2%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	31.0	26.0	26.0	33.0	27.0	27.0	66.0	58.8		37.2	34.0	
Effective Green, g (s)	31.0	26.0	26.0	33.0	27.0	27.0	66.0	58.8		37.2	34.0	
Actuated g/C Ratio	0.28	0.24	0.24	0.30	0.25	0.25	0.60	0.53		0.34	0.31	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	151	845	367	331	877	377	523	1902		114	1064	
v/s Ratio Prot	c0.04	0.07		0.02	c0.27		c0.27	c0.58		0.02	0.31	
v/s Ratio Perm	0.22		0.03	0.09		0.04	0.37			0.21		
v/c Ratio	0.92	0.30	0.14	0.38	1.10	0.18	1.07	1.09		0.68	1.01	
Uniform Delay, d1	37.2	34.5	33.2	29.1	41.5	32.8	33.1	25.6		31.2	38.0	
Progression Factor	0.78	0.75	0.36	1.00	1.00	1.00	1.00	1.00		1.32	0.96	
Incremental Delay, d2	46.0	0.2	0.2	0.7	60.0	0.2	59.6	49.1		11.2	27.2	
Delay (s)	75.0	25.9	12.1	29.9	101.5	33.0	92.8	74.7		52.3	63.8	
Level of Service	E	C	B	C	F	C	F	E		D	E	
Approach Delay (s)		32.2			86.7			78.5			63.0	
Approach LOS		C			F			E			E	

Intersection Summary			
HCM Average Control Delay	72.1	HCM Level of Service	E
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	102.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



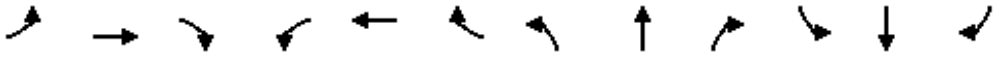
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	251	221	126	96	380	787	63	1195	8	177	1080	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1787	3400		1748	1845	1560	1736	3570		1770	3574	1577
Flt Permitted	0.35	1.00		0.46	1.00	1.00	0.10	1.00		0.10	1.00	1.00
Satd. Flow (perm)	659	3400		842	1845	1560	187	3570		178	3574	1577
Peak-hour factor, PHF	0.89	0.89	0.89	0.92	0.92	0.92	0.91	0.91	0.91	0.89	0.89	0.89
Adj. Flow (vph)	282	248	142	104	413	855	69	1313	9	199	1213	337
RTOR Reduction (vph)	0	74	0	0	0	65	0	1	0	0	0	188
Lane Group Flow (vph)	282	316	0	104	413	790	69	1321	0	199	1213	149
Confl. Peds. (#/hr)				6		6	7		7	1		1
Heavy Vehicles (%)	1%	0%	1%	3%	3%	1%	4%	1%	0%	2%	1%	1%
Turn Type	pm+pt			pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	48.0	44.0		50.0	45.0	45.0	42.2	39.0		47.8	41.8	41.8
Effective Green, g (s)	48.0	44.0		50.0	45.0	45.0	42.2	39.0		47.8	41.8	41.8
Actuated g/C Ratio	0.44	0.40		0.45	0.41	0.41	0.38	0.35		0.43	0.38	0.38
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	329	1360		424	755	638	117	1266		164	1358	599
v/s Ratio Prot	c0.03	0.09		0.01	0.22		0.02	0.37		c0.07	0.34	
v/s Ratio Perm	0.34			0.10		c0.51	0.21			c0.46		0.09
v/c Ratio	0.86	0.23		0.25	0.55	1.24	0.59	1.04		1.21	0.89	0.25
Uniform Delay, d1	31.1	21.8		17.6	24.7	32.5	26.4	35.5		27.8	32.0	23.4
Progression Factor	0.56	0.36		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	18.3	0.1		0.3	0.8	120.3	7.4	37.5		139.1	9.3	1.0
Delay (s)	35.9	8.0		17.9	25.6	152.8	33.8	73.0		166.9	41.3	24.3
Level of Service	D	A		B	C	F	C	E		F	D	C
Approach Delay (s)		19.7			104.3			71.0			52.3	
Approach LOS		B			F			E			D	

Intersection Summary			
HCM Average Control Delay	66.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	106.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	120	206	431	841	748	284
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.96	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1719	1505	1770	1845	1845	1568
Flt Permitted	0.95	1.00	0.15	1.00	1.00	1.00
Satd. Flow (perm)	1719	1505	276	1845	1845	1568
Peak-hour factor, PHF	0.88	0.88	0.91	0.91	0.91	0.91
Adj. Flow (vph)	136	234	474	924	822	312
RTOR Reduction (vph)	0	210	0	0	0	128
Lane Group Flow (vph)	136	24	474	924	822	184
Confl. Peds. (#/hr)	6	6				
Heavy Vehicles (%)	5%	3%	2%	3%	3%	3%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	11.4	11.4	90.6	90.6	63.3	63.3
Effective Green, g (s)	11.4	11.4	90.6	90.6	63.3	63.3
Actuated g/C Ratio	0.10	0.10	0.82	0.82	0.58	0.58
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	178	156	544	1520	1062	902
v/s Ratio Prot	c0.08		c0.18	0.50	0.45	
v/s Ratio Perm		0.02	c0.53			0.12
v/c Ratio	0.76	0.16	0.87	0.61	0.77	0.20
Uniform Delay, d1	48.0	44.9	26.0	3.4	17.9	11.2
Progression Factor	1.00	1.00	0.56	2.99	1.08	2.22
Incremental Delay, d2	17.5	0.5	10.2	1.2	4.1	0.4
Delay (s)	65.5	45.4	24.8	11.5	23.3	25.3
Level of Service	E	D	C	B	C	C
Approach Delay (s)	52.8			16.0	23.9	
Approach LOS	D			B	C	

Intersection Summary			
HCM Average Control Delay	23.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	66	251	205	248	641	60	147	825	102	41	886	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1703	1681		1736	1835		1703	1827	1455	1597	1845	1515
Flt Permitted	0.13	1.00		0.11	1.00		0.08	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	233	1681		210	1835		144	1827	1455	140	1845	1515
Peak-hour factor, PHF	0.92	0.92	0.92	0.93	0.93	0.93	0.94	0.94	0.94	0.96	0.96	0.96
Adj. Flow (vph)	72	273	223	267	689	65	156	878	109	43	923	55
RTOR Reduction (vph)	0	27	0	0	3	0	0	0	44	0	0	22
Lane Group Flow (vph)	72	469	0	267	751	0	156	878	65	43	923	33
Confl. Peds. (#/hr)	7		7	3		3				4		4
Heavy Vehicles (%)	6%	2%	5%	4%	2%	1%	6%	4%	11%	13%	3%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	34.0	30.8		45.8	38.6		53.8	49.8	49.8	50.6	48.2	48.2
Effective Green, g (s)	34.0	30.8		45.8	38.6		53.8	49.8	49.8	50.6	48.2	48.2
Actuated g/C Ratio	0.31	0.28		0.42	0.35		0.49	0.45	0.45	0.46	0.44	0.44
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	115	471		240	644		127	827	659	96	808	664
v/s Ratio Prot	0.02	0.28		c0.11	c0.41		c0.04	0.48		0.01	0.50	
v/s Ratio Perm	0.18			0.35			c0.56		0.04	0.20		0.02
v/c Ratio	0.63	1.00		1.11	1.17		1.23	1.06	0.10	0.45	1.14	0.05
Uniform Delay, d1	31.7	39.5		29.6	35.7		28.7	30.1	17.2	25.6	30.9	17.7
Progression Factor	1.00	1.00		1.82	0.70		1.00	1.00	1.00	0.57	0.57	0.15
Incremental Delay, d2	10.2	40.3		56.6	76.3		153.7	49.0	0.3	2.2	74.1	0.1
Delay (s)	41.9	79.8		110.4	101.2		182.4	79.1	17.5	16.7	91.8	2.8
Level of Service	D	E		F	F		F	E	B	B	F	A
Approach Delay (s)		75.0			103.6			87.3			83.8	
Approach LOS		E			F			F			F	

Intersection Summary			
HCM Average Control Delay	88.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	109.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	1	336	2	502	1	770	336	972	785	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00		0.95	1.00	0.97	1.00	
Frpb, ped/bikes		1.00			1.00	0.98		1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Frt		0.86			1.00	0.85		1.00	0.85	1.00	1.00	
Flt Protected		1.00			0.95	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1644			1752	1446		3505	1559	3400	1845	
Flt Permitted		1.00			0.73	1.00		0.95	1.00	0.95	1.00	
Satd. Flow (perm)		1644			1334	1446		3345	1559	3400	1845	
Peak-hour factor, PHF	0.25	0.25	0.25	0.90	0.90	0.90	0.98	0.98	0.98	0.94	0.94	0.94
Adj. Flow (vph)	0	0	4	373	2	558	1	786	343	1034	835	0
RTOR Reduction (vph)	0	3	0	0	0	400	0	0	250	0	0	0
Lane Group Flow (vph)	0	1	0	0	375	158	0	787	93	1034	835	0
Confl. Peds. (#/hr)				2		2	2		2	4		4
Heavy Vehicles (%)	0%	0%	0%	3%	0%	10%	0%	3%	2%	3%	3%	0%
Turn Type	Perm			Perm		Perm	Perm		Perm	Prot		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2			
Actuated Green, G (s)		24.0			24.0	24.0		23.0	23.0	26.0	53.0	
Effective Green, g (s)		24.0			24.0	24.0		23.0	23.0	26.0	53.0	
Actuated g/C Ratio		0.28			0.28	0.28		0.27	0.27	0.31	0.62	
Clearance Time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		464			377	408		905	422	1040	1150	
v/s Ratio Prot		0.00								c0.30	0.45	
v/s Ratio Perm					c0.28	0.11		c0.24	0.06			
v/c Ratio		0.00			0.99	0.39		0.87	0.22	0.99	0.73	
Uniform Delay, d1		21.9			30.4	24.6		29.6	24.0	29.4	11.0	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0			44.7	0.6		11.1	1.2	26.3	4.0	
Delay (s)		21.9			75.1	25.2		40.7	25.2	55.8	15.0	
Level of Service		C			E	C		D	C	E	B	
Approach Delay (s)		21.9			45.2			36.0			37.6	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	38.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	612	28	22	15	12	35	36	856	15	57	633	552
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99			1.00	0.85	1.00	1.00		1.00	0.93	
Flt Protected	0.95	0.96			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1684			1849	1475	1805	3531		1671	3290	
Flt Permitted	0.95	0.96			0.97	1.00	0.18	1.00		0.25	1.00	
Satd. Flow (perm)	1681	1684			1849	1475	342	3531		435	3290	
Peak-hour factor, PHF	0.93	0.93	0.93	0.98	0.98	0.98	0.98	0.98	0.98	0.92	0.92	0.92
Adj. Flow (vph)	658	30	24	15	12	36	37	873	15	62	688	600
RTOR Reduction (vph)	0	5	0	0	0	35	0	2	0	0	303	0
Lane Group Flow (vph)	355	352	0	0	27	1	37	886	0	62	985	0
Confl. Peds. (#/hr)	2		2	2		2						
Heavy Vehicles (%)	2%	0%	0%	0%	0%	7%	0%	2%	0%	8%	3%	1%
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases						8	2			6		
Actuated Green, G (s)	12.7	12.7			1.1	1.1	22.2	22.2		22.2	22.2	
Effective Green, g (s)	12.7	12.7			1.1	1.1	22.2	22.2		22.2	22.2	
Actuated g/C Ratio	0.26	0.26			0.02	0.02	0.46	0.46		0.46	0.46	
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	445	446			42	34	158	1633		201	1522	
v/s Ratio Prot	c0.21	0.21			c0.01			0.25			c0.30	
v/s Ratio Perm						0.00	0.11			0.14		
v/c Ratio	0.80	0.79			0.64	0.02	0.23	0.54		0.31	0.65	
Uniform Delay, d1	16.5	16.4			23.3	22.9	7.8	9.3		8.1	9.9	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	9.6	9.0			29.0	0.3	3.4	1.3		3.9	2.1	
Delay (s)	26.1	25.4			52.3	23.2	11.2	10.6		12.0	12.0	
Level of Service	C	C			D	C	B	B		B	B	
Approach Delay (s)		25.7			35.7			10.6			12.0	
Approach LOS		C			D			B			B	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	48.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	321	585	687	138	935	73	1269	889	142	71	461	332
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.97	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	3574	1566	1786	5077		3502	3574	1562	1770	3574	1590
Flt Permitted	0.17	1.00	1.00	0.31	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	330	3574	1566	582	5077		3502	3574	1562	1770	3574	1590
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.96	0.96	0.96	0.91	0.91	0.91
Adj. Flow (vph)	345	629	739	148	1005	78	1322	926	148	78	507	365
RTOR Reduction (vph)	0	0	536	0	9	0	0	0	94	0	0	138
Lane Group Flow (vph)	345	629	203	148	1074	0	1322	926	54	78	507	227
Confl. Peds. (#/hr)	5		5	3		3	1		1	2		2
Heavy Vehicles (%)	0%	1%	1%	1%	1%	0%	0%	1%	2%	2%	1%	0%
Turn Type	pm+pt		Perm	pm+pt			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4		4	8					2			6
Actuated Green, G (s)	36.0	26.0	26.0	25.0	19.0		35.0	35.0	35.0	13.0	13.0	13.0
Effective Green, g (s)	36.0	26.0	26.0	25.0	19.0		35.0	35.0	35.0	13.0	13.0	13.0
Actuated g/C Ratio	0.38	0.27	0.27	0.26	0.20		0.36	0.36	0.36	0.14	0.14	0.14
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	323	968	424	227	1005		1277	1303	569	240	484	215
v/s Ratio Prot	c0.14	0.18		0.04	0.21		c0.38	0.26		0.04	0.14	
v/s Ratio Perm	c0.26		0.13	0.13					0.03			c0.14
v/c Ratio	1.07	0.65	0.48	0.65	1.07		1.04	0.71	0.09	0.32	1.05	1.05
Uniform Delay, d1	25.2	31.0	29.3	29.1	38.5		30.5	26.2	20.1	37.5	41.5	41.5
Progression Factor	1.00	1.00	1.00	0.92	0.98		0.85	0.86	1.08	1.00	1.00	1.00
Incremental Delay, d2	69.3	1.5	0.9	0.6	33.3		32.3	2.7	0.3	3.6	53.9	76.4
Delay (s)	94.5	32.5	30.2	27.3	71.2		58.3	25.1	22.0	41.1	95.4	117.9
Level of Service	F	C	C	C	E		E	C	C	D	F	F
Approach Delay (s)		44.0			65.9			43.2			99.6	
Approach LOS		D			E			D			F	

Intersection Summary			
HCM Average Control Delay	56.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	438	1042	1294	0	0	1327
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	0.97	0.91	0.91			0.86
Frpb, ped/bikes	0.99	0.98	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	0.92	0.85	1.00			1.00
Flt Protected	0.98	1.00	1.00			1.00
Satd. Flow (prot)	3250	1433	5136			6471
Flt Permitted	0.98	1.00	1.00			1.00
Satd. Flow (perm)	3250	1433	5136			6471
Peak-hour factor, PHF	0.97	0.97	0.98	0.92	0.92	0.96
Adj. Flow (vph)	452	1074	1320	0	0	1382
RTOR Reduction (vph)	5	5	0	0	0	0
Lane Group Flow (vph)	984	532	1320	0	0	1382
Confl. Peds. (#/hr)	2	2				
Heavy Vehicles (%)	1%	1%	1%	2%	2%	1%
Turn Type		Perm				
Protected Phases	8		2			6
Permitted Phases		8				
Actuated Green, G (s)	44.7	44.7	43.3			43.3
Effective Green, g (s)	44.7	44.7	43.3			43.3
Actuated g/C Ratio	0.47	0.47	0.45			0.45
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	1513	667	2317			2919
v/s Ratio Prot	0.30		c0.26			0.21
v/s Ratio Perm		c0.37				
v/c Ratio	0.65	0.80	0.57			0.47
Uniform Delay, d1	19.7	21.8	19.5			18.4
Progression Factor	1.00	1.00	0.35			0.63
Incremental Delay, d2	1.0	6.6	0.9			0.3
Delay (s)	20.7	28.4	7.7			11.9
Level of Service	C	C	A			B
Approach Delay (s)	23.4		7.7			11.9
Approach LOS	C		A			B

Intersection Summary			
HCM Average Control Delay	14.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	1386	413	545	1277
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0
Lane Util. Factor			0.91		0.97	0.91
Frpb, ped/bikes			1.00		1.00	1.00
Flpb, ped/bikes			1.00		1.00	1.00
Frt			0.97		1.00	1.00
Flt Protected			1.00		0.95	1.00
Satd. Flow (prot)			4941		3467	5136
Flt Permitted			1.00		0.95	1.00
Satd. Flow (perm)			4941		3467	5136
Peak-hour factor, PHF	0.92	0.92	0.93	0.93	0.97	0.97
Adj. Flow (vph)	0	0	1490	444	562	1316
RTOR Reduction (vph)	0	0	28	0	0	0
Lane Group Flow (vph)	0	0	1906	0	562	1316
Confl. Peds. (#/hr)				2	4	
Heavy Vehicles (%)	2%	2%	1%	1%	1%	1%
Turn Type					Prot	
Protected Phases			2		1	6
Permitted Phases						
Actuated Green, G (s)			66.9		21.1	96.0
Effective Green, g (s)			66.9		21.1	96.0
Actuated g/C Ratio			0.70		0.22	1.00
Clearance Time (s)			4.0		4.0	4.0
Vehicle Extension (s)			3.0		3.0	3.0
Lane Grp Cap (vph)			3443		762	5136
v/s Ratio Prot			c0.39		c0.16	0.26
v/s Ratio Perm						
v/c Ratio			0.55		0.74	0.26
Uniform Delay, d1			7.2		34.9	0.0
Progression Factor			0.35		0.93	1.00
Incremental Delay, d2			0.4		3.3	0.1
Delay (s)			2.9		35.8	0.1
Level of Service			A		D	A
Approach Delay (s)	0.0		2.9			10.8
Approach LOS	A		A			B

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

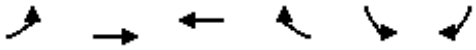
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	0	1	309	2	269	6	1346	91	111	1283	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.93			0.94			0.99		1.00	1.00	
Flt Protected		0.98			0.97			1.00		0.95	1.00	
Satd. Flow (prot)		1712			1702			3500		1787	3539	
Flt Permitted		0.91			0.83			0.95		0.08	1.00	
Satd. Flow (perm)		1605			1454			3323		157	3539	
Peak-hour factor, PHF	0.75	0.75	0.75	0.95	0.95	0.95	0.99	0.99	0.99	0.96	0.96	0.96
Adj. Flow (vph)	1	0	1	325	2	283	6	1360	92	116	1336	1
RTOR Reduction (vph)	0	1	0	0	33	0	0	5	0	0	0	0
Lane Group Flow (vph)	0	1	0	0	578	0	0	1453	0	116	1337	0
Confl. Peds. (#/hr)	4		4	2		2	4		4			
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	2%	1%	1%	2%	0%
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		36.0			36.0			44.0		52.0	52.0	
Effective Green, g (s)		36.0			36.0			44.0		52.0	52.0	
Actuated g/C Ratio		0.38			0.38			0.46		0.54	0.54	
Clearance Time (s)		4.0			4.0			4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		602			545			1523		153	1917	
v/s Ratio Prot										0.03	c0.38	
v/s Ratio Perm		0.00			c0.40			c0.44		0.38		
v/c Ratio		0.00			1.06			0.95		0.76	0.70	
Uniform Delay, d1		18.8			30.0			25.0		19.9	16.2	
Progression Factor		1.00			1.00			0.66		1.07	1.14	
Incremental Delay, d2		0.0			55.3			7.7		18.9	2.1	
Delay (s)		18.8			85.3			24.1		40.1	20.5	
Level of Service		B			F			C		D	C	
Approach Delay (s)		18.8			85.3			24.1			22.1	
Approach LOS		B			F			C			C	

Intersection Summary			
HCM Average Control Delay	33.9	HCM Level of Service	C
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	126.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	213	309	55	270	520	392	120	728	76	416	778	354
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1725		1787	1863	1599	1752	3517		1752	3384	
Flt Permitted	0.16	1.00		0.16	1.00	1.00	0.17	1.00		0.15	1.00	
Satd. Flow (perm)	295	1725		308	1863	1599	321	3517		273	3384	
Peak-hour factor, PHF	0.92	0.92	0.92	0.89	0.89	0.89	0.89	0.89	0.89	0.88	0.88	0.88
Adj. Flow (vph)	232	336	60	303	584	440	135	818	85	473	884	402
RTOR Reduction (vph)	0	7	0	0	0	16	0	8	0	0	55	0
Lane Group Flow (vph)	232	389	0	303	584	424	135	895	0	473	1231	0
Heavy Vehicles (%)	3%	6%	17%	1%	2%	1%	3%	1%	3%	3%	2%	1%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	33.0	25.0		41.0	29.0	49.0	28.0	23.0		47.0	38.0	
Effective Green, g (s)	33.0	25.0		41.0	29.0	49.0	28.0	23.0		47.0	38.0	
Actuated g/C Ratio	0.34	0.26		0.43	0.30	0.51	0.29	0.24		0.49	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	223	449		316	563	883	168	843		442	1340	
v/s Ratio Prot	0.09	0.23		c0.12	c0.31	0.10	0.04	0.25		c0.22	0.36	
v/s Ratio Perm	0.27			0.29		0.17	0.19			c0.30		
v/c Ratio	1.04	0.87		0.96	1.04	0.48	0.80	1.06		1.07	0.92	
Uniform Delay, d1	28.3	33.9		22.0	33.5	15.2	29.2	36.5		27.4	27.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.63	0.87	
Incremental Delay, d2	71.2	16.0		39.2	47.9	0.4	23.5	48.6		55.4	8.3	
Delay (s)	99.5	49.9		61.2	81.4	15.7	52.7	85.1		99.9	32.3	
Level of Service	F	D		E	F	B	D	F		F	C	
Approach Delay (s)		68.3			55.0			80.9			50.5	
Approach LOS		E			D			F			D	

Intersection Summary			
HCM Average Control Delay	60.7	HCM Level of Service	E
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	98.1%	ICU Level of Service	F
Analysis Period (min)	15		

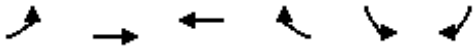
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	69	180	336	362	115	53
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.87	0.87	0.84	0.84	0.92	0.92
Hourly flow rate (vph)	79	207	400	431	125	58
Pedestrians		2	2			
Lane Width (ft)		12.0	12.0			
Walking Speed (ft/s)		4.0	4.0			
Percent Blockage		0	0			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			840			
pX, platoon unblocked						
vC, conflicting volume	831				983	617
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	831				983	617
tC, single (s)	4.1				6.5	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.3
p0 queue free %	90				48	88
cM capacity (veh/h)	810				242	483

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	286	831	125	58
Volume Left	79	0	125	0
Volume Right	0	431	0	58
cSH	810	1700	242	483
Volume to Capacity	0.10	0.49	0.52	0.12
Queue Length 95th (ft)	8	0	68	10
Control Delay (s)	3.6	0.0	34.7	13.5
Lane LOS	A		D	B
Approach Delay (s)	3.6	0.0	28.0	
Approach LOS			D	

Intersection Summary			
Average Delay	4.7		
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	19	186	357	53	21	36
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.97	0.97	0.85	0.85
Hourly flow rate (vph)	22	216	368	55	25	42
Pedestrians		2	2		4	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	427				662	401
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	427				662	401
tC, single (s)	4.1				6.4	6.3
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.4
p0 queue free %	98				94	93
cM capacity (veh/h)	1140				420	629

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	238	423	67
Volume Left	22	0	25
Volume Right	0	55	42
cSH	1140	1700	531
Volume to Capacity	0.02	0.25	0.13
Queue Length 95th (ft)	1	0	11
Control Delay (s)	0.9	0.0	12.8
Lane LOS	A		B
Approach Delay (s)	0.9	0.0	12.8
Approach LOS			B

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	36.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (veh/h)	1692	50	94	1238	22	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.96	0.96	0.80	0.92
Hourly flow rate (vph)	1727	51	98	1290	28	0
Pedestrians	3				2	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	872			236		
pX, platoon unblocked			0.79		0.79	0.79
vC, conflicting volume			1780		2383	603
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1048		1814	0
tC, single (s)			4.2		6.9	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.3
p0 queue free %			81		36	100
cM capacity (veh/h)			514		43	853

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4	SW 1
Volume Total	691	691	396	98	430	430	430	28
Volume Left	0	0	0	98	0	0	0	28
Volume Right	0	0	51	0	0	0	0	0
cSH	1700	1700	1700	514	1700	1700	1700	43
Volume to Capacity	0.41	0.41	0.23	0.19	0.25	0.25	0.25	0.64
Queue Length 95th (ft)	0	0	0	17	0	0	0	60
Control Delay (s)	0.0	0.0	0.0	13.6	0.0	0.0	0.0	184.1
Lane LOS				B				F
Approach Delay (s)	0.0			1.0				184.1
Approach LOS								F

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	153	61	105	419	351	374
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.83	0.83	0.99	0.99	0.96	0.96
Hourly flow rate (vph)	184	73	106	423	366	390
Pedestrians	8			11	11	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			1	1	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1003	397	763			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1003	397	763			
tC, single (s)	6.9	7.1	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.2			
p0 queue free %	10	87	87			
cM capacity (veh/h)	204	577	846			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	258	247	282	244	511
Volume Left	184	106	0	0	0
Volume Right	73	0	0	0	390
cSH	250	846	1700	1700	1700
Volume to Capacity	1.03	0.13	0.17	0.14	0.30
Queue Length 95th (ft)	258	11	0	0	0
Control Delay (s)	108.5	5.0	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	108.5	2.3		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	18.9		
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	2	136	32	22	69	15	41	8	25	1	1	2
Peak Hour Factor	0.87	0.87	0.87	0.90	0.90	0.90	0.73	0.73	0.73	0.75	0.75	0.75
Hourly flow rate (vph)	2	156	37	24	77	17	56	11	34	1	1	3

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	195	118	101	5
Volume Left (vph)	2	24	56	1
Volume Right (vph)	37	17	34	3
Hadj (s)	-0.06	0.03	-0.09	-0.25
Departure Headway (s)	4.2	4.4	4.5	4.5
Degree Utilization, x	0.23	0.14	0.13	0.01
Capacity (veh/h)	826	782	745	732
Control Delay (s)	8.5	8.1	8.2	7.5
Approach Delay (s)	8.5	8.1	8.2	7.5
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.3		
HCM Level of Service	A		
Intersection Capacity Utilization	33.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	115	1692	0	0	1332
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.98	0.92	0.92	0.96
Hourly flow rate (vph)	0	125	1727	0	0	1388
Pedestrians	2					3
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			983			125
pX, platoon unblocked	0.85	0.85			0.85	
vC, conflicting volume	2191	581			1729	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1773	0			1227	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	86			100	
cM capacity (veh/h)	63	917			477	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	125	576	576	576	462	462	462
Volume Left	0	0	0	0	0	0	0
Volume Right	125	0	0	0	0	0	0
cSH	917	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.14	0.34	0.34	0.34	0.27	0.27	0.27
Queue Length 95th (ft)	12	0	0	0	0	0	0
Control Delay (s)	9.5	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A						
Approach Delay (s)	9.5	0.0			0.0		
Approach LOS	A						

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	47.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	7	16	14	15	82	2	1448	8	6	859	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.90			1.00			1.00	
Flt Protected		0.97			0.99			1.00			1.00	
Satd. Flow (prot)		1773			1681			3569			3570	
Flt Permitted		0.53			0.96			0.95			0.95	
Satd. Flow (perm)		965			1632			3406			3377	
Peak-hour factor, PHF	0.82	0.82	0.82	0.90	0.90	0.90	0.98	0.98	0.98	0.93	0.93	0.93
Adj. Flow (vph)	37	9	20	16	17	91	2	1478	8	6	924	6
RTOR Reduction (vph)	0	17	0	0	74	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	49	0	0	50	0	0	1488	0	0	936	0
Confl. Peds. (#/hr)				2		2				1		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	14%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		8.9			8.9			79.1			79.1	
Effective Green, g (s)		8.9			8.9			79.1			79.1	
Actuated g/C Ratio		0.09			0.09			0.82			0.82	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		89			151			2806			2783	
v/s Ratio Prot												
v/s Ratio Perm		c0.05			0.03			c0.44			0.28	
v/c Ratio		0.55			0.33			0.53			0.34	
Uniform Delay, d1		41.6			40.8			2.6			2.1	
Progression Factor		1.00			0.71			0.15			1.00	
Incremental Delay, d2		6.7			1.2			0.5			0.3	
Delay (s)		48.4			30.0			0.9			2.4	
Level of Service		D			C			A			A	
Approach Delay (s)		48.4			30.0			0.9			2.4	
Approach LOS		D			C			A			A	

Intersection Summary			
HCM Average Control Delay	4.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	15	7	84	761	965	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	0.95	
Frpb, ped/bikes	1.00			1.00	1.00	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.96			1.00	1.00	
Flt Protected	0.97			1.00	1.00	
Satd. Flow (prot)	1751			1857	3566	
Flt Permitted	0.97			0.82	1.00	
Satd. Flow (perm)	1751			1525	3566	
Peak-hour factor, PHF	0.75	0.75	0.98	0.98	0.98	0.98
Adj. Flow (vph)	20	9	86	777	985	14
RTOR Reduction (vph)	9	0	0	0	1	0
Lane Group Flow (vph)	20	0	0	863	998	0
Confl. Peds. (#/hr)	2	2	1			1
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	2.4			85.6	85.6	
Effective Green, g (s)	2.4			85.6	85.6	
Actuated g/C Ratio	0.02			0.89	0.89	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	44			1360	3180	
v/s Ratio Prot	c0.01				0.28	
v/s Ratio Perm				c0.57		
v/c Ratio	0.46			0.63	0.31	
Uniform Delay, d1	46.2			1.3	0.8	
Progression Factor	0.86			0.40	1.00	
Incremental Delay, d2	7.1			1.6	0.3	
Delay (s)	46.8			2.2	1.0	
Level of Service	D			A	A	
Approach Delay (s)	46.8			2.2	1.0	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	2.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	1415	849	0	938	981	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	1.00		0.95	0.97	
Frpb, ped/bikes	1.00	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		1.00	0.95	
Satd. Flow (prot)	3574	1562		3574	3467	
Flt Permitted	1.00	1.00		1.00	0.95	
Satd. Flow (perm)	3574	1562		3574	3467	
Peak-hour factor, PHF	0.98	0.98	0.92	0.96	0.99	0.92
Adj. Flow (vph)	1444	866	0	977	991	0
RTOR Reduction (vph)	0	369	0	0	0	0
Lane Group Flow (vph)	1444	497	0	977	991	0
Confl. Peds. (#/hr)		1				
Heavy Vehicles (%)	1%	1%	2%	1%	1%	2%
Turn Type		Perm				
Protected Phases	2			6	8	
Permitted Phases		2				
Actuated Green, G (s)	55.1	55.1		55.1	32.9	
Effective Green, g (s)	55.1	55.1		55.1	32.9	
Actuated g/C Ratio	0.57	0.57		0.57	0.34	
Clearance Time (s)	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	2051	897		2051	1188	
v/s Ratio Prot	c0.40			0.27	c0.29	
v/s Ratio Perm		0.32				
v/c Ratio	0.70	0.55		0.48	0.83	
Uniform Delay, d1	14.6	12.8		12.0	29.0	
Progression Factor	0.64	1.14		0.85	0.97	
Incremental Delay, d2	0.2	0.2		0.8	5.0	
Delay (s)	9.5	14.8		11.0	33.3	
Level of Service	A	B		B	C	
Approach Delay (s)	11.5			11.0	33.3	
Approach LOS	B			B	C	

Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	84	1349	322	565	1885	252	308	444	321	347	730	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		0.97	0.95	1.00	0.97	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.94		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	4972		3467	3574	1562	3467	4774		3433	4837	
Flt Permitted	0.11	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	203	4972		3467	3574	1562	3467	4774		3433	4837	
Peak-hour factor, PHF	0.98	0.98	0.98	0.96	0.96	0.96	0.94	0.94	0.94	0.99	0.99	0.99
Adj. Flow (vph)	86	1377	329	589	1964	262	328	472	341	351	737	149
RTOR Reduction (vph)	0	42	0	0	0	103	0	136	0	0	32	0
Lane Group Flow (vph)	86	1664	0	589	1964	159	328	677	0	351	854	0
Confl. Peds. (#/hr)	2		2	1		1	2		2	21		21
Heavy Vehicles (%)	3%	1%	1%	1%	1%	2%	1%	2%	0%	2%	4%	2%
Turn Type	pm+pt			Prot		Perm	Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6					2						
Actuated Green, G (s)	39.6	36.4		18.6	51.8	51.8	9.0	15.0		10.0	16.0	
Effective Green, g (s)	39.6	36.4		18.6	51.8	51.8	9.0	15.0		10.0	16.0	
Actuated g/C Ratio	0.41	0.38		0.19	0.54	0.54	0.09	0.16		0.10	0.17	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	135	1885		672	1928	843	325	746		358	806	
v/s Ratio Prot	0.02	0.33		c0.17	c0.55		0.09	0.14		c0.10	c0.18	
v/s Ratio Perm	0.24					0.10						
v/c Ratio	0.64	0.88		0.88	1.02	0.19	1.01	0.91		0.98	1.06	
Uniform Delay, d1	23.2	27.8		37.6	22.1	11.3	43.5	39.8		42.9	40.0	
Progression Factor	0.73	0.86		1.04	0.73	0.97	1.00	1.00		1.00	1.00	
Incremental Delay, d2	7.6	4.3		8.8	21.7	0.3	52.3	16.9		42.1	48.8	
Delay (s)	24.6	28.1		48.1	37.8	11.4	95.8	56.7		85.1	88.8	
Level of Service	C	C		D	D	B	F	E		F	F	
Approach Delay (s)		27.9			37.5			67.9			87.7	
Approach LOS		C			D			E			F	

Intersection Summary			
HCM Average Control Delay	48.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	1967	18	141	2471	23	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	5077		1805	3539	1805	1576
Flt Permitted	1.00		0.09	1.00	0.95	1.00
Satd. Flow (perm)	5077		163	3539	1805	1576
Peak-hour factor, PHF	0.97	0.97	0.98	0.98	0.83	0.83
Adj. Flow (vph)	2028	19	144	2521	28	69
RTOR Reduction (vph)	1	0	0	0	0	48
Lane Group Flow (vph)	2046	0	144	2521	28	21
Confl. Peds. (#/hr)		6	1		7	7
Heavy Vehicles (%)	2%	0%	0%	2%	0%	0%
Turn Type			Perm			Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	85.0		85.0	85.0	3.0	3.0
Effective Green, g (s)	85.0		85.0	85.0	3.0	3.0
Actuated g/C Ratio	0.89		0.89	0.89	0.03	0.03
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	4495		144	3133	56	49
v/s Ratio Prot	0.40			0.71	c0.02	
v/s Ratio Perm			c0.88			0.01
v/c Ratio	0.46		1.00	0.80	0.50	0.42
Uniform Delay, d1	1.1		5.5	2.2	45.8	45.6
Progression Factor	3.13		1.11	0.56	1.00	1.00
Incremental Delay, d2	0.0		54.7	0.8	28.5	24.3
Delay (s)	3.3		60.8	2.1	74.3	69.9
Level of Service	A		E	A	E	E
Approach Delay (s)	3.3			5.2	71.2	
Approach LOS	A			A	E	

Intersection Summary			
HCM Average Control Delay	5.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	1229	774	784	1602	0	0	0	0	1141	207	725
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00	0.99	1.00	1.00					1.00	1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.96	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		6471	1546	3467	3574					1626	3014	1418
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		6471	1546	3467	3574					1626	3014	1418
Peak-hour factor, PHF	0.92	0.92	0.92	0.97	0.97	0.92	0.92	0.92	0.92	0.89	0.89	0.89
Adj. Flow (vph)	0	1336	841	808	1652	0	0	0	0	1282	233	815
RTOR Reduction (vph)	0	0	191	0	0	0	0	0	0	0	14	14
Lane Group Flow (vph)	0	1336	650	808	1652	0	0	0	0	641	1145	516
Confl. Peds. (#/hr)	1		1	1		1				2		2
Heavy Vehicles (%)	0%	1%	3%	1%	1%	0%	0%	0%	0%	1%	1%	2%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		32.0	32.0	19.0	55.0					33.0	33.0	33.0
Effective Green, g (s)		32.0	32.0	19.0	55.0					33.0	33.0	33.0
Actuated g/C Ratio		0.33	0.33	0.20	0.57					0.34	0.34	0.34
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2157	515	686	2048					559	1036	487
v/s Ratio Prot		0.21		c0.23	0.46					c0.39	0.38	
v/s Ratio Perm			c0.42									0.36
v/c Ratio		0.62	1.26	1.18	0.81					1.15	1.10	1.06
Uniform Delay, d1		26.9	32.0	38.5	16.3					31.5	31.5	31.5
Progression Factor		0.61	0.61	0.43	0.63					1.00	1.00	1.00
Incremental Delay, d2		1.2	132.0	87.3	1.7					85.5	61.3	57.2
Delay (s)		17.5	151.5	103.7	11.9					117.0	92.8	88.7
Level of Service		B	F	F	B					F	F	F
Approach Delay (s)		69.3			42.0			0.0			98.5	
Approach LOS		E			D			A			F	

Intersection Summary			
HCM Average Control Delay	69.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	112.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	252	808	526	1696	0	0	2175	789	0	0	397
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.95			0.86	0.88			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	0.97			1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1770	2787	3433	3539			6536	2741			1627
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1770	2787	3433	3539			6536	2741			1627
Peak-hour factor, PHF	0.90	0.90	0.92	0.92	0.92	0.92	0.94	0.94	0.92	0.92	0.90
Adj. Flow (vph)	280	898	572	1843	0	0	2314	839	0	0	441
RTOR Reduction (vph)	0	21	0	0	0	0	0	235	0	0	363
Lane Group Flow (vph)	280	877	572	1843	0	0	2314	604	0	0	78
Confl. Peds. (#/hr)	3	3	3					2			8
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	1%	2%	2%	1%
Turn Type		Prot	Prot					Perm			Over
Protected Phases	4	4	1	6			2				1
Permitted Phases								2			
Actuated Green, G (s)	30.0	30.0	17.0	58.0			37.0	37.0			17.0
Effective Green, g (s)	30.0	30.0	17.0	58.0			37.0	37.0			17.0
Actuated g/C Ratio	0.31	0.31	0.18	0.60			0.39	0.39			0.18
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	553	871	608	2138			2519	1056			288
v/s Ratio Prot	0.16	c0.31	c0.17	c0.52			0.35				0.05
v/s Ratio Perm								0.22			
v/c Ratio	0.51	1.01	0.94	0.86			0.92	0.57			0.27
Uniform Delay, d1	27.0	33.0	39.0	15.7			28.1	23.3			34.1
Progression Factor	1.00	1.00	1.16	0.28			0.56	0.27			1.00
Incremental Delay, d2	0.7	32.3	13.3	2.4			1.9	0.6			0.5
Delay (s)	27.7	65.3	58.7	6.8			17.6	6.8			34.7
Level of Service	C	E	E	A			B	A			C
Approach Delay (s)	56.4			19.1			14.7		34.7		
Approach LOS	E			B			B		C		

Intersection Summary			
HCM Average Control Delay	24.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	407	73	57	35	53	95	272	1773	650	123	2522	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1900	1407	1805	1900	1579	1736	4988	1571	1805	5165	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.08	1.00	1.00	0.08	1.00	
Satd. Flow (perm)	3433	1900	1407	1805	1900	1579	138	4988	1571	155	5165	
Peak-hour factor, PHF	0.85	0.85	0.85	0.76	0.76	0.76	0.93	0.93	0.93	0.97	0.97	0.97
Adj. Flow (vph)	479	86	67	46	70	125	292	1906	699	127	2600	63
RTOR Reduction (vph)	0	0	57	0	0	120	0	0	300	0	2	0
Lane Group Flow (vph)	479	86	10	46	70	5	292	1906	399	127	2661	0
Confl. Peds. (#/hr)	7		7	6		6	3		3	2		2
Heavy Vehicles (%)	2%	0%	12%	0%	0%	0%	4%	4%	1%	0%	0%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		Perm	pm+pt		
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	14.0	14.0	14.0	4.0	4.0	4.0	66.0	54.2	54.2	56.8	49.0	
Effective Green, g (s)	14.0	14.0	14.0	4.0	4.0	4.0	66.0	54.2	54.2	56.8	49.0	
Actuated g/C Ratio	0.15	0.15	0.15	0.04	0.04	0.04	0.69	0.56	0.56	0.59	0.51	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	501	277	205	75	79	66	311	2816	887	226	2636	
v/s Ratio Prot	c0.14	0.05		0.03	c0.04		c0.13	0.38		0.05	c0.52	
v/s Ratio Perm			0.01			0.00	0.52		0.25	0.29		
v/c Ratio	0.96	0.31	0.05	0.61	0.89	0.08	0.94	0.68	0.45	0.56	1.01	
Uniform Delay, d1	40.7	36.7	35.3	45.2	45.8	44.2	31.1	14.7	12.2	11.9	23.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.08	1.50	1.00	1.00	
Incremental Delay, d2	29.1	0.6	0.1	14.0	63.8	0.5	21.4	0.6	0.8	3.2	19.8	
Delay (s)	69.8	37.3	35.4	59.2	109.6	44.7	52.4	16.5	19.1	15.1	43.3	
Level of Service	E	D	D	E	F	D	D	B	B	B	D	
Approach Delay (s)		61.7			66.3			20.8			42.0	
Approach LOS		E			E			C			D	

Intersection Summary			
HCM Average Control Delay	35.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	93.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	516	295	53	125	309	295	111	1050	573	99	1729	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3367	3370		1770	1881	1615	1703	3505	1524	1770	3563	
Flt Permitted	0.95	1.00		0.53	1.00	1.00	0.06	1.00	1.00	0.14	1.00	
Satd. Flow (perm)	3367	3370		993	1881	1615	108	3505	1524	268	3563	
Peak-hour factor, PHF	0.95	0.95	0.95	0.92	0.92	0.92	0.96	0.96	0.96	0.97	0.97	0.97
Adj. Flow (vph)	543	311	56	136	336	321	116	1094	597	102	1782	22
RTOR Reduction (vph)	0	11	0	0	0	67	0	0	258	0	1	0
Lane Group Flow (vph)	543	356	0	136	336	254	116	1094	339	102	1804	0
Confl. Peds. (#/hr)										1		1
Heavy Vehicles (%)	4%	3%	14%	2%	1%	0%	6%	3%	6%	2%	1%	11%
Turn Type	Prot			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases				8		8	6		6	2		
Actuated Green, G (s)	22.0	37.1		32.9	24.0	24.0	72.3	66.3	66.3	75.7	68.0	
Effective Green, g (s)	22.0	37.1		32.9	24.0	24.0	72.3	66.3	66.3	75.7	68.0	
Actuated g/C Ratio	0.16	0.27		0.24	0.18	0.18	0.53	0.49	0.49	0.56	0.50	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	545	919		291	332	285	128	1709	743	234	1782	
v/s Ratio Prot	c0.16	0.11		0.03	c0.18		c0.04	0.31		c0.02	c0.51	
v/s Ratio Perm				0.08		0.16	0.44		0.22	0.22		
v/c Ratio	1.00	0.39		0.47	1.01	0.89	0.91	0.64	0.46	0.44	1.01	
Uniform Delay, d1	57.0	40.2		42.3	56.0	54.7	33.5	26.0	23.0	18.5	34.0	
Progression Factor	1.05	1.12		1.00	1.00	1.00	1.00	1.00	1.00	0.42	0.33	
Incremental Delay, d2	33.1	0.2		1.2	52.5	27.5	51.4	1.9	2.0	0.1	9.7	
Delay (s)	93.0	45.2		43.5	108.5	82.2	85.0	27.8	25.0	7.9	21.0	
Level of Service	F	D		D	F	F	F	C	C	A	C	
Approach Delay (s)		73.7			86.7			30.5			20.3	
Approach LOS		E			F			C			C	

Intersection Summary			
HCM Average Control Delay	42.4	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	136.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	98.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	207	179	118	894	122	521	1878	48	72	818	203
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3574	1553	1764	3574	1533	1787	3559		1687	3441	
Flt Permitted	0.11	1.00	1.00	0.53	1.00	1.00	0.09	1.00		0.09	1.00	
Satd. Flow (perm)	217	3574	1553	979	3574	1533	160	3559		165	3441	
Peak-hour factor, PHF	0.82	0.82	0.82	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	139	252	218	127	961	131	560	2019	52	77	880	218
RTOR Reduction (vph)	0	0	162	0	0	50	0	1	0	0	16	0
Lane Group Flow (vph)	139	252	56	127	961	81	560	2070	0	77	1082	0
Confl. Peds. (#/hr)				4		4						
Heavy Vehicles (%)	0%	1%	4%	2%	1%	3%	1%	1%	3%	7%	2%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	41.0	35.0	35.0	41.0	35.0	35.0	83.0	75.0		47.0	43.0	
Effective Green, g (s)	41.0	35.0	35.0	41.0	35.0	35.0	83.0	75.0		47.0	43.0	
Actuated g/C Ratio	0.30	0.26	0.26	0.30	0.26	0.26	0.61	0.55		0.35	0.32	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	135	920	400	330	920	395	528	1963		102	1088	
v/s Ratio Prot	c0.05	0.07		0.02	c0.27		c0.28	0.58		0.02	0.31	
v/s Ratio Perm	0.26		0.04	0.10		0.05	c0.37			0.24		
v/c Ratio	1.03	0.27	0.14	0.38	1.04	0.21	1.06	1.05		0.75	0.99	
Uniform Delay, d1	44.8	40.3	38.9	36.5	50.5	39.6	42.3	30.5		38.0	46.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		0.98	0.62	
Incremental Delay, d2	85.5	0.2	0.2	0.7	42.0	0.3	56.2	36.4		21.9	23.1	
Delay (s)	130.3	40.5	39.1	37.2	92.5	39.9	98.6	66.9		59.3	51.7	
Level of Service	F	D	D	D	F	D	F	E		E	D	
Approach Delay (s)		60.5			81.1			73.6			52.2	
Approach LOS		E			F			E			D	

Intersection Summary			
HCM Average Control Delay	69.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	136.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	251	221	126	96	380	787	63	1195	8	177	1080	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	0.88	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.97	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1787	3400		1747	1845	2740	1736	3570		1770	3574	1577
Flt Permitted	0.15	1.00		0.52	1.00	1.00	0.12	1.00		0.10	1.00	1.00
Satd. Flow (perm)	281	3400		959	1845	2740	223	3570		178	3574	1577
Peak-hour factor, PHF	0.89	0.89	0.89	0.92	0.92	0.92	0.91	0.91	0.91	0.89	0.89	0.89
Adj. Flow (vph)	282	248	142	104	413	855	69	1313	9	199	1213	337
RTOR Reduction (vph)	0	84	0	0	0	24	0	1	0	0	0	174
Lane Group Flow (vph)	282	306	0	104	413	831	69	1321	0	199	1213	163
Confl. Peds. (#/hr)				6		6	7		7	1		1
Heavy Vehicles (%)	1%	0%	1%	3%	3%	1%	4%	1%	0%	2%	1%	1%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	36.8	28.0		27.6	22.8	32.7	41.0	37.8		51.7	44.5	44.5
Effective Green, g (s)	36.8	28.0		27.6	22.8	32.7	41.0	37.8		51.7	44.5	44.5
Actuated g/C Ratio	0.38	0.29		0.29	0.24	0.34	0.42	0.39		0.54	0.46	0.46
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	263	987		313	436	1042	145	1398		259	1648	727
v/s Ratio Prot	c0.11	0.09		0.02	0.22	c0.08	0.02	c0.37		0.08	0.34	
v/s Ratio Perm	c0.30			0.08		0.22	0.19			0.33		0.10
v/c Ratio	1.07	0.31		0.33	0.95	0.80	0.48	0.95		0.77	0.74	0.22
Uniform Delay, d1	25.1	26.7		26.2	36.3	28.9	18.6	28.3		22.1	21.2	15.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	76.0	0.2		0.6	29.7	4.3	2.5	14.1		12.8	3.0	0.7
Delay (s)	101.1	26.9		26.8	66.0	33.2	21.1	42.5		34.9	24.2	16.3
Level of Service	F	C		C	E	C	C	D		C	C	B
Approach Delay (s)		58.0			42.6			41.4			23.9	
Approach LOS		E			D			D			C	

Intersection Summary			
HCM Average Control Delay	38.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	96.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	90.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	120	206	431	841	748	284
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.96	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1719	1497	1770	1845	1845	1568
Flt Permitted	0.95	1.00	0.17	1.00	1.00	1.00
Satd. Flow (perm)	1719	1497	310	1845	1845	1568
Peak-hour factor, PHF	0.88	0.88	0.91	0.91	0.91	0.91
Adj. Flow (vph)	136	234	474	924	822	312
RTOR Reduction (vph)	0	210	0	0	0	98
Lane Group Flow (vph)	136	24	474	924	822	214
Confl. Peds. (#/hr)	6	6				
Heavy Vehicles (%)	5%	3%	2%	3%	3%	3%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	13.9	13.9	114.1	114.1	81.7	81.7
Effective Green, g (s)	13.9	13.9	114.1	114.1	81.7	81.7
Actuated g/C Ratio	0.10	0.10	0.84	0.84	0.60	0.60
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	176	153	565	1548	1108	942
v/s Ratio Prot	c0.08		c0.18	0.50	0.45	
v/s Ratio Perm		0.02	c0.53			0.14
v/c Ratio	0.77	0.16	0.84	0.60	0.74	0.23
Uniform Delay, d1	59.5	55.7	28.9	3.5	19.6	12.6
Progression Factor	1.00	1.56	1.00	1.00	0.70	0.20
Incremental Delay, d2	18.0	0.5	10.5	1.7	3.4	0.4
Delay (s)	77.5	87.1	39.4	5.2	17.2	2.9
Level of Service	E	F	D	A	B	A
Approach Delay (s)	83.6			16.8	13.3	
Approach LOS	F			B	B	

Intersection Summary			
HCM Average Control Delay	23.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	136.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	66	251	205	248	641	60	147	825	102	41	886	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1703	1684		1736	1836		1703	3471	1455	1597	3505	1519
Flt Permitted	0.14	1.00		0.14	1.00		0.13	1.00	1.00	0.17	1.00	1.00
Satd. Flow (perm)	252	1684		247	1836		234	3471	1455	284	3505	1519
Peak-hour factor, PHF	0.92	0.92	0.92	0.93	0.93	0.93	0.94	0.94	0.94	0.96	0.96	0.96
Adj. Flow (vph)	72	273	223	267	689	65	156	878	109	43	923	55
RTOR Reduction (vph)	0	33	0	0	4	0	0	0	72	0	0	38
Lane Group Flow (vph)	72	463	0	267	750	0	156	878	37	43	923	17
Confl. Peds. (#/hr)	7		7	3		3				4		4
Heavy Vehicles (%)	6%	2%	5%	4%	2%	1%	6%	4%	11%	13%	3%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	31.7	28.5		44.9	37.7		36.6	30.7	30.7	29.6	27.2	27.2
Effective Green, g (s)	31.7	28.5		44.9	37.7		36.6	30.7	30.7	29.6	27.2	27.2
Actuated g/C Ratio	0.35	0.32		0.50	0.42		0.41	0.34	0.34	0.33	0.30	0.30
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	140	533		328	769		191	1184	496	128	1059	459
v/s Ratio Prot	0.02	0.28		c0.11	c0.41		c0.05	0.25		0.01	0.26	
v/s Ratio Perm	0.16			0.29			c0.28		0.03	0.10		0.01
v/c Ratio	0.51	0.87		0.81	0.98		0.82	0.74	0.07	0.34	0.87	0.04
Uniform Delay, d1	23.2	29.0		19.2	25.7		20.9	26.2	20.0	21.8	29.7	22.2
Progression Factor	1.03	0.45		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	5.3		14.3	26.2		22.9	4.2	0.3	1.6	9.9	0.1
Delay (s)	24.9	18.4		33.5	51.9		43.8	30.4	20.3	23.4	39.6	22.3
Level of Service	C	B		C	D		D	C	C	C	D	C
Approach Delay (s)		19.2			47.1			31.2			38.0	
Approach LOS		B			D			C			D	

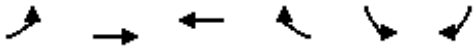
Intersection Summary			
HCM Average Control Delay	35.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	87.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	1	336	2	502	1	770	336	972	785	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	0.88		0.95	1.00	0.97	1.00	
Frpb, ped/bikes		1.00			1.00	0.99		1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Frt		0.86			1.00	0.85		1.00	0.85	1.00	1.00	
Flt Protected		1.00			0.95	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1644			1752	2553		3505	1559	3400	1845	
Flt Permitted		1.00			0.73	1.00		0.95	1.00	0.95	1.00	
Satd. Flow (perm)		1644			1334	2553		3345	1559	3400	1845	
Peak-hour factor, PHF	0.25	0.25	0.25	0.90	0.90	0.90	0.98	0.98	0.98	0.94	0.94	0.94
Adj. Flow (vph)	0	0	4	373	2	558	1	786	343	1034	835	0
RTOR Reduction (vph)	0	3	0	0	0	15	0	0	250	0	0	0
Lane Group Flow (vph)	0	1	0	0	375	543	0	787	93	1034	835	0
Confl. Peds. (#/hr)				2		2	2		2	4		4
Heavy Vehicles (%)	0%	0%	0%	3%	0%	10%	0%	3%	2%	3%	3%	0%
Turn Type	Perm			Perm		pm+ov	Perm		Perm	Prot		
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2		2			
Actuated Green, G (s)		24.0			24.0	50.0		23.0	23.0	26.0	53.0	
Effective Green, g (s)		24.0			24.0	50.0		23.0	23.0	26.0	53.0	
Actuated g/C Ratio		0.28			0.28	0.59		0.27	0.27	0.31	0.62	
Clearance Time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		464			377	1622		905	422	1040	1150	
v/s Ratio Prot		0.00				0.10				c0.30	0.45	
v/s Ratio Perm					c0.28	0.11		c0.24	0.06			
v/c Ratio		0.00			0.99	0.33		0.87	0.22	0.99	0.73	
Uniform Delay, d1		21.9			30.4	9.0		29.6	24.0	29.4	11.0	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0			44.7	0.1		11.1	1.2	26.3	4.0	
Delay (s)		21.9			75.1	9.1		40.7	25.2	55.8	15.0	
Level of Service		C			E	A		D	C	E	B	
Approach Delay (s)		21.9			35.6			36.0			37.6	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	36.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	612	28	22	15	12	35	36	856	15	57	633	552
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99			1.00	0.85	1.00	1.00		1.00	0.93	
Flt Protected	0.95	0.96			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1684			1849	1475	1805	3531		1671	3290	
Flt Permitted	0.95	0.96			0.97	1.00	0.18	1.00		0.25	1.00	
Satd. Flow (perm)	1681	1684			1849	1475	342	3531		435	3290	
Peak-hour factor, PHF	0.93	0.93	0.93	0.98	0.98	0.98	0.98	0.98	0.98	0.92	0.92	0.92
Adj. Flow (vph)	658	30	24	15	12	36	37	873	15	62	688	600
RTOR Reduction (vph)	0	5	0	0	0	35	0	2	0	0	303	0
Lane Group Flow (vph)	355	352	0	0	27	1	37	886	0	62	985	0
Confl. Peds. (#/hr)	2		2	2		2						
Heavy Vehicles (%)	2%	0%	0%	0%	0%	7%	0%	2%	0%	8%	3%	1%
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases						8	2			6		
Actuated Green, G (s)	12.7	12.7			1.1	1.1	22.2	22.2		22.2	22.2	
Effective Green, g (s)	12.7	12.7			1.1	1.1	22.2	22.2		22.2	22.2	
Actuated g/C Ratio	0.26	0.26			0.02	0.02	0.46	0.46		0.46	0.46	
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	445	446			42	34	158	1633		201	1522	
v/s Ratio Prot	c0.21	0.21			c0.01			0.25			c0.30	
v/s Ratio Perm						0.00	0.11			0.14		
v/c Ratio	0.80	0.79			0.64	0.02	0.23	0.54		0.31	0.65	
Uniform Delay, d1	16.5	16.4			23.3	22.9	7.8	9.3		8.1	9.9	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	9.6	9.0			29.0	0.3	3.4	1.3		3.9	2.1	
Delay (s)	26.1	25.4			52.3	23.2	11.2	10.6		12.0	12.0	
Level of Service	C	C			D	C	B	B		B	B	
Approach Delay (s)		25.7			35.7			10.6			12.0	
Approach LOS		C			D			B			B	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	48.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	69	180	336	362	115	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.93		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		1834	1724		1671	1501
Flt Permitted		0.48	1.00		0.95	1.00
Satd. Flow (perm)		897	1724		1671	1501
Peak-hour factor, PHF	0.87	0.87	0.84	0.84	0.92	0.92
Adj. Flow (vph)	79	207	400	431	125	58
RTOR Reduction (vph)	0	0	72	0	0	39
Lane Group Flow (vph)	0	286	759	0	125	19
Confl. Peds. (#/hr)					2	2
Heavy Vehicles (%)	0%	3%	2%	3%	8%	5%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		37.6	37.6		22.4	22.4
Effective Green, g (s)		37.6	37.6		22.4	22.4
Actuated g/C Ratio		0.55	0.55		0.33	0.33
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		496	953		550	494
v/s Ratio Prot			c0.44		c0.07	
v/s Ratio Perm		0.32				0.01
v/c Ratio		0.58	0.80		0.23	0.04
Uniform Delay, d1		10.0	12.1		16.5	15.5
Progression Factor		1.00	0.70		1.00	1.00
Incremental Delay, d2		1.6	4.0		1.0	0.1
Delay (s)		11.6	12.5		17.5	15.6
Level of Service		B	B		B	B
Approach Delay (s)		11.6	12.5		16.9	
Approach LOS		B	B		B	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	68.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	321	585	687	138	935	73	1269	889	142	71	461	332
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.88	1.00	0.91		0.97	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3502	3574	2791	1787	5078		3502	3574	1562	1770	3574	1590
Flt Permitted	0.95	1.00	1.00	0.25	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3502	3574	2791	461	5078		3502	3574	1562	1770	3574	1590
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.96	0.96	0.96	0.91	0.91	0.91
Adj. Flow (vph)	345	629	739	148	1005	78	1322	926	148	78	507	365
RTOR Reduction (vph)	0	0	38	0	10	0	0	0	94	0	0	86
Lane Group Flow (vph)	345	629	701	148	1073	0	1322	926	54	78	507	279
Confl. Peds. (#/hr)	5		5	3		3	1		1	2		2
Heavy Vehicles (%)	0%	1%	1%	1%	1%	0%	0%	1%	2%	2%	1%	0%
Turn Type	Prot		pm+ov	pm+pt			Split		Perm	Split		Perm
Protected Phases	7	4	2	3	8		2	2		6	6	
Permitted Phases			4	8					2			6
Actuated Green, G (s)	9.0	22.0	55.0	23.0	18.0		33.0	33.0	33.0	14.0	14.0	14.0
Effective Green, g (s)	9.0	22.0	55.0	23.0	18.0		33.0	33.0	33.0	14.0	14.0	14.0
Actuated g/C Ratio	0.10	0.24	0.61	0.26	0.20		0.37	0.37	0.37	0.16	0.16	0.16
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	350	874	1830	191	1016		1284	1310	573	275	556	247
v/s Ratio Prot	c0.10	c0.18	0.14	0.04	c0.21		c0.38	0.26		0.04	0.14	
v/s Ratio Perm			0.11	0.15					0.03			c0.18
v/c Ratio	0.99	0.72	0.38	0.77	1.06		1.03	0.71	0.09	0.28	0.91	1.13
Uniform Delay, d1	40.4	31.2	8.9	28.8	36.0		28.5	24.4	18.7	33.6	37.4	38.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.86	0.86	1.01	1.00	1.00	1.00
Incremental Delay, d2	43.9	2.9	0.1	17.6	44.4		30.5	2.6	0.3	2.6	21.7	96.4
Delay (s)	84.3	34.0	9.0	46.5	80.4		54.9	23.5	19.1	36.1	59.1	134.4
Level of Service	F	C	A	D	F		D	C	B	D	E	F
Approach Delay (s)		33.4			76.3			40.6			86.1	
Approach LOS		C			E			D			F	

Intersection Summary			
HCM Average Control Delay	52.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	91.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	438	1042	1294	0	0	1327
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	0.97	0.91	0.91			0.86
Frpb, ped/bikes	0.99	0.98	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	0.92	0.85	1.00			1.00
Flt Protected	0.98	1.00	1.00			1.00
Satd. Flow (prot)	3250	1433	5136			6471
Flt Permitted	0.98	1.00	1.00			1.00
Satd. Flow (perm)	3250	1433	5136			6471
Peak-hour factor, PHF	0.97	0.97	0.98	0.92	0.92	0.96
Adj. Flow (vph)	452	1074	1320	0	0	1382
RTOR Reduction (vph)	3	3	0	0	0	0
Lane Group Flow (vph)	986	534	1320	0	0	1382
Confl. Peds. (#/hr)	2	2				
Heavy Vehicles (%)	1%	1%	1%	2%	2%	1%
Turn Type		Perm				
Protected Phases	8		2			6
Permitted Phases		8				
Actuated Green, G (s)	42.7	42.7	39.3			39.3
Effective Green, g (s)	42.7	42.7	39.3			39.3
Actuated g/C Ratio	0.47	0.47	0.44			0.44
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	1542	680	2243			2826
v/s Ratio Prot	0.30		c0.26			0.21
v/s Ratio Perm		c0.37				
v/c Ratio	0.64	0.79	0.59			0.49
Uniform Delay, d1	17.8	19.8	19.2			18.2
Progression Factor	1.00	1.00	0.36			0.65
Incremental Delay, d2	0.9	5.9	1.0			0.5
Delay (s)	18.7	25.7	7.9			12.2
Level of Service	B	C	A			B
Approach Delay (s)	21.2		7.9			12.2
Approach LOS	C		A			B

Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	1386	413	545	1277
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0
Lane Util. Factor			0.91		0.97	0.91
Frpb, ped/bikes			1.00		1.00	1.00
Flpb, ped/bikes			1.00		1.00	1.00
Frt			0.97		1.00	1.00
Flt Protected			1.00		0.95	1.00
Satd. Flow (prot)			4941		3467	5136
Flt Permitted			1.00		0.95	1.00
Satd. Flow (perm)			4941		3467	5136
Peak-hour factor, PHF	0.92	0.92	0.93	0.93	0.97	0.97
Adj. Flow (vph)	0	0	1490	444	562	1316
RTOR Reduction (vph)	0	0	28	0	0	0
Lane Group Flow (vph)	0	0	1906	0	562	1316
Confl. Peds. (#/hr)				2	4	
Heavy Vehicles (%)	2%	2%	1%	1%	1%	1%
Turn Type					Prot	
Protected Phases			2		1	6
Permitted Phases						
Actuated Green, G (s)			61.9		20.1	90.0
Effective Green, g (s)			61.9		20.1	90.0
Actuated g/C Ratio			0.69		0.22	1.00
Clearance Time (s)			4.0		4.0	4.0
Vehicle Extension (s)			3.0		3.0	3.0
Lane Grp Cap (vph)			3398		774	5136
v/s Ratio Prot			c0.39		c0.16	0.26
v/s Ratio Perm						
v/c Ratio			0.56		0.73	0.26
Uniform Delay, d1			7.1		32.4	0.0
Progression Factor			0.35		0.86	1.00
Incremental Delay, d2			0.4		3.0	0.1
Delay (s)			2.9		30.9	0.1
Level of Service			A		C	A
Approach Delay (s)	0.0		2.9			9.3
Approach LOS	A		A			A

Intersection Summary			
HCM Average Control Delay	6.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

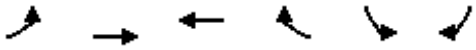
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	0	1	309	2	269	6	1346	91	111	1283	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.93			0.94			0.99		1.00	1.00	
Flt Protected		0.98			0.97			1.00		0.95	1.00	
Satd. Flow (prot)		1712			1702			3501		1787	3539	
Flt Permitted		0.91			0.83			0.95		0.09	1.00	
Satd. Flow (perm)		1600			1455			3324		167	3539	
Peak-hour factor, PHF	0.75	0.75	0.75	0.95	0.95	0.95	0.99	0.99	0.99	0.96	0.96	0.96
Adj. Flow (vph)	1	0	1	325	2	283	6	1360	92	116	1336	1
RTOR Reduction (vph)	0	1	0	0	35	0	0	5	0	0	0	0
Lane Group Flow (vph)	0	1	0	0	575	0	0	1453	0	116	1337	0
Confl. Peds. (#/hr)	4		4	2		2	4		4			
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	2%	1%	1%	2%	0%
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0			41.0		49.0	49.0	
Effective Green, g (s)		33.0			33.0			41.0		49.0	49.0	
Actuated g/C Ratio		0.37			0.37			0.46		0.54	0.54	
Clearance Time (s)		4.0			4.0			4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		587			534			1514		163	1927	
v/s Ratio Prot										0.03	c0.38	
v/s Ratio Perm		0.00			c0.40			c0.44		0.36		
v/c Ratio		0.00			1.08			0.96		0.71	0.69	
Uniform Delay, d1		18.1			28.5			23.7		18.5	15.0	
Progression Factor		1.00			1.00			0.90		0.75	0.89	
Incremental Delay, d2		0.0			61.3			9.8		13.5	2.1	
Delay (s)		18.1			89.8			31.1		27.4	15.5	
Level of Service		B			F			C		C	B	
Approach Delay (s)		18.1			89.8			31.1			16.4	
Approach LOS		B			F			C			B	

Intersection Summary			
HCM Average Control Delay	35.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	126.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	213	309	55	270	520	392	120	728	76	416	778	354
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1725		1787	1863	1599	1752	3574	1568	1752	3539	1599
Flt Permitted	0.18	1.00		0.15	1.00	1.00	0.27	1.00	1.00	0.15	1.00	1.00
Satd. Flow (perm)	335	1725		289	1863	1599	498	3574	1568	284	3539	1599
Peak-hour factor, PHF	0.92	0.92	0.92	0.89	0.89	0.89	0.89	0.89	0.89	0.88	0.88	0.88
Adj. Flow (vph)	232	336	60	303	584	440	135	818	85	473	884	402
RTOR Reduction (vph)	0	7	0	0	0	16	0	0	64	0	0	196
Lane Group Flow (vph)	232	389	0	303	584	425	135	818	21	473	884	206
Heavy Vehicles (%)	3%	6%	17%	1%	2%	1%	3%	1%	3%	3%	2%	1%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)	29.0	22.0		38.0	27.0	45.0	28.0	22.0	22.0	44.0	34.0	34.0
Effective Green, g (s)	29.0	22.0		38.0	27.0	45.0	28.0	22.0	22.0	44.0	34.0	34.0
Actuated g/C Ratio	0.32	0.24		0.42	0.30	0.50	0.31	0.24	0.24	0.49	0.38	0.38
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	218	422		322	559	871	239	874	383	432	1337	604
v/s Ratio Prot	0.08	0.23		c0.13	c0.31	0.10	0.04	0.23		c0.22	0.25	
v/s Ratio Perm	0.26			0.27		0.17	0.14		0.01	c0.32		0.13
v/c Ratio	1.06	0.92		0.94	1.04	0.49	0.56	0.94	0.05	1.09	0.66	0.34
Uniform Delay, d1	28.3	33.2		21.7	31.5	14.9	23.2	33.3	26.0	25.1	23.2	20.0
Progression Factor	1.00	1.00		1.16	0.71	0.64	1.00	1.00	1.00	0.70	1.04	1.66
Incremental Delay, d2	79.0	25.5		30.1	46.3	0.3	3.0	18.4	0.3	64.2	1.7	1.0
Delay (s)	107.3	58.7		55.4	68.6	9.9	26.3	51.7	26.3	81.7	25.8	34.2
Level of Service	F	E		E	E	A	C	D	C	F	C	C
Approach Delay (s)		76.6			46.1			46.3			42.8	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM Average Control Delay	48.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	19	186	357	53	21	36
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.97	0.97	0.85	0.85
Hourly flow rate (vph)	22	216	368	55	25	42
Pedestrians		2	2		4	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	427				662	401
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	427				662	401
tC, single (s)	4.1				6.4	6.3
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.4
p0 queue free %	98				94	93
cM capacity (veh/h)	1140				420	629

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	238	423	67
Volume Left	22	0	25
Volume Right	0	55	42
cSH	1140	1700	531
Volume to Capacity	0.02	0.25	0.13
Queue Length 95th (ft)	1	0	11
Control Delay (s)	0.9	0.0	12.8
Lane LOS	A		B
Approach Delay (s)	0.9	0.0	12.8
Approach LOS			B

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	36.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (veh/h)	1692	50	94	1238	22	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.96	0.96	0.80	0.92
Hourly flow rate (vph)	1727	51	98	1290	28	0
Pedestrians	3				2	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	872			236		
pX, platoon unblocked			0.80		0.80	0.80
vC, conflicting volume			1780		2383	603
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1091		1847	0
tC, single (s)			4.2		6.9	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.3
p0 queue free %			80		33	100
cM capacity (veh/h)			502		41	864

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4	SW 1
Volume Total	691	691	396	98	430	430	430	28
Volume Left	0	0	0	98	0	0	0	28
Volume Right	0	0	51	0	0	0	0	0
cSH	1700	1700	1700	502	1700	1700	1700	41
Volume to Capacity	0.41	0.41	0.23	0.20	0.25	0.25	0.25	0.67
Queue Length 95th (ft)	0	0	0	18	0	0	0	62
Control Delay (s)	0.0	0.0	0.0	13.9	0.0	0.0	0.0	198.4
Lane LOS				B				F
Approach Delay (s)	0.0			1.0				198.4
Approach LOS								F

Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	153	61	105	419	351	374
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.83	0.83	0.99	0.99	0.96	0.96
Hourly flow rate (vph)	184	73	106	423	366	390
Pedestrians	8			11	11	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			1	1	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1003	397	763			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1003	397	763			
tC, single (s)	6.9	7.1	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.2			
p0 queue free %	10	87	87			
cM capacity (veh/h)	204	577	846			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	258	247	282	244	511
Volume Left	184	106	0	0	0
Volume Right	73	0	0	0	390
cSH	250	846	1700	1700	1700
Volume to Capacity	1.03	0.13	0.17	0.14	0.30
Queue Length 95th (ft)	258	11	0	0	0
Control Delay (s)	108.5	5.0	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	108.5	2.3		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	18.9		
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	2	136	32	22	69	15	41	8	25	1	1	2
Peak Hour Factor	0.87	0.87	0.87	0.90	0.90	0.90	0.73	0.73	0.73	0.75	0.75	0.75
Hourly flow rate (vph)	2	156	37	24	77	17	56	11	34	1	1	3

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	195	118	101	5
Volume Left (vph)	2	24	56	1
Volume Right (vph)	37	17	34	3
Hadj (s)	-0.06	0.03	-0.09	-0.25
Departure Headway (s)	4.2	4.4	4.5	4.5
Degree Utilization, x	0.23	0.14	0.13	0.01
Capacity (veh/h)	826	782	745	732
Control Delay (s)	8.5	8.1	8.2	7.5
Approach Delay (s)	8.5	8.1	8.2	7.5
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.3		
HCM Level of Service	A		
Intersection Capacity Utilization	33.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	115	1692	0	0	1332
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.98	0.92	0.92	0.96
Hourly flow rate (vph)	0	125	1727	0	0	1388
Pedestrians	2					3
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			983			125
pX, platoon unblocked	0.86	0.86			0.86	
vC, conflicting volume	2191	581			1729	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1817	0			1280	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	87			100	
cM capacity (veh/h)	59	932			462	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	125	576	576	576	462	462	462
Volume Left	0	0	0	0	0	0	0
Volume Right	125	0	0	0	0	0	0
cSH	932	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.13	0.34	0.34	0.34	0.27	0.27	0.27
Queue Length 95th (ft)	12	0	0	0	0	0	0
Control Delay (s)	9.5	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A						
Approach Delay (s)	9.5	0.0			0.0		
Approach LOS	A						

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	47.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	20	22	13	19	7	12	901	7	1	1432	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			0.95	
Frpb, ped/bikes		1.00			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.97			1.00			1.00	
Flt Protected		0.98			0.98			1.00			1.00	
Satd. Flow (prot)		1772			1810			1878			3603	
Flt Permitted		0.92			0.90			0.98			0.95	
Satd. Flow (perm)		1668			1654			1833			3440	
Peak-hour factor, PHF	0.94	0.94	0.94	0.82	0.82	0.82	0.91	0.91	0.91	0.98	0.98	0.98
Adj. Flow (vph)	28	21	23	16	23	9	13	990	8	1	1461	16
RTOR Reduction (vph)	0	22	0	0	8	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	50	0	0	40	0	0	1011	0	0	1477	0
Confl. Peds. (#/hr)	2		2	3		3	4		4	1		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		4.8			4.8			67.2			67.2	
Effective Green, g (s)		4.8			4.8			67.2			67.2	
Actuated g/C Ratio		0.06			0.06			0.84			0.84	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		100			99			1540			2890	
v/s Ratio Prot												
v/s Ratio Perm		c0.03			0.02			c0.55			0.43	
v/c Ratio		0.50			0.40			0.66			0.51	
Uniform Delay, d1		36.4			36.2			2.3			1.8	
Progression Factor		1.00			0.95			0.44			1.00	
Incremental Delay, d2		4.0			2.6			1.3			0.6	
Delay (s)		40.4			36.9			2.3			2.4	
Level of Service		D			D			A			A	
Approach Delay (s)		40.4			36.9			2.3			2.4	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	4.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	8	4	13	983	721	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	0.95	
Frpb, ped/bikes	1.00			1.00	1.00	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.96			1.00	0.99	
Flt Protected	0.97			1.00	1.00	
Satd. Flow (prot)	1745			1880	3553	
Flt Permitted	0.97			0.99	1.00	
Satd. Flow (perm)	1745			1862	3553	
Peak-hour factor, PHF	0.75	0.75	0.98	0.98	0.95	0.95
Adj. Flow (vph)	11	5	13	1003	759	28
RTOR Reduction (vph)	5	0	0	0	3	0
Lane Group Flow (vph)	11	0	0	1016	784	0
Confl. Peds. (#/hr)	2	2	2			2
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	0.4			71.6	71.6	
Effective Green, g (s)	0.4			71.6	71.6	
Actuated g/C Ratio	0.00			0.89	0.89	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	9			1666	3180	
v/s Ratio Prot	c0.01				0.22	
v/s Ratio Perm				c0.55		
v/c Ratio	1.23			0.61	0.25	
Uniform Delay, d1	39.8			1.0	0.6	
Progression Factor	0.40			0.12	1.00	
Incremental Delay, d2	362.0			1.1	0.2	
Delay (s)	378.0			1.3	0.8	
Level of Service	F			A	A	
Approach Delay (s)	378.0			1.3	0.8	
Approach LOS	F			A	A	

Intersection Summary			
HCM Average Control Delay	4.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	940	958	0	1472	712	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		0.95	0.97	
Frpb, ped/bikes	1.00	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		1.00	0.95	
Satd. Flow (prot)	1881	1559		3574	3502	
Flt Permitted	1.00	1.00		1.00	0.95	
Satd. Flow (perm)	1881	1559		3574	3502	
Peak-hour factor, PHF	0.96	0.96	0.92	0.94	0.93	0.92
Adj. Flow (vph)	979	998	0	1566	766	0
RTOR Reduction (vph)	0	353	0	0	0	0
Lane Group Flow (vph)	979	645	0	1566	766	0
Confl. Peds. (#/hr)		2	1		1	
Heavy Vehicles (%)	1%	1%	2%	1%	0%	2%
Turn Type		Perm				
Protected Phases	2			6	8	
Permitted Phases		2				
Actuated Green, G (s)	51.7	51.7		51.7	20.3	
Effective Green, g (s)	51.7	51.7		51.7	20.3	
Actuated g/C Ratio	0.65	0.65		0.65	0.25	
Clearance Time (s)	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	1216	1008		2310	889	
v/s Ratio Prot	c0.52			0.44	c0.22	
v/s Ratio Perm		0.41				
v/c Ratio	0.81	0.64		0.68	0.86	
Uniform Delay, d1	10.4	8.5		8.9	28.5	
Progression Factor	0.85	4.68		0.82	0.99	
Incremental Delay, d2	0.5	0.3		1.5	8.5	
Delay (s)	9.4	40.2		8.8	36.8	
Level of Service	A	D		A	D	
Approach Delay (s)	25.0			8.8	36.8	
Approach LOS	C			A	D	

Intersection Summary			
HCM Average Control Delay	21.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	105	1865	200	255	1350	439	375	821	343	265	587	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		0.97	0.95		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.96		1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	5054		3467	3457		1803	4865		1768	4890	
Flt Permitted	0.11	1.00		0.95	1.00		0.25	1.00		0.33	1.00	
Satd. Flow (perm)	217	5054		3467	3457		474	4865		621	4890	
Peak-hour factor, PHF	0.95	0.95	0.95	0.99	0.99	0.99	0.98	0.98	0.98	0.91	0.91	0.91
Adj. Flow (vph)	111	1963	211	258	1364	443	383	838	350	291	645	133
RTOR Reduction (vph)	0	16	0	0	39	0	0	86	0	0	39	0
Lane Group Flow (vph)	111	2158	0	258	1768	0	383	1102	0	291	739	0
Confl. Peds. (#/hr)	1		1	1		1	19		19	12		12
Heavy Vehicles (%)	0%	1%	1%	1%	0%	1%	0%	1%	0%	2%	3%	2%
Turn Type	pm+pt			Prot			pm+pt			pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6						4			8		
Actuated Green, G (s)	38.2	35.0		6.0	37.8		27.0	16.0		19.0	12.0	
Effective Green, g (s)	38.2	35.0		6.0	37.8		27.0	16.0		19.0	12.0	
Actuated g/C Ratio	0.48	0.44		0.08	0.47		0.34	0.20		0.24	0.15	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	2211		260	1633		343	973		248	734	
v/s Ratio Prot	0.03	0.43		c0.07	c0.51		c0.15	c0.23		0.10	0.15	
v/s Ratio Perm	0.29						0.22			0.18		
v/c Ratio	0.66	0.98		0.99	1.08		1.12	1.13		1.17	1.01	
Uniform Delay, d1	18.0	22.1		37.0	21.1		23.9	32.0		29.6	34.0	
Progression Factor	0.83	0.84		0.83	0.98		1.15	0.47		1.00	1.00	
Incremental Delay, d2	6.5	10.6		41.8	44.8		78.3	70.2		112.2	34.9	
Delay (s)	21.5	29.2		72.5	65.5		105.8	85.1		141.8	68.9	
Level of Service	C	C		E	E		F	F		F	E	
Approach Delay (s)		28.8			66.4			90.2			88.7	
Approach LOS		C			E			F			F	

Intersection Summary			
HCM Average Control Delay	62.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	109.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	2371	16	66	1903	26	206
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	5080		1805	3539	1805	1563
Flt Permitted	1.00		0.08	1.00	0.95	1.00
Satd. Flow (perm)	5080		148	3539	1805	1563
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.64	0.64
Adj. Flow (vph)	2395	16	67	1922	41	322
RTOR Reduction (vph)	1	0	0	0	0	5
Lane Group Flow (vph)	2410	0	67	1922	41	317
Confl. Peds. (#/hr)		6	1		7	7
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Turn Type			Perm			Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	51.5		51.5	51.5	20.5	20.5
Effective Green, g (s)	51.5		51.5	51.5	20.5	20.5
Actuated g/C Ratio	0.64		0.64	0.64	0.26	0.26
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3270		95	2278	463	401
v/s Ratio Prot	0.47			c0.54	0.02	
v/s Ratio Perm			0.45			c0.20
v/c Ratio	0.74		0.71	0.84	0.09	0.79
Uniform Delay, d1	9.7		9.3	11.1	22.6	27.7
Progression Factor	0.37		0.96	0.93	1.00	1.00
Incremental Delay, d2	0.1		12.6	1.7	0.4	14.6
Delay (s)	3.6		21.5	12.1	23.0	42.4
Level of Service	A		C	B	C	D
Approach Delay (s)	3.6			12.4	40.2	
Approach LOS	A			B	D	

Intersection Summary			
HCM Average Control Delay	10.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	2274	518	556	1530	0	0	0	0	1147	336	430
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	0.99
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.99	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		6471	1599	3433	3610					1643	3138	1448
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		6471	1599	3433	3610					1643	3138	1448
Peak-hour factor, PHF	0.92	0.99	0.99	0.93	0.93	0.92	0.92	0.92	0.92	0.98	0.98	0.98
Adj. Flow (vph)	0	2297	523	598	1645	0	0	0	0	1170	343	439
RTOR Reduction (vph)	0	0	127	0	0	0	0	0	0	0	4	13
Lane Group Flow (vph)	0	2297	396	598	1645	0	0	0	0	585	968	382
Confl. Peds. (#/hr)										2		2
Heavy Vehicles (%)	0%	1%	1%	2%	0%	0%	0%	0%	0%	0%	1%	0%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		28.0	28.0	13.0	45.0					27.0	27.0	27.0
Effective Green, g (s)		28.0	28.0	13.0	45.0					27.0	27.0	27.0
Actuated g/C Ratio		0.35	0.35	0.16	0.56					0.34	0.34	0.34
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2265	560	558	2031					555	1059	489
v/s Ratio Prot		c0.35		c0.17	0.46					c0.36	0.31	
v/s Ratio Perm			0.25									0.26
v/c Ratio		1.01	0.71	1.07	0.81					1.05	1.05dl	0.78
Uniform Delay, d1		26.0	22.5	33.5	14.1					26.5	25.4	23.8
Progression Factor		0.73	0.62	1.26	1.54					1.00	1.00	1.00
Incremental Delay, d2		19.5	5.2	45.8	1.5					53.2	11.8	7.9
Delay (s)		38.4	19.2	88.0	23.2					79.7	37.2	31.7
Level of Service		D	B	F	C					E	D	C
Approach Delay (s)		34.9			40.5			0.0			48.9	
Approach LOS		C			D			A			D	

Intersection Summary			
HCM Average Control Delay	40.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	281	761	1119	2098	0	0	1733	887	0	0	550
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.95			0.86	0.88			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1787	2814	3502	3610			6536	2814			1644
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1787	2814	3502	3610			6536	2814			1644
Peak-hour factor, PHF	0.93	0.93	0.98	0.98	0.92	0.92	0.99	0.99	0.92	0.92	0.86
Adj. Flow (vph)	302	818	1142	2141	0	0	1751	896	0	0	640
RTOR Reduction (vph)	0	14	0	0	0	0	0	145	0	0	366
Lane Group Flow (vph)	302	804	1142	2141	0	0	1751	751	0	0	274
Confl. Peds. (#/hr)	1	1	1								1
Heavy Vehicles (%)	1%	1%	0%	0%	2%	2%	0%	1%	2%	2%	0%
Turn Type		Prot	Prot					Perm			Over
Protected Phases	4	4	1	6			2				1
Permitted Phases								2			
Actuated Green, G (s)	21.0	21.0	25.0	51.0			22.0	22.0			25.0
Effective Green, g (s)	21.0	21.0	25.0	51.0			22.0	22.0			25.0
Actuated g/C Ratio	0.26	0.26	0.31	0.64			0.28	0.28			0.31
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	469	739	1094	2301			1797	774			514
v/s Ratio Prot	0.17	c0.29	c0.33	c0.59			0.27				0.17
v/s Ratio Perm								0.27			
v/c Ratio	0.64	1.09	1.04	0.93			0.97	0.97			0.53
Uniform Delay, d1	26.2	29.5	27.5	12.9			28.7	28.7			22.7
Progression Factor	1.00	1.00	0.55	1.45			0.87	0.83			1.00
Incremental Delay, d2	3.0	59.6	22.8	0.9			11.7	19.3			1.1
Delay (s)	29.2	89.1	37.9	19.6			36.7	43.0			23.7
Level of Service	C	F	D	B			D	D			C
Approach Delay (s)	72.9			26.0			38.8		23.7		
Approach LOS	E			C			D		C		

Intersection Summary			
HCM Average Control Delay	37.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	466	41	117	42	52	149	73	2482	534	76	1813	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1743	1523	1805	1900	1593	1770	5136	1568	1805	5181	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.09	1.00	1.00	0.10	1.00	
Satd. Flow (perm)	3433	1743	1523	1805	1900	1593	174	5136	1568	184	5181	
Peak-hour factor, PHF	0.94	0.94	0.94	0.75	0.75	0.75	0.96	0.96	0.96	0.95	0.95	0.95
Adj. Flow (vph)	496	44	124	56	69	199	76	2585	556	80	1908	12
RTOR Reduction (vph)	0	0	105	0	0	78	0	0	259	0	1	0
Lane Group Flow (vph)	496	44	19	56	69	121	76	2585	297	80	1919	0
Confl. Peds. (#/hr)	5		5	1		1	5		5	4		4
Heavy Vehicles (%)	2%	9%	4%	0%	0%	0%	2%	1%	1%	0%	0%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		Perm	pm+pt		
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	12.0	12.0	12.0	6.0	6.0	6.0	47.6	42.8	42.8	44.4	41.2	
Effective Green, g (s)	12.0	12.0	12.0	6.0	6.0	6.0	47.6	42.8	42.8	44.4	41.2	
Actuated g/C Ratio	0.15	0.15	0.15	0.08	0.08	0.08	0.60	0.53	0.53	0.55	0.52	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	515	261	228	135	143	119	199	2748	839	167	2668	
v/s Ratio Prot	c0.14	0.03		0.03	0.04		c0.02	c0.50		0.02	0.37	
v/s Ratio Perm			0.01			c0.08	0.20		0.19	0.25		
v/c Ratio	0.96	0.17	0.08	0.41	0.48	1.02	0.38	0.94	0.35	0.48	0.72	
Uniform Delay, d1	33.8	29.6	29.3	35.3	35.5	37.0	10.8	17.4	10.7	16.7	14.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.80	0.86	1.47	0.21	
Incremental Delay, d2	30.3	0.3	0.2	2.1	2.6	87.8	0.5	3.8	0.5	0.9	0.7	
Delay (s)	64.0	30.0	29.4	37.4	38.1	124.8	10.5	17.8	9.6	25.6	3.8	
Level of Service	E	C	C	D	D	F	B	B	A	C	A	
Approach Delay (s)		55.3			91.2			16.2			4.7	
Approach LOS		E			F			B			A	

Intersection Summary			
HCM Average Control Delay	20.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	576	615	84	131	285	130	385	1606	643	176	974	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	3474		1805	1900	1553	1805	3610	1599	1787	3556	
Flt Permitted	0.95	1.00		0.33	1.00	1.00	0.14	1.00	1.00	0.17	1.00	
Satd. Flow (perm)	3467	3474		633	1900	1553	271	3610	1599	314	3556	
Peak-hour factor, PHF	0.96	0.96	0.96	0.92	0.92	0.92	0.94	0.94	0.94	0.92	0.92	0.92
Adj. Flow (vph)	600	641	88	142	310	141	410	1709	684	191	1059	39
RTOR Reduction (vph)	0	14	0	0	0	120	0	0	248	0	4	0
Lane Group Flow (vph)	600	715	0	142	310	21	410	1709	436	191	1095	0
Confl. Peds. (#/hr)	2		2									
Heavy Vehicles (%)	1%	1%	8%	0%	0%	4%	0%	0%	1%	1%	1%	0%
Turn Type	Prot			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases				8		8	6		6	2		
Actuated Green, G (s)	13.0	19.0		18.0	12.0	12.0	43.0	35.0	35.0	28.0	24.0	
Effective Green, g (s)	13.0	19.0		18.0	12.0	12.0	43.0	35.0	35.0	28.0	24.0	
Actuated g/C Ratio	0.16	0.24		0.22	0.15	0.15	0.54	0.44	0.44	0.35	0.30	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	563	825		230	285	233	433	1579	700	184	1067	
v/s Ratio Prot	c0.17	0.21		0.05	c0.16		c0.18	c0.47		0.05	0.31	
v/s Ratio Perm				0.09		0.01	0.33		0.27	0.31		
v/c Ratio	1.07	0.87		0.62	1.09	0.09	0.95	1.08	0.62	1.04	1.03	
Uniform Delay, d1	33.5	29.3		26.3	34.0	29.3	21.3	22.5	17.4	26.4	28.0	
Progression Factor	0.91	0.97		0.83	0.84	0.65	1.47	0.40	0.25	0.79	0.86	
Incremental Delay, d2	44.1	4.3		4.7	77.8	0.2	17.6	42.9	1.9	70.9	31.9	
Delay (s)	74.7	32.6		26.5	106.2	19.3	48.9	51.9	6.2	91.7	56.1	
Level of Service	E	C		C	F	B	D	D	A	F	E	
Approach Delay (s)		51.6			66.4			40.3			61.3	
Approach LOS		D			E			D			E	

Intersection Summary			
HCM Average Control Delay	49.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	262	741	249	150	370	107	231	806	87	79	1186	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1805	3494		1805	3537	
Flt Permitted	0.25	1.00	1.00	0.33	1.00	1.00	0.11	1.00		0.23	1.00	
Satd. Flow (perm)	467	3574	1599	622	3574	1599	210	3494		429	3537	
Peak-hour factor, PHF	0.97	0.97	0.97	0.93	0.93	0.93	0.97	0.97	0.97	0.93	0.93	0.93
Adj. Flow (vph)	270	764	257	161	398	115	238	831	90	85	1275	101
RTOR Reduction (vph)	0	0	140	0	0	98	0	10	0	0	7	0
Lane Group Flow (vph)	270	764	118	161	398	17	238	911	0	85	1369	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	2%	0%	0%	1%	0%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	27.0	18.0	18.0	17.1	12.1	12.1	44.2	36.2		37.8	33.0	
Effective Green, g (s)	27.0	18.0	18.0	17.1	12.1	12.1	44.2	36.2		37.8	33.0	
Actuated g/C Ratio	0.34	0.22	0.22	0.21	0.15	0.15	0.55	0.45		0.47	0.41	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	337	804	360	206	541	242	276	1581		285	1459	
v/s Ratio Prot	c0.11	c0.21		0.05	0.11		c0.09	0.26		0.02	c0.39	
v/s Ratio Perm	0.16		0.07	0.12		0.01	0.39			0.12		
v/c Ratio	0.80	0.95	0.33	0.78	0.74	0.07	0.86	0.58		0.30	0.94	
Uniform Delay, d1	21.4	30.6	25.9	29.0	32.4	29.1	18.6	16.2		12.3	22.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		0.26	0.25	
Incremental Delay, d2	12.8	20.5	0.5	17.3	5.2	0.1	23.1	1.5		0.1	1.6	
Delay (s)	34.2	51.1	26.5	46.3	37.6	29.3	41.7	17.8		3.3	7.2	
Level of Service	C	D	C	D	D	C	D	B		A	A	
Approach Delay (s)		42.6			38.2			22.7			7.0	
Approach LOS		D			D			C			A	

Intersection Summary			
HCM Average Control Delay	25.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	229	632	265	109	168	131	85	879	94	528	1687	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1787	3450		1787	1881	1538	1752	3518		1805	3610	1579
Flt Permitted	0.40	1.00		0.27	1.00	1.00	0.18	1.00		0.15	1.00	1.00
Satd. Flow (perm)	755	3450		508	1881	1538	332	3518		290	3610	1579
Peak-hour factor, PHF	0.93	0.93	0.93	0.95	0.95	0.95	0.96	0.96	0.96	0.99	0.99	0.99
Adj. Flow (vph)	246	680	285	115	177	138	89	916	98	533	1704	213
RTOR Reduction (vph)	0	56	0	0	0	112	0	10	0	0	0	114
Lane Group Flow (vph)	246	909	0	115	177	26	89	1004	0	533	1704	99
Confl. Peds. (#/hr)							1		1	7		7
Heavy Vehicles (%)	1%	0%	0%	1%	1%	5%	3%	1%	1%	0%	0%	0%
Turn Type	pm+pt			pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	27.8	20.6		18.0	14.8	14.8	25.4	22.2		44.2	37.0	37.0
Effective Green, g (s)	27.8	20.6		18.0	14.8	14.8	25.4	22.2		44.2	37.0	37.0
Actuated g/C Ratio	0.35	0.26		0.22	0.18	0.18	0.32	0.28		0.55	0.46	0.46
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	378	888		165	348	285	162	976		501	1670	730
v/s Ratio Prot	c0.07	c0.26		0.03	0.09		0.02	0.29		c0.24	0.47	
v/s Ratio Perm	0.15			0.13		0.02	0.15			c0.35		0.06
v/c Ratio	0.65	1.02		0.70	0.51	0.09	0.55	1.03		1.06	1.02	0.13
Uniform Delay, d1	20.1	29.7		28.7	29.3	27.0	21.8	28.9		22.1	21.5	12.3
Progression Factor	0.54	0.63		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.2	28.8		12.1	1.2	0.1	3.8	36.3		58.3	27.3	0.4
Delay (s)	13.1	47.4		40.8	30.5	27.2	25.6	65.2		80.4	48.8	12.7
Level of Service	B	D		D	C	C	C	E		F	D	B
Approach Delay (s)		40.4			32.2			62.0			52.5	
Approach LOS		D			C			E			D	

Intersection Summary			
HCM Average Control Delay	50.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	298	520	186	1113	820	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.97	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1555	1719	1881	1881	1583
Flt Permitted	0.95	1.00	0.10	1.00	1.00	1.00
Satd. Flow (perm)	1770	1555	181	1881	1881	1583
Peak-hour factor, PHF	0.95	0.95	0.94	0.94	0.94	0.94
Adj. Flow (vph)	314	547	198	1184	872	179
RTOR Reduction (vph)	0	209	0	0	0	81
Lane Group Flow (vph)	314	338	198	1184	872	98
Confl. Peds. (#/hr)	3	3				
Heavy Vehicles (%)	2%	1%	5%	1%	1%	2%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	17.0	17.0	55.0	55.0	44.0	44.0
Effective Green, g (s)	17.0	17.0	55.0	55.0	44.0	44.0
Actuated g/C Ratio	0.21	0.21	0.69	0.69	0.55	0.55
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	376	330	259	1293	1035	871
v/s Ratio Prot	0.18		0.07	c0.63	0.46	
v/s Ratio Perm		c0.22	0.46			0.06
v/c Ratio	0.84	1.02	0.76	0.92	0.84	0.11
Uniform Delay, d1	30.2	31.5	16.3	10.5	15.1	8.6
Progression Factor	0.95	0.90	1.00	1.00	1.05	1.30
Incremental Delay, d2	14.4	54.8	12.6	11.6	4.1	0.1
Delay (s)	43.0	83.2	28.9	22.1	20.0	11.4
Level of Service	D	F	C	C	C	B
Approach Delay (s)	68.6			23.1	18.5	
Approach LOS	E			C	B	

Intersection Summary			
HCM Average Control Delay	33.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	88	432	100	247	428	88	136	862	193	118	1013	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.95	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1671	1798		1805	1822		1787	1881	1448	1770	1863	1571
Flt Permitted	0.13	1.00		0.12	1.00		0.07	1.00	1.00	0.07	1.00	1.00
Satd. Flow (perm)	235	1798		224	1822		125	1881	1448	122	1863	1571
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.98	0.98	0.98	0.94	0.94	0.94
Adj. Flow (vph)	92	450	104	257	446	92	139	880	197	126	1078	72
RTOR Reduction (vph)	0	7	0	0	6	0	0	0	74	0	0	22
Lane Group Flow (vph)	92	547	0	257	532	0	139	880	123	126	1078	50
Confl. Peds. (#/hr)	7		7	4		4	8		8	2		2
Heavy Vehicles (%)	8%	2%	1%	0%	1%	1%	1%	1%	6%	2%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	34.0	30.0		43.0	35.0		64.0	60.0	60.0	66.0	61.0	61.0
Effective Green, g (s)	34.0	30.0		43.0	35.0		64.0	60.0	60.0	66.0	61.0	61.0
Actuated g/C Ratio	0.28	0.25		0.36	0.29		0.53	0.50	0.50	0.55	0.51	0.51
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	114	450		199	531		122	941	724	136	947	799
v/s Ratio Prot	0.03	0.30		c0.10	0.29		0.04	0.47		c0.04	c0.58	
v/s Ratio Perm	0.20			c0.37			0.57		0.08	0.47		0.03
v/c Ratio	0.81	1.22		1.29	1.00		1.14	0.94	0.17	0.93	1.14	0.06
Uniform Delay, d1	39.5	45.0		33.2	42.5		28.7	28.2	16.4	27.9	29.5	15.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	32.6	116.1		163.3	39.3		123.8	17.3	0.5	54.8	75.2	0.1
Delay (s)	72.2	161.1		196.5	81.8		152.5	45.5	16.9	82.6	104.7	15.1
Level of Service	E	F		F	F		F	D	B	F	F	B
Approach Delay (s)		148.4			118.9			53.1			97.5	
Approach LOS		F			F			D			F	

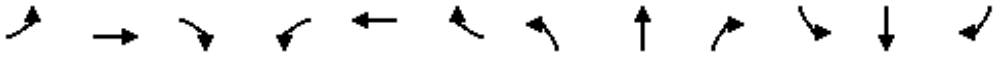
Intersection Summary			
HCM Average Control Delay	96.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	116.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	0	1	439	7	840	0	935	342	516	1096	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00		0.95	1.00	0.97	1.00	
Frpb, ped/bikes		0.99			1.00	0.96		1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00			0.97	1.00		1.00	1.00	1.00	1.00	
Frt		0.93			1.00	0.85		1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.95	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1715			1746	1538		3574	1571	3400	1863	
Flt Permitted		0.91			0.73	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1592			1332	1538		3574	1571	3400	1863	
Peak-hour factor, PHF	0.50	0.50	0.50	0.95	0.95	0.95	0.90	0.90	0.90	0.98	0.98	0.98
Adj. Flow (vph)	2	0	2	462	7	884	0	1039	380	527	1118	0
RTOR Reduction (vph)	0	1	0	0	0	260	0	0	247	0	0	0
Lane Group Flow (vph)	0	3	0	0	469	624	0	1039	133	527	1118	0
Confl. Peds. (#/hr)	2		2	15		15	3		3	7		7
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	1%	1%	3%	2%	0%
Turn Type	Perm			Perm		Perm	Perm		Perm	Prot		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2			
Actuated Green, G (s)		33.0			33.0	33.0		33.5	33.5	17.5	55.0	
Effective Green, g (s)		33.0			33.0	33.0		33.5	33.5	17.5	55.0	
Actuated g/C Ratio		0.34			0.34	0.34		0.35	0.35	0.18	0.57	
Clearance Time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		547			458	529		1247	548	620	1067	
v/s Ratio Prot								0.29		0.16	c0.60	
v/s Ratio Perm		0.00			0.35	c0.41			0.08			
v/c Ratio		0.00			1.02	1.18		0.83	0.24	0.85	1.05	
Uniform Delay, d1		20.7			31.5	31.5		28.7	22.2	38.0	20.5	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0			48.3	99.1		6.6	1.0	10.8	40.9	
Delay (s)		20.7			79.8	130.6		35.3	23.3	48.8	61.4	
Level of Service		C			E	F		D	C	D	E	
Approach Delay (s)		20.7			113.0			32.1			57.4	
Approach LOS		C			F			C			E	

Intersection Summary			
HCM Average Control Delay	66.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	124.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	662	97	28	83	61	33	41	785	57	80	1190	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99			1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	0.97			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1698	1713			1847	1421	1805	3498		1752	3574	
Flt Permitted	0.95	0.97			0.97	1.00	0.16	1.00		0.21	1.00	
Satd. Flow (perm)	1698	1713			1847	1421	304	3498		386	3574	
Peak-hour factor, PHF	0.93	0.93	0.93	0.83	0.83	0.83	0.93	0.93	0.93	0.96	0.96	0.92
Adj. Flow (vph)	712	104	30	100	73	40	44	844	61	83	1240	0
RTOR Reduction (vph)	0	4	0	0	0	36	0	9	0	0	0	0
Lane Group Flow (vph)	420	422	0	0	173	4	44	896	0	83	1240	0
Confl. Peds. (#/hr)	2		2	2		2	1		1			
Heavy Vehicles (%)	1%	0%	0%	0%	0%	11%	0%	2%	2%	3%	1%	0%
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases						8	2			6		
Actuated Green, G (s)	16.4	16.4			6.0	6.0	25.0	25.0		25.0	25.0	
Effective Green, g (s)	16.4	16.4			6.0	6.0	25.0	25.0		25.0	25.0	
Actuated g/C Ratio	0.28	0.28			0.10	0.10	0.42	0.42		0.42	0.42	
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	469	473			187	144	128	1472		162	1504	
v/s Ratio Prot	c0.25	0.25			c0.09			0.26			c0.35	
v/s Ratio Perm						0.00	0.14			0.21		
v/c Ratio	0.90	0.89			0.93	0.03	0.34	0.61		0.51	0.82	
Uniform Delay, d1	20.7	20.6			26.5	24.1	11.6	13.4		12.7	15.3	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	19.2	18.6			44.6	0.1	7.2	1.9		11.1	5.3	
Delay (s)	39.9	39.3			71.1	24.2	18.8	15.3		23.8	20.5	
Level of Service	D	D			E	C	B	B		C	C	
Approach Delay (s)		39.6			62.3			15.4			20.7	
Approach LOS		D			E			B			C	

Intersection Summary			
HCM Average Control Delay	26.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	59.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	402	865	927	216	770	145	966	830	234	80	1002	268
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.97	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	3610	1615	1787	5002		3467	3610	1583	1770	3574	1591
Flt Permitted	0.24	1.00	1.00	0.31	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	443	3610	1615	579	5002		3467	3610	1583	1770	3574	1591
Peak-hour factor, PHF	0.99	0.99	0.99	0.96	0.96	0.96	0.97	0.97	0.97	0.99	0.99	0.99
Adj. Flow (vph)	406	874	936	225	802	151	996	856	241	81	1012	271
RTOR Reduction (vph)	0	0	412	0	34	0	0	0	175	0	0	125
Lane Group Flow (vph)	406	874	524	225	919	0	996	856	66	81	1012	146
Confl. Peds. (#/hr)				2		2				2		2
Heavy Vehicles (%)	1%	0%	0%	1%	1%	1%	1%	0%	2%	2%	1%	0%
Turn Type	pm+pt		Perm	pm+pt			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4		4	8					2			6
Actuated Green, G (s)	27.0	19.0	19.0	17.0	13.0		22.0	22.0	22.0	19.0	19.0	19.0
Effective Green, g (s)	27.0	19.0	19.0	17.0	13.0		22.0	22.0	22.0	19.0	19.0	19.0
Actuated g/C Ratio	0.34	0.24	0.24	0.21	0.16		0.28	0.28	0.28	0.24	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	318	857	384	183	813		953	993	435	420	849	378
v/s Ratio Prot	c0.16	0.24		0.06	0.18		c0.29	0.24		0.05	c0.28	
v/s Ratio Perm	0.27		c0.32	0.20					0.04			0.09
v/c Ratio	1.28	1.02	1.37	1.23	1.13		1.05	0.86	0.15	0.19	1.19	0.39
Uniform Delay, d1	24.0	30.5	30.5	31.6	33.5		29.0	27.6	21.9	24.4	30.5	25.6
Progression Factor	1.00	1.00	1.00	1.07	0.49		1.00	0.99	1.72	1.00	1.00	1.00
Incremental Delay, d2	146.7	35.8	180.3	118.6	64.3		39.8	8.7	0.6	1.0	98.0	3.0
Delay (s)	170.7	66.3	210.8	152.5	80.7		68.7	36.0	38.3	25.4	128.5	28.6
Level of Service	F	E	F	F	F		E	D	D	C	F	C
Approach Delay (s)		146.5			94.4			51.8			102.5	
Approach LOS		F			F			D			F	

Intersection Summary			
HCM Average Control Delay	99.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	109.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	652	824	1074	0	0	2052
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	0.97	0.91	0.91			0.86
Frpb, ped/bikes	0.99	0.99	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	0.95	0.85	1.00			1.00
Flt Protected	0.97	1.00	1.00			1.00
Satd. Flow (prot)	3331	1433	5136			6471
Flt Permitted	0.97	1.00	1.00			1.00
Satd. Flow (perm)	3331	1433	5136			6471
Peak-hour factor, PHF	0.97	0.97	0.97	0.92	0.92	0.99
Adj. Flow (vph)	672	849	1107	0	0	2073
RTOR Reduction (vph)	17	17	0	0	0	0
Lane Group Flow (vph)	1020	467	1107	0	0	2073
Confl. Peds. (#/hr)	2	2				
Heavy Vehicles (%)	1%	1%	1%	2%	2%	1%
Turn Type		Perm				
Protected Phases	8		2			6
Permitted Phases		8				
Actuated Green, G (s)	34.1	34.1	37.9			37.9
Effective Green, g (s)	34.1	34.1	37.9			37.9
Actuated g/C Ratio	0.43	0.43	0.47			0.47
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	1420	611	2433			3066
v/s Ratio Prot	0.31		0.22			c0.32
v/s Ratio Perm		c0.33				
v/c Ratio	0.72	0.76	0.45			0.68
Uniform Delay, d1	19.0	19.5	14.1			16.3
Progression Factor	1.00	1.00	0.14			0.68
Incremental Delay, d2	1.8	5.7	0.5			0.1
Delay (s)	20.7	25.2	2.5			11.2
Level of Service	C	C	A			B
Approach Delay (s)	22.2		2.5			11.2
Approach LOS	C		A			B

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	1063	519	914	1788
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0
Lane Util. Factor			0.91		0.97	0.91
Frpb, ped/bikes			0.99		1.00	1.00
Flpb, ped/bikes			1.00		1.00	1.00
Frt			0.95		1.00	1.00
Flt Protected			1.00		0.95	1.00
Satd. Flow (prot)			4857		3467	5136
Flt Permitted			1.00		0.95	1.00
Satd. Flow (perm)			4857		3467	5136
Peak-hour factor, PHF	0.92	0.92	0.97	0.97	0.99	0.99
Adj. Flow (vph)	0	0	1096	535	923	1806
RTOR Reduction (vph)	0	0	24	0	0	0
Lane Group Flow (vph)	0	0	1607	0	923	1806
Confl. Peds. (#/hr)				3		
Heavy Vehicles (%)	2%	2%	1%	1%	1%	1%
Turn Type					Prot	
Protected Phases			2		1	6
Permitted Phases						
Actuated Green, G (s)			44.2		27.8	80.0
Effective Green, g (s)			44.2		27.8	80.0
Actuated g/C Ratio			0.55		0.35	1.00
Clearance Time (s)			4.0		4.0	4.0
Vehicle Extension (s)			3.0		3.0	3.0
Lane Grp Cap (vph)			2683		1205	5136
v/s Ratio Prot			c0.33		c0.27	0.35
v/s Ratio Perm						
v/c Ratio			0.60		0.77	0.35
Uniform Delay, d1			12.0		23.2	0.0
Progression Factor			0.26		0.90	1.00
Incremental Delay, d2			0.5		2.2	0.1
Delay (s)			3.6		23.2	0.1
Level of Service			A		C	A
Approach Delay (s)	0.0		3.6			7.9
Approach LOS	A		A			A

Intersection Summary			
HCM Average Control Delay	6.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

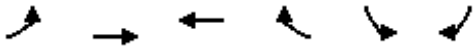
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	4	2	205	6	122	0	1427	206	214	1488	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.96			0.95			0.98		1.00	1.00	
Flt Protected		0.99			0.97			1.00		0.95	1.00	
Satd. Flow (prot)		1808			1715			3500		1787	3574	
Flt Permitted		0.97			0.80			1.00		0.09	1.00	
Satd. Flow (perm)		1763			1413			3500		167	3574	
Peak-hour factor, PHF	0.31	0.31	0.31	0.85	0.85	0.85	0.95	0.95	0.95	0.94	0.94	0.94
Adj. Flow (vph)	3	13	6	241	7	144	0	1502	217	228	1583	0
RTOR Reduction (vph)	0	5	0	0	26	0	0	14	0	0	0	0
Lane Group Flow (vph)	0	18	0	0	366	0	0	1705	0	228	1583	0
Confl. Peds. (#/hr)	4		4	5		5	2		2	6		6
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	1%	0%	1%	1%	0%
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		20.0			20.0			41.0		52.0	52.0	
Effective Green, g (s)		20.0			20.0			41.0		52.0	52.0	
Actuated g/C Ratio		0.25			0.25			0.51		0.65	0.65	
Clearance Time (s)		4.0			4.0			4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		441			353			1794		250	2323	
v/s Ratio Prot								0.49		c0.08	0.44	
v/s Ratio Perm		0.01			c0.26					c0.51		
v/c Ratio		0.04			1.04			0.95		0.91	0.68	
Uniform Delay, d1		22.7			30.0			18.5		22.1	8.8	
Progression Factor		1.00			0.98			0.65		1.53	0.61	
Incremental Delay, d2		0.0			57.3			7.2		33.4	1.6	
Delay (s)		22.8			86.7			19.3		67.0	7.0	
Level of Service		C			F			B		E	A	
Approach Delay (s)		22.8			86.7			19.3			14.5	
Approach LOS		C			F			B			B	

Intersection Summary			
HCM Average Control Delay	23.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	123.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	254	430	77	220	382	382	68	788	147	434	954	189
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	1802		1805	1863	1615	1752	3496		1805	3474	
Flt Permitted	0.18	1.00		0.20	1.00	1.00	0.19	1.00		0.16	1.00	
Satd. Flow (perm)	342	1802		380	1863	1615	351	3496		304	3474	
Peak-hour factor, PHF	0.89	0.89	0.89	0.92	0.92	0.92	0.90	0.90	0.90	0.99	0.99	0.99
Adj. Flow (vph)	285	483	87	239	415	415	76	876	163	438	964	191
RTOR Reduction (vph)	0	8	0	0	0	21	0	19	0	0	20	0
Lane Group Flow (vph)	285	562	0	239	415	394	76	1020	0	438	1135	0
Heavy Vehicles (%)	1%	3%	3%	0%	2%	0%	3%	1%	0%	0%	1%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	31.0	22.0		27.0	20.0	34.0	24.2	21.0		39.0	31.8	
Effective Green, g (s)	31.0	22.0		27.0	20.0	34.0	24.2	21.0		39.0	31.8	
Actuated g/C Ratio	0.39	0.28		0.34	0.25	0.42	0.30	0.26		0.49	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	295	496		253	466	767	162	918		411	1381	
v/s Ratio Prot	c0.11	c0.31		0.08	0.22	0.09	0.02	0.29		c0.19	0.33	
v/s Ratio Perm	0.27			0.24		0.15	0.12			c0.33		
v/c Ratio	0.97	1.13		0.94	0.89	0.51	0.47	1.11		1.07	0.82	
Uniform Delay, d1	20.3	29.0		23.7	28.9	16.9	21.0	29.5		21.4	21.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.71	0.91	
Incremental Delay, d2	42.8	82.4		41.3	18.8	0.6	2.1	65.0		55.1	3.8	
Delay (s)	63.1	111.4		65.0	47.7	17.5	23.2	94.5		91.7	23.5	
Level of Service	E	F		E	D	B	C	F		F	C	
Approach Delay (s)		95.3			39.8			89.6			42.2	
Approach LOS		F			D			F			D	

Intersection Summary			
HCM Average Control Delay	62.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	103.3%	ICU Level of Service	G
Analysis Period (min)	15		

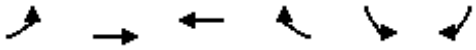
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	54	409	287	111	472	230
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.93	0.93	0.87	0.87
Hourly flow rate (vph)	59	445	309	119	543	264
Pedestrians		3	3		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			840			
pX, platoon unblocked						
vC, conflicting volume	430				935	373
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	430				935	373
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				0	61
cM capacity (veh/h)	1138				278	672

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	503	428	543	264
Volume Left	59	0	543	0
Volume Right	0	119	0	264
cSH	1138	1700	278	672
Volume to Capacity	0.05	0.25	1.95	0.39
Queue Length 95th (ft)	4	0	959	47
Control Delay (s)	1.5	0.0	470.7	13.8
Lane LOS	A		F	B
Approach Delay (s)	1.5	0.0	321.0	
Approach LOS			F	

Intersection Summary			
Average Delay	149.4		
Intersection Capacity Utilization	82.6%	ICU Level of Service	E
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	18	340	420	19	117	82
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	19	358	442	20	127	89
Pedestrians		4	4		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	464				854	458
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	464				854	458
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				61	85
cM capacity (veh/h)	1106				324	604

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	377	462	216
Volume Left	19	0	127
Volume Right	0	20	89
cSH	1106	1700	401
Volume to Capacity	0.02	0.27	0.54
Queue Length 95th (ft)	1	0	77
Control Delay (s)	0.6	0.0	24.0
Lane LOS	A		C
Approach Delay (s)	0.6	0.0	24.0
Approach LOS			C

Intersection Summary			
Average Delay	5.1		
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (veh/h)	1400	67	107	1635	63	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.99	0.99	0.91	0.92
Hourly flow rate (vph)	1429	68	108	1652	69	0
Pedestrians	4				1	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	872			236		
pX, platoon unblocked						
vC, conflicting volume			1498		2234	511
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1498		2234	511
tC, single (s)			4.1		6.9	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			76		0	100
cM capacity (veh/h)			448		27	507

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4	SW 1
Volume Total	571	571	354	108	551	551	551	69
Volume Left	0	0	0	108	0	0	0	69
Volume Right	0	0	68	0	0	0	0	0
cSH	1700	1700	1700	448	1700	1700	1700	27
Volume to Capacity	0.34	0.34	0.21	0.24	0.32	0.32	0.32	2.61
Queue Length 95th (ft)	0	0	0	23	0	0	0	210
Control Delay (s)	0.0	0.0	0.0	15.6	0.0	0.0	0.0	1040.5
Lane LOS				C				F
Approach Delay (s)	0.0			1.0				1040.5
Approach LOS								F

Intersection Summary			
Average Delay	22.2		
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	292	105	37	296	476	94
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	332	119	39	312	517	102
Pedestrians	7			6	6	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	815	323	627			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	815	323	627			
tC, single (s)	6.8	7.0	4.4			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.3			
p0 queue free %	0	82	96			
cM capacity (veh/h)	300	663	875			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	451	143	208	345	275
Volume Left	332	39	0	0	0
Volume Right	119	0	0	0	102
cSH	351	875	1700	1700	1700
Volume to Capacity	1.29	0.04	0.12	0.20	0.16
Queue Length 95th (ft)	518	3	0	0	0
Control Delay (s)	180.1	2.9	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	180.1	1.2		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	57.5		
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	57	69	84	116	5	20	1	9	12	4	4
Peak Hour Factor	0.86	0.86	0.86	0.81	0.81	0.81	0.68	0.68	0.68	0.71	0.71	0.71
Hourly flow rate (vph)	1	66	80	104	143	6	29	1	13	17	6	6

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	148	253	44	28
Volume Left (vph)	1	104	29	17
Volume Right (vph)	80	6	13	6
Hadj (s)	-0.29	0.09	0.02	0.00
Departure Headway (s)	4.1	4.3	4.8	4.8
Degree Utilization, x	0.17	0.30	0.06	0.04
Capacity (veh/h)	859	808	683	675
Control Delay (s)	7.9	9.2	8.1	8.0
Approach Delay (s)	7.9	9.2	8.1	8.0
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.6			
HCM Level of Service	A			
Intersection Capacity Utilization	32.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	152	1400	0	0	1741
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.89	0.98	0.92	0.92	0.99
Hourly flow rate (vph)	0	171	1429	0	0	1759
Pedestrians	1					4
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			983			125
pX, platoon unblocked						
vC, conflicting volume	2016	481			1430	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2016	481			1430	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	68			100	
cM capacity (veh/h)	51	531			471	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	171	476	476	476	586	586	586
Volume Left	0	0	0	0	0	0	0
Volume Right	171	0	0	0	0	0	0
cSH	531	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.32	0.28	0.28	0.28	0.34	0.34	0.34
Queue Length 95th (ft)	34	0	0	0	0	0	0
Control Delay (s)	14.9	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	14.9	0.0			0.0		
Approach LOS	B						

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	20	22	13	19	7	12	901	7	1	1432	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.97			1.00			1.00	
Flt Protected		0.98			0.98			1.00			1.00	
Satd. Flow (prot)		1773			1813			3568			3603	
Flt Permitted		0.90			0.90			0.93			0.95	
Satd. Flow (perm)		1632			1657			3317			3440	
Peak-hour factor, PHF	0.94	0.94	0.94	0.82	0.82	0.82	0.91	0.91	0.91	0.98	0.98	0.98
Adj. Flow (vph)	28	21	23	16	23	9	13	990	8	1	1461	16
RTOR Reduction (vph)	0	21	0	0	8	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	51	0	0	40	0	0	1010	0	0	1477	0
Confl. Peds. (#/hr)	2		2	3		3	4		4	1		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		7.0			7.0			71.0			71.0	
Effective Green, g (s)		7.0			7.0			71.0			71.0	
Actuated g/C Ratio		0.08			0.08			0.83			0.83	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		133			135			2738			2840	
v/s Ratio Prot												
v/s Ratio Perm		c0.03			0.02			0.30			c0.43	
v/c Ratio		0.38			0.29			0.37			0.52	
Uniform Delay, d1		37.5			37.2			1.9			2.3	
Progression Factor		1.00			0.95			0.20			1.00	
Incremental Delay, d2		1.8			1.2			0.4			0.7	
Delay (s)		39.3			36.7			0.7			3.0	
Level of Service		D			D			A			A	
Approach Delay (s)		39.3			36.7			0.7			3.0	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	3.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	86.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	8	4	13	983	721	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	0.95	
Frpb, ped/bikes	1.00			1.00	1.00	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.96			1.00	0.99	
Flt Protected	0.97			1.00	1.00	
Satd. Flow (prot)	1745			1880	3553	
Flt Permitted	0.97			0.99	1.00	
Satd. Flow (perm)	1745			1862	3553	
Peak-hour factor, PHF	0.75	0.75	0.98	0.98	0.95	0.95
Adj. Flow (vph)	11	5	13	1003	759	28
RTOR Reduction (vph)	5	0	0	0	3	0
Lane Group Flow (vph)	11	0	0	1016	784	0
Confl. Peds. (#/hr)	2	2	2			2
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	0.8			77.2	77.2	
Effective Green, g (s)	0.8			77.2	77.2	
Actuated g/C Ratio	0.01			0.90	0.90	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	16			1671	3189	
v/s Ratio Prot	c0.01				0.22	
v/s Ratio Perm				c0.55		
v/c Ratio	0.69			0.61	0.25	
Uniform Delay, d1	42.5			1.0	0.6	
Progression Factor	0.51			0.33	1.00	
Incremental Delay, d2	80.1			1.1	0.2	
Delay (s)	101.8			1.5	0.8	
Level of Service	F			A	A	
Approach Delay (s)	101.8			1.5	0.8	
Approach LOS	F			A	A	

Intersection Summary			
HCM Average Control Delay	2.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	86.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	940	958	0	1472	712	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	1.00		0.95	0.97	
Frpb, ped/bikes	1.00	0.97		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		1.00	0.95	
Satd. Flow (prot)	3574	1559		3574	3502	
Flt Permitted	1.00	1.00		1.00	0.95	
Satd. Flow (perm)	3574	1559		3574	3502	
Peak-hour factor, PHF	0.96	0.96	0.92	0.94	0.93	0.92
Adj. Flow (vph)	979	998	0	1566	766	0
RTOR Reduction (vph)	0	353	0	0	0	0
Lane Group Flow (vph)	979	645	0	1566	766	0
Confl. Peds. (#/hr)		2	1		1	
Heavy Vehicles (%)	1%	1%	2%	1%	0%	2%
Turn Type		Perm				
Protected Phases	2			6	8	
Permitted Phases		2				
Actuated Green, G (s)	55.6	55.6		55.6	22.4	
Effective Green, g (s)	55.6	55.6		55.6	22.4	
Actuated g/C Ratio	0.65	0.65		0.65	0.26	
Clearance Time (s)	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	2311	1008		2311	912	
v/s Ratio Prot	0.27			c0.44	c0.22	
v/s Ratio Perm		0.41				
v/c Ratio	0.42	0.64		0.68	0.84	
Uniform Delay, d1	7.4	9.2		9.6	30.1	
Progression Factor	0.68	8.67		0.77	0.99	
Incremental Delay, d2	0.3	1.9		1.4	6.8	
Delay (s)	5.4	81.4		8.8	36.5	
Level of Service	A	F		A	D	
Approach Delay (s)	43.8			8.8	36.5	
Approach LOS	D			A	D	

Intersection Summary			
HCM Average Control Delay	29.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	86.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	105	1865	200	255	1350	439	375	821	343	265	587	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		0.97	0.95	1.00	0.97	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	5054		3467	3610	1577	3502	4862		3433	4889	
Flt Permitted	0.11	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	211	5054		3467	3610	1577	3502	4862		3433	4889	
Peak-hour factor, PHF	0.95	0.95	0.95	0.99	0.99	0.99	0.98	0.98	0.98	0.91	0.91	0.91
Adj. Flow (vph)	111	1963	211	258	1364	443	383	838	350	291	645	133
RTOR Reduction (vph)	0	15	0	0	0	199	0	88	0	0	36	0
Lane Group Flow (vph)	111	2159	0	258	1364	244	383	1100	0	291	742	0
Confl. Peds. (#/hr)	1		1	1		1	19		19	12		12
Heavy Vehicles (%)	0%	1%	1%	1%	0%	1%	0%	1%	0%	2%	3%	2%
Turn Type	pm+pt			Prot		Perm	Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6					2						
Actuated Green, G (s)	40.0	36.0		7.0	39.0	39.0	11.8	19.0		8.0	15.2	
Effective Green, g (s)	40.0	36.0		7.0	39.0	39.0	11.8	19.0		8.0	15.2	
Actuated g/C Ratio	0.47	0.42		0.08	0.45	0.45	0.14	0.22		0.09	0.18	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	172	2116		282	1637	715	481	1074		319	864	
v/s Ratio Prot	0.03	c0.43		c0.07	c0.38		c0.11	c0.23		0.08	0.15	
v/s Ratio Perm	0.27					0.15						
v/c Ratio	0.65	1.02		0.91	0.83	0.34	0.80	1.02		0.91	0.86	
Uniform Delay, d1	17.2	25.0		39.2	20.6	15.2	35.9	33.5		38.7	34.4	
Progression Factor	0.86	0.87		0.96	1.05	1.92	1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.6	21.6		22.9	3.3	0.8	8.9	33.8		29.0	8.5	
Delay (s)	20.4	43.3		60.3	24.9	30.0	44.8	67.3		67.6	42.8	
Level of Service	C	D		E	C	C	D	E		E	D	
Approach Delay (s)		42.2			30.4			61.8			49.6	
Approach LOS		D			C			E			D	

Intersection Summary			
HCM Average Control Delay	44.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	86.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	92.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	2371	16	66	1903	26	206
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	5080		1805	3539	1805	1562
Flt Permitted	1.00		0.07	1.00	0.95	1.00
Satd. Flow (perm)	5080		136	3539	1805	1562
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.64	0.64
Adj. Flow (vph)	2395	16	67	1922	41	322
RTOR Reduction (vph)	1	0	0	0	0	5
Lane Group Flow (vph)	2410	0	67	1922	41	317
Confl. Peds. (#/hr)		6	1		7	7
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Turn Type			Perm			Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	56.0		56.0	56.0	22.0	22.0
Effective Green, g (s)	56.0		56.0	56.0	22.0	22.0
Actuated g/C Ratio	0.65		0.65	0.65	0.26	0.26
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3308		89	2304	462	400
v/s Ratio Prot	0.47			c0.54	0.02	
v/s Ratio Perm			0.49			c0.20
v/c Ratio	0.73		0.75	0.83	0.09	0.79
Uniform Delay, d1	10.0		10.3	11.5	24.4	29.9
Progression Factor	0.25		1.13	1.18	1.00	1.00
Incremental Delay, d2	0.1		18.5	1.6	0.4	14.8
Delay (s)	2.6		30.0	15.1	24.7	44.7
Level of Service	A		C	B	C	D
Approach Delay (s)	2.6			15.6	42.4	
Approach LOS	A			B	D	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	86.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	2274	518	556	1530	0	0	0	0	1147	336	430
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.99	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		6471	1599	3433	3610					1643	3138	1447
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		6471	1599	3433	3610					1643	3138	1447
Peak-hour factor, PHF	0.92	0.99	0.99	0.93	0.93	0.92	0.92	0.92	0.92	0.98	0.98	0.98
Adj. Flow (vph)	0	2297	523	598	1645	0	0	0	0	1170	343	439
RTOR Reduction (vph)	0	0	125	0	0	0	0	0	0	0	3	15
Lane Group Flow (vph)	0	2297	398	598	1645	0	0	0	0	585	969	380
Confl. Peds. (#/hr)										2		2
Heavy Vehicles (%)	0%	1%	1%	2%	0%	0%	0%	0%	0%	0%	1%	0%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		31.0	31.0	14.0	49.0					29.0	29.0	29.0
Effective Green, g (s)		31.0	31.0	14.0	49.0					29.0	29.0	29.0
Actuated g/C Ratio		0.36	0.36	0.16	0.57					0.34	0.34	0.34
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2333	576	559	2057					554	1058	488
v/s Ratio Prot		c0.35		c0.17	0.46					c0.36	0.31	
v/s Ratio Perm			0.25									0.26
v/c Ratio		0.98	0.69	1.07	0.80					1.06	1.05dl	0.78
Uniform Delay, d1		27.3	23.4	36.0	14.6					28.5	27.3	25.6
Progression Factor		0.62	0.41	0.40	0.97					1.00	1.00	1.00
Incremental Delay, d2		12.4	4.8	45.6	1.4					53.9	12.0	7.7
Delay (s)		29.4	14.5	60.0	15.6					82.4	39.3	33.3
Level of Service		C	B	E	B					F	D	C
Approach Delay (s)		26.6			27.5			0.0			51.0	
Approach LOS		C			C			A			D	

Intersection Summary			
HCM Average Control Delay	33.7	HCM Level of Service	C
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	86.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	281	761	1119	2098	0	0	1733	887	0	0	550
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.95			0.86	0.88			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1787	2814	3502	3610			6536	2814			1644
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1787	2814	3502	3610			6536	2814			1644
Peak-hour factor, PHF	0.93	0.93	0.98	0.98	0.92	0.92	0.99	0.99	0.92	0.92	0.86
Adj. Flow (vph)	302	818	1142	2141	0	0	1751	896	0	0	640
RTOR Reduction (vph)	0	14	0	0	0	0	0	149	0	0	366
Lane Group Flow (vph)	302	804	1142	2141	0	0	1751	747	0	0	274
Confl. Peds. (#/hr)	1	1	1								1
Heavy Vehicles (%)	1%	1%	0%	0%	2%	2%	0%	1%	2%	2%	0%
Turn Type		Prot	Prot					Perm			Over
Protected Phases	4	4	1	6			2				1
Permitted Phases								2			
Actuated Green, G (s)	23.0	23.0	27.0	55.0			24.0	24.0			27.0
Effective Green, g (s)	23.0	23.0	27.0	55.0			24.0	24.0			27.0
Actuated g/C Ratio	0.27	0.27	0.31	0.64			0.28	0.28			0.31
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	478	753	1099	2309			1824	785			516
v/s Ratio Prot	0.17	c0.29	c0.33	c0.59			0.27				0.17
v/s Ratio Perm								0.27			
v/c Ratio	0.63	1.07	1.04	0.93			0.96	0.95			0.53
Uniform Delay, d1	27.8	31.5	29.5	13.7			30.5	30.4			24.3
Progression Factor	1.00	1.00	1.18	1.03			0.77	0.72			1.00
Incremental Delay, d2	2.7	52.4	25.3	2.4			9.8	16.4			1.1
Delay (s)	30.5	83.9	60.0	16.6			33.4	38.4			25.3
Level of Service	C	F	E	B			C	D			C
Approach Delay (s)	69.5			31.7			35.1		25.3		
Approach LOS	E			C			D		C		

Intersection Summary			
HCM Average Control Delay	37.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	86.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	466	41	117	42	52	149	73	2482	534	76	1813	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1743	1522	1805	1900	1593	1770	5136	1567	1805	5181	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.08	1.00	1.00	0.09	1.00	
Satd. Flow (perm)	3433	1743	1522	1805	1900	1593	156	5136	1567	165	5181	
Peak-hour factor, PHF	0.94	0.94	0.94	0.75	0.75	0.75	0.96	0.96	0.96	0.95	0.95	0.95
Adj. Flow (vph)	496	44	124	56	69	199	76	2585	556	80	1908	12
RTOR Reduction (vph)	0	0	104	0	0	73	0	0	247	0	1	0
Lane Group Flow (vph)	496	44	20	56	69	126	76	2585	309	80	1919	0
Confl. Peds. (#/hr)	5		5	1		1	5		5	4		4
Heavy Vehicles (%)	2%	9%	4%	0%	0%	0%	2%	1%	1%	0%	0%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		Perm	pm+pt		
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	13.0	13.0	13.0	6.0	6.0	6.0	52.6	47.8	47.8	49.4	46.2	
Effective Green, g (s)	13.0	13.0	13.0	6.0	6.0	6.0	52.6	47.8	47.8	49.4	46.2	
Actuated g/C Ratio	0.15	0.15	0.15	0.07	0.07	0.07	0.61	0.56	0.56	0.57	0.54	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	519	263	230	126	133	111	185	2855	871	156	2783	
v/s Ratio Prot	c0.14	0.03		0.03	0.04		c0.02	c0.50		0.02	0.37	
v/s Ratio Perm			0.01			c0.08	0.23		0.20	0.28		
v/c Ratio	0.96	0.17	0.09	0.44	0.52	1.14	0.41	0.91	0.35	0.51	0.69	
Uniform Delay, d1	36.2	31.8	31.4	38.4	38.6	40.0	10.9	17.1	10.6	16.9	14.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.06	0.92	1.12	1.56	0.18	
Incremental Delay, d2	28.4	0.3	0.2	2.5	3.4	127.7	0.6	2.5	0.5	1.3	0.7	
Delay (s)	64.6	32.1	31.5	40.9	42.0	167.7	12.3	18.2	12.3	27.7	3.3	
Level of Service	E	C	C	D	D	F	B	B	B	C	A	
Approach Delay (s)		56.3			119.0			17.1			4.3	
Approach LOS		E			F			B			A	

Intersection Summary			
HCM Average Control Delay	22.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	86.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	576	615	84	131	285	130	385	1606	643	176	974	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	3474		1805	1900	1553	1805	3610	1599	1787	3556	
Flt Permitted	0.95	1.00		0.31	1.00	1.00	0.13	1.00	1.00	0.15	1.00	
Satd. Flow (perm)	3467	3474		585	1900	1553	245	3610	1599	279	3556	
Peak-hour factor, PHF	0.96	0.96	0.96	0.92	0.92	0.92	0.94	0.94	0.94	0.92	0.92	0.92
Adj. Flow (vph)	600	641	88	142	310	141	410	1709	684	191	1059	39
RTOR Reduction (vph)	0	12	0	0	0	120	0	0	246	0	3	0
Lane Group Flow (vph)	600	717	0	142	310	21	410	1709	438	191	1095	0
Confl. Peds. (#/hr)	2		2									
Heavy Vehicles (%)	1%	1%	8%	0%	0%	4%	0%	0%	1%	1%	1%	0%
Turn Type	Prot			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases				8		8	6		6	2		
Actuated Green, G (s)	14.0	20.0		20.0	13.0	13.0	47.0	38.0	38.0	32.0	27.0	
Effective Green, g (s)	14.0	20.0		20.0	13.0	13.0	47.0	38.0	38.0	32.0	27.0	
Actuated g/C Ratio	0.16	0.23		0.23	0.15	0.15	0.55	0.44	0.44	0.37	0.31	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	564	808		235	287	235	424	1595	707	191	1116	
v/s Ratio Prot	c0.17	0.21		0.05	c0.16		c0.18	c0.47		0.06	0.31	
v/s Ratio Perm				0.09		0.01	0.35		0.27	0.31		
v/c Ratio	1.06	0.89		0.60	1.08	0.09	0.97	1.07	0.62	1.00	0.98	
Uniform Delay, d1	36.0	31.9		27.8	36.5	31.4	24.2	24.0	18.4	26.0	29.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.20	0.37	0.50	1.00	1.00	
Incremental Delay, d2	56.0	11.5		4.3	76.1	0.2	23.0	39.1	2.1	65.1	22.8	
Delay (s)	92.0	43.4		32.1	112.6	31.6	52.1	48.1	11.3	91.2	52.1	
Level of Service	F	D		C	F	C	D	D	B	F	D	
Approach Delay (s)		65.4			74.1			39.7			57.9	
Approach LOS		E			E			D			E	

Intersection Summary			
HCM Average Control Delay	52.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	86.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	262	741	249	150	370	107	231	806	87	79	1186	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1805	3494		1805	3537	
Flt Permitted	0.28	1.00	1.00	0.40	1.00	1.00	0.13	1.00		0.21	1.00	
Satd. Flow (perm)	534	3574	1599	745	3574	1599	253	3494		405	3537	
Peak-hour factor, PHF	0.97	0.97	0.97	0.93	0.93	0.93	0.97	0.97	0.97	0.93	0.93	0.93
Adj. Flow (vph)	270	764	257	161	398	115	238	831	90	85	1275	101
RTOR Reduction (vph)	0	0	137	0	0	98	0	11	0	0	8	0
Lane Group Flow (vph)	270	764	120	161	398	17	238	910	0	85	1368	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	2%	0%	0%	1%	0%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	24.0	16.0	16.0	14.1	10.1	10.1	36.0	30.0		32.0	28.0	
Effective Green, g (s)	24.0	16.0	16.0	14.1	10.1	10.1	36.0	30.0		32.0	28.0	
Actuated g/C Ratio	0.34	0.23	0.23	0.20	0.14	0.14	0.51	0.43		0.46	0.40	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	360	817	365	210	516	231	263	1497		265	1415	
v/s Ratio Prot	c0.11	c0.21		0.04	0.11		c0.08	0.26		0.02	0.39	
v/s Ratio Perm	0.15		0.08	0.11		0.01	c0.39			0.13		
v/c Ratio	0.75	0.94	0.33	0.77	0.77	0.07	0.90	0.61		0.32	0.97	
Uniform Delay, d1	18.4	26.5	22.5	26.2	28.8	25.9	15.0	15.5		11.5	20.5	
Progression Factor	0.72	0.79	0.57	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	7.8	16.4	0.5	15.3	7.0	0.1	31.5	1.8		0.7	17.2	
Delay (s)	21.0	37.2	13.3	41.5	35.9	26.0	46.5	17.3		12.2	37.7	
Level of Service	C	D	B	D	D	C	D	B		B	D	
Approach Delay (s)		29.1			35.5			23.3			36.2	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM Average Control Delay	30.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

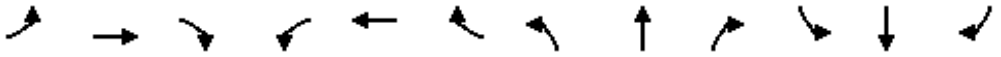
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	229	632	265	109	168	131	85	879	94	528	1687	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	0.88	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1787	3450		1787	1881	2707	1752	3518		1805	3610	1575
Flt Permitted	0.37	1.00		0.23	1.00	1.00	0.13	1.00		0.12	1.00	1.00
Satd. Flow (perm)	701	3450		430	1881	2707	248	3518		225	3610	1575
Peak-hour factor, PHF	0.93	0.93	0.93	0.95	0.95	0.95	0.96	0.96	0.96	0.99	0.99	0.99
Adj. Flow (vph)	246	680	285	115	177	138	89	916	98	533	1704	213
RTOR Reduction (vph)	0	46	0	0	0	69	0	8	0	0	0	92
Lane Group Flow (vph)	246	919	0	115	177	69	89	1006	0	533	1704	121
Confl. Peds. (#/hr)							1		1	7		7
Heavy Vehicles (%)	1%	0%	0%	1%	1%	5%	3%	1%	1%	0%	0%	0%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	34.0	26.0		21.5	17.5	42.5	33.0	29.8		58.8	51.6	51.6
Effective Green, g (s)	34.0	26.0		21.5	17.5	42.5	33.0	29.8		58.8	51.6	51.6
Actuated g/C Ratio	0.34	0.26		0.21	0.17	0.42	0.33	0.30		0.58	0.51	0.51
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	371	890		146	327	1249	129	1040		523	1848	806
v/s Ratio Prot	c0.08	c0.27		0.03	0.09	0.01	0.02	0.29		c0.25	0.47	
v/s Ratio Perm	0.14			0.14		0.01	0.20			c0.34		0.08
v/c Ratio	0.66	1.03		0.79	0.54	0.05	0.69	0.97		1.02	0.92	0.15
Uniform Delay, d1	26.2	37.4		37.3	38.0	17.3	28.9	35.0		29.8	22.7	13.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.4	38.8		23.9	1.8	0.0	14.3	21.1		44.3	9.1	0.4
Delay (s)	30.6	76.2		61.2	39.8	17.3	43.2	56.1		74.0	31.9	13.4
Level of Service	C	E		E	D	B	D	E		E	C	B
Approach Delay (s)		67.0			38.3			55.1			39.4	
Approach LOS		E			D			E			D	

Intersection Summary			
HCM Average Control Delay	49.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	100.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	298	520	186	1113	820	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.97	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1555	1719	1881	1881	1583
Flt Permitted	0.95	1.00	0.10	1.00	1.00	1.00
Satd. Flow (perm)	1770	1555	181	1881	1881	1583
Peak-hour factor, PHF	0.95	0.95	0.94	0.94	0.94	0.94
Adj. Flow (vph)	314	547	198	1184	872	179
RTOR Reduction (vph)	0	209	0	0	0	81
Lane Group Flow (vph)	314	338	198	1184	872	98
Confl. Peds. (#/hr)	3	3				
Heavy Vehicles (%)	2%	1%	5%	1%	1%	2%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	17.0	17.0	55.0	55.0	44.0	44.0
Effective Green, g (s)	17.0	17.0	55.0	55.0	44.0	44.0
Actuated g/C Ratio	0.21	0.21	0.69	0.69	0.55	0.55
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	376	330	259	1293	1035	871
v/s Ratio Prot	0.18		0.07	c0.63	0.46	
v/s Ratio Perm		c0.22	0.46			0.06
v/c Ratio	0.84	1.02	0.76	0.92	0.84	0.11
Uniform Delay, d1	30.2	31.5	16.3	10.5	15.1	8.6
Progression Factor	0.96	1.02	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.4	46.4	12.6	11.6	8.3	0.3
Delay (s)	39.3	78.6	28.9	22.1	23.4	8.9
Level of Service	D	E	C	C	C	A
Approach Delay (s)	64.3			23.1	20.9	
Approach LOS	E			C	C	

Intersection Summary			
HCM Average Control Delay	33.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	88	432	100	247	428	88	136	862	193	118	1013	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1670	1802		1805	1824		1787	3574	1467	1769	3539	1576
Flt Permitted	0.23	1.00		0.16	1.00		0.19	1.00	1.00	0.19	1.00	1.00
Satd. Flow (perm)	399	1802		297	1824		355	3574	1467	351	3539	1576
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.98	0.98	0.98	0.94	0.94	0.94
Adj. Flow (vph)	92	450	104	257	446	92	139	880	197	126	1078	72
RTOR Reduction (vph)	0	12	0	0	10	0	0	0	137	0	0	50
Lane Group Flow (vph)	92	542	0	257	528	0	139	880	60	126	1078	22
Confl. Peds. (#/hr)	7		7	4		4	8		8	2		2
Heavy Vehicles (%)	8%	2%	1%	0%	1%	1%	1%	1%	6%	2%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	25.0	21.8		32.6	25.6		25.2	21.2	21.2	25.2	21.2	21.2
Effective Green, g (s)	25.0	21.8		32.6	25.6		25.2	21.2	21.2	25.2	21.2	21.2
Actuated g/C Ratio	0.36	0.31		0.47	0.37		0.36	0.30	0.30	0.36	0.30	0.30
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	201	561		289	667		210	1082	444	207	1072	477
v/s Ratio Prot	0.02	0.30		c0.09	0.29		c0.04	0.25		0.03	c0.30	
v/s Ratio Perm	0.14			c0.33			0.20		0.04	0.18		0.01
v/c Ratio	0.46	0.97		0.89	0.79		0.66	0.81	0.13	0.61	1.01	0.05
Uniform Delay, d1	16.3	23.7		15.4	19.8		17.8	22.6	17.7	16.8	24.4	17.2
Progression Factor	1.00	1.00		2.13	0.53		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.7	29.4		17.9	3.9		7.6	6.7	0.6	5.0	28.9	0.2
Delay (s)	18.0	53.2		50.8	14.4		25.4	29.3	18.4	21.8	53.3	17.4
Level of Service	B	D		D	B		C	C	B	C	D	B
Approach Delay (s)		48.1			26.2			27.1			48.1	
Approach LOS		D			C			C			D	

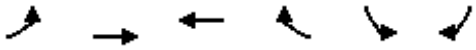
Intersection Summary			
HCM Average Control Delay	37.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	91.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	0	1	439	7	840	0	935	342	516	1096	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	0.88		0.95	1.00	0.97	1.00	
Frpb, ped/bikes		0.99			1.00	0.96		1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00			0.98	1.00		1.00	1.00	1.00	1.00	
Frt		0.93			1.00	0.85		1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.95	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1715			1751	2708		3574	1572	3400	1863	
Flt Permitted		0.90			0.73	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1583			1336	2708		3574	1572	3400	1863	
Peak-hour factor, PHF	0.50	0.50	0.50	0.95	0.95	0.95	0.90	0.90	0.90	0.98	0.98	0.98
Adj. Flow (vph)	2	0	2	462	7	884	0	1039	380	527	1118	0
RTOR Reduction (vph)	0	1	0	0	0	16	0	0	247	0	0	0
Lane Group Flow (vph)	0	3	0	0	469	868	0	1039	133	527	1118	0
Confl. Peds. (#/hr)	2		2	15		15	3		3	7		7
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	1%	1%	3%	2%	0%
Turn Type	Perm			Perm		pm+ov	Perm		Perm	Prot		
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2		2			
Actuated Green, G (s)		28.0			28.0	44.0		30.0	30.0	16.0	50.0	
Effective Green, g (s)		28.0			28.0	44.0		30.0	30.0	16.0	50.0	
Actuated g/C Ratio		0.33			0.33	0.51		0.35	0.35	0.19	0.58	
Clearance Time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		515			435	1511		1247	548	633	1083	
v/s Ratio Prot						0.11		0.29		0.16	c0.60	
v/s Ratio Perm		0.00			c0.35	0.21			0.08			
v/c Ratio		0.01			1.08	0.57		0.83	0.24	0.83	1.03	
Uniform Delay, d1		19.6			29.0	14.5		25.7	19.9	33.7	18.0	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0			65.7	0.5		6.6	1.0	9.2	36.0	
Delay (s)		19.6			94.7	15.1		32.3	21.0	42.9	54.0	
Level of Service		B			F	B		C	C	D	D	
Approach Delay (s)		19.6			42.7			29.3			50.4	
Approach LOS		B			D			C			D	

Intersection Summary			
HCM Average Control Delay	41.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	86.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	124.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	662	97	28	83	61	33	41	785	57	80	1190	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99			1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	0.97			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1698	1713			1847	1421	1805	3498		1752	3574	
Flt Permitted	0.95	0.97			0.97	1.00	0.16	1.00		0.21	1.00	
Satd. Flow (perm)	1698	1713			1847	1421	304	3498		386	3574	
Peak-hour factor, PHF	0.93	0.93	0.93	0.83	0.83	0.83	0.93	0.93	0.93	0.96	0.96	0.92
Adj. Flow (vph)	712	104	30	100	73	40	44	844	61	83	1240	0
RTOR Reduction (vph)	0	4	0	0	0	36	0	9	0	0	0	0
Lane Group Flow (vph)	420	422	0	0	173	4	44	896	0	83	1240	0
Confl. Peds. (#/hr)	2		2	2		2	1		1			
Heavy Vehicles (%)	1%	0%	0%	0%	0%	11%	0%	2%	2%	3%	1%	0%
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases						8	2			6		
Actuated Green, G (s)	16.4	16.4			6.0	6.0	25.0	25.0		25.0	25.0	
Effective Green, g (s)	16.4	16.4			6.0	6.0	25.0	25.0		25.0	25.0	
Actuated g/C Ratio	0.28	0.28			0.10	0.10	0.42	0.42		0.42	0.42	
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	469	473			187	144	128	1472		162	1504	
v/s Ratio Prot	c0.25	0.25			c0.09			0.26			c0.35	
v/s Ratio Perm						0.00	0.14			0.21		
v/c Ratio	0.90	0.89			0.93	0.03	0.34	0.61		0.51	0.82	
Uniform Delay, d1	20.7	20.6			26.5	24.1	11.6	13.4		12.7	15.3	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	19.2	18.6			44.6	0.1	7.2	1.9		11.1	5.3	
Delay (s)	39.9	39.3			71.1	24.2	18.8	15.3		23.8	20.5	
Level of Service	D	D			E	C	B	B		C	C	
Approach Delay (s)		39.6			62.3			15.4			20.7	
Approach LOS		D			E			B			C	

Intersection Summary			
HCM Average Control Delay	26.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	59.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	54	409	287	111	472	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.96		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		1872	1757		1770	1561
Flt Permitted		0.89	1.00		0.95	1.00
Satd. Flow (perm)		1683	1757		1770	1561
Peak-hour factor, PHF	0.92	0.92	0.93	0.93	0.87	0.87
Adj. Flow (vph)	59	445	309	119	543	264
RTOR Reduction (vph)	0	0	37	0	0	150
Lane Group Flow (vph)	0	504	391	0	543	114
Confl. Peds. (#/hr)	2			2	3	3
Heavy Vehicles (%)	0%	1%	2%	8%	2%	1%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		14.7	14.7		17.3	17.3
Effective Green, g (s)		14.7	14.7		17.3	17.3
Actuated g/C Ratio		0.37	0.37		0.43	0.43
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		619	646		766	675
v/s Ratio Prot			0.22		c0.31	
v/s Ratio Perm		c0.30				0.07
v/c Ratio		0.81	0.61		0.71	0.17
Uniform Delay, d1		11.4	10.3		9.3	6.9
Progression Factor		1.00	0.81		1.00	1.00
Incremental Delay, d2		8.1	1.5		5.5	0.5
Delay (s)		19.5	9.8		14.8	7.5
Level of Service		B	A		B	A
Approach Delay (s)		19.5	9.8		12.4	
Approach LOS		B	A		B	

Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	402	865	927	216	770	145	966	830	234	80	1002	268
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.88	1.00	0.91		0.97	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	3610	2842	1787	5001		3467	3610	1583	1769	3574	1590
Flt Permitted	0.95	1.00	1.00	0.24	1.00		0.95	1.00	1.00	0.33	1.00	1.00
Satd. Flow (perm)	3467	3610	2842	443	5001		3467	3610	1583	616	3574	1590
Peak-hour factor, PHF	0.99	0.99	0.99	0.96	0.96	0.96	0.97	0.97	0.97	0.99	0.99	0.99
Adj. Flow (vph)	406	874	936	225	802	151	996	856	241	81	1012	271
RTOR Reduction (vph)	0	0	15	0	29	0	0	0	126	0	0	124
Lane Group Flow (vph)	406	874	921	225	924	0	996	856	115	81	1012	147
Confl. Peds. (#/hr)				2		2				2		2
Heavy Vehicles (%)	1%	0%	0%	1%	1%	1%	1%	0%	2%	2%	1%	0%
Turn Type	Prot		pm+ov	pm+pt			Prot		Perm	pm+pt		Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4	8					2	6		6
Actuated Green, G (s)	11.0	22.0	48.0	23.0	17.0		26.0	46.0	46.0	32.0	26.0	26.0
Effective Green, g (s)	11.0	22.0	48.0	23.0	17.0		26.0	46.0	46.0	32.0	26.0	26.0
Actuated g/C Ratio	0.11	0.23	0.50	0.24	0.18		0.27	0.48	0.48	0.33	0.27	0.27
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	397	827	1539	190	886		939	1730	759	277	968	431
v/s Ratio Prot	c0.12	c0.24	0.16	0.07	0.18		c0.29	0.24		0.02	c0.28	
v/s Ratio Perm			0.16	0.21					0.07	0.08		0.09
v/c Ratio	1.02	1.06	0.60	1.18	1.04		1.06	0.49	0.15	0.29	1.05	0.34
Uniform Delay, d1	42.5	37.0	17.1	35.4	39.5		35.0	17.1	14.0	22.4	35.0	28.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.15	0.65	0.86	1.00	1.00	1.00
Incremental Delay, d2	51.1	47.4	0.6	123.7	42.1		45.2	0.9	0.4	2.7	41.5	2.1
Delay (s)	93.6	84.4	17.8	159.1	81.6		85.5	12.0	12.4	25.0	76.5	30.3
Level of Service	F	F	B	F	F		F	B	B	C	E	C
Approach Delay (s)		57.9			96.4			47.0			64.3	
Approach LOS		E			F			D			E	

Intersection Summary			
HCM Average Control Delay	62.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	104.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	652	824	1074	0	0	2052
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	0.97	0.91	0.91			0.86
Frpb, ped/bikes	0.99	0.98	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	0.95	0.85	1.00			1.00
Flt Protected	0.97	1.00	1.00			1.00
Satd. Flow (prot)	3330	1433	5136			6471
Flt Permitted	0.97	1.00	1.00			1.00
Satd. Flow (perm)	3330	1433	5136			6471
Peak-hour factor, PHF	0.97	0.97	0.97	0.92	0.92	0.99
Adj. Flow (vph)	672	849	1107	0	0	2073
RTOR Reduction (vph)	19	19	0	0	0	0
Lane Group Flow (vph)	1018	465	1107	0	0	2073
Confl. Peds. (#/hr)	2	2				
Heavy Vehicles (%)	1%	1%	1%	2%	2%	1%
Turn Type		Perm				
Protected Phases	8		2			6
Permitted Phases		8				
Actuated Green, G (s)	40.1	40.1	47.9			47.9
Effective Green, g (s)	40.1	40.1	47.9			47.9
Actuated g/C Ratio	0.42	0.42	0.50			0.50
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	1391	599	2563			3229
v/s Ratio Prot	0.31		0.22			c0.32
v/s Ratio Perm		c0.32				
v/c Ratio	0.73	0.78	0.43			0.64
Uniform Delay, d1	23.4	24.1	15.4			17.7
Progression Factor	1.00	1.00	0.81			0.81
Incremental Delay, d2	2.0	6.3	0.4			0.5
Delay (s)	25.5	30.3	12.9			14.8
Level of Service	C	C	B			B
Approach Delay (s)	27.0		12.9			14.8
Approach LOS	C		B			B

Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	1063	519	914	1788
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0
Lane Util. Factor			0.91		0.97	0.91
Frpb, ped/bikes			0.99		1.00	1.00
Flpb, ped/bikes			1.00		1.00	1.00
Frt			0.95		1.00	1.00
Flt Protected			1.00		0.95	1.00
Satd. Flow (prot)			4855		3467	5136
Flt Permitted			1.00		0.95	1.00
Satd. Flow (perm)			4855		3467	5136
Peak-hour factor, PHF	0.92	0.92	0.97	0.97	0.99	0.99
Adj. Flow (vph)	0	0	1096	535	923	1806
RTOR Reduction (vph)	0	0	26	0	0	0
Lane Group Flow (vph)	0	0	1605	0	923	1806
Confl. Peds. (#/hr)				3		
Heavy Vehicles (%)	2%	2%	1%	1%	1%	1%
Turn Type					Prot	
Protected Phases			2		1	6
Permitted Phases						
Actuated Green, G (s)			55.3		32.7	96.0
Effective Green, g (s)			55.3		32.7	96.0
Actuated g/C Ratio			0.58		0.34	1.00
Clearance Time (s)			4.0		4.0	4.0
Vehicle Extension (s)			3.0		3.0	3.0
Lane Grp Cap (vph)			2797		1181	5136
v/s Ratio Prot			c0.33		c0.27	0.35
v/s Ratio Perm						
v/c Ratio			0.57		0.78	0.35
Uniform Delay, d1			12.9		28.4	0.0
Progression Factor			0.25		0.75	1.00
Incremental Delay, d2			0.5		2.7	0.1
Delay (s)			3.7		23.9	0.1
Level of Service			A		C	A
Approach Delay (s)	0.0		3.7			8.2
Approach LOS	A		A			A

Intersection Summary			
HCM Average Control Delay	6.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

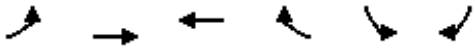
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	4	2	205	6	122	0	1427	206	214	1488	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			0.99			1.00		1.00	1.00	
Frt		0.96			0.95			0.98		1.00	1.00	
Flt Protected		0.99			0.97			1.00		0.95	1.00	
Satd. Flow (prot)		1808			1712			3499		1787	3574	
Flt Permitted		0.96			0.80			1.00		0.07	1.00	
Satd. Flow (perm)		1754			1411			3499		139	3574	
Peak-hour factor, PHF	0.31	0.31	0.31	0.85	0.85	0.85	0.95	0.95	0.95	0.94	0.94	0.94
Adj. Flow (vph)	3	13	6	241	7	144	0	1502	217	228	1583	0
RTOR Reduction (vph)	0	4	0	0	21	0	0	12	0	0	0	0
Lane Group Flow (vph)	0	18	0	0	371	0	0	1707	0	228	1583	0
Confl. Peds. (#/hr)	4		4	5		5	2		2	6		6
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	1%	0%	1%	1%	0%
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.0			25.0			50.0		63.0	63.0	
Effective Green, g (s)		25.0			25.0			50.0		63.0	63.0	
Actuated g/C Ratio		0.26			0.26			0.52		0.66	0.66	
Clearance Time (s)		4.0			4.0			4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		457			367			1822		246	2345	
v/s Ratio Prot								0.49		c0.09	0.44	
v/s Ratio Perm		0.01			c0.26					c0.52		
v/c Ratio		0.04			1.01			0.94		0.93	0.68	
Uniform Delay, d1		26.5			35.5			21.5		29.0	10.2	
Progression Factor		1.00			1.00			0.69		1.54	0.60	
Incremental Delay, d2		0.0			49.4			7.5		36.8	1.5	
Delay (s)		26.6			84.9			22.4		81.5	7.6	
Level of Service		C			F			C		F	A	
Approach Delay (s)		26.6			84.9			22.4			16.9	
Approach LOS		C			F			C			B	

Intersection Summary			
HCM Average Control Delay	26.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	123.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	254	430	77	220	382	382	68	788	147	434	954	189
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	1802		1805	1863	1615	1752	3574	1615	1805	3574	1568
Flt Permitted	0.17	1.00		0.15	1.00	1.00	0.24	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	315	1802		292	1863	1615	435	3574	1615	253	3574	1568
Peak-hour factor, PHF	0.89	0.89	0.89	0.92	0.92	0.92	0.90	0.90	0.90	0.99	0.99	0.99
Adj. Flow (vph)	285	483	87	239	415	415	76	876	163	438	964	191
RTOR Reduction (vph)	0	7	0	0	0	21	0	0	119	0	0	113
Lane Group Flow (vph)	285	563	0	239	415	394	76	876	44	438	964	78
Heavy Vehicles (%)	1%	3%	3%	0%	2%	0%	3%	1%	0%	0%	1%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)	39.0	28.0		35.0	26.0	43.0	30.0	26.0	26.0	47.0	39.0	39.0
Effective Green, g (s)	39.0	28.0		35.0	26.0	43.0	30.0	26.0	26.0	47.0	39.0	39.0
Actuated g/C Ratio	0.41	0.29		0.36	0.27	0.45	0.31	0.27	0.27	0.49	0.41	0.41
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	297	526		248	505	791	191	968	437	399	1452	637
v/s Ratio Prot	c0.11	c0.31		0.09	0.22	0.09	0.02	0.25		c0.19	0.27	
v/s Ratio Perm	0.28			0.26		0.16	0.11		0.03	c0.34		0.05
v/c Ratio	0.96	1.07		0.96	0.82	0.50	0.40	0.90	0.10	1.10	0.66	0.12
Uniform Delay, d1	22.8	34.0		25.8	32.8	18.8	23.9	33.8	26.2	27.5	23.2	17.8
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.63	0.73	0.67
Incremental Delay, d2	40.8	59.4		46.7	10.4	0.5	1.4	13.5	0.5	66.8	1.7	0.3
Delay (s)	63.6	93.4		72.5	43.2	19.3	25.3	47.3	26.7	111.7	18.6	12.2
Level of Service	E	F		E	D	B	C	D	C	F	B	B
Approach Delay (s)		83.4			40.5			42.8			43.4	
Approach LOS		F			D			D			D	

Intersection Summary			
HCM Average Control Delay	50.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	18	340	420	19	117	82
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	19	358	442	20	127	89
Pedestrians		4	4		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	464				854	458
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	464				854	458
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				61	85
cM capacity (veh/h)	1106				324	604

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	377	462	216
Volume Left	19	0	127
Volume Right	0	20	89
cSH	1106	1700	401
Volume to Capacity	0.02	0.27	0.54
Queue Length 95th (ft)	1	0	77
Control Delay (s)	0.6	0.0	24.0
Lane LOS	A		C
Approach Delay (s)	0.6	0.0	24.0
Approach LOS			C

Intersection Summary			
Average Delay	5.1		
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (veh/h)	1400	67	107	1635	63	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.99	0.99	0.91	0.92
Hourly flow rate (vph)	1429	68	108	1652	69	0
Pedestrians	4				1	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	872			236		
pX, platoon unblocked						
vC, conflicting volume			1498		2234	511
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1498		2234	511
tC, single (s)			4.1		6.9	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			76		0	100
cM capacity (veh/h)			448		27	507

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4	SW 1
Volume Total	571	571	354	108	551	551	551	69
Volume Left	0	0	0	108	0	0	0	69
Volume Right	0	0	68	0	0	0	0	0
cSH	1700	1700	1700	448	1700	1700	1700	27
Volume to Capacity	0.34	0.34	0.21	0.24	0.32	0.32	0.32	2.61
Queue Length 95th (ft)	0	0	0	23	0	0	0	210
Control Delay (s)	0.0	0.0	0.0	15.6	0.0	0.0	0.0	1040.5
Lane LOS				C				F
Approach Delay (s)	0.0			1.0				1040.5
Approach LOS								F

Intersection Summary			
Average Delay	22.2		
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	292	105	37	296	476	94
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	332	119	39	312	517	102
Pedestrians	7			6	6	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	815	323	627			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	815	323	627			
tC, single (s)	6.8	7.0	4.4			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.3			
p0 queue free %	0	82	96			
cM capacity (veh/h)	300	663	875			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	451	143	208	345	275
Volume Left	332	39	0	0	0
Volume Right	119	0	0	0	102
cSH	351	875	1700	1700	1700
Volume to Capacity	1.29	0.04	0.12	0.20	0.16
Queue Length 95th (ft)	518	3	0	0	0
Control Delay (s)	180.1	2.9	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	180.1	1.2		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	57.5		
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	57	69	84	116	5	20	1	9	12	4	4
Peak Hour Factor	0.86	0.86	0.86	0.81	0.81	0.81	0.68	0.68	0.68	0.71	0.71	0.71
Hourly flow rate (vph)	1	66	80	104	143	6	29	1	13	17	6	6

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	148	253	44	28
Volume Left (vph)	1	104	29	17
Volume Right (vph)	80	6	13	6
Hadj (s)	-0.29	0.09	0.02	0.00
Departure Headway (s)	4.1	4.3	4.8	4.8
Degree Utilization, x	0.17	0.30	0.06	0.04
Capacity (veh/h)	859	808	683	675
Control Delay (s)	7.9	9.2	8.1	8.0
Approach Delay (s)	7.9	9.2	8.1	8.0
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.6			
HCM Level of Service	A			
Intersection Capacity Utilization	32.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	152	1400	0	0	1741
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.89	0.98	0.92	0.92	0.99
Hourly flow rate (vph)	0	171	1429	0	0	1759
Pedestrians	1					4
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			983			125
pX, platoon unblocked						
vC, conflicting volume	2016	481			1430	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2016	481			1430	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	68			100	
cM capacity (veh/h)	51	531			471	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	171	476	476	476	586	586	586
Volume Left	0	0	0	0	0	0	0
Volume Right	171	0	0	0	0	0	0
cSH	531	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.32	0.28	0.28	0.28	0.34	0.34	0.34
Queue Length 95th (ft)	34	0	0	0	0	0	0
Control Delay (s)	14.9	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	14.9	0.0			0.0		
Approach LOS	B						

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	1349	389	678	1377	0	0	0	0	597	173	509
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00	0.99	1.00	1.00					1.00	1.00	0.99
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		6536	1591	3467	3574					1643	3012	1433
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.98	1.00
Satd. Flow (perm)		6536	1591	3467	3574					1643	3012	1433
Peak-hour factor, PHF	0.92	0.97	0.97	0.98	0.98	0.92	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	0	1391	401	692	1405	0	0	0	0	686	199	585
RTOR Reduction (vph)	0	0	220	0	0	0	0	0	0	0	25	25
Lane Group Flow (vph)	0	1391	181	692	1405	0	0	0	0	384	722	314
Confl. Peds. (#/hr)	2		2							2		2
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	1%	1%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		22.0	22.0	19.0	45.0					27.0	27.0	27.0
Effective Green, g (s)		22.0	22.0	19.0	45.0					27.0	27.0	27.0
Actuated g/C Ratio		0.28	0.28	0.24	0.56					0.34	0.34	0.34
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1797	438	823	2010					555	1017	484
v/s Ratio Prot		c0.21		c0.20	0.39					0.23	c0.24	
v/s Ratio Perm			0.11									0.22
v/c Ratio		0.77	0.41	0.84	0.70					0.69	0.71	0.65
Uniform Delay, d1		26.7	23.7	29.1	12.6					22.9	23.1	22.5
Progression Factor		1.00	1.00	0.35	0.54					1.00	1.00	1.00
Incremental Delay, d2		3.3	2.9	5.8	1.5					3.7	2.3	3.0
Delay (s)		30.0	26.6	15.9	8.4					26.6	25.4	25.5
Level of Service		C	C	B	A					C	C	C
Approach Delay (s)		29.3			10.8			0.0			25.7	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	21.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	107	762	455	1469	0	0	1659	565	0	0	346
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.95			0.86	0.88			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1805	2814	3502	3574			6471	2787			1644
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1805	2814	3502	3574			6471	2787			1644
Peak-hour factor, PHF	0.94	0.94	0.98	0.98	0.92	0.92	0.99	0.99	0.92	0.92	0.93
Adj. Flow (vph)	114	811	464	1499	0	0	1676	571	0	0	372
RTOR Reduction (vph)	0	35	0	0	0	0	0	369	0	0	306
Lane Group Flow (vph)	114	776	464	1499	0	0	1676	202	0	0	66
Confl. Peds. (#/hr)	1	1	3		3						
Heavy Vehicles (%)	0%	1%	0%	1%	2%	2%	1%	2%	2%	2%	0%
Turn Type		Prot	Prot					Perm			Over
Protected Phases	4	4	1	6			2				1
Permitted Phases								2			
Actuated Green, G (s)	25.4	25.4	14.3	46.6			28.3	28.3			14.3
Effective Green, g (s)	25.4	25.4	14.3	46.6			28.3	28.3			14.3
Actuated g/C Ratio	0.32	0.32	0.18	0.58			0.35	0.35			0.18
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	573	893	626	2082			2289	986			294
v/s Ratio Prot	0.06	c0.28	0.13	c0.42			0.26				0.04
v/s Ratio Perm								0.07			
v/c Ratio	0.20	0.87	0.74	0.72			0.73	0.20			0.23
Uniform Delay, d1	19.9	25.7	31.1	12.0			22.5	18.0			28.1
Progression Factor	1.00	1.00	1.21	1.16			0.59	1.01			1.00
Incremental Delay, d2	0.2	9.0	3.1	1.4			1.5	0.3			0.4
Delay (s)	20.1	34.7	40.8	15.4			14.9	18.6			28.5
Level of Service	C	C	D	B			B	B			C
Approach Delay (s)	32.9			21.4			15.9		28.5		
Approach LOS	C			C			B		C		

Intersection Summary			
HCM Average Control Delay	21.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	237	22	75	68	20	101	112	1983	153	47	1980	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1900	1532	1805	1900	1615	1805	5187	1588	1770	5130	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.08	1.00	1.00	0.09	1.00	
Satd. Flow (perm)	3433	1900	1532	1805	1900	1615	158	5187	1588	163	5130	
Peak-hour factor, PHF	0.93	0.93	0.93	0.94	0.94	0.94	0.94	0.94	0.94	0.95	0.95	0.95
Adj. Flow (vph)	255	24	81	72	21	107	119	2110	163	49	2084	16
RTOR Reduction (vph)	0	0	72	0	0	85	0	0	65	0	1	0
Lane Group Flow (vph)	255	24	9	72	21	22	119	2110	98	49	2099	0
Confl. Peds. (#/hr)	1		1				3		3			
Heavy Vehicles (%)	2%	0%	4%	0%	0%	0%	0%	0%	0%	2%	1%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		Perm	pm+pt		
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	8.8	8.8	8.8	4.8	4.8	4.8	52.8	48.0	48.0	48.0	45.6	
Effective Green, g (s)	8.8	8.8	8.8	4.8	4.8	4.8	52.8	48.0	48.0	48.0	45.6	
Actuated g/C Ratio	0.11	0.11	0.11	0.06	0.06	0.06	0.66	0.60	0.60	0.60	0.57	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	378	209	169	108	114	97	203	3112	953	146	2924	
v/s Ratio Prot	c0.07	0.01		c0.04	0.01		c0.04	0.41		0.01	c0.41	
v/s Ratio Perm			0.01			0.01	0.35		0.06	0.19		
v/c Ratio	0.67	0.11	0.05	0.67	0.18	0.23	0.59	0.68	0.10	0.34	0.72	
Uniform Delay, d1	34.2	32.1	31.9	36.8	35.7	35.8	10.7	10.8	6.8	9.0	12.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.07	0.80	1.00	0.70	0.32	
Incremental Delay, d2	4.7	0.2	0.1	14.5	0.8	1.2	2.9	0.8	0.1	0.4	0.4	
Delay (s)	38.9	32.3	32.0	51.3	36.5	37.1	14.4	9.4	7.0	6.6	4.5	
Level of Service	D	C	C	D	D	D	B	A	A	A	A	
Approach Delay (s)		36.9			42.1			9.5			4.5	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	572	409	163	105	404	305	262	1038	456	212	1081	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	3397		1787	1881	1599	1805	3574	1555	1787	3554	
Flt Permitted	0.95	1.00		0.41	1.00	1.00	0.15	1.00	1.00	0.17	1.00	
Satd. Flow (perm)	3467	3397		778	1881	1599	279	3574	1555	311	3554	
Peak-hour factor, PHF	0.91	0.91	0.91	0.92	0.92	0.92	0.93	0.93	0.93	0.95	0.95	0.95
Adj. Flow (vph)	629	449	179	114	439	332	282	1116	490	223	1138	44
RTOR Reduction (vph)	0	51	0	0	0	111	0	0	258	0	3	0
Lane Group Flow (vph)	629	577	0	114	439	221	282	1116	232	223	1179	0
Confl. Peds. (#/hr)							3		3	2		2
Heavy Vehicles (%)	1%	2%	1%	1%	1%	1%	0%	1%	1%	1%	1%	0%
Turn Type	Prot			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases				8		8	6		6	2		
Actuated Green, G (s)	14.0	27.0		22.6	17.8	17.8	35.2	27.2	27.2	29.2	24.2	
Effective Green, g (s)	14.0	27.0		22.6	17.8	17.8	35.2	27.2	27.2	29.2	24.2	
Actuated g/C Ratio	0.18	0.34		0.28	0.22	0.22	0.44	0.34	0.34	0.36	0.30	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	607	1146		280	419	356	275	1215	529	206	1075	
v/s Ratio Prot	c0.18	0.17		0.02	c0.23		c0.10	0.31		0.07	0.33	
v/s Ratio Perm				0.09		0.14	c0.35		0.15	0.33		
v/c Ratio	1.04	0.50		0.41	1.05	0.62	1.03	0.92	0.44	1.08	1.10	
Uniform Delay, d1	33.0	21.2		22.0	31.1	28.1	18.8	25.3	20.5	24.2	27.9	
Progression Factor	0.96	0.81		1.00	1.00	1.00	1.21	0.58	0.83	1.00	1.00	
Incremental Delay, d2	43.3	0.3		1.0	57.0	3.3	54.4	10.1	2.0	86.4	57.7	
Delay (s)	74.8	17.5		23.0	88.1	31.4	77.2	24.8	19.0	110.6	85.6	
Level of Service	E	B		C	F	C	E	C	B	F	F	
Approach Delay (s)		46.2			58.4			31.1			89.5	
Approach LOS		D			E			C			F	

Intersection Summary			
HCM Average Control Delay	54.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

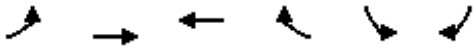


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	197	175	117	826	759	187
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1787	1563	1770	1881	1881	1599
Flt Permitted	0.95	1.00	0.20	1.00	1.00	1.00
Satd. Flow (perm)	1787	1563	366	1881	1881	1599
Peak-hour factor, PHF	0.93	0.93	0.94	0.94	0.95	0.95
Adj. Flow (vph)	212	188	124	879	799	197
RTOR Reduction (vph)	0	156	0	0	0	76
Lane Group Flow (vph)	212	32	124	879	799	121
Confl. Peds. (#/hr)	1	1	1			
Heavy Vehicles (%)	1%	1%	2%	1%	1%	1%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	13.6	13.6	58.4	58.4	49.3	49.3
Effective Green, g (s)	13.6	13.6	58.4	58.4	49.3	49.3
Actuated g/C Ratio	0.17	0.17	0.73	0.73	0.62	0.62
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	304	266	357	1373	1159	985
v/s Ratio Prot	c0.12		0.02	c0.47	c0.42	
v/s Ratio Perm		0.02	0.23			0.08
v/c Ratio	0.70	0.12	0.35	0.64	0.69	0.12
Uniform Delay, d1	31.3	28.1	7.7	5.5	10.2	6.4
Progression Factor	1.00	1.00	0.56	0.36	0.87	1.73
Incremental Delay, d2	6.8	0.2	0.3	1.3	1.5	0.1
Delay (s)	38.1	28.3	4.7	3.3	10.4	11.1
Level of Service	D	C	A	A	B	B
Approach Delay (s)	33.5			3.4	10.6	
Approach LOS	C			A	B	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	88	318	91	179	380	100	165	690	163	138	642	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1796		1805	1826		1719	1881	1540	1805	1900	1547
Flt Permitted	0.19	1.00		0.17	1.00		0.12	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	355	1796		322	1826		218	1881	1540	236	1900	1547
Peak-hour factor, PHF	0.86	0.86	0.86	0.91	0.91	0.91	0.96	0.96	0.96	0.90	0.90	0.90
Adj. Flow (vph)	102	370	106	197	418	110	172	719	170	153	713	129
RTOR Reduction (vph)	0	13	0	0	11	0	0	0	99	0	0	77
Lane Group Flow (vph)	102	463	0	197	517	0	172	719	71	153	713	52
Confl. Peds. (#/hr)	2		2				7		7	5		5
Heavy Vehicles (%)	3%	1%	4%	0%	1%	0%	5%	1%	1%	0%	0%	1%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	24.0	20.8		29.6	23.6		38.2	33.2	33.2	36.2	32.2	32.2
Effective Green, g (s)	24.0	20.8		29.6	23.6		38.2	33.2	33.2	36.2	32.2	32.2
Actuated g/C Ratio	0.30	0.26		0.37	0.30		0.48	0.42	0.42	0.45	0.40	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	162	467		230	539		198	781	639	185	765	623
v/s Ratio Prot	0.03	0.26		c0.06	c0.28		c0.05	c0.38		0.04	0.38	
v/s Ratio Perm	0.16			0.25			0.36		0.05	0.33		0.03
v/c Ratio	0.63	0.99		0.86	0.96		0.87	0.92	0.11	0.83	0.93	0.08
Uniform Delay, d1	23.6	29.5		20.9	27.7		17.8	22.2	14.3	18.2	22.9	14.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.10	0.52	0.38
Incremental Delay, d2	7.4	39.5		25.5	28.3		30.7	17.8	0.3	20.5	16.4	0.2
Delay (s)	31.0	69.0		46.4	56.0		48.5	40.0	14.7	40.6	28.2	5.8
Level of Service	C	E		D	E		D	D	B	D	C	A
Approach Delay (s)		62.3			53.4			37.3			27.2	
Approach LOS		E			D			D			C	

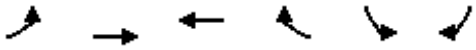
Intersection Summary			
HCM Average Control Delay	42.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	61	263	257	91	95	63
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.97	0.97	0.88	0.88
Hourly flow rate (vph)	66	286	265	94	108	72
Pedestrians		1	1		1	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			840			
pX, platoon unblocked						
vC, conflicting volume	360				732	314
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	360				732	314
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				70	90
cM capacity (veh/h)	1209				365	730

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	352	359	108	72
Volume Left	66	0	108	0
Volume Right	0	94	0	72
cSH	1209	1700	365	730
Volume to Capacity	0.05	0.21	0.30	0.10
Queue Length 95th (ft)	4	0	30	8
Control Delay (s)	2.0	0.0	19.0	10.5
Lane LOS	A		C	B
Approach Delay (s)	2.0	0.0	15.6	
Approach LOS			C	

Intersection Summary			
Average Delay	3.9		
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	2	251	308	27	33	27
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.96	0.96	0.86	0.86
Hourly flow rate (vph)	2	264	321	28	38	31
Pedestrians		4	4			
Lane Width (ft)		12.0	12.0			
Walking Speed (ft/s)		4.0	4.0			
Percent Blockage		0	0			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	349				607	339
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	349				607	339
tC, single (s)	5.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	3.1				3.5	3.3
p0 queue free %	100				92	95
cM capacity (veh/h)	820				453	697

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	266	349	70
Volume Left	2	0	38
Volume Right	0	28	31
cSH	820	1700	538
Volume to Capacity	0.00	0.21	0.13
Queue Length 95th (ft)	0	0	11
Control Delay (s)	0.1	0.0	12.7
Lane LOS	A		B
Approach Delay (s)	0.1	0.0	12.7
Approach LOS			B

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	29.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (veh/h)	1510	29	47	1326	12	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.97	0.97	0.95	0.95	0.83	0.92
Hourly flow rate (vph)	1557	30	49	1396	14	0
Pedestrians	2				1	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1588		2139	535
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1588		2139	535
tC, single (s)			4.3		7.2	6.9
tC, 2 stage (s)						
tF (s)			2.3		3.7	3.3
p0 queue free %			87		50	100
cM capacity (veh/h)			382		29	489

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4	SW 1
Volume Total	623	623	341	49	465	465	465	14
Volume Left	0	0	0	49	0	0	0	14
Volume Right	0	0	30	0	0	0	0	0
cSH	1700	1700	1700	382	1700	1700	1700	29
Volume to Capacity	0.37	0.37	0.20	0.13	0.27	0.27	0.27	0.50
Queue Length 95th (ft)	0	0	0	11	0	0	0	40
Control Delay (s)	0.0	0.0	0.0	15.8	0.0	0.0	0.0	217.9
Lane LOS				C				F
Approach Delay (s)	0.0			0.5				217.9
Approach LOS								F

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	82	13	19	202	162	48
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.73	0.73	0.70	0.70	0.97	0.97
Hourly flow rate (vph)	112	18	27	289	167	49
Pedestrians				1	1	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				4.0	4.0	
Percent Blockage				0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	391	109	216			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	391	109	216			
tC, single (s)	6.9	7.1	4.4			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.3			
p0 queue free %	80	98	98			
cM capacity (veh/h)	567	901	1274			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	130	123	192	111	105
Volume Left	112	27	0	0	0
Volume Right	18	0	0	0	49
cSH	597	1274	1700	1700	1700
Volume to Capacity	0.22	0.02	0.11	0.07	0.06
Queue Length 95th (ft)	21	2	0	0	0
Control Delay (s)	12.7	1.9	0.0	0.0	0.0
Lane LOS	B	A			
Approach Delay (s)	12.7	0.7		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	27.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	69	25	21	56	1	33	1	23	4	1	5
Peak Hour Factor	0.92	0.92	0.92	0.87	0.87	0.87	0.82	0.82	0.82	0.67	0.67	0.67
Hourly flow rate (vph)	1	75	27	24	64	1	40	1	28	6	1	7

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	103	90	70	15
Volume Left (vph)	1	24	40	6
Volume Right (vph)	27	1	28	7
Hadj (s)	-0.05	0.15	-0.09	-0.22
Departure Headway (s)	4.1	4.3	4.3	4.2
Degree Utilization, x	0.12	0.11	0.08	0.02
Capacity (veh/h)	847	808	803	814
Control Delay (s)	7.7	7.9	7.6	7.3
Approach Delay (s)	7.7	7.9	7.6	7.3
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.7			
HCM Level of Service	A			
Intersection Capacity Utilization	22.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	61	1510	0	0	1373
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.88	0.97	0.92	0.92	0.95
Hourly flow rate (vph)	0	69	1557	0	0	1445
Pedestrians	1					2
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2039	522			1558	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2039	522			1558	
tC, single (s)	6.8	7.0			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	100	86			100	
cM capacity (veh/h)	49	488			420	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	69	519	519	519	482	482	482
Volume Left	0	0	0	0	0	0	0
Volume Right	69	0	0	0	0	0	0
cSH	488	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.14	0.31	0.31	0.31	0.28	0.28	0.28
Queue Length 95th (ft)	12	0	0	0	0	0	0
Control Delay (s)	13.6	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	13.6	0.0			0.0		
Approach LOS	B						

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	40.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	1349	389	678	1377	0	0	0	0	597	173	509
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00	0.99	1.00	1.00					1.00	1.00	0.99
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.95	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		6536	1591	3467	3574					1643	3012	1433
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.98	1.00
Satd. Flow (perm)		6536	1591	3467	3574					1643	3012	1433
Peak-hour factor, PHF	0.92	0.97	0.97	0.98	0.98	0.92	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	0	1391	401	692	1405	0	0	0	0	686	199	585
RTOR Reduction (vph)	0	0	221	0	0	0	0	0	0	0	25	25
Lane Group Flow (vph)	0	1391	180	692	1405	0	0	0	0	384	722	314
Confl. Peds. (#/hr)	2		2							2		2
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	1%	1%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		21.9	21.9	19.1	45.0					27.0	27.0	27.0
Effective Green, g (s)		21.9	21.9	19.1	45.0					27.0	27.0	27.0
Actuated g/C Ratio		0.27	0.27	0.24	0.56					0.34	0.34	0.34
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1789	436	828	2010					555	1017	484
v/s Ratio Prot		c0.21		c0.20	0.39					0.23	c0.24	
v/s Ratio Perm			0.11									0.22
v/c Ratio		0.78	0.41	0.84	0.70					0.69	0.71	0.65
Uniform Delay, d1		26.8	23.8	29.0	12.6					22.9	23.1	22.5
Progression Factor		1.00	1.00	0.34	0.54					1.00	1.00	1.00
Incremental Delay, d2		3.4	2.9	5.5	1.5					3.7	2.3	3.0
Delay (s)		30.2	26.7	15.5	8.4					26.6	25.4	25.5
Level of Service		C	C	B	A					C	C	C
Approach Delay (s)		29.4			10.7			0.0			25.7	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	21.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	107	762	455	1469	0	0	1659	565	0	0	346
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.95			0.86	0.88			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1805	2814	3502	3574			6471	2787			1644
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1805	2814	3502	3574			6471	2787			1644
Peak-hour factor, PHF	0.94	0.94	0.98	0.98	0.92	0.92	0.99	0.99	0.92	0.92	0.93
Adj. Flow (vph)	114	811	464	1499	0	0	1676	571	0	0	372
RTOR Reduction (vph)	0	35	0	0	0	0	0	369	0	0	306
Lane Group Flow (vph)	114	776	464	1499	0	0	1676	202	0	0	66
Confl. Peds. (#/hr)	1	1	3		3						
Heavy Vehicles (%)	0%	1%	0%	1%	2%	2%	1%	2%	2%	2%	0%
Turn Type		Prot	Prot					Perm			Over
Protected Phases	4	4	1	6			2				1
Permitted Phases								2			
Actuated Green, G (s)	25.4	25.4	14.3	46.6			28.3	28.3			14.3
Effective Green, g (s)	25.4	25.4	14.3	46.6			28.3	28.3			14.3
Actuated g/C Ratio	0.32	0.32	0.18	0.58			0.35	0.35			0.18
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	573	893	626	2082			2289	986			294
v/s Ratio Prot	0.06	c0.28	0.13	c0.42			0.26				0.04
v/s Ratio Perm								0.07			
v/c Ratio	0.20	0.87	0.74	0.72			0.73	0.20			0.23
Uniform Delay, d1	19.9	25.7	31.1	12.0			22.5	18.0			28.1
Progression Factor	1.00	1.00	1.21	1.17			0.59	1.01			1.00
Incremental Delay, d2	0.2	9.0	3.1	1.4			1.5	0.3			0.4
Delay (s)	20.1	34.7	40.8	15.4			14.9	18.6			28.5
Level of Service	C	C	D	B			B	B			C
Approach Delay (s)	32.9			21.4			15.8		28.5		
Approach LOS	C			C			B		C		

Intersection Summary			
HCM Average Control Delay	21.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	237	22	75	68	20	101	112	1983	153	47	1980	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1900	1532	1805	1900	1615	1805	5187	1588	1770	5130	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.08	1.00	1.00	0.09	1.00	
Satd. Flow (perm)	3433	1900	1532	1805	1900	1615	158	5187	1588	163	5130	
Peak-hour factor, PHF	0.93	0.93	0.93	0.94	0.94	0.94	0.94	0.94	0.94	0.95	0.95	0.95
Adj. Flow (vph)	255	24	81	72	21	107	119	2110	163	49	2084	16
RTOR Reduction (vph)	0	0	72	0	0	85	0	0	65	0	1	0
Lane Group Flow (vph)	255	24	9	72	21	22	119	2110	98	49	2099	0
Confl. Peds. (#/hr)	1		1				3		3			
Heavy Vehicles (%)	2%	0%	4%	0%	0%	0%	0%	0%	0%	2%	1%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		Perm	pm+pt		
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	8.8	8.8	8.8	4.8	4.8	4.8	52.8	48.0	48.0	48.0	45.6	
Effective Green, g (s)	8.8	8.8	8.8	4.8	4.8	4.8	52.8	48.0	48.0	48.0	45.6	
Actuated g/C Ratio	0.11	0.11	0.11	0.06	0.06	0.06	0.66	0.60	0.60	0.60	0.57	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	378	209	169	108	114	97	203	3112	953	146	2924	
v/s Ratio Prot	c0.07	0.01		c0.04	0.01		c0.04	0.41		0.01	c0.41	
v/s Ratio Perm			0.01			0.01	0.35		0.06	0.19		
v/c Ratio	0.67	0.11	0.05	0.67	0.18	0.23	0.59	0.68	0.10	0.34	0.72	
Uniform Delay, d1	34.2	32.1	31.9	36.8	35.7	35.8	10.7	10.8	6.8	9.0	12.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.07	0.80	1.00	0.70	0.32	
Incremental Delay, d2	4.7	0.2	0.1	14.5	0.8	1.2	2.9	0.8	0.1	0.4	0.4	
Delay (s)	38.9	32.3	32.0	51.3	36.5	37.1	14.4	9.4	7.0	6.6	4.5	
Level of Service	D	C	C	D	D	D	B	A	A	A	A	
Approach Delay (s)		36.9			42.1			9.5			4.5	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	572	409	163	105	404	305	262	1038	456	212	1081	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	3397		1787	1881	1599	1805	3574	1555	1787	3554	
Flt Permitted	0.95	1.00		0.41	1.00	1.00	0.15	1.00	1.00	0.17	1.00	
Satd. Flow (perm)	3467	3397		778	1881	1599	279	3574	1555	311	3554	
Peak-hour factor, PHF	0.91	0.91	0.91	0.92	0.92	0.92	0.93	0.93	0.93	0.95	0.95	0.95
Adj. Flow (vph)	629	449	179	114	439	332	282	1116	490	223	1138	44
RTOR Reduction (vph)	0	51	0	0	0	111	0	0	258	0	3	0
Lane Group Flow (vph)	629	577	0	114	439	221	282	1116	232	223	1179	0
Confl. Peds. (#/hr)							3		3	2		2
Heavy Vehicles (%)	1%	2%	1%	1%	1%	1%	0%	1%	1%	1%	1%	0%
Turn Type	Prot			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases				8		8	6		6	2		
Actuated Green, G (s)	14.0	27.0		22.6	17.8	17.8	35.2	27.2	27.2	29.2	24.2	
Effective Green, g (s)	14.0	27.0		22.6	17.8	17.8	35.2	27.2	27.2	29.2	24.2	
Actuated g/C Ratio	0.18	0.34		0.28	0.22	0.22	0.44	0.34	0.34	0.36	0.30	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	607	1146		280	419	356	275	1215	529	206	1075	
v/s Ratio Prot	c0.18	0.17		0.02	c0.23		c0.10	0.31		0.07	0.33	
v/s Ratio Perm				0.09		0.14	c0.35		0.15	0.33		
v/c Ratio	1.04	0.50		0.41	1.05	0.62	1.03	0.92	0.44	1.08	1.10	
Uniform Delay, d1	33.0	21.2		22.0	31.1	28.1	18.8	25.3	20.5	24.2	27.9	
Progression Factor	0.95	0.85		1.00	1.00	1.00	1.21	0.58	0.83	1.00	1.00	
Incremental Delay, d2	43.3	0.3		1.0	57.0	3.3	54.4	10.1	2.0	86.4	57.7	
Delay (s)	74.7	18.3		23.0	88.1	31.4	77.2	24.8	19.0	110.6	85.6	
Level of Service	E	B		C	F	C	E	C	B	F	F	
Approach Delay (s)		46.5			58.4			31.1			89.5	
Approach LOS		D			E			C			F	

Intersection Summary			
HCM Average Control Delay	54.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

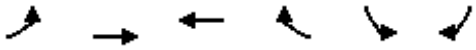


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	197	175	117	826	759	187
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1787	1563	1770	1881	1881	1599
Flt Permitted	0.95	1.00	0.20	1.00	1.00	1.00
Satd. Flow (perm)	1787	1563	366	1881	1881	1599
Peak-hour factor, PHF	0.93	0.93	0.94	0.94	0.95	0.95
Adj. Flow (vph)	212	188	124	879	799	197
RTOR Reduction (vph)	0	156	0	0	0	76
Lane Group Flow (vph)	212	32	124	879	799	121
Confl. Peds. (#/hr)	1	1	1			
Heavy Vehicles (%)	1%	1%	2%	1%	1%	1%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	13.6	13.6	58.4	58.4	49.3	49.3
Effective Green, g (s)	13.6	13.6	58.4	58.4	49.3	49.3
Actuated g/C Ratio	0.17	0.17	0.73	0.73	0.62	0.62
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	304	266	357	1373	1159	985
v/s Ratio Prot	c0.12		0.02	c0.47	c0.42	
v/s Ratio Perm		0.02	0.23			0.08
v/c Ratio	0.70	0.12	0.35	0.64	0.69	0.12
Uniform Delay, d1	31.3	28.1	7.7	5.5	10.2	6.4
Progression Factor	0.86	1.41	1.00	1.00	0.70	0.89
Incremental Delay, d2	6.3	0.2	0.6	2.3	1.5	0.1
Delay (s)	33.2	39.7	8.3	7.8	8.6	5.8
Level of Service	C	D	A	A	A	A
Approach Delay (s)	36.2			7.8	8.1	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

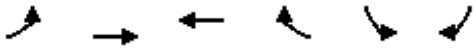
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	88	318	91	179	380	100	165	690	163	138	642	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1797		1805	1826		1718	3574	1546	1804	3610	1552
Flt Permitted	0.22	1.00		0.20	1.00		0.21	1.00	1.00	0.26	1.00	1.00
Satd. Flow (perm)	397	1797		371	1826		385	3574	1546	486	3610	1552
Peak-hour factor, PHF	0.86	0.86	0.86	0.91	0.91	0.91	0.96	0.96	0.96	0.90	0.90	0.90
Adj. Flow (vph)	102	370	106	197	418	110	172	719	170	153	713	129
RTOR Reduction (vph)	0	17	0	0	16	0	0	0	118	0	0	94
Lane Group Flow (vph)	102	459	0	197	512	0	172	719	52	153	713	35
Confl. Peds. (#/hr)	2		2				7		7	5		5
Heavy Vehicles (%)	3%	1%	4%	0%	1%	0%	5%	1%	1%	0%	0%	1%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	21.7	18.6		25.5	20.5		23.8	18.8	18.8	20.0	16.9	16.9
Effective Green, g (s)	21.7	18.6		25.5	20.5		23.8	18.8	18.8	20.0	16.9	16.9
Actuated g/C Ratio	0.35	0.30		0.41	0.33		0.39	0.31	0.31	0.33	0.27	0.27
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	208	543		270	609		257	1093	473	224	992	426
v/s Ratio Prot	0.02	0.26		c0.06	c0.28		c0.05	0.20		0.03	0.20	
v/s Ratio Perm	0.15			0.24			c0.20		0.03	0.19		0.02
v/c Ratio	0.49	0.84		0.73	0.84		0.67	0.66	0.11	0.68	0.72	0.08
Uniform Delay, d1	14.8	20.1		13.6	19.0		13.8	18.6	15.3	16.6	20.2	16.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.8	11.5		9.5	10.2		6.5	3.1	0.5	8.3	4.5	0.4
Delay (s)	16.6	31.6		23.1	29.2		20.3	21.7	15.8	24.9	24.6	16.9
Level of Service	B	C		C	C		C	C	B	C	C	B
Approach Delay (s)		29.0			27.5			20.5			23.7	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	24.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	61.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	61	263	257	91	95	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00
Frpb, ped/bikes		1.00	1.00		1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	0.96		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		1867	1795		1752	1581
Flt Permitted		0.87	1.00		0.95	1.00
Satd. Flow (perm)		1633	1795		1752	1581
Peak-hour factor, PHF	0.92	0.92	0.97	0.97	0.88	0.88
Adj. Flow (vph)	66	286	265	94	108	72
RTOR Reduction (vph)	0	0	35	0	0	38
Lane Group Flow (vph)	0	352	324	0	108	34
Confl. Peds. (#/hr)				1	1	1
Heavy Vehicles (%)	0%	1%	1%	4%	3%	0%
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)		13.3	13.3		18.7	18.7
Effective Green, g (s)		13.3	13.3		18.7	18.7
Actuated g/C Ratio		0.33	0.33		0.47	0.47
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		543	597		819	739
v/s Ratio Prot			0.18		c0.06	
v/s Ratio Perm		c0.22				0.02
v/c Ratio		0.65	0.54		0.13	0.05
Uniform Delay, d1		11.4	10.9		6.0	5.8
Progression Factor		1.00	0.91		1.00	1.00
Incremental Delay, d2		2.7	1.0		0.3	0.1
Delay (s)		14.0	10.8		6.4	5.9
Level of Service		B	B		A	A
Approach Delay (s)		14.0	10.8		6.2	
Approach LOS		B	B		A	

Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	2	251	308	27	33	27
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.96	0.96	0.86	0.86
Hourly flow rate (vph)	2	264	321	28	38	31
Pedestrians		4	4			
Lane Width (ft)		12.0	12.0			
Walking Speed (ft/s)		4.0	4.0			
Percent Blockage		0	0			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	349				607	339
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	349				607	339
tC, single (s)	5.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	3.1				3.5	3.3
p0 queue free %	100				92	95
cM capacity (veh/h)	820				453	697

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	266	349	70
Volume Left	2	0	38
Volume Right	0	28	31
cSH	820	1700	538
Volume to Capacity	0.00	0.21	0.13
Queue Length 95th (ft)	0	0	11
Control Delay (s)	0.1	0.0	12.7
Lane LOS	A		B
Approach Delay (s)	0.1	0.0	12.7
Approach LOS			B

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	29.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (veh/h)	1510	29	47	1326	12	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.97	0.97	0.95	0.95	0.83	0.92
Hourly flow rate (vph)	1557	30	49	1396	14	0
Pedestrians	2				1	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1588		2139	535
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1588		2139	535
tC, single (s)			4.3		7.2	6.9
tC, 2 stage (s)						
tF (s)			2.3		3.7	3.3
p0 queue free %			87		50	100
cM capacity (veh/h)			382		29	489

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4	SW 1
Volume Total	623	623	341	49	465	465	465	14
Volume Left	0	0	0	49	0	0	0	14
Volume Right	0	0	30	0	0	0	0	0
cSH	1700	1700	1700	382	1700	1700	1700	29
Volume to Capacity	0.37	0.37	0.20	0.13	0.27	0.27	0.27	0.50
Queue Length 95th (ft)	0	0	0	11	0	0	0	40
Control Delay (s)	0.0	0.0	0.0	15.8	0.0	0.0	0.0	217.9
Lane LOS				C				F
Approach Delay (s)	0.0			0.5				217.9
Approach LOS								F

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	82	13	19	202	162	48
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.73	0.73	0.70	0.70	0.97	0.97
Hourly flow rate (vph)	112	18	27	289	167	49
Pedestrians				1	1	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				4.0	4.0	
Percent Blockage				0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	391	109	216			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	391	109	216			
tC, single (s)	6.9	7.1	4.4			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.3			
p0 queue free %	80	98	98			
cM capacity (veh/h)	567	901	1274			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	130	123	192	111	105
Volume Left	112	27	0	0	0
Volume Right	18	0	0	0	49
cSH	597	1274	1700	1700	1700
Volume to Capacity	0.22	0.02	0.11	0.07	0.06
Queue Length 95th (ft)	21	2	0	0	0
Control Delay (s)	12.7	1.9	0.0	0.0	0.0
Lane LOS	B	A			
Approach Delay (s)	12.7	0.7		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	27.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	69	25	21	56	1	33	1	23	4	1	5
Peak Hour Factor	0.92	0.92	0.92	0.87	0.87	0.87	0.82	0.82	0.82	0.67	0.67	0.67
Hourly flow rate (vph)	1	75	27	24	64	1	40	1	28	6	1	7

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	103	90	70	15
Volume Left (vph)	1	24	40	6
Volume Right (vph)	27	1	28	7
Hadj (s)	-0.05	0.15	-0.09	-0.22
Departure Headway (s)	4.1	4.3	4.3	4.2
Degree Utilization, x	0.12	0.11	0.08	0.02
Capacity (veh/h)	847	808	803	814
Control Delay (s)	7.7	7.9	7.6	7.3
Approach Delay (s)	7.7	7.9	7.6	7.3
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.7			
HCM Level of Service	A			
Intersection Capacity Utilization	22.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	61	1510	0	0	1373
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.88	0.97	0.92	0.92	0.95
Hourly flow rate (vph)	0	69	1557	0	0	1445
Pedestrians	1					2
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2039	522			1558	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2039	522			1558	
tC, single (s)	6.8	7.0			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	100	86			100	
cM capacity (veh/h)	49	488			420	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	69	519	519	519	482	482	482
Volume Left	0	0	0	0	0	0	0
Volume Right	69	0	0	0	0	0	0
cSH	488	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.14	0.31	0.31	0.31	0.28	0.28	0.28
Queue Length 95th (ft)	12	0	0	0	0	0	0
Control Delay (s)	13.6	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	13.6	0.0			0.0		
Approach LOS	B						

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	40.4%	ICU Level of Service	A
Analysis Period (min)	15		

Appendix H
2011 Build Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	6	22	13	14	74	4	1274	7	5	772	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			0.95	
Frpb, ped/bikes		1.00			0.98			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.95			0.90			1.00			1.00	
Flt Protected		0.98			0.99			1.00			1.00	
Satd. Flow (prot)		1754			1668			1878			3570	
Flt Permitted		0.51			0.96			1.00			0.95	
Satd. Flow (perm)		912			1610			1875			3388	
Peak-hour factor, PHF	0.82	0.82	0.82	0.90	0.90	0.90	0.98	0.98	0.98	0.93	0.93	0.93
Adj. Flow (vph)	34	7	27	14	16	82	4	1300	7	5	830	5
RTOR Reduction (vph)	0	21	0	0	76	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	47	0	0	36	0	0	1311	0	0	840	0
Confl. Peds. (#/hr)				2		2				1		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	14%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		8.4			8.4			93.6			93.6	
Effective Green, g (s)		8.4			8.4			93.6			93.6	
Actuated g/C Ratio		0.08			0.08			0.85			0.85	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		70			123			1595			2883	
v/s Ratio Prot												
v/s Ratio Perm		c0.05			0.02			c0.70			0.25	
v/c Ratio		0.67			0.29			0.82			0.29	
Uniform Delay, d1		49.4			48.0			4.1			1.6	
Progression Factor		1.00			0.75			0.85			1.00	
Incremental Delay, d2		21.5			1.2			1.4			0.3	
Delay (s)		71.0			37.2			4.9			1.9	
Level of Service		E			D			A			A	
Approach Delay (s)		71.0			37.2			4.9			1.9	
Approach LOS		E			D			A			A	

Intersection Summary			
HCM Average Control Delay	7.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	14	6	76	676	860	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	0.95	
Frpb, ped/bikes	1.00			1.00	1.00	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.96			1.00	1.00	
Flt Protected	0.97			0.99	1.00	
Satd. Flow (prot)	1754			1857	3566	
Flt Permitted	0.97			0.83	1.00	
Satd. Flow (perm)	1754			1557	3566	
Peak-hour factor, PHF	0.75	0.75	0.98	0.98	0.98	0.98
Adj. Flow (vph)	19	8	78	690	878	13
RTOR Reduction (vph)	8	0	0	0	1	0
Lane Group Flow (vph)	19	0	0	768	890	0
Confl. Peds. (#/hr)	2	2	1			1
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	3.6			98.4	98.4	
Effective Green, g (s)	3.6			98.4	98.4	
Actuated g/C Ratio	0.03			0.89	0.89	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	57			1393	3190	
v/s Ratio Prot	c0.01				0.25	
v/s Ratio Perm				c0.49		
v/c Ratio	0.34			0.55	0.28	
Uniform Delay, d1	52.0			1.2	0.8	
Progression Factor	0.96			0.10	1.00	
Incremental Delay, d2	3.2			1.3	0.2	
Delay (s)	53.3			1.4	1.0	
Level of Service	D			A	A	
Approach Delay (s)	53.3			1.4	1.0	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	2.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	1248	751	0	846	875	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		0.95	0.97	
Frpb, ped/bikes	1.00	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		1.00	0.95	
Satd. Flow (prot)	1881	1562		3574	3467	
Flt Permitted	1.00	1.00		1.00	0.95	
Satd. Flow (perm)	1881	1562		3574	3467	
Peak-hour factor, PHF	0.98	0.98	0.92	0.96	0.99	0.92
Adj. Flow (vph)	1273	766	0	881	884	0
RTOR Reduction (vph)	0	217	0	0	0	0
Lane Group Flow (vph)	1273	549	0	881	884	0
Confl. Peds. (#/hr)		1				
Heavy Vehicles (%)	1%	1%	2%	1%	1%	2%
Turn Type		Perm				
Protected Phases	2			6	8	
Permitted Phases		2				
Actuated Green, G (s)	74.0	74.0		74.0	28.0	
Effective Green, g (s)	74.0	74.0		74.0	28.0	
Actuated g/C Ratio	0.67	0.67		0.67	0.25	
Clearance Time (s)	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	1265	1051		2404	883	
v/s Ratio Prot	c0.68			0.25	c0.25	
v/s Ratio Perm		0.35				
v/c Ratio	1.01	0.52		0.37	1.00	
Uniform Delay, d1	18.0	9.1		7.8	41.0	
Progression Factor	0.58	1.09		0.83	0.98	
Incremental Delay, d2	9.2	0.2		0.4	30.2	
Delay (s)	19.7	10.1		6.9	70.4	
Level of Service	B	B		A	E	
Approach Delay (s)	16.1			6.9	70.4	
Approach LOS	B			A	E	

Intersection Summary			
HCM Average Control Delay	26.6	HCM Level of Service	C
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	97.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	76	1229	292	523	1672	240	279	402	308	326	661	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		0.97	0.95		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.93		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	4972		3467	3496		1787	4762		1767	4833	
Flt Permitted	0.09	1.00		0.95	1.00		0.27	1.00		0.24	1.00	
Satd. Flow (perm)	172	4972		3467	3496		502	4762		438	4833	
Peak-hour factor, PHF	0.98	0.98	0.98	0.96	0.96	0.96	0.94	0.94	0.94	0.99	0.99	0.99
Adj. Flow (vph)	78	1254	298	545	1742	250	297	428	328	329	668	135
RTOR Reduction (vph)	0	35	0	0	10	0	0	126	0	0	28	0
Lane Group Flow (vph)	78	1517	0	545	1982	0	297	630	0	329	775	0
Confl. Peds. (#/hr)	2		2	1		1	2		2	21		21
Heavy Vehicles (%)	3%	1%	1%	1%	1%	2%	1%	2%	0%	2%	4%	2%
Turn Type	pm+pt			Prot			pm+pt			pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6						4			8		
Actuated Green, G (s)	46.0	42.8		20.2	59.8		29.0	15.0		33.0	17.0	
Effective Green, g (s)	46.0	42.8		20.2	59.8		29.0	15.0		33.0	17.0	
Actuated g/C Ratio	0.42	0.39		0.18	0.54		0.26	0.14		0.30	0.15	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	118	1935		637	1901		296	649		325	747	
v/s Ratio Prot	0.02	0.30		c0.16	c0.57		0.13	0.13		c0.15	c0.16	
v/s Ratio Perm	0.26						0.14			0.16		
v/c Ratio	0.66	0.78		0.86	1.04		1.00	0.97		1.01	1.04	
Uniform Delay, d1	26.6	29.5		43.5	25.1		37.6	47.3		34.8	46.5	
Progression Factor	1.11	0.51		1.13	0.64		1.00	1.00		1.00	1.00	
Incremental Delay, d2	9.6	1.6		8.5	30.2		53.2	28.8		53.1	43.1	
Delay (s)	39.2	16.7		57.7	46.3		90.8	76.1		87.9	89.6	
Level of Service	D	B		E	D		F	E		F	F	
Approach Delay (s)		17.8			48.8			80.2			89.1	
Approach LOS		B			D			F			F	

Intersection Summary			
HCM Average Control Delay	53.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	104.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	1791	16	127	2202	21	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	5078		1805	3539	1805	1573
Flt Permitted	1.00		0.10	1.00	0.95	1.00
Satd. Flow (perm)	5078		198	3539	1805	1573
Peak-hour factor, PHF	0.97	0.97	0.98	0.98	0.83	0.83
Adj. Flow (vph)	1846	16	130	2247	25	63
RTOR Reduction (vph)	1	0	0	0	0	57
Lane Group Flow (vph)	1861	0	130	2247	25	6
Confl. Peds. (#/hr)		6	1		7	7
Heavy Vehicles (%)	2%	0%	0%	2%	0%	0%
Turn Type			Perm			Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	95.0		95.0	95.0	7.0	7.0
Effective Green, g (s)	95.0		95.0	95.0	7.0	7.0
Actuated g/C Ratio	0.86		0.86	0.86	0.06	0.06
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	4386		171	3056	115	100
v/s Ratio Prot	0.37			0.63	c0.01	
v/s Ratio Perm			c0.66			0.00
v/c Ratio	0.42		0.76	0.74	0.22	0.06
Uniform Delay, d1	1.6		3.0	2.8	48.9	48.4
Progression Factor	0.64		0.88	0.68	1.00	1.00
Incremental Delay, d2	0.0		11.9	0.6	4.3	1.1
Delay (s)	1.1		14.5	2.5	53.2	49.5
Level of Service	A		B	A	D	D
Approach Delay (s)	1.1			3.2	50.6	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	3.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	1155	701	738	1452	0	0	0	0	1084	188	657
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00	0.99	1.00	1.00					1.00	1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.96	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		6471	1546	3467	3574					1626	3017	1418
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		6471	1546	3467	3574					1626	3017	1418
Peak-hour factor, PHF	0.92	0.92	0.92	0.97	0.97	0.92	0.92	0.92	0.92	0.89	0.89	0.89
Adj. Flow (vph)	0	1255	762	761	1497	0	0	0	0	1218	211	738
RTOR Reduction (vph)	0	0	222	0	0	0	0	0	0	0	19	19
Lane Group Flow (vph)	0	1255	540	761	1497	0	0	0	0	609	1052	468
Confl. Peds. (#/hr)	1		1	1		1				2		2
Heavy Vehicles (%)	0%	1%	3%	1%	1%	0%	0%	0%	0%	1%	1%	2%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		34.0	34.0	24.0	62.0					40.0	40.0	40.0
Effective Green, g (s)		34.0	34.0	24.0	62.0					40.0	40.0	40.0
Actuated g/C Ratio		0.31	0.31	0.22	0.56					0.36	0.36	0.36
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2000	478	756	2014					591	1097	516
v/s Ratio Prot		0.19		c0.22	0.42					c0.37	0.35	
v/s Ratio Perm			c0.35									0.33
v/c Ratio		0.63	1.13	1.01	0.74					1.03	1.00dl	0.91
Uniform Delay, d1		32.6	38.0	43.0	18.0					35.0	34.2	33.2
Progression Factor		0.83	0.92	0.39	0.38					1.00	1.00	1.00
Incremental Delay, d2		1.4	80.2	26.9	1.5					45.1	17.9	19.5
Delay (s)		28.3	115.0	43.5	8.4					80.1	52.1	52.7
Level of Service		C	F	D	A					F	D	D
Approach Delay (s)		61.1			20.2			0.0			60.1	
Approach LOS		E			C			A			E	

Intersection Summary			
HCM Average Control Delay	46.4	HCM Level of Service	D
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	104.6%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	228	767	476	1609	0	0	1974	747	0	0	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.95			0.86	0.88			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	0.97			1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1770	2787	3433	3539			6536	2739			1627
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1770	2787	3433	3539			6536	2739			1627
Peak-hour factor, PHF	0.90	0.90	0.92	0.92	0.92	0.92	0.94	0.94	0.92	0.92	0.90
Adj. Flow (vph)	253	852	517	1749	0	0	2100	795	0	0	400
RTOR Reduction (vph)	0	23	0	0	0	0	0	291	0	0	329
Lane Group Flow (vph)	253	829	517	1749	0	0	2100	504	0	0	71
Confl. Peds. (#/hr)	3	3	3					2			8
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	1%	2%	2%	1%
Turn Type		Prot	Prot					Perm			Over
Protected Phases	4	4	1	6			2				1
Permitted Phases								2			
Actuated Green, G (s)	35.8	35.8	19.5	66.2			42.7	42.7			19.5
Effective Green, g (s)	35.8	35.8	19.5	66.2			42.7	42.7			19.5
Actuated g/C Ratio	0.33	0.33	0.18	0.60			0.39	0.39			0.18
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	576	907	609	2130			2537	1063			288
v/s Ratio Prot	0.14	c0.30	0.15	c0.49			0.32				0.04
v/s Ratio Perm								0.18			
v/c Ratio	0.44	0.91	0.85	0.82			0.83	0.47			0.25
Uniform Delay, d1	29.2	35.6	43.8	17.2			30.3	25.2			38.9
Progression Factor	1.00	1.00	1.14	0.29			0.56	0.26			1.00
Incremental Delay, d2	0.5	13.4	6.3	2.1			1.2	0.5			0.4
Delay (s)	29.7	49.0	56.1	7.0			18.3	7.1			39.4
Level of Service	C	D	E	A			B	A			D
Approach Delay (s)	44.6			18.2			15.2		39.4		
Approach LOS	D			B			B		D		

Intersection Summary			
HCM Average Control Delay	22.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	504	66	119	32	48	86	246	1522	614	216	2165	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3502	1900	1404	1805	1900	1576	1736	4988	1570	1805	5164	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.07	1.00	1.00	0.09	1.00	
Satd. Flow (perm)	3502	1900	1404	1805	1900	1576	133	4988	1570	166	5164	
Peak-hour factor, PHF	0.96	0.96	0.96	0.80	0.80	0.80	0.93	0.93	0.93	0.97	0.97	0.97
Adj. Flow (vph)	525	69	124	40	60	108	265	1637	660	223	2232	57
RTOR Reduction (vph)	0	0	106	0	0	99	0	0	326	0	2	0
Lane Group Flow (vph)	525	69	18	40	60	9	265	1637	334	223	2287	0
Confl. Peds. (#/hr)			7	6		6	3		3	2		2
Heavy Vehicles (%)	0%	0%	12%	0%	0%	0%	4%	4%	1%	0%	0%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		Perm	pm+pt		
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	16.0	16.0	16.0	8.8	8.8	8.8	73.2	55.1	55.1	65.0	50.9	
Effective Green, g (s)	16.0	16.0	16.0	8.8	8.8	8.8	73.2	55.1	55.1	65.0	50.9	
Actuated g/C Ratio	0.15	0.15	0.15	0.08	0.08	0.08	0.67	0.50	0.50	0.59	0.46	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	509	276	204	144	152	126	355	2499	786	308	2390	
v/s Ratio Prot	c0.15	0.04		0.02	c0.03		c0.12	0.33		0.09	c0.44	
v/s Ratio Perm			0.01			0.01	0.37		0.21	0.34		
v/c Ratio	1.03	0.25	0.09	0.28	0.39	0.07	0.75	0.66	0.42	0.72	0.96	
Uniform Delay, d1	47.0	41.7	40.7	47.6	48.1	46.8	31.9	20.4	17.4	23.1	28.5	
Progression Factor	0.93	0.92	0.85	1.00	1.00	1.00	1.05	1.03	1.27	0.87	1.03	
Incremental Delay, d2	47.8	0.5	0.2	1.1	1.7	0.2	4.4	0.7	0.9	3.4	5.3	
Delay (s)	91.5	38.9	35.0	48.7	49.8	47.0	37.9	21.6	22.9	23.4	34.7	
Level of Service	F	D	C	D	D	D	D	C	C	C	C	
Approach Delay (s)		76.7			48.1			23.6			33.7	
Approach LOS		E			D			C			C	

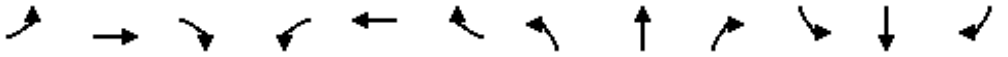
Intersection Summary			
HCM Average Control Delay	35.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	502	273	54	114	287	292	119	935	533	97	1526	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3367	3358		1770	1881	1615	1703	3505	1524	1770	3562	
Flt Permitted	0.95	1.00		0.55	1.00	1.00	0.08	1.00	1.00	0.17	1.00	
Satd. Flow (perm)	3367	3358		1015	1881	1615	143	3505	1524	320	3562	
Peak-hour factor, PHF	0.95	0.95	0.95	0.92	0.92	0.92	0.96	0.96	0.96	0.97	0.97	0.97
Adj. Flow (vph)	528	287	57	124	312	317	124	974	555	100	1573	20
RTOR Reduction (vph)	0	15	0	0	0	74	0	0	278	0	1	0
Lane Group Flow (vph)	528	329	0	124	312	243	124	974	277	100	1592	0
Confl. Peds. (#/hr)										1		1
Heavy Vehicles (%)	4%	3%	14%	2%	1%	0%	6%	3%	6%	2%	1%	11%
Turn Type	Prot			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases				8		8	6		6	2		
Actuated Green, G (s)	18.0	30.0		26.0	19.0	19.0	55.2	50.2	50.2	58.8	52.0	
Effective Green, g (s)	18.0	30.0		26.0	19.0	19.0	55.2	50.2	50.2	58.8	52.0	
Actuated g/C Ratio	0.16	0.27		0.24	0.17	0.17	0.50	0.46	0.46	0.53	0.47	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	551	916		288	325	279	143	1600	695	261	1684	
v/s Ratio Prot	c0.16	0.10		0.03	c0.17		c0.04	0.28		c0.02	c0.45	
v/s Ratio Perm				0.07		0.15	0.40		0.18	0.18		
v/c Ratio	0.96	0.36		0.43	0.96	0.87	0.87	0.61	0.40	0.38	0.95	
Uniform Delay, d1	45.6	32.2		34.5	45.1	44.3	24.8	22.5	19.9	15.2	27.6	
Progression Factor	0.78	0.81		1.00	1.00	1.00	2.40	0.23	1.09	0.30	0.36	
Incremental Delay, d2	24.3	0.2		1.0	39.2	23.7	32.2	1.4	1.3	0.4	6.3	
Delay (s)	60.0	26.3		35.5	84.3	68.0	91.6	6.4	23.0	4.9	16.3	
Level of Service	E	C		D	F	E	F	A	C	A	B	
Approach Delay (s)		46.7			69.4			18.4			15.7	
Approach LOS		D			E			B			B	

Intersection Summary			
HCM Average Control Delay	30.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	104	188	163	107	810	119	473	1646	44	76	726	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3574	1553	1765	3574	1536	1787	3559		1687	3438	
Flt Permitted	0.15	1.00	1.00	0.54	1.00	1.00	0.10	1.00		0.11	1.00	
Satd. Flow (perm)	292	3574	1553	1004	3574	1536	193	3559		203	3438	
Peak-hour factor, PHF	0.82	0.82	0.82	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	127	229	199	115	871	128	509	1770	47	82	781	199
RTOR Reduction (vph)	0	0	152	0	0	68	0	2	0	0	20	0
Lane Group Flow (vph)	127	229	47	115	871	60	509	1815	0	82	960	0
Confl. Peds. (#/hr)				4		4						
Heavy Vehicles (%)	0%	1%	4%	2%	1%	3%	1%	1%	3%	7%	2%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	31.0	26.0	26.0	33.0	27.0	27.0	66.0	58.8		38.2	35.0	
Effective Green, g (s)	31.0	26.0	26.0	33.0	27.0	27.0	66.0	58.8		38.2	35.0	
Actuated g/C Ratio	0.28	0.24	0.24	0.30	0.25	0.25	0.60	0.53		0.35	0.32	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	151	845	367	343	877	377	507	1902		114	1094	
v/s Ratio Prot	c0.04	0.06		0.02	c0.24		c0.25	0.51		0.02	0.28	
v/s Ratio Perm	0.20		0.03	0.08		0.04	c0.36			0.23		
v/c Ratio	0.84	0.27	0.13	0.34	0.99	0.16	1.00	0.95		0.72	0.88	
Uniform Delay, d1	35.6	34.3	33.1	28.9	41.4	32.6	33.1	24.3		31.7	35.5	
Progression Factor	0.77	0.74	0.36	1.00	1.00	1.00	1.00	1.00		1.20	0.99	
Incremental Delay, d2	29.9	0.2	0.1	0.6	28.5	0.2	40.9	12.4		16.3	8.4	
Delay (s)	57.2	25.4	12.0	29.5	70.0	32.8	74.1	36.7		54.4	43.6	
Level of Service	E	C	B	C	E	C	E	D		D	D	
Approach Delay (s)		27.9			61.5			44.9			44.4	
Approach LOS		C			E			D			D	

Intersection Summary			
HCM Average Control Delay	46.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	236	206	120	87	355	713	64	1082	7	160	978	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.94		1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1787	3398		1747	1845	1563	1736	3570		1770	3574	1577
Flt Permitted	0.35	1.00		0.51	1.00	1.00	0.13	1.00		0.12	1.00	1.00
Satd. Flow (perm)	666	3398		931	1845	1563	230	3570		215	3574	1577
Peak-hour factor, PHF	0.89	0.89	0.89	0.92	0.92	0.92	0.91	0.91	0.91	0.89	0.89	0.89
Adj. Flow (vph)	265	231	135	95	386	775	70	1189	8	180	1099	315
RTOR Reduction (vph)	0	81	0	0	0	84	0	1	0	0	0	202
Lane Group Flow (vph)	265	285	0	95	386	691	70	1196	0	180	1099	113
Confl. Peds. (#/hr)				6		6	7		7	1		1
Heavy Vehicles (%)	1%	0%	1%	3%	3%	1%	4%	1%	0%	2%	1%	1%
Turn Type	pm+pt			pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	43.8	38.8		41.8	37.8	37.8	35.0	31.8		40.6	34.6	34.6
Effective Green, g (s)	43.8	38.8		41.8	37.8	37.8	35.0	31.8		40.6	34.6	34.6
Actuated g/C Ratio	0.45	0.40		0.43	0.39	0.39	0.36	0.33		0.42	0.36	0.36
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	360	1365		437	722	612	133	1175		187	1280	565
v/s Ratio Prot	c0.04	0.08		0.01	0.21		0.02	0.34		c0.06	0.31	
v/s Ratio Perm	0.30			0.09		c0.44	0.17			c0.34		0.07
v/c Ratio	0.74	0.21		0.22	0.53	1.13	0.53	1.02		0.96	0.86	0.20
Uniform Delay, d1	23.1	18.9		16.5	22.6	29.4	23.4	32.4		24.5	28.7	21.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	7.6	0.1		0.3	0.8	77.4	3.7	30.9		54.6	7.6	0.8
Delay (s)	30.7	19.0		16.7	23.4	106.8	27.1	63.3		79.1	36.4	22.2
Level of Service	C	B		B	C	F	C	E		E	D	C
Approach Delay (s)		23.9			74.4			61.3			38.4	
Approach LOS		C			E			E			D	

Intersection Summary			
HCM Average Control Delay	52.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	96.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	98.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	119	226	421	798	693	271
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.96	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1719	1505	1770	1845	1845	1568
Flt Permitted	0.95	1.00	0.19	1.00	1.00	1.00
Satd. Flow (perm)	1719	1505	358	1845	1845	1568
Peak-hour factor, PHF	0.88	0.88	0.91	0.91	0.91	0.91
Adj. Flow (vph)	135	257	463	877	762	298
RTOR Reduction (vph)	0	229	0	0	0	124
Lane Group Flow (vph)	135	28	463	877	762	174
Confl. Peds. (#/hr)	6	6				
Heavy Vehicles (%)	5%	3%	2%	3%	3%	3%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	12.0	12.0	90.0	90.0	64.4	64.4
Effective Green, g (s)	12.0	12.0	90.0	90.0	64.4	64.4
Actuated g/C Ratio	0.11	0.11	0.82	0.82	0.59	0.59
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	188	164	570	1510	1080	918
v/s Ratio Prot	c0.08		c0.16	0.48	0.41	
v/s Ratio Perm		0.02	c0.50			0.11
v/c Ratio	0.72	0.17	0.81	0.58	0.71	0.19
Uniform Delay, d1	47.4	44.5	19.5	3.5	16.1	10.6
Progression Factor	1.00	1.00	0.82	2.84	0.61	1.54
Incremental Delay, d2	12.3	0.5	6.3	1.2	3.1	0.4
Delay (s)	59.7	45.0	22.2	11.0	12.9	16.7
Level of Service	E	D	C	B	B	B
Approach Delay (s)	50.0			14.9	14.0	
Approach LOS	D			B	B	

Intersection Summary			
HCM Average Control Delay	19.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	227	186	225	580	59	134	800	92	39	848	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1703	1681		1736	1834		1703	1827	1455	1597	1845	1515
Flt Permitted	0.13	1.00		0.12	1.00		0.08	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	233	1681		224	1834		141	1827	1455	140	1845	1515
Peak-hour factor, PHF	0.92	0.92	0.92	0.93	0.93	0.93	0.94	0.94	0.94	0.96	0.96	0.96
Adj. Flow (vph)	73	247	202	242	624	63	143	851	98	41	883	55
RTOR Reduction (vph)	0	27	0	0	3	0	0	0	41	0	0	22
Lane Group Flow (vph)	73	422	0	242	684	0	143	851	57	41	883	33
Confl. Peds. (#/hr)	7		7	3		3				4		4
Heavy Vehicles (%)	6%	2%	5%	4%	2%	1%	6%	4%	11%	13%	3%	3%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	34.0	30.8		44.8	37.6		55.8	50.8	50.8	50.6	48.2	48.2
Effective Green, g (s)	34.0	30.8		44.8	37.6		55.8	50.8	50.8	50.6	48.2	48.2
Actuated g/C Ratio	0.31	0.28		0.41	0.34		0.51	0.46	0.46	0.46	0.44	0.44
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	115	471		229	627		143	844	672	96	808	664
v/s Ratio Prot	0.02	0.25		c0.10	c0.37		c0.05	0.47		0.01	c0.48	
v/s Ratio Perm	0.18			0.33			0.46		0.04	0.19		0.02
v/c Ratio	0.63	0.90		1.06	1.09		1.00	1.01	0.08	0.43	1.09	0.05
Uniform Delay, d1	32.0	38.1		27.0	36.2		25.8	29.6	16.6	25.6	30.9	17.7
Progression Factor	1.00	1.00		1.88	0.71		1.00	1.00	1.00	0.61	0.64	0.19
Incremental Delay, d2	10.9	19.3		46.4	48.3		75.3	33.0	0.2	2.2	55.8	0.1
Delay (s)	42.9	57.4		97.1	74.0		101.0	62.6	16.8	17.8	75.6	3.5
Level of Service	D	E		F	E		F	E	B	B	E	A
Approach Delay (s)		55.4			80.0			63.5			69.1	
Approach LOS		E			E			E			E	

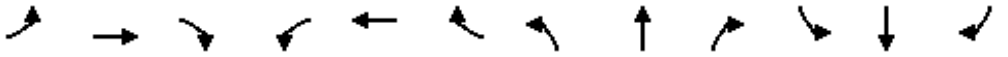
Intersection Summary			
HCM Average Control Delay	68.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	103.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	1	308	2	481	1	727	306	891	730	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00		0.95	1.00	0.97	1.00	
Frpb, ped/bikes		1.00			1.00	0.99		1.00	0.99	1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Frt		0.86			1.00	0.85		1.00	0.85	1.00	1.00	
Flt Protected		1.00			0.95	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1644			1752	1446		3505	1560	3400	1845	
Flt Permitted		1.00			0.73	1.00		0.95	1.00	0.95	1.00	
Satd. Flow (perm)		1644			1334	1446		3345	1560	3400	1845	
Peak-hour factor, PHF	0.25	0.25	0.25	0.90	0.90	0.90	0.98	0.98	0.98	0.94	0.94	0.94
Adj. Flow (vph)	0	0	4	342	2	534	1	742	312	948	777	0
RTOR Reduction (vph)	0	3	0	0	0	385	0	0	225	0	0	0
Lane Group Flow (vph)	0	1	0	0	344	149	0	743	87	948	777	0
Confl. Peds. (#/hr)				2		2	2		2	4		4
Heavy Vehicles (%)	0%	0%	0%	3%	0%	10%	0%	3%	2%	3%	3%	0%
Turn Type	Perm			Perm		Perm	Perm		Perm	Prot		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2			
Actuated Green, G (s)		22.1			22.1	22.1		22.0	22.0	23.0	49.0	
Effective Green, g (s)		22.1			22.1	22.1		22.0	22.0	23.0	49.0	
Actuated g/C Ratio		0.28			0.28	0.28		0.28	0.28	0.29	0.62	
Clearance Time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		459			373	404		930	434	989	1143	
v/s Ratio Prot		0.00								c0.28	0.42	
v/s Ratio Perm					c0.26	0.10		c0.22	0.06			
v/c Ratio		0.00			0.92	0.37		0.80	0.20	0.96	0.68	
Uniform Delay, d1		20.6			27.7	22.9		26.5	21.8	27.6	9.9	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0			27.8	0.6		7.1	1.0	19.1	3.3	
Delay (s)		20.6			55.5	23.5		33.6	22.9	46.7	13.2	
Level of Service		C			E	C		C	C	D	B	
Approach Delay (s)		20.6			36.0			30.4			31.6	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM Average Control Delay	32.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	79.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	569	25	20	14	11	32	33	793	14	52	589	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	0.96			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1684			1848	1474	1805	3531		1671	3505	
Flt Permitted	0.95	0.96			0.97	1.00	0.37	1.00		0.27	1.00	
Satd. Flow (perm)	1681	1684			1848	1474	700	3531		484	3505	
Peak-hour factor, PHF	0.93	0.93	0.93	0.98	0.98	0.98	0.98	0.98	0.98	0.92	0.92	0.92
Adj. Flow (vph)	612	27	22	14	11	33	34	809	14	57	640	0
RTOR Reduction (vph)	0	5	0	0	0	32	0	2	0	0	0	0
Lane Group Flow (vph)	330	326	0	0	25	1	34	821	0	57	640	0
Confl. Peds. (#/hr)	2		2	2		2						
Heavy Vehicles (%)	2%	0%	0%	0%	0%	7%	0%	2%	0%	8%	3%	1%
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases						8	2			6		
Actuated Green, G (s)	15.2	15.2			1.1	1.1	25.5	25.5		25.5	25.5	
Effective Green, g (s)	15.2	15.2			1.1	1.1	25.5	25.5		25.5	25.5	
Actuated g/C Ratio	0.28	0.28			0.02	0.02	0.47	0.47		0.47	0.47	
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	475	476			38	30	332	1674		229	1661	
v/s Ratio Prot	c0.20	0.19			c0.01			c0.23			0.18	
v/s Ratio Perm						0.00	0.05			0.12		
v/c Ratio	0.69	0.68			0.66	0.02	0.10	0.49		0.25	0.39	
Uniform Delay, d1	17.2	17.2			26.2	25.8	7.8	9.7		8.4	9.1	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.4	4.1			34.3	0.3	0.6	1.0		2.6	0.7	
Delay (s)	21.6	21.2			60.4	26.1	8.4	10.7		11.0	9.8	
Level of Service	C	C			E	C	A	B		B	A	
Approach Delay (s)		21.4			40.9			10.6			9.9	
Approach LOS		C			D			B			A	

Intersection Summary			
HCM Average Control Delay	14.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	53.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	291	540	651	127	853	71	1171	820	128	72	429	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.97	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	3574	1567	1786	5074		3502	3574	1562	1770	3574	1591
Flt Permitted	0.20	1.00	1.00	0.35	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	380	3574	1567	667	5074		3502	3574	1562	1770	3574	1591
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.96	0.96	0.96	0.91	0.91	0.91
Adj. Flow (vph)	313	581	700	137	917	76	1220	854	133	79	471	330
RTOR Reduction (vph)	0	0	519	0	11	0	0	0	84	0	0	112
Lane Group Flow (vph)	313	581	181	137	982	0	1220	854	49	79	471	218
Confl. Peds. (#/hr)	5		5	3		3	1		1	2		2
Heavy Vehicles (%)	0%	1%	1%	1%	1%	0%	0%	1%	2%	2%	1%	0%
Turn Type	pm+pt		Perm	pm+pt			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4		4	8					2			6
Actuated Green, G (s)	30.0	22.0	22.0	20.0	16.0		31.0	31.0	31.0	12.0	12.0	12.0
Effective Green, g (s)	30.0	22.0	22.0	20.0	16.0		31.0	31.0	31.0	12.0	12.0	12.0
Actuated g/C Ratio	0.35	0.26	0.26	0.24	0.19		0.36	0.36	0.36	0.14	0.14	0.14
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	302	925	406	210	955		1277	1303	570	250	505	225
v/s Ratio Prot	c0.12	0.16		0.03	0.19		c0.35	0.24		0.04	0.13	
v/s Ratio Perm	c0.24		0.12	0.12					0.03			c0.14
v/c Ratio	1.04	0.63	0.45	0.65	1.03		0.96	0.66	0.09	0.32	0.93	0.97
Uniform Delay, d1	24.3	27.9	26.4	27.9	34.5		26.3	22.5	17.7	32.8	36.1	36.3
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.84	0.84	1.02	1.00	1.00	1.00
Incremental Delay, d2	61.6	1.3	0.8	7.1	36.5		14.8	2.2	0.2	3.3	26.4	52.8
Delay (s)	85.9	29.2	27.2	34.9	71.0		36.9	21.2	18.4	36.1	62.5	89.2
Level of Service	F	C	C	C	E		D	C	B	D	E	F
Approach Delay (s)		39.5			66.6			29.7			70.1	
Approach LOS		D			E			C			E	

Intersection Summary			
HCM Average Control Delay	45.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	399	943	1209	0	0	1243
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	0.97	0.91	0.91			0.86
Frpb, ped/bikes	0.99	0.98	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	0.92	0.85	1.00			1.00
Flt Protected	0.98	1.00	1.00			1.00
Satd. Flow (prot)	3251	1433	5136			6471
Flt Permitted	0.98	1.00	1.00			1.00
Satd. Flow (perm)	3251	1433	5136			6471
Peak-hour factor, PHF	0.97	0.97	0.98	0.92	0.92	0.96
Adj. Flow (vph)	411	972	1234	0	0	1295
RTOR Reduction (vph)	7	7	0	0	0	0
Lane Group Flow (vph)	890	479	1234	0	0	1295
Confl. Peds. (#/hr)	2	2				
Heavy Vehicles (%)	1%	1%	1%	2%	2%	1%
Turn Type		Perm				
Protected Phases	8		2			6
Permitted Phases		8				
Actuated Green, G (s)	37.0	37.0	40.0			40.0
Effective Green, g (s)	37.0	37.0	40.0			40.0
Actuated g/C Ratio	0.44	0.44	0.47			0.47
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	1415	624	2417			3045
v/s Ratio Prot	0.27		c0.24			0.20
v/s Ratio Perm		c0.33				
v/c Ratio	0.63	0.77	0.51			0.43
Uniform Delay, d1	18.7	20.4	15.7			14.9
Progression Factor	1.00	1.00	0.34			0.64
Incremental Delay, d2	0.9	5.7	0.7			0.2
Delay (s)	19.5	26.0	6.0			9.7
Level of Service	B	C	A			A
Approach Delay (s)	21.8		6.0			9.7
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	1293	379	493	1200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0
Lane Util. Factor			0.91		0.97	0.91
Frpb, ped/bikes			1.00		1.00	1.00
Flpb, ped/bikes			1.00		1.00	1.00
Frt			0.97		1.00	1.00
Flt Protected			1.00		0.95	1.00
Satd. Flow (prot)			4944		3467	5136
Flt Permitted			1.00		0.95	1.00
Satd. Flow (perm)			4944		3467	5136
Peak-hour factor, PHF	0.92	0.92	0.93	0.93	0.97	0.97
Adj. Flow (vph)	0	0	1390	408	508	1237
RTOR Reduction (vph)	0	0	34	0	0	0
Lane Group Flow (vph)	0	0	1764	0	508	1237
Confl. Peds. (#/hr)				2	4	
Heavy Vehicles (%)	2%	2%	1%	1%	1%	1%
Turn Type					Prot	
Protected Phases			2		1	6
Permitted Phases						
Actuated Green, G (s)			59.2		17.8	85.0
Effective Green, g (s)			59.2		17.8	85.0
Actuated g/C Ratio			0.70		0.21	1.00
Clearance Time (s)			4.0		4.0	4.0
Vehicle Extension (s)			3.0		3.0	3.0
Lane Grp Cap (vph)			3443		726	5136
v/s Ratio Prot			c0.36		c0.15	0.24
v/s Ratio Perm						
v/c Ratio			0.51		0.70	0.24
Uniform Delay, d1			6.1		31.1	0.0
Progression Factor			0.36		0.92	1.00
Incremental Delay, d2			0.4		2.7	0.1
Delay (s)			2.5		31.5	0.1
Level of Service			A		C	A
Approach Delay (s)	0.0		2.5			9.2
Approach LOS	A		A			A

Intersection Summary			
HCM Average Control Delay	5.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	0	1	305	2	246	5	1230	108	102	1166	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.93			0.94			0.99		1.00	1.00	
Flt Protected		0.98			0.97			1.00		0.95	1.00	
Satd. Flow (prot)		1713			1706			3490		1787	3539	
Flt Permitted		0.91			0.83			0.95		0.09	1.00	
Satd. Flow (perm)		1600			1451			3320		176	3539	
Peak-hour factor, PHF	0.75	0.75	0.75	0.95	0.95	0.95	0.99	0.99	0.99	0.96	0.96	0.96
Adj. Flow (vph)	1	0	1	321	2	259	5	1242	109	106	1215	1
RTOR Reduction (vph)	0	1	0	0	34	0	0	8	0	0	0	0
Lane Group Flow (vph)	0	1	0	0	548	0	0	1348	0	106	1216	0
Confl. Peds. (#/hr)	4		4	2		2	4		4			
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	2%	1%	1%	2%	0%
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		31.0			31.0			38.8		46.0	46.0	
Effective Green, g (s)		31.0			31.0			38.8		46.0	46.0	
Actuated g/C Ratio		0.36			0.36			0.46		0.54	0.54	
Clearance Time (s)		4.0			4.0			4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		584			529			1515		156	1915	
v/s Ratio Prot										0.03	c0.34	
v/s Ratio Perm		0.00			c0.38			c0.41		0.34		
v/c Ratio		0.00			1.04			0.89		0.68	0.63	
Uniform Delay, d1		17.2			27.0			21.1		16.1	13.6	
Progression Factor		1.00			1.00			0.65		0.75	0.93	
Incremental Delay, d2		0.0			48.9			4.6		11.1	1.6	
Delay (s)		17.2			75.9			18.4		23.1	14.3	
Level of Service		B			E			B		C	B	
Approach Delay (s)		17.2			75.9			18.4			15.0	
Approach LOS		B			E			B			B	

Intersection Summary			
HCM Average Control Delay	27.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	118.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	204	281	50	247	472	360	108	680	71	379	720	332
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1725		1787	1863	1599	1752	3517		1752	3382	
Flt Permitted	0.17	1.00		0.25	1.00	1.00	0.20	1.00		0.17	1.00	
Satd. Flow (perm)	321	1725		475	1863	1599	369	3517		307	3382	
Peak-hour factor, PHF	0.92	0.92	0.92	0.89	0.89	0.89	0.89	0.89	0.89	0.88	0.88	0.88
Adj. Flow (vph)	222	305	54	278	530	404	121	764	80	431	818	377
RTOR Reduction (vph)	0	7	0	0	0	26	0	9	0	0	64	0
Lane Group Flow (vph)	222	352	0	278	530	378	121	835	0	431	1131	0
Heavy Vehicles (%)	3%	6%	17%	1%	2%	1%	3%	1%	3%	3%	2%	1%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	31.0	23.0		35.0	25.0	41.0	24.0	20.0		40.0	32.0	
Effective Green, g (s)	31.0	23.0		35.0	25.0	41.0	24.0	20.0		40.0	32.0	
Actuated g/C Ratio	0.36	0.27		0.41	0.29	0.48	0.28	0.24		0.47	0.38	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	252	467		350	548	847	169	828		416	1273	
v/s Ratio Prot	0.08	0.20		c0.09	c0.28	0.08	0.03	0.24		c0.19	0.33	
v/s Ratio Perm	0.24			0.23		0.15	0.17			c0.29		
v/c Ratio	0.88	0.75		0.79	0.97	0.45	0.72	1.01		1.04	0.89	
Uniform Delay, d1	22.1	28.4		18.9	29.6	14.5	25.8	32.5		23.0	24.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.65	0.95	
Incremental Delay, d2	28.0	6.8		11.7	29.9	0.4	13.5	33.3		47.2	7.2	
Delay (s)	50.1	35.2		30.6	59.5	14.9	39.2	65.8		85.2	30.7	
Level of Service	D	D		C	E	B	D	E		F	C	
Approach Delay (s)		40.9			38.0			62.5			45.2	
Approach LOS		D			D			E			D	

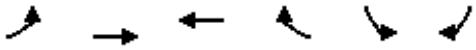
Intersection Summary			
HCM Average Control Delay	46.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Volume (veh/h)	305	371	150	74	93	168
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.84	0.84	0.92	0.92	0.87	0.87
Hourly flow rate (vph)	363	442	163	80	107	193
Pedestrians		2			2	
Lane Width (ft)		12.0			12.0	
Walking Speed (ft/s)		4.0			4.0	
Percent Blockage		0			0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		979				
pX, platoon unblocked						
vC, conflicting volume	245				1333	167
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	245				1333	167
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	72				14	78
cM capacity (veh/h)	1318				124	872

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	NE 1	NE 2
Volume Total	363	442	163	80	107	193
Volume Left	363	0	0	0	107	0
Volume Right	0	0	0	80	0	193
cSH	1318	1700	1700	1700	124	872
Volume to Capacity	0.28	0.26	0.10	0.05	0.86	0.22
Queue Length 95th (ft)	28	0	0	0	134	21
Control Delay (s)	8.8	0.0	0.0	0.0	113.3	10.3
Lane LOS	A				F	B
Approach Delay (s)	4.0		0.0		47.0	
Approach LOS					E	

Intersection Summary			
Average Delay	12.8		
Intersection Capacity Utilization	40.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	17	199	353	48	19	33
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.97	0.97	0.85	0.85
Hourly flow rate (vph)	20	231	364	49	22	39
Pedestrians		2	2		4	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	417				666	395
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	417				666	395
tC, single (s)	4.1				6.4	6.3
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.4
p0 queue free %	98				95	94
cM capacity (veh/h)	1149				418	634

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	251	413	61
Volume Left	20	0	22
Volume Right	0	49	39
cSH	1149	1700	534
Volume to Capacity	0.02	0.24	0.11
Queue Length 95th (ft)	1	0	10
Control Delay (s)	0.8	0.0	12.6
Lane LOS	A		B
Approach Delay (s)	0.8	0.0	12.6
Approach LOS			B

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (veh/h)	1535	57	128	1122	24	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.96	0.96	0.80	0.92
Hourly flow rate (vph)	1566	58	133	1169	30	0
Pedestrians	3				2	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	872			236		
pX, platoon unblocked			0.88		0.88	0.88
vC, conflicting volume			1626		2257	553
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1236		1952	16
tC, single (s)			4.2		6.9	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.3
p0 queue free %			73		13	100
cM capacity (veh/h)			487		35	930

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4	SW 1
Volume Total	627	627	371	133	390	390	390	30
Volume Left	0	0	0	133	0	0	0	30
Volume Right	0	0	58	0	0	0	0	0
cSH	1700	1700	1700	487	1700	1700	1700	35
Volume to Capacity	0.37	0.37	0.22	0.27	0.23	0.23	0.23	0.87
Queue Length 95th (ft)	0	0	0	28	0	0	0	77
Control Delay (s)	0.0	0.0	0.0	15.2	0.0	0.0	0.0	283.7
Lane LOS				C				F
Approach Delay (s)	0.0			1.6				283.7
Approach LOS								F

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	51.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (veh/h)	231	57	100	409	329	384
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.94	0.94	0.96	0.96
Hourly flow rate (vph)	251	62	106	435	343	400
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	541				671	106
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	541				671	106
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	76				0	58
cM capacity (veh/h)	1027				319	948

Direction, Lane #	SE 1	SE 2	NW 1	NW 2	SW 1	SW 2
Volume Total	251	62	106	435	343	400
Volume Left	251	0	0	0	343	0
Volume Right	0	0	0	435	0	400
cSH	1027	1700	1700	1700	319	948
Volume to Capacity	0.24	0.04	0.06	0.26	1.08	0.42
Queue Length 95th (ft)	24	0	0	0	323	53
Control Delay (s)	9.6	0.0	0.0	0.0	109.0	11.5
Lane LOS	A				F	B
Approach Delay (s)	7.7		0.0		56.5	
Approach LOS					F	

Intersection Summary			
Average Delay	27.8		
Intersection Capacity Utilization	44.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	2	177	29	20	107	14	37	7	22	1	1	2
Peak Hour Factor	0.86	0.86	0.86	0.90	0.90	0.90	0.73	0.73	0.73	0.75	0.75	0.75
Hourly flow rate (vph)	2	206	34	22	119	16	51	10	30	1	1	3

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	242	141	16	90	5
Volume Left (vph)	2	22	0	51	1
Volume Right (vph)	34	0	16	30	3
Hadj (s)	-0.03	0.18	-0.70	-0.09	-0.25
Departure Headway (s)	4.4	5.1	4.2	4.7	4.7
Degree Utilization, x	0.30	0.20	0.02	0.12	0.01
Capacity (veh/h)	798	680	819	702	686
Control Delay (s)	9.2	8.2	6.1	8.4	7.7
Approach Delay (s)	9.2	8.0		8.4	7.7
Approach LOS	A	A		A	A

Intersection Summary				
Delay	8.7			
HCM Level of Service	A			
Intersection Capacity Utilization	33.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	199	477	4	13	984	264	9	0	5	35	0	27
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.98	0.98	0.98	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	209	502	4	13	1004	269	10	0	6	39	0	30
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					450							
pX, platoon unblocked												
vC, conflicting volume	1273			506			1482	2223	253	1706	1956	502
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1273			506			1482	2223	253	1706	1956	502
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	61			99			82	100	99	4	100	94
cM capacity (veh/h)	541			1055			57	26	746	41	38	515

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	209	335	172	13	502	502	269	16	69
Volume Left	209	0	0	13	0	0	0	10	39
Volume Right	0	0	4	0	0	0	269	6	30
cSH	541	1700	1700	1055	1700	1700	1700	85	68
Volume to Capacity	0.39	0.20	0.10	0.01	0.30	0.30	0.16	0.18	1.02
Queue Length 95th (ft)	45	0	0	1	0	0	0	16	129
Control Delay (s)	15.8	0.0	0.0	8.5	0.0	0.0	0.0	56.9	218.2
Lane LOS	C			A				F	F
Approach Delay (s)	4.6			0.1				56.9	218.2
Approach LOS								F	F

Intersection Summary				
Average Delay	9.3			
Intersection Capacity Utilization	52.3%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	575	7	16	1003	16	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.98	0.98	0.92	0.92
Hourly flow rate (vph)	605	7	16	1023	17	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				838		
pX, platoon unblocked						
vC, conflicting volume			613		1665	609
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			613		1665	609
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		83	99
cM capacity (veh/h)			967		105	495

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	613	16	1023	23
Volume Left	0	16	0	17
Volume Right	7	0	0	5
cSH	1700	967	1700	129
Volume to Capacity	0.36	0.02	0.60	0.18
Queue Length 95th (ft)	0	1	0	15
Control Delay (s)	0.0	8.8	0.0	38.9
Lane LOS		A		E
Approach Delay (s)	0.0	0.1		38.9
Approach LOS				E

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	62.8%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL2	WBL	NBL	NBR	NER	NER2
Lane Configurations						
Volume (veh/h)	100	826	14	15	698	43
Sign Control		Free	Stop		Free	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	109	898	15	16	759	47
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None			None	
Median storage veh)						
Upstream signal (ft)		1272				
pX, platoon unblocked						
vC, conflicting volume	805		1874	759		
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	805		1874	759		
tC, single (s)	4.1		6.4	6.2		
tC, 2 stage (s)						
tF (s)	2.2		3.5	3.3		
p0 queue free %	87		78	96		
cM capacity (veh/h)	819		68	407		

Direction, Lane #	WB 1	WB 2	NB 1	NE 1	NE 2
Volume Total	109	898	32	759	47
Volume Left	109	0	15	0	0
Volume Right	0	0	16	0	47
cSH	819	1700	120	1700	1700
Volume to Capacity	0.13	0.53	0.26	0.45	0.03
Queue Length 95th (ft)	11	0	25	0	0
Control Delay (s)	10.1	0.0	45.3	0.0	0.0
Lane LOS	B		E		
Approach Delay (s)	1.1		45.3	0.0	
Approach LOS			E		

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBR	NWL	NWR	SWL	SWR
Lane Configurations						
Volume (veh/h)	725	51	9	16	119	721
Sign Control	Free		Stop		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.95	0.95	0.90	0.90	0.97	0.97
Hourly flow rate (vph)	763	54	10	18	123	743
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None				None	
Median storage veh)						
Upstream signal (ft)	277					
pX, platoon unblocked						
vC, conflicting volume			1752	763	817	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1752	763	817	
tC, single (s)			6.4	6.2	4.1	
tC, 2 stage (s)						
tF (s)			3.5	3.3	2.2	
p0 queue free %			87	96	85	
cM capacity (veh/h)			80	404	811	

Direction, Lane #	EB 1	EB 2	NW 1	SW 1	SW 2
Volume Total	763	54	28	123	743
Volume Left	0	0	10	123	0
Volume Right	0	54	18	0	0
cSH	1700	1700	164	811	1700
Volume to Capacity	0.45	0.03	0.17	0.15	0.44
Queue Length 95th (ft)	0	0	15	13	0
Control Delay (s)	0.0	0.0	31.4	10.2	0.0
Lane LOS			D	B	
Approach Delay (s)	0.0		31.4	1.4	
Approach LOS			D		

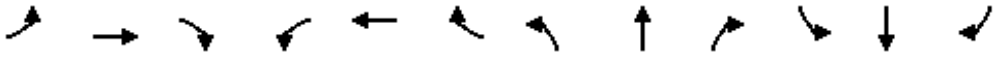
Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	60.1%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	0	0	0	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					376	
pX, platoon unblocked						
vC, conflicting volume	0	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0	0	0			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	1023	1084	1622			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	0	0	0	0	0	0
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.00	0.00	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A					
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS	A					

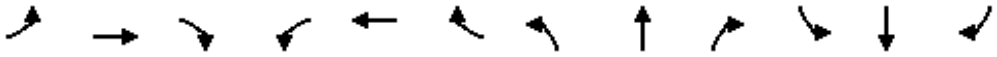
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	0	0	78	0	4	10	518	117	2	375	11
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	56	0	0	85	0	4	11	551	124	2	399	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											897	
pX, platoon unblocked												
vC, conflicting volume	710	1106	205	776	987	276	411			676		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	710	1106	205	776	987	276	411			676		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	82	100	100	70	100	99	99			100		
cM capacity (veh/h)	316	207	801	285	243	722	1145			912		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	56	85	4	194	367	124	2	266	145
Volume Left	56	85	0	11	0	0	2	0	0
Volume Right	0	0	4	0	0	124	0	0	12
cSH	316	285	722	1145	1700	1700	912	1700	1700
Volume to Capacity	0.18	0.30	0.01	0.01	0.22	0.07	0.00	0.16	0.09
Queue Length 95th (ft)	16	30	0	1	0	0	0	0	0
Control Delay (s)	18.8	22.9	10.0	0.5	0.0	0.0	9.0	0.0	0.0
Lane LOS	C	C	B	A			A		
Approach Delay (s)	18.8	22.3		0.1			0.0		
Approach LOS	C	C							

Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	37.5%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					634							
pX, platoon unblocked												
vC, conflicting volume	0			0			0	0	0	0	0	0
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0			0			0	0	0	0	0	0
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1623			1623			1023	896	1085	1023	896	1085

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2
Volume Total	0	0	0	0	0	0	0	0	0	0
Volume Left	0	0	0	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0	0	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS							A	A	A	A
Approach Delay (s)	0.0			0.0			0.0		0.0	
Approach LOS							A		A	

Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	0.0%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	144	1535	0	0	1250
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.98	0.92	0.92	0.96
Hourly flow rate (vph)	0	157	1566	0	0	1302
Pedestrians	2					3
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			983			125
pX, platoon unblocked	0.99	0.99			0.99	
vC, conflicting volume	2002	527			1568	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1979	491			1541	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	70			100	
cM capacity (veh/h)	53	519			422	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	157	522	522	522	434	434	434
Volume Left	0	0	0	0	0	0	0
Volume Right	157	0	0	0	0	0	0
cSH	519	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.30	0.31	0.31	0.31	0.26	0.26	0.26
Queue Length 95th (ft)	31	0	0	0	0	0	0
Control Delay (s)	14.9	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	14.9	0.0			0.0		
Approach LOS	B						

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	6	22	13	14	74	4	1274	7	5	772	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			0.95	
Frpb, ped/bikes		1.00			0.98			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.95			0.90			1.00			1.00	
Flt Protected		0.98			0.99			1.00			1.00	
Satd. Flow (prot)		1754			1669			1878			3570	
Flt Permitted		0.55			0.96			1.00			0.95	
Satd. Flow (perm)		981			1608			1875			3390	
Peak-hour factor, PHF	0.82	0.82	0.82	0.90	0.90	0.90	0.98	0.98	0.98	0.93	0.93	0.93
Adj. Flow (vph)	34	7	27	14	16	82	4	1300	7	5	830	5
RTOR Reduction (vph)	0	25	0	0	76	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	43	0	0	36	0	0	1311	0	0	840	0
Confl. Peds. (#/hr)				2		2				1		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	14%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		6.9			6.9			80.1			80.1	
Effective Green, g (s)		6.9			6.9			80.1			80.1	
Actuated g/C Ratio		0.07			0.07			0.84			0.84	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		71			117			1581			2858	
v/s Ratio Prot												
v/s Ratio Perm		c0.04			0.02			c0.70			0.25	
v/c Ratio		0.61			0.31			0.83			0.29	
Uniform Delay, d1		42.7			41.8			3.9			1.6	
Progression Factor		1.00			0.85			0.92			1.00	
Incremental Delay, d2		13.7			1.4			1.3			0.3	
Delay (s)		56.4			37.1			4.9			1.8	
Level of Service		E			D			A			A	
Approach Delay (s)		56.4			37.1			4.9			1.8	
Approach LOS		E			D			A			A	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	14	6	76	676	860	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	0.95	
Frpb, ped/bikes	1.00			1.00	1.00	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.96			1.00	1.00	
Flt Protected	0.97			0.99	1.00	
Satd. Flow (prot)	1754			1857	3566	
Flt Permitted	0.97			0.84	1.00	
Satd. Flow (perm)	1754			1566	3566	
Peak-hour factor, PHF	0.75	0.75	0.98	0.98	0.98	0.98
Adj. Flow (vph)	19	8	78	690	878	13
RTOR Reduction (vph)	8	0	0	0	1	0
Lane Group Flow (vph)	19	0	0	768	890	0
Confl. Peds. (#/hr)	2	2	1			1
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	2.4			84.6	84.6	
Effective Green, g (s)	2.4			84.6	84.6	
Actuated g/C Ratio	0.03			0.89	0.89	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	44			1395	3176	
v/s Ratio Prot	c0.01				0.25	
v/s Ratio Perm				c0.49		
v/c Ratio	0.44			0.55	0.28	
Uniform Delay, d1	45.6			1.1	0.8	
Progression Factor	1.01			0.14	1.00	
Incremental Delay, d2	6.2			1.3	0.2	
Delay (s)	52.1			1.4	1.0	
Level of Service	D			A	A	
Approach Delay (s)	52.1			1.4	1.0	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	2.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	1248	751	0	846	875	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		0.95	0.97	
Frpb, ped/bikes	1.00	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		1.00	0.95	
Satd. Flow (prot)	1881	1562		3574	3467	
Flt Permitted	1.00	1.00		1.00	0.95	
Satd. Flow (perm)	1881	1562		3574	3467	
Peak-hour factor, PHF	0.98	0.98	0.92	0.96	0.99	0.92
Adj. Flow (vph)	1273	766	0	881	884	0
RTOR Reduction (vph)	0	251	0	0	0	0
Lane Group Flow (vph)	1273	515	0	881	884	0
Confl. Peds. (#/hr)		1				
Heavy Vehicles (%)	1%	1%	2%	1%	1%	2%
Turn Type		Perm				
Protected Phases	2			6	8	
Permitted Phases		2				
Actuated Green, G (s)	63.0	63.0		63.0	24.0	
Effective Green, g (s)	63.0	63.0		63.0	24.0	
Actuated g/C Ratio	0.66	0.66		0.66	0.25	
Clearance Time (s)	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	1247	1036		2370	876	
v/s Ratio Prot	c0.68			0.25	c0.25	
v/s Ratio Perm		0.33				
v/c Ratio	1.02	0.50		0.37	1.01	
Uniform Delay, d1	16.0	8.0		7.2	35.5	
Progression Factor	1.06	4.23		0.82	0.98	
Incremental Delay, d2	20.6	0.6		0.4	32.3	
Delay (s)	37.6	34.6		6.3	67.2	
Level of Service	D	C		A	E	
Approach Delay (s)	36.5			6.3	67.2	
Approach LOS	D			A	E	

Intersection Summary			
HCM Average Control Delay	36.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	97.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	76	1229	292	523	1672	240	279	402	308	326	661	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		0.97	0.95	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.93		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	4973		3467	3574	1562	1787	4763		1766	4838	
Flt Permitted	0.11	1.00		0.95	1.00	1.00	0.31	1.00		0.27	1.00	
Satd. Flow (perm)	208	4973		3467	3574	1562	579	4763		496	4838	
Peak-hour factor, PHF	0.98	0.98	0.98	0.96	0.96	0.96	0.94	0.94	0.94	0.99	0.99	0.99
Adj. Flow (vph)	78	1254	298	545	1742	250	297	428	328	329	668	135
RTOR Reduction (vph)	0	41	0	0	0	112	0	146	0	0	32	0
Lane Group Flow (vph)	78	1511	0	545	1742	138	297	610	0	329	771	0
Confl. Peds. (#/hr)	2		2	1		1	2		2	21		21
Heavy Vehicles (%)	3%	1%	1%	1%	1%	2%	1%	2%	0%	2%	4%	2%
Turn Type	pm+pt			Prot		Perm	pm+pt			pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6					2	4			8		
Actuated Green, G (s)	38.7	35.5		17.5	49.8	49.8	24.0	13.0		28.0	15.0	
Effective Green, g (s)	38.7	35.5		17.5	49.8	49.8	24.0	13.0		28.0	15.0	
Actuated g/C Ratio	0.41	0.37		0.18	0.52	0.52	0.25	0.14		0.29	0.16	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	137	1858		639	1874	819	286	652		320	764	
v/s Ratio Prot	0.02	0.30		c0.16	c0.49		0.12	0.13		c0.14	0.16	
v/s Ratio Perm	0.21					0.09	0.14			c0.16		
v/c Ratio	0.57	0.81		0.85	0.93	0.17	1.04	0.94		1.03	1.01	
Uniform Delay, d1	22.1	26.8		37.5	21.0	11.8	33.6	40.6		30.8	40.0	
Progression Factor	1.12	0.54		0.89	0.91	1.04	1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.8	2.0		8.2	7.6	0.3	63.6	22.6		57.7	34.8	
Delay (s)	28.7	16.4		41.6	26.7	12.6	97.1	63.2		88.5	74.8	
Level of Service	C	B		D	C	B	F	E		F	E	
Approach Delay (s)		17.0			28.5			72.7			78.8	
Approach LOS		B			C			E			E	

Intersection Summary			
HCM Average Control Delay	41.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	1791	16	127	2202	21	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	5078		1805	3539	1805	1576
Flt Permitted	1.00		0.10	1.00	0.95	1.00
Satd. Flow (perm)	5078		197	3539	1805	1576
Peak-hour factor, PHF	0.97	0.97	0.98	0.98	0.83	0.83
Adj. Flow (vph)	1846	16	130	2247	25	63
RTOR Reduction (vph)	1	0	0	0	0	55
Lane Group Flow (vph)	1861	0	130	2247	25	8
Confl. Peds. (#/hr)		6	1		7	7
Heavy Vehicles (%)	2%	0%	0%	2%	0%	0%
Turn Type			Perm			Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	81.0		81.0	81.0	6.0	6.0
Effective Green, g (s)	81.0		81.0	81.0	6.0	6.0
Actuated g/C Ratio	0.85		0.85	0.85	0.06	0.06
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	4330		168	3017	114	100
v/s Ratio Prot	0.37			0.63	c0.01	
v/s Ratio Perm			c0.66			0.00
v/c Ratio	0.43		0.77	0.74	0.22	0.08
Uniform Delay, d1	1.6		3.0	2.8	42.3	41.9
Progression Factor	0.04		1.17	0.59	1.00	1.00
Incremental Delay, d2	0.0		12.9	0.6	4.4	1.5
Delay (s)	0.1		16.5	2.3	46.7	43.4
Level of Service	A		B	A	D	D
Approach Delay (s)	0.1			3.1	44.3	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	2.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	1155	701	738	1452	0	0	0	0	1084	188	657
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00	0.99	1.00	1.00					1.00	1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.96	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		6471	1546	3467	3574					1626	3018	1419
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		6471	1546	3467	3574					1626	3018	1419
Peak-hour factor, PHF	0.92	0.92	0.92	0.97	0.97	0.92	0.92	0.92	0.92	0.89	0.89	0.89
Adj. Flow (vph)	0	1255	762	761	1497	0	0	0	0	1218	211	738
RTOR Reduction (vph)	0	0	212	0	0	0	0	0	0	0	20	20
Lane Group Flow (vph)	0	1255	550	761	1497	0	0	0	0	609	1051	467
Confl. Peds. (#/hr)	1		1	1		1				2		2
Heavy Vehicles (%)	0%	1%	3%	1%	1%	0%	0%	0%	0%	1%	1%	2%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		31.0	31.0	19.0	54.0					33.0	33.0	33.0
Effective Green, g (s)		31.0	31.0	19.0	54.0					33.0	33.0	33.0
Actuated g/C Ratio		0.33	0.33	0.20	0.57					0.35	0.35	0.35
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2112	504	693	2032					565	1048	493
v/s Ratio Prot		0.19		c0.22	0.42					c0.37	0.35	
v/s Ratio Perm			c0.36									0.33
v/c Ratio		0.59	1.09	1.10	0.74					1.08	1.04dl	0.95
Uniform Delay, d1		26.7	32.0	38.0	15.2					31.0	31.0	30.1
Progression Factor		0.73	0.54	0.43	0.34					1.00	1.00	1.00
Incremental Delay, d2		1.2	66.2	57.0	1.4					60.6	28.4	27.4
Delay (s)		20.6	83.5	73.3	6.6					91.6	59.4	57.5
Level of Service		C	F	E	A					F	E	E
Approach Delay (s)		44.4			29.1			0.0			68.0	
Approach LOS		D			C			A			E	

Intersection Summary			
HCM Average Control Delay	47.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	104.6%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	228	767	476	1609	0	0	1974	747	0	0	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.95			0.86	0.88			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	0.97			1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1770	2787	3433	3539			6536	2742			1627
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1770	2787	3433	3539			6536	2742			1627
Peak-hour factor, PHF	0.90	0.90	0.92	0.92	0.92	0.92	0.94	0.94	0.92	0.92	0.90
Adj. Flow (vph)	253	852	517	1749	0	0	2100	795	0	0	400
RTOR Reduction (vph)	0	23	0	0	0	0	0	285	0	0	330
Lane Group Flow (vph)	253	829	517	1749	0	0	2100	510	0	0	70
Confl. Peds. (#/hr)	3	3	3					2			8
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	1%	2%	2%	1%
Turn Type		Prot	Prot					Perm			Over
Protected Phases	4	4	1	6			2				1
Permitted Phases								2			
Actuated Green, G (s)	30.4	30.4	16.6	56.6			36.0	36.0			16.6
Effective Green, g (s)	30.4	30.4	16.6	56.6			36.0	36.0			16.6
Actuated g/C Ratio	0.32	0.32	0.17	0.60			0.38	0.38			0.17
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	566	892	600	2108			2477	1039			284
v/s Ratio Prot	0.14	c0.30	0.15	c0.49			0.32				0.04
v/s Ratio Perm								0.19			
v/c Ratio	0.45	0.93	0.86	0.83			0.85	0.49			0.25
Uniform Delay, d1	25.6	31.3	38.1	15.3			27.0	22.5			33.8
Progression Factor	1.00	1.00	1.21	0.44			0.50	0.22			1.00
Incremental Delay, d2	0.6	15.5	7.2	2.2			1.0	0.4			0.5
Delay (s)	26.2	46.8	53.1	9.0			14.6	5.3			34.3
Level of Service	C	D	D	A			B	A			C
Approach Delay (s)	42.1			19.0			12.0		34.3		
Approach LOS	D			B			B		C		

Intersection Summary			
HCM Average Control Delay	20.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	504	66	119	32	48	86	246	1522	767	216	2165	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3502	1900	1407	1805	1900	1579	1736	4988	2755	1805	5164	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.09	1.00	1.00	0.10	1.00	
Satd. Flow (perm)	3502	1900	1407	1805	1900	1579	170	4988	2755	195	5164	
Peak-hour factor, PHF	0.96	0.96	0.96	0.80	0.80	0.80	0.93	0.93	0.93	0.97	0.97	0.97
Adj. Flow (vph)	525	69	124	40	60	108	265	1637	825	223	2232	57
RTOR Reduction (vph)	0	0	103	0	0	100	0	0	298	0	3	0
Lane Group Flow (vph)	525	69	21	40	60	8	265	1637	527	223	2286	0
Confl. Peds. (#/hr)			7	6		6	3		3	2		2
Heavy Vehicles (%)	0%	0%	12%	0%	0%	0%	4%	4%	1%	0%	0%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		pm+ov	pm+pt		
Protected Phases	4	4		8	8		1	6	4	5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	16.0	16.0	16.0	7.3	7.3	7.3	59.6	42.9	58.9	51.8	39.0	
Effective Green, g (s)	16.0	16.0	16.0	7.3	7.3	7.3	59.6	42.9	58.9	51.8	39.0	
Actuated g/C Ratio	0.17	0.17	0.17	0.08	0.08	0.08	0.63	0.45	0.62	0.55	0.41	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	590	320	237	139	146	121	382	2252	1824	323	2120	
v/s Ratio Prot	c0.15	0.04		0.02	c0.03		c0.12	0.33	0.05	0.09	c0.44	
v/s Ratio Perm			0.01			0.01	0.31		0.14	0.28		
v/c Ratio	0.89	0.22	0.09	0.29	0.41	0.07	0.69	0.73	0.29	0.69	1.08	
Uniform Delay, d1	38.6	34.1	33.3	41.4	41.8	40.7	23.9	21.3	8.4	18.0	28.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.05	0.99	0.78	1.21	0.69	
Incremental Delay, d2	15.2	0.3	0.2	1.1	1.9	0.2	3.0	1.2	0.0	2.3	39.0	
Delay (s)	53.9	34.4	33.5	42.5	43.7	40.9	28.1	22.1	6.6	24.1	58.4	
Level of Service	D	C	C	D	D	D	C	C	A	C	E	
Approach Delay (s)		48.5			42.0			18.0			55.3	
Approach LOS		D			D			B			E	

Intersection Summary			
HCM Average Control Delay	37.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	502	273	54	114	287	292	119	935	533	97	1526	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3367	3358		1770	1881	1615	1703	3505	1524	1770	3562	
Flt Permitted	0.95	1.00		0.55	1.00	1.00	0.09	1.00	1.00	0.17	1.00	
Satd. Flow (perm)	3367	3358		1015	1881	1615	170	3505	1524	321	3562	
Peak-hour factor, PHF	0.95	0.95	0.95	0.92	0.92	0.92	0.96	0.96	0.96	0.97	0.97	0.97
Adj. Flow (vph)	528	287	57	124	312	317	124	974	555	100	1573	20
RTOR Reduction (vph)	0	18	0	0	0	72	0	0	285	0	1	0
Lane Group Flow (vph)	528	326	0	124	312	245	124	974	270	100	1592	0
Confl. Peds. (#/hr)										1		1
Heavy Vehicles (%)	4%	3%	14%	2%	1%	0%	6%	3%	6%	2%	1%	11%
Turn Type	Prot			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases				8		8	6		6	2		
Actuated Green, G (s)	16.0	25.1		22.9	16.0	16.0	46.2	42.2	42.2	47.8	43.0	
Effective Green, g (s)	16.0	25.1		22.9	16.0	16.0	46.2	42.2	42.2	47.8	43.0	
Actuated g/C Ratio	0.17	0.26		0.24	0.17	0.17	0.49	0.44	0.44	0.50	0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	567	887		300	317	272	147	1557	677	235	1612	
v/s Ratio Prot	c0.16	0.10		0.03	c0.17		c0.04	0.28		0.02	c0.45	
v/s Ratio Perm				0.07		0.15	0.37		0.18	0.19		
v/c Ratio	0.93	0.37		0.41	0.98	0.90	0.84	0.63	0.40	0.43	0.99	
Uniform Delay, d1	39.0	28.5		29.4	39.4	38.7	21.8	20.3	17.8	14.5	25.7	
Progression Factor	0.82	0.60		0.78	0.77	0.67	2.39	0.38	2.10	0.47	0.39	
Incremental Delay, d2	19.0	0.2		0.8	43.2	28.0	26.1	1.4	1.3	0.5	11.1	
Delay (s)	51.0	17.4		23.8	73.5	53.9	78.2	9.1	38.7	7.3	21.2	
Level of Service	D	B		C	E	D	E	A	D	A	C	
Approach Delay (s)		37.7			57.1			24.2			20.4	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM Average Control Delay	30.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	104	188	163	107	810	119	473	1646	44	76	726	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3574	1553	1766	3574	1538	1787	3559		1687	3438	
Flt Permitted	0.19	1.00	1.00	0.52	1.00	1.00	0.12	1.00		0.13	1.00	
Satd. Flow (perm)	362	3574	1553	969	3574	1538	221	3559		237	3438	
Peak-hour factor, PHF	0.82	0.82	0.82	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	127	229	199	115	871	128	509	1770	47	82	781	199
RTOR Reduction (vph)	0	0	155	0	0	78	0	2	0	0	24	0
Lane Group Flow (vph)	127	229	44	115	871	50	509	1815	0	82	956	0
Confl. Peds. (#/hr)				4		4						
Heavy Vehicles (%)	0%	1%	4%	2%	1%	3%	1%	1%	3%	7%	2%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	25.0	21.0	21.0	29.0	23.0	23.0	56.0	48.8		33.2	30.0	
Effective Green, g (s)	25.0	21.0	21.0	29.0	23.0	23.0	56.0	48.8		33.2	30.0	
Actuated g/C Ratio	0.26	0.22	0.22	0.31	0.24	0.24	0.59	0.51		0.35	0.32	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	156	790	343	346	865	372	493	1828		132	1086	
v/s Ratio Prot	c0.03	0.06		c0.02	c0.24		c0.24	0.51		0.02	0.28	
v/s Ratio Perm	0.18		0.03	0.08		0.03	c0.37			0.20		
v/c Ratio	0.81	0.29	0.13	0.33	1.01	0.13	1.03	0.99		0.62	0.88	
Uniform Delay, d1	32.7	30.8	29.7	24.6	36.0	28.2	27.8	22.9		24.9	30.8	
Progression Factor	1.09	1.07	2.20	1.00	1.00	1.00	1.00	1.00		1.02	0.44	
Incremental Delay, d2	24.2	0.2	0.2	0.6	32.3	0.2	49.1	19.4		7.2	8.6	
Delay (s)	59.8	33.2	65.5	25.2	68.3	28.4	77.0	42.4		32.6	22.1	
Level of Service	E	C	E	C	E	C	E	D		C	C	
Approach Delay (s)		50.9			59.3			49.9			22.9	
Approach LOS		D			E			D			C	

Intersection Summary			
HCM Average Control Delay	46.4	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	236	206	120	87	355	713	64	1082	7	160	978	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.94		1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1787	3398		1747	1845	1563	1736	3570		1770	3574	1577
Flt Permitted	0.36	1.00		0.51	1.00	1.00	0.13	1.00		0.12	1.00	1.00
Satd. Flow (perm)	677	3398		936	1845	1563	242	3570		226	3574	1577
Peak-hour factor, PHF	0.89	0.89	0.89	0.92	0.92	0.92	0.91	0.91	0.91	0.89	0.89	0.89
Adj. Flow (vph)	265	231	135	95	386	775	70	1189	8	180	1099	315
RTOR Reduction (vph)	0	80	0	0	0	83	0	1	0	0	0	206
Lane Group Flow (vph)	265	286	0	95	386	692	70	1196	0	180	1099	109
Confl. Peds. (#/hr)				6		6	7		7	1		1
Heavy Vehicles (%)	1%	0%	1%	3%	3%	1%	4%	1%	0%	2%	1%	1%
Turn Type	pm+pt			pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	43.8	38.8		41.8	37.8	37.8	33.4	30.2		39.0	33.0	33.0
Effective Green, g (s)	43.8	38.8		41.8	37.8	37.8	33.4	30.2		39.0	33.0	33.0
Actuated g/C Ratio	0.46	0.41		0.44	0.40	0.40	0.35	0.32		0.41	0.35	0.35
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	371	1388		446	734	622	135	1135		190	1241	548
v/s Ratio Prot	c0.04	0.08		0.01	0.21		0.02	c0.34		c0.06	0.31	
v/s Ratio Perm	0.29			0.08		c0.44	0.16			0.33		0.07
v/c Ratio	0.71	0.21		0.21	0.53	1.11	0.52	1.05		0.95	0.89	0.20
Uniform Delay, d1	21.9	18.2		15.8	21.8	28.6	23.7	32.4		24.3	29.2	21.7
Progression Factor	0.89	0.69		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.1	0.1		0.2	0.7	71.0	3.3	42.2		49.7	9.5	0.8
Delay (s)	25.5	12.5		16.0	22.5	99.6	27.0	74.6		74.0	38.7	22.6
Level of Service	C	B		B	C	F	C	E		E	D	C
Approach Delay (s)		18.0			69.6			71.9			39.5	
Approach LOS		B			E			E			D	

Intersection Summary			
HCM Average Control Delay	53.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	98.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	119	226	421	798	693	271
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.96	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1719	1509	1770	1845	1845	1568
Flt Permitted	0.95	1.00	0.18	1.00	1.00	1.00
Satd. Flow (perm)	1719	1509	334	1845	1845	1568
Peak-hour factor, PHF	0.88	0.88	0.91	0.91	0.91	0.91
Adj. Flow (vph)	135	257	463	877	762	298
RTOR Reduction (vph)	0	229	0	0	0	129
Lane Group Flow (vph)	135	28	463	877	762	169
Confl. Peds. (#/hr)	6	6				
Heavy Vehicles (%)	5%	3%	2%	3%	3%	3%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	10.4	10.4	76.6	76.6	53.8	53.8
Effective Green, g (s)	10.4	10.4	76.6	76.6	53.8	53.8
Actuated g/C Ratio	0.11	0.11	0.81	0.81	0.57	0.57
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	188	165	553	1488	1045	888
v/s Ratio Prot	c0.08		c0.17	0.48	0.41	
v/s Ratio Perm		0.02	c0.51			0.11
v/c Ratio	0.72	0.17	0.84	0.59	0.73	0.19
Uniform Delay, d1	40.9	38.4	18.6	3.4	15.2	10.0
Progression Factor	0.94	0.99	0.74	1.52	0.50	0.83
Incremental Delay, d2	12.1	0.5	8.2	1.3	3.5	0.4
Delay (s)	50.6	38.6	22.0	6.5	11.2	8.7
Level of Service	D	D	C	A	B	A
Approach Delay (s)	42.7			11.8	10.5	
Approach LOS	D			B	B	

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	227	186	225	580	59	134	800	92	39	848	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1703	1683		1736	1863	1553	1703	1827	1455	1597	1845	1518
Flt Permitted	0.16	1.00		0.14	1.00	1.00	0.09	1.00	1.00	0.10	1.00	1.00
Satd. Flow (perm)	289	1683		254	1863	1553	168	1827	1455	163	1845	1518
Peak-hour factor, PHF	0.92	0.92	0.92	0.93	0.93	0.93	0.94	0.94	0.94	0.96	0.96	0.96
Adj. Flow (vph)	73	247	202	242	624	63	143	851	98	41	883	55
RTOR Reduction (vph)	0	30	0	0	0	41	0	0	47	0	0	27
Lane Group Flow (vph)	73	419	0	242	624	22	143	851	51	41	883	28
Confl. Peds. (#/hr)	7		7	3		3				4		4
Heavy Vehicles (%)	6%	2%	5%	4%	2%	1%	6%	4%	11%	13%	3%	3%
Turn Type	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)	28.0	24.8		37.8	30.6	30.6	46.8	42.8	42.8	43.6	41.2	41.2
Effective Green, g (s)	28.0	24.8		37.8	30.6	30.6	46.8	42.8	42.8	43.6	41.2	41.2
Actuated g/C Ratio	0.29	0.26		0.40	0.32	0.32	0.49	0.45	0.45	0.46	0.43	0.43
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	133	439		241	600	500	147	823	656	111	800	658
v/s Ratio Prot	0.02	0.25		c0.09	c0.33		c0.04	0.47		0.01	c0.48	
v/s Ratio Perm	0.14			0.30		0.01	0.44		0.03	0.16		0.02
v/c Ratio	0.55	0.95		1.00	1.04	0.04	0.97	1.03	0.08	0.37	1.10	0.04
Uniform Delay, d1	27.1	34.5		23.9	32.2	22.1	24.0	26.1	14.9	21.7	26.9	15.5
Progression Factor	1.00	1.00		1.73	0.69	0.61	1.00	1.00	1.00	0.49	0.56	0.14
Incremental Delay, d2	4.6	31.2		28.5	28.9	0.0	65.6	40.5	0.2	1.4	59.7	0.1
Delay (s)	31.6	65.7		69.8	51.3	13.5	89.6	66.6	15.1	12.0	74.9	2.3
Level of Service	C	E		E	D	B	F	E	B	B	E	A
Approach Delay (s)		60.9			53.5			65.0			68.2	
Approach LOS		E			D			E			E	

Intersection Summary			
HCM Average Control Delay	62.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	101.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	1	308	2	481	1	727	306	891	730	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00		0.95	1.00	0.97	1.00	
Frpb, ped/bikes		1.00			1.00	0.99		1.00	0.99	1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Frt		0.86			1.00	0.85		1.00	0.85	1.00	1.00	
Flt Protected		1.00			0.95	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1644			1752	1446		3505	1560	3400	1845	
Flt Permitted		1.00			0.73	1.00		0.95	1.00	0.95	1.00	
Satd. Flow (perm)		1644			1334	1446		3345	1560	3400	1845	
Peak-hour factor, PHF	0.25	0.25	0.25	0.90	0.90	0.90	0.98	0.98	0.98	0.94	0.94	0.94
Adj. Flow (vph)	0	0	4	342	2	534	1	742	312	948	777	0
RTOR Reduction (vph)	0	3	0	0	0	385	0	0	225	0	0	0
Lane Group Flow (vph)	0	1	0	0	344	149	0	743	87	948	777	0
Confl. Peds. (#/hr)				2		2	2		2	4		4
Heavy Vehicles (%)	0%	0%	0%	3%	0%	10%	0%	3%	2%	3%	3%	0%
Turn Type	Perm			Perm		Perm	Perm		Perm	Prot		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2			
Actuated Green, G (s)		22.1			22.1	22.1		22.0	22.0	23.0	49.0	
Effective Green, g (s)		22.1			22.1	22.1		22.0	22.0	23.0	49.0	
Actuated g/C Ratio		0.28			0.28	0.28		0.28	0.28	0.29	0.62	
Clearance Time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		459			373	404		930	434	989	1143	
v/s Ratio Prot		0.00								c0.28	0.42	
v/s Ratio Perm					c0.26	0.10		c0.22	0.06			
v/c Ratio		0.00			0.92	0.37		0.80	0.20	0.96	0.68	
Uniform Delay, d1		20.6			27.7	22.9		26.5	21.8	27.6	9.9	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0			27.8	0.6		7.1	1.0	19.1	3.3	
Delay (s)		20.6			55.5	23.5		33.6	22.9	46.7	13.2	
Level of Service		C			E	C		C	C	D	B	
Approach Delay (s)		20.6			36.0			30.4			31.6	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM Average Control Delay	32.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	79.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	569	25	20	14	11	32	33	793	14	52	589	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	0.96			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1684			1848	1474	1805	3531		1671	3505	
Flt Permitted	0.95	0.96			0.97	1.00	0.37	1.00		0.27	1.00	
Satd. Flow (perm)	1681	1684			1848	1474	700	3531		484	3505	
Peak-hour factor, PHF	0.93	0.93	0.93	0.98	0.98	0.98	0.98	0.98	0.98	0.92	0.92	0.92
Adj. Flow (vph)	612	27	22	14	11	33	34	809	14	57	640	0
RTOR Reduction (vph)	0	5	0	0	0	32	0	2	0	0	0	0
Lane Group Flow (vph)	330	326	0	0	25	1	34	821	0	57	640	0
Confl. Peds. (#/hr)	2		2	2		2						
Heavy Vehicles (%)	2%	0%	0%	0%	0%	7%	0%	2%	0%	8%	3%	1%
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases						8	2			6		
Actuated Green, G (s)	15.2	15.2			1.1	1.1	25.5	25.5		25.5	25.5	
Effective Green, g (s)	15.2	15.2			1.1	1.1	25.5	25.5		25.5	25.5	
Actuated g/C Ratio	0.28	0.28			0.02	0.02	0.47	0.47		0.47	0.47	
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	475	476			38	30	332	1674		229	1661	
v/s Ratio Prot	c0.20	0.19			c0.01			c0.23			0.18	
v/s Ratio Perm						0.00	0.05			0.12		
v/c Ratio	0.69	0.68			0.66	0.02	0.10	0.49		0.25	0.39	
Uniform Delay, d1	17.2	17.2			26.2	25.8	7.8	9.7		8.4	9.1	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.4	4.1			34.3	0.3	0.6	1.0		2.6	0.7	
Delay (s)	21.6	21.2			60.4	26.1	8.4	10.7		11.0	9.8	
Level of Service	C	C			E	C	A	B		B	A	
Approach Delay (s)		21.4			40.9			10.6			9.9	
Approach LOS		C			D			B			A	

Intersection Summary			
HCM Average Control Delay	14.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	53.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Volume (vph)	305	371	150	74	93	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.97	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	1845	1759	1498	1805	1568
Flt Permitted	0.61	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1143	1845	1759	1498	1805	1568
Peak-hour factor, PHF	0.84	0.84	0.92	0.92	0.87	0.87
Adj. Flow (vph)	363	442	163	80	107	193
RTOR Reduction (vph)	0	0	0	28	0	171
Lane Group Flow (vph)	363	442	163	52	107	22
Confl. Peds. (#/hr)				2		
Heavy Vehicles (%)	2%	3%	8%	5%	0%	3%
Turn Type	pm+pt			Perm		Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Actuated Green, G (s)	76.0	76.0	61.2	61.2	11.0	11.0
Effective Green, g (s)	76.0	76.0	61.2	61.2	11.0	11.0
Actuated g/C Ratio	0.80	0.80	0.64	0.64	0.12	0.12
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	986	1476	1133	965	209	182
v/s Ratio Prot	c0.04	0.24	0.09		c0.06	
v/s Ratio Perm	c0.25			0.03		0.01
v/c Ratio	0.37	0.30	0.14	0.05	0.51	0.12
Uniform Delay, d1	2.5	2.5	6.6	6.2	39.5	37.7
Progression Factor	0.33	0.34	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.4	0.3	0.1	2.1	0.3
Delay (s)	1.0	1.3	6.9	6.3	41.6	38.0
Level of Service	A	A	A	A	D	D
Approach Delay (s)		1.2	6.7		39.3	
Approach LOS		A	A		D	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	291	540	651	127	853	71	1171	820	128	72	429	300
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.97	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1805	3574	1567	1786	5074		3502	3574	1562	1770	3574	1591
Flt Permitted	0.20	1.00	1.00	0.35	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	380	3574	1567	667	5074		3502	3574	1562	1770	3574	1591
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.96	0.96	0.96	0.91	0.91	0.91
Adj. Flow (vph)	313	581	700	137	917	76	1220	854	133	79	471	330
RTOR Reduction (vph)	0	0	519	0	11	0	0	0	84	0	0	112
Lane Group Flow (vph)	313	581	181	137	982	0	1220	854	49	79	471	218
Confl. Peds. (#/hr)	5		5	3		3	1		1	2		2
Heavy Vehicles (%)	0%	1%	1%	1%	1%	0%	0%	1%	2%	2%	1%	0%
Turn Type	pm+pt		Perm	pm+pt			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4		4	8					2			6
Actuated Green, G (s)	30.0	22.0	22.0	20.0	16.0		31.0	31.0	31.0	12.0	12.0	12.0
Effective Green, g (s)	30.0	22.0	22.0	20.0	16.0		31.0	31.0	31.0	12.0	12.0	12.0
Actuated g/C Ratio	0.35	0.26	0.26	0.24	0.19		0.36	0.36	0.36	0.14	0.14	0.14
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	302	925	406	210	955		1277	1303	570	250	505	225
v/s Ratio Prot	c0.12	0.16		0.03	0.19		c0.35	0.24		0.04	0.13	
v/s Ratio Perm	c0.24		0.12	0.12					0.03			c0.14
v/c Ratio	1.04	0.63	0.45	0.65	1.03		0.96	0.66	0.09	0.32	0.93	0.97
Uniform Delay, d1	24.3	27.9	26.4	27.9	34.5		26.3	22.5	17.7	32.8	36.1	36.3
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.87	0.88	1.02	1.00	1.00	1.00
Incremental Delay, d2	61.6	1.3	0.8	7.1	36.5		14.8	2.2	0.2	3.3	26.4	52.8
Delay (s)	85.9	29.2	27.2	34.9	71.0		37.7	21.9	18.2	36.1	62.5	89.2
Level of Service	F	C	C	C	E		D	C	B	D	E	F
Approach Delay (s)		39.5			66.6			30.4			70.1	
Approach LOS		D			E			C			E	

Intersection Summary			
HCM Average Control Delay	45.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	399	943	1209	0	0	1243
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	0.97	0.91	0.91			0.86
Frpb, ped/bikes	0.99	0.98	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	0.92	0.85	1.00			1.00
Flt Protected	0.98	1.00	1.00			1.00
Satd. Flow (prot)	3251	1433	5136			6471
Flt Permitted	0.98	1.00	1.00			1.00
Satd. Flow (perm)	3251	1433	5136			6471
Peak-hour factor, PHF	0.97	0.97	0.98	0.92	0.92	0.96
Adj. Flow (vph)	411	972	1234	0	0	1295
RTOR Reduction (vph)	7	7	0	0	0	0
Lane Group Flow (vph)	890	479	1234	0	0	1295
Confl. Peds. (#/hr)	2	2				
Heavy Vehicles (%)	1%	1%	1%	2%	2%	1%
Turn Type		Perm				
Protected Phases	8		2			6
Permitted Phases		8				
Actuated Green, G (s)	37.0	37.0	40.0			40.0
Effective Green, g (s)	37.0	37.0	40.0			40.0
Actuated g/C Ratio	0.44	0.44	0.47			0.47
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	1415	624	2417			3045
v/s Ratio Prot	0.27		c0.24			0.20
v/s Ratio Perm		c0.33				
v/c Ratio	0.63	0.77	0.51			0.43
Uniform Delay, d1	18.7	20.4	15.7			14.9
Progression Factor	1.00	1.00	0.28			0.63
Incremental Delay, d2	0.9	5.7	0.7			0.2
Delay (s)	19.5	26.0	5.1			9.7
Level of Service	B	C	A			A
Approach Delay (s)	21.8		5.1			9.7
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	12.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	1293	379	493	1200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0
Lane Util. Factor			0.91		0.97	0.91
Frpb, ped/bikes			1.00		1.00	1.00
Flpb, ped/bikes			1.00		1.00	1.00
Frt			0.97		1.00	1.00
Flt Protected			1.00		0.95	1.00
Satd. Flow (prot)			4944		3467	5136
Flt Permitted			1.00		0.95	1.00
Satd. Flow (perm)			4944		3467	5136
Peak-hour factor, PHF	0.92	0.92	0.93	0.93	0.97	0.97
Adj. Flow (vph)	0	0	1390	408	508	1237
RTOR Reduction (vph)	0	0	34	0	0	0
Lane Group Flow (vph)	0	0	1764	0	508	1237
Confl. Peds. (#/hr)				2	4	
Heavy Vehicles (%)	2%	2%	1%	1%	1%	1%
Turn Type					Prot	
Protected Phases			2		1	6
Permitted Phases						
Actuated Green, G (s)			59.2		17.8	85.0
Effective Green, g (s)			59.2		17.8	85.0
Actuated g/C Ratio			0.70		0.21	1.00
Clearance Time (s)			4.0		4.0	4.0
Vehicle Extension (s)			3.0		3.0	3.0
Lane Grp Cap (vph)			3443		726	5136
v/s Ratio Prot			c0.36		c0.15	0.24
v/s Ratio Perm						
v/c Ratio			0.51		0.70	0.24
Uniform Delay, d1			6.1		31.1	0.0
Progression Factor			0.28		0.93	1.00
Incremental Delay, d2			0.5		2.7	0.1
Delay (s)			2.2		31.6	0.1
Level of Service			A		C	A
Approach Delay (s)	0.0		2.2			9.3
Approach LOS	A		A			A

Intersection Summary			
HCM Average Control Delay	5.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	1535	57	128	1122	24	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	1.00	
Flt Protected	1.00		0.95	1.00	0.95	
Satd. Flow (prot)	5105		1752	5136	1719	
Flt Permitted	1.00		0.12	1.00	0.95	
Satd. Flow (perm)	5105		215	5136	1719	
Peak-hour factor, PHF	0.98	0.98	0.96	0.96	0.80	0.92
Adj. Flow (vph)	1566	58	133	1169	30	0
RTOR Reduction (vph)	3	0	0	0	0	0
Lane Group Flow (vph)	1621	0	133	1169	30	0
Confl. Peds. (#/hr)		2			3	
Heavy Vehicles (%)	1%	0%	3%	1%	5%	2%
Turn Type			pm+pt			
Protected Phases	2		1	6	8	
Permitted Phases			6			
Actuated Green, G (s)	61.2		73.6	73.6	3.4	
Effective Green, g (s)	61.2		73.6	73.6	3.4	
Actuated g/C Ratio	0.72		0.87	0.87	0.04	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	3676		338	4447	69	
v/s Ratio Prot	c0.32		c0.04	0.23	c0.02	
v/s Ratio Perm			0.30			
v/c Ratio	0.44		0.39	0.26	0.43	
Uniform Delay, d1	4.9		2.5	1.0	39.9	
Progression Factor	0.39		4.93	0.59	1.00	
Incremental Delay, d2	0.2		0.7	0.1	4.3	
Delay (s)	2.1		13.0	0.7	44.2	
Level of Service	A		B	A	D	
Approach Delay (s)	2.1			2.0	44.2	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	2.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	51.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

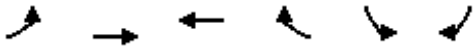
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	0	1	305	2	246	5	1230	108	102	1166	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.93			0.94			0.99		1.00	1.00	
Flt Protected		0.98			0.97			1.00		0.95	1.00	
Satd. Flow (prot)		1713			1706			3490		1787	3539	
Flt Permitted		0.91			0.83			0.95		0.09	1.00	
Satd. Flow (perm)		1600			1451			3320		176	3539	
Peak-hour factor, PHF	0.75	0.75	0.75	0.95	0.95	0.95	0.99	0.99	0.99	0.96	0.96	0.96
Adj. Flow (vph)	1	0	1	321	2	259	5	1242	109	106	1215	1
RTOR Reduction (vph)	0	1	0	0	34	0	0	8	0	0	0	0
Lane Group Flow (vph)	0	1	0	0	548	0	0	1348	0	106	1216	0
Confl. Peds. (#/hr)	4		4	2		2	4		4			
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	2%	1%	1%	2%	0%
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		31.0			31.0			38.8		46.0	46.0	
Effective Green, g (s)		31.0			31.0			38.8		46.0	46.0	
Actuated g/C Ratio		0.36			0.36			0.46		0.54	0.54	
Clearance Time (s)		4.0			4.0			4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		584			529			1515		156	1915	
v/s Ratio Prot										0.03	c0.34	
v/s Ratio Perm		0.00			c0.38			c0.41		0.34		
v/c Ratio		0.00			1.04			0.89		0.68	0.63	
Uniform Delay, d1		17.2			27.0			21.1		16.1	13.6	
Progression Factor		1.00			1.00			0.65		0.91	0.90	
Incremental Delay, d2		0.0			48.9			4.6		11.0	1.6	
Delay (s)		17.2			75.9			18.4		25.7	13.9	
Level of Service		B			E			B		C	B	
Approach Delay (s)		17.2			75.9			18.4			14.9	
Approach LOS		B			E			B			B	

Intersection Summary			
HCM Average Control Delay	27.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	118.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	204	281	50	247	472	360	108	680	71	379	720	332
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1725		1787	1863	1599	1752	3517		1752	3382	
Flt Permitted	0.17	1.00		0.25	1.00	1.00	0.20	1.00		0.17	1.00	
Satd. Flow (perm)	321	1725		475	1863	1599	369	3517		307	3382	
Peak-hour factor, PHF	0.92	0.92	0.92	0.89	0.89	0.89	0.89	0.89	0.89	0.88	0.88	0.88
Adj. Flow (vph)	222	305	54	278	530	404	121	764	80	431	818	377
RTOR Reduction (vph)	0	7	0	0	0	26	0	9	0	0	64	0
Lane Group Flow (vph)	222	352	0	278	530	378	121	835	0	431	1131	0
Heavy Vehicles (%)	3%	6%	17%	1%	2%	1%	3%	1%	3%	3%	2%	1%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	31.0	23.0		35.0	25.0	41.0	24.0	20.0		40.0	32.0	
Effective Green, g (s)	31.0	23.0		35.0	25.0	41.0	24.0	20.0		40.0	32.0	
Actuated g/C Ratio	0.36	0.27		0.41	0.29	0.48	0.28	0.24		0.47	0.38	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	252	467		350	548	847	169	828		416	1273	
v/s Ratio Prot	0.08	0.20		c0.09	c0.28	0.08	0.03	0.24		c0.19	0.33	
v/s Ratio Perm	0.24			0.23		0.15	0.17			c0.29		
v/c Ratio	0.88	0.75		0.79	0.97	0.45	0.72	1.01		1.04	0.89	
Uniform Delay, d1	22.1	28.4		18.9	29.6	14.5	25.8	32.5		23.0	24.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.64	0.94	
Incremental Delay, d2	28.0	6.8		11.7	29.9	0.4	13.5	33.3		47.2	7.2	
Delay (s)	50.1	35.2		30.6	59.5	14.9	39.2	65.8		85.0	30.5	
Level of Service	D	D		C	E	B	D	E		F	C	
Approach Delay (s)		40.9			38.0			62.5			45.0	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM Average Control Delay	46.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	17	199	353	48	19	33
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.97	0.97	0.85	0.85
Hourly flow rate (vph)	20	231	364	49	22	39
Pedestrians		2	2		4	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	417				666	395
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	417				666	395
tC, single (s)	4.1				6.4	6.3
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.4
p0 queue free %	98				95	94
cM capacity (veh/h)	1149				418	634

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	251	413	61
Volume Left	20	0	22
Volume Right	0	49	39
cSH	1149	1700	534
Volume to Capacity	0.02	0.24	0.11
Queue Length 95th (ft)	1	0	10
Control Delay (s)	0.8	0.0	12.6
Lane LOS	A		B
Approach Delay (s)	0.8	0.0	12.6
Approach LOS			B

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	2	177	29	20	107	14	37	7	22	1	1	2
Peak Hour Factor	0.86	0.86	0.86	0.90	0.90	0.90	0.73	0.73	0.73	0.75	0.75	0.75
Hourly flow rate (vph)	2	206	34	22	119	16	51	10	30	1	1	3

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	242	141	16	90	5
Volume Left (vph)	2	22	0	51	1
Volume Right (vph)	34	0	16	30	3
Hadj (s)	-0.03	0.18	-0.70	-0.09	-0.25
Departure Headway (s)	4.4	5.1	4.2	4.7	4.7
Degree Utilization, x	0.30	0.20	0.02	0.12	0.01
Capacity (veh/h)	798	680	819	702	686
Control Delay (s)	9.2	8.2	6.1	8.4	7.7
Approach Delay (s)	9.2	8.0		8.4	7.7
Approach LOS	A	A		A	A

Intersection Summary				
Delay	8.7			
HCM Level of Service	A			
Intersection Capacity Utilization	33.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	144	1535	0	0	1250
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.98	0.92	0.92	0.96
Hourly flow rate (vph)	0	157	1566	0	0	1302
Pedestrians	2					3
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			111			125
pX, platoon unblocked	0.87	0.87			0.87	
vC, conflicting volume	2002	527			1568	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1632	0			1133	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	83			100	
cM capacity (veh/h)	80	943			532	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	157	522	522	522	434	434	434
Volume Left	0	0	0	0	0	0	0
Volume Right	157	0	0	0	0	0	0
cSH	943	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.17	0.31	0.31	0.31	0.26	0.26	0.26
Queue Length 95th (ft)	15	0	0	0	0	0	0
Control Delay (s)	9.6	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A						
Approach Delay (s)	9.6	0.0			0.0		
Approach LOS	A						

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	18	30	12	17	6	23	826	6	1	1282	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			0.95	
Frpb, ped/bikes		0.99			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.94			0.98			1.00			1.00	
Flt Protected		0.98			0.98			1.00			1.00	
Satd. Flow (prot)		1750			1817			1877			3603	
Flt Permitted		0.88			0.95			0.95			0.95	
Satd. Flow (perm)		1558			1754			1786			3440	
Peak-hour factor, PHF	0.94	0.94	0.94	0.82	0.82	0.82	0.91	0.91	0.91	0.98	0.98	0.98
Adj. Flow (vph)	24	19	32	15	21	7	25	908	7	1	1308	15
RTOR Reduction (vph)	0	30	0	0	7	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	45	0	0	36	0	0	940	0	0	1323	0
Confl. Peds. (#/hr)	2		2	3		3	4		4	1		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		3.6			3.6			48.4			48.4	
Effective Green, g (s)		3.6			3.6			48.4			48.4	
Actuated g/C Ratio		0.06			0.06			0.81			0.81	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		93			105			1441			2775	
v/s Ratio Prot												
v/s Ratio Perm		c0.03			0.02			c0.53			0.38	
v/c Ratio		0.48			0.35			0.65			0.48	
Uniform Delay, d1		27.3			27.1			2.4			1.8	
Progression Factor		1.00			0.96			0.50			1.00	
Incremental Delay, d2		3.9			1.9			1.5			0.6	
Delay (s)		31.2			28.0			2.7			2.4	
Level of Service		C			C			A			A	
Approach Delay (s)		31.2			28.0			2.7			2.4	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	3.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	7	3	12	894	664	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	0.95	
Frpb, ped/bikes	1.00			1.00	1.00	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.96			1.00	0.99	
Flt Protected	0.97			1.00	1.00	
Satd. Flow (prot)	1748			1880	3554	
Flt Permitted	0.97			0.99	1.00	
Satd. Flow (perm)	1748			1865	3554	
Peak-hour factor, PHF	0.75	0.75	0.98	0.98	0.95	0.95
Adj. Flow (vph)	9	4	12	912	699	25
RTOR Reduction (vph)	4	0	0	0	4	0
Lane Group Flow (vph)	9	0	0	924	721	0
Confl. Peds. (#/hr)	2	2	2			2
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	0.4			51.6	51.6	
Effective Green, g (s)	0.4			51.6	51.6	
Actuated g/C Ratio	0.01			0.86	0.86	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	12			1604	3056	
v/s Ratio Prot	c0.01				0.20	
v/s Ratio Perm				c0.50		
v/c Ratio	0.75			0.58	0.24	
Uniform Delay, d1	29.8			1.2	0.7	
Progression Factor	0.53			0.61	1.00	
Incremental Delay, d2	120.5			1.1	0.2	
Delay (s)	136.3			1.8	0.9	
Level of Service	F			A	A	
Approach Delay (s)	136.3			1.8	0.9	
Approach LOS	F			A	A	

Intersection Summary			
HCM Average Control Delay	2.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	872	872	0	1327	656	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		0.95	0.97	
Frpb, ped/bikes	1.00	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		1.00	0.95	
Satd. Flow (prot)	1881	1561		3574	3502	
Flt Permitted	1.00	1.00		1.00	0.95	
Satd. Flow (perm)	1881	1561		3574	3502	
Peak-hour factor, PHF	0.96	0.96	0.92	0.94	0.93	0.92
Adj. Flow (vph)	908	908	0	1412	705	0
RTOR Reduction (vph)	0	342	0	0	0	0
Lane Group Flow (vph)	908	566	0	1412	705	0
Confl. Peds. (#/hr)		2	1		1	
Heavy Vehicles (%)	1%	1%	2%	1%	0%	2%
Turn Type		Perm				
Protected Phases	2			6	8	
Permitted Phases		2				
Actuated Green, G (s)	37.4	37.4		37.4	14.6	
Effective Green, g (s)	37.4	37.4		37.4	14.6	
Actuated g/C Ratio	0.62	0.62		0.62	0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	1172	973		2228	852	
v/s Ratio Prot	c0.48			0.40	c0.20	
v/s Ratio Perm		0.36				
v/c Ratio	0.77	0.58		0.63	0.83	
Uniform Delay, d1	8.2	6.7		7.0	21.5	
Progression Factor	1.00	1.00		0.79	0.99	
Incremental Delay, d2	5.0	2.5		1.3	6.6	
Delay (s)	13.3	9.2		6.8	27.8	
Level of Service	B	A		A	C	
Approach Delay (s)	11.2			6.8	27.8	
Approach LOS	B			A	C	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	96	1708	181	298	1272	424	340	744	371	267	532	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		0.97	0.95		1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.96		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	5055		3467	3454		1802	4824		1769	4889	
Flt Permitted	0.11	1.00		0.95	1.00		0.22	1.00		0.27	1.00	
Satd. Flow (perm)	205	5055		3467	3454		422	4824		496	4889	
Peak-hour factor, PHF	0.95	0.95	0.95	0.99	0.99	0.99	0.98	0.98	0.98	0.91	0.91	0.91
Adj. Flow (vph)	101	1798	191	301	1285	428	347	759	379	293	585	120
RTOR Reduction (vph)	0	14	0	0	35	0	0	87	0	0	35	0
Lane Group Flow (vph)	101	1975	0	301	1678	0	347	1051	0	293	670	0
Confl. Peds. (#/hr)	1		1	1		1	19		19	12		12
Heavy Vehicles (%)	0%	1%	1%	1%	0%	1%	0%	1%	0%	2%	3%	2%
Turn Type	pm+pt			Prot			pm+pt			pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6						4			8		
Actuated Green, G (s)	40.2	37.0		8.0	41.8		32.0	18.0		26.0	15.0	
Effective Green, g (s)	40.2	37.0		8.0	41.8		32.0	18.0		26.0	15.0	
Actuated g/C Ratio	0.45	0.41		0.09	0.46		0.36	0.20		0.29	0.17	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	148	2078		308	1604		365	965		299	815	
v/s Ratio Prot	0.02	0.39		c0.09	c0.49		c0.15	c0.22		0.12	0.14	
v/s Ratio Perm	0.28						0.19			0.16		
v/c Ratio	0.68	0.95		0.98	1.05		0.95	1.09		0.98	0.82	
Uniform Delay, d1	21.0	25.6		40.9	24.1		24.2	36.0		29.3	36.2	
Progression Factor	1.00	1.00		1.16	0.77		1.00	1.00		1.00	1.00	
Incremental Delay, d2	12.2	10.4		36.4	32.1		34.3	56.3		46.0	6.7	
Delay (s)	33.2	36.0		83.7	50.7		58.5	92.3		75.3	42.9	
Level of Service	C	D		F	D		E	F		E	D	
Approach Delay (s)		35.9			55.6			84.4			52.4	
Approach LOS		D			E			F			D	

Intersection Summary			
HCM Average Control Delay	55.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	105.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	2230	15	59	1842	23	187
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	5080		1805	3539	1805	1561
Flt Permitted	1.00		0.07	1.00	0.95	1.00
Satd. Flow (perm)	5080		126	3539	1805	1561
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.64	0.64
Adj. Flow (vph)	2253	15	60	1861	36	292
RTOR Reduction (vph)	1	0	0	0	0	9
Lane Group Flow (vph)	2267	0	60	1861	36	283
Confl. Peds. (#/hr)		6	1		7	7
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Turn Type			Perm			Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	60.3		60.3	60.3	21.7	21.7
Effective Green, g (s)	60.3		60.3	60.3	21.7	21.7
Actuated g/C Ratio	0.67		0.67	0.67	0.24	0.24
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3404		84	2371	435	376
v/s Ratio Prot	0.45			c0.53	0.02	
v/s Ratio Perm			0.48			c0.18
v/c Ratio	0.67		0.71	0.78	0.08	0.75
Uniform Delay, d1	8.9		9.4	10.3	26.4	31.7
Progression Factor	0.90		0.47	0.42	1.00	1.00
Incremental Delay, d2	0.1		15.8	1.1	0.4	13.0
Delay (s)	8.1		20.2	5.4	26.8	44.7
Level of Service	A		C	A	C	D
Approach Delay (s)	8.1			5.9	42.7	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	9.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	2147	469	556	1520	0	0	0	0	1116	305	389
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.99	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		6471	1599	3433	3610					1643	3137	1447
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		6471	1599	3433	3610					1643	3137	1447
Peak-hour factor, PHF	0.92	0.99	0.99	0.93	0.93	0.92	0.92	0.92	0.92	0.98	0.98	0.98
Adj. Flow (vph)	0	2169	474	598	1634	0	0	0	0	1139	311	397
RTOR Reduction (vph)	0	0	146	0	0	0	0	0	0	0	3	14
Lane Group Flow (vph)	0	2169	328	598	1634	0	0	0	0	569	918	343
Confl. Peds. (#/hr)										2		2
Heavy Vehicles (%)	0%	1%	1%	2%	0%	0%	0%	0%	0%	0%	1%	0%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		32.0	32.0	15.0	51.0					31.0	31.0	31.0
Effective Green, g (s)		32.0	32.0	15.0	51.0					31.0	31.0	31.0
Actuated g/C Ratio		0.36	0.36	0.17	0.57					0.34	0.34	0.34
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2301	569	572	2046					566	1081	498
v/s Ratio Prot		c0.34		c0.17	0.45					c0.35	0.29	
v/s Ratio Perm			0.20									0.24
v/c Ratio		0.94	0.58	1.05	0.80					1.01	1.00dl	0.69
Uniform Delay, d1		28.1	23.5	37.5	15.4					29.5	27.3	25.3
Progression Factor		0.82	0.93	0.46	0.68					1.00	1.00	1.00
Incremental Delay, d2		7.6	3.2	38.4	1.6					39.1	6.4	3.9
Delay (s)		30.6	25.1	55.5	12.1					68.6	33.7	29.3
Level of Service		C	C	E	B					E	C	C
Approach Delay (s)		29.6			23.8			0.0			43.6	
Approach LOS		C			C			A			D	

Intersection Summary			
HCM Average Control Delay	31.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	255	738	1013	2073	0	0	1748	889	0	0	498
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.95			0.86	0.88			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1787	2814	3502	3610			6536	2814			1644
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1787	2814	3502	3610			6536	2814			1644
Peak-hour factor, PHF	0.93	0.93	0.98	0.98	0.92	0.92	0.99	0.99	0.92	0.92	0.86
Adj. Flow (vph)	274	794	1034	2115	0	0	1766	898	0	0	579
RTOR Reduction (vph)	0	14	0	0	0	0	0	186	0	0	375
Lane Group Flow (vph)	274	780	1034	2115	0	0	1766	712	0	0	205
Confl. Peds. (#/hr)	1	1	1								1
Heavy Vehicles (%)	1%	1%	0%	0%	2%	2%	0%	1%	2%	2%	0%
Turn Type		Prot	Prot					Perm			Over
Protected Phases	4	4	1	6			2				1
Permitted Phases								2			
Actuated Green, G (s)	25.0	25.0	27.0	57.0			26.0	26.0			27.0
Effective Green, g (s)	25.0	25.0	27.0	57.0			26.0	26.0			27.0
Actuated g/C Ratio	0.28	0.28	0.30	0.63			0.29	0.29			0.30
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	496	782	1051	2286			1888	813			493
v/s Ratio Prot	0.15	c0.28	c0.30	c0.59			0.27				0.12
v/s Ratio Perm								0.25			
v/c Ratio	0.55	1.00	0.98	0.93			0.94	0.88			0.41
Uniform Delay, d1	27.7	32.5	31.3	14.6			31.2	30.5			25.2
Progression Factor	1.00	1.00	1.15	1.18			0.68	0.63			1.00
Incremental Delay, d2	1.3	31.2	12.7	3.1			6.5	7.9			0.6
Delay (s)	29.1	63.6	48.8	20.3			27.7	27.0			25.8
Level of Service	C	E	D	C			C	C			C
Approach Delay (s)	54.8			29.7			27.5		25.8		
Approach LOS	D			C			C		C		

Intersection Summary			
HCM Average Control Delay	32.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	89.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	797	37	368	38	47	135	66	2095	674	295	1529	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1743	1521	1805	1900	1593	1769	5136	1564	1805	5181	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.12	1.00	1.00	0.11	1.00	
Satd. Flow (perm)	3433	1743	1521	1805	1900	1593	219	5136	1564	200	5181	
Peak-hour factor, PHF	0.97	0.97	0.97	0.80	0.80	0.80	0.98	0.98	0.98	0.97	0.97	0.97
Adj. Flow (vph)	822	38	379	48	59	169	67	2138	688	304	1576	10
RTOR Reduction (vph)	0	0	248	0	0	72	0	0	240	0	1	0
Lane Group Flow (vph)	822	38	131	48	59	97	67	2138	448	304	1585	0
Confl. Peds. (#/hr)	5		5	1		1	5		5	4		4
Heavy Vehicles (%)	2%	9%	4%	0%	0%	0%	2%	1%	1%	0%	0%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		pm+ov	pm+pt		
Protected Phases	4	4		8	8		1	6	4	5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	18.0	18.0	18.0	10.6	10.6	10.6	38.9	34.0	52.0	49.4	40.5	
Effective Green, g (s)	18.0	18.0	18.0	10.6	10.6	10.6	38.9	34.0	52.0	49.4	40.5	
Actuated g/C Ratio	0.20	0.20	0.20	0.12	0.12	0.12	0.43	0.38	0.58	0.55	0.45	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	687	349	304	213	224	188	179	1940	973	313	2331	
v/s Ratio Prot	c0.24	0.02		0.03	0.03		0.02	c0.42	0.09	c0.12	0.31	
v/s Ratio Perm			0.09			c0.06	0.14		0.19	0.41		
v/c Ratio	1.20	0.11	0.43	0.23	0.26	0.51	0.37	1.10	0.46	0.97	0.68	
Uniform Delay, d1	36.0	29.4	31.5	36.0	36.1	37.3	16.2	28.0	10.9	25.7	19.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.15	1.06	1.09	1.67	0.29	
Incremental Delay, d2	102.2	0.1	1.0	0.5	0.6	2.4	0.4	49.0	0.1	26.4	0.7	
Delay (s)	138.2	29.6	32.5	36.5	36.8	39.6	19.1	78.6	12.0	69.3	6.3	
Level of Service	F	C	C	D	D	D	B	E	B	E	A	
Approach Delay (s)		102.6			38.5			61.4			16.5	
Approach LOS		F			D			E			B	

Intersection Summary			
HCM Average Control Delay	55.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	577	562	81	119	264	174	410	1468	651	164	919	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	3470		1805	1900	1553	1805	3610	1599	1787	3557	
Flt Permitted	0.95	1.00		0.34	1.00	1.00	0.13	1.00	1.00	0.15	1.00	
Satd. Flow (perm)	3467	3470		644	1900	1553	253	3610	1599	289	3557	
Peak-hour factor, PHF	0.96	0.96	0.96	0.92	0.92	0.92	0.94	0.94	0.94	0.92	0.92	0.92
Adj. Flow (vph)	601	585	84	129	287	189	436	1562	693	178	999	36
RTOR Reduction (vph)	0	12	0	0	0	160	0	0	274	0	3	0
Lane Group Flow (vph)	601	657	0	129	287	29	436	1562	419	178	1032	0
Confl. Peds. (#/hr)	2		2									
Heavy Vehicles (%)	1%	1%	8%	0%	0%	4%	0%	0%	1%	1%	1%	0%
Turn Type	Prot			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases				8		8	6		6	2		
Actuated Green, G (s)	16.0	24.0		20.0	14.0	14.0	48.0	39.0	39.0	31.0	26.0	
Effective Green, g (s)	16.0	24.0		20.0	14.0	14.0	48.0	39.0	39.0	31.0	26.0	
Actuated g/C Ratio	0.18	0.27		0.22	0.16	0.16	0.53	0.43	0.43	0.34	0.29	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	616	925		221	296	242	445	1564	693	183	1028	
v/s Ratio Prot	c0.17	0.19		0.04	c0.15		c0.20	c0.43		0.05	0.29	
v/s Ratio Perm				0.09		0.02	0.33		0.26	0.28		
v/c Ratio	0.98	0.71		0.58	0.97	0.12	0.98	1.00	0.61	0.97	1.00	
Uniform Delay, d1	36.8	29.8		29.3	37.8	32.7	25.5	25.5	19.6	28.2	32.0	
Progression Factor	1.14	1.00		0.92	0.98	1.44	1.59	0.27	0.33	1.00	1.00	
Incremental Delay, d2	19.9	1.3		3.7	42.5	0.2	17.5	11.6	1.1	58.2	29.1	
Delay (s)	61.7	31.0		30.7	79.4	47.2	58.2	18.6	7.5	86.3	61.1	
Level of Service	E	C		C	E	D	E	B	A	F	E	
Approach Delay (s)		45.6			59.0			22.2			64.8	
Approach LOS		D			E			C			E	

Intersection Summary			
HCM Average Control Delay	40.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	243	672	227	136	336	122	210	728	79	96	1059	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1805	3494		1805	3535	
Flt Permitted	0.31	1.00	1.00	0.45	1.00	1.00	0.17	1.00		0.23	1.00	
Satd. Flow (perm)	588	3574	1599	855	3574	1599	328	3494		445	3535	
Peak-hour factor, PHF	0.97	0.97	0.97	0.93	0.93	0.93	0.97	0.97	0.97	0.93	0.93	0.93
Adj. Flow (vph)	251	693	234	146	361	131	216	751	81	103	1139	97
RTOR Reduction (vph)	0	0	167	0	0	112	0	13	0	0	11	0
Lane Group Flow (vph)	251	693	67	146	361	19	216	819	0	103	1225	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	2%	0%	0%	1%	0%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	20.8	13.6	13.6	12.0	8.8	8.8	28.2	23.2		26.2	22.2	
Effective Green, g (s)	20.8	13.6	13.6	12.0	8.8	8.8	28.2	23.2		26.2	22.2	
Actuated g/C Ratio	0.35	0.23	0.23	0.20	0.15	0.15	0.47	0.39		0.44	0.37	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	364	810	362	221	524	235	277	1351		285	1308	
v/s Ratio Prot	c0.09	c0.19		0.04	0.10		c0.06	0.23		0.02	c0.35	
v/s Ratio Perm	0.15		0.04	0.10		0.01	0.30			0.13		
v/c Ratio	0.69	0.86	0.18	0.66	0.69	0.08	0.78	0.61		0.36	0.94	
Uniform Delay, d1	15.3	22.3	18.7	21.7	24.3	22.1	12.8	14.7		10.6	18.2	
Progression Factor	0.93	0.97	1.02	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.6	7.6	0.2	7.2	3.8	0.1	13.0	2.0		0.8	13.7	
Delay (s)	18.8	29.3	19.3	28.9	28.1	22.3	25.8	16.8		11.3	32.0	
Level of Service	B	C	B	C	C	C	C	B		B	C	
Approach Delay (s)		25.1			27.1			18.6			30.4	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM Average Control Delay	25.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	214	597	258	99	175	119	94	796	85	479	1528	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1787	3447		1787	1881	1538	1752	3518		1805	3610	1577
Flt Permitted	0.40	1.00		0.22	1.00	1.00	0.15	1.00		0.13	1.00	1.00
Satd. Flow (perm)	752	3447		423	1881	1538	271	3518		244	3610	1577
Peak-hour factor, PHF	0.93	0.93	0.93	0.95	0.95	0.95	0.96	0.96	0.96	0.99	0.99	0.99
Adj. Flow (vph)	230	642	277	104	184	125	98	829	89	484	1543	200
RTOR Reduction (vph)	0	52	0	0	0	100	0	9	0	0	0	102
Lane Group Flow (vph)	230	867	0	104	184	25	98	909	0	484	1543	98
Confl. Peds. (#/hr)							1		1	7		7
Heavy Vehicles (%)	1%	0%	0%	1%	1%	5%	3%	1%	1%	0%	0%	0%
Turn Type	pm+pt			pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	30.8	23.6		21.0	17.8	17.8	30.4	27.2		51.2	44.0	44.0
Effective Green, g (s)	30.8	23.6		21.0	17.8	17.8	30.4	27.2		51.2	44.0	44.0
Actuated g/C Ratio	0.34	0.26		0.23	0.20	0.20	0.34	0.30		0.57	0.49	0.49
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	361	904		147	372	304	144	1063		486	1765	771
v/s Ratio Prot	c0.06	c0.25		0.03	0.10		0.02	0.26		c0.22	0.43	
v/s Ratio Perm	0.15			0.14		0.02	0.21			c0.35		0.06
v/c Ratio	0.64	0.96		0.71	0.49	0.08	0.68	0.86		1.00	0.87	0.13
Uniform Delay, d1	22.8	32.7		32.0	32.1	29.4	24.0	29.5		25.7	20.5	12.5
Progression Factor	0.55	0.63		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.3	14.7		14.4	1.0	0.1	12.4	8.8		39.5	6.4	0.3
Delay (s)	14.9	35.3		46.4	33.1	29.5	36.4	38.3		65.2	26.9	12.9
Level of Service	B	D		D	C	C	D	D		E	C	B
Approach Delay (s)		31.2			35.4			38.2			34.0	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	34.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	279	526	233	1065	813	161
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.97	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1554	1719	1881	1881	1583
Flt Permitted	0.95	1.00	0.08	1.00	1.00	1.00
Satd. Flow (perm)	1770	1554	142	1881	1881	1583
Peak-hour factor, PHF	0.95	0.95	0.94	0.94	0.94	0.94
Adj. Flow (vph)	294	554	248	1133	865	171
RTOR Reduction (vph)	0	213	0	0	0	82
Lane Group Flow (vph)	294	341	248	1133	865	89
Confl. Peds. (#/hr)	3	3				
Heavy Vehicles (%)	2%	1%	5%	1%	1%	2%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	21.0	21.0	61.0	61.0	47.1	47.1
Effective Green, g (s)	21.0	21.0	61.0	61.0	47.1	47.1
Actuated g/C Ratio	0.23	0.23	0.68	0.68	0.52	0.52
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	413	363	270	1275	984	828
v/s Ratio Prot	0.17		0.10	c0.60	0.46	
v/s Ratio Perm		c0.22	c0.52			0.06
v/c Ratio	0.71	0.94	0.92	0.89	0.88	0.11
Uniform Delay, d1	31.7	33.9	26.8	11.7	18.9	10.8
Progression Factor	1.00	1.00	1.00	1.00	0.54	0.75
Incremental Delay, d2	5.7	31.5	33.6	9.5	6.5	0.1
Delay (s)	37.4	65.4	60.4	21.2	16.8	8.2
Level of Service	D	E	E	C	B	A
Approach Delay (s)	55.7			28.3	15.4	
Approach LOS	E			C	B	

Intersection Summary			
HCM Average Control Delay	31.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	392	92	224	387	90	124	861	175	118	999	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.95	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1671	1797		1805	1816		1787	1881	1448	1770	1863	1571
Flt Permitted	0.14	1.00		0.12	1.00		0.06	1.00	1.00	0.06	1.00	1.00
Satd. Flow (perm)	243	1797		230	1816		121	1881	1448	120	1863	1571
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.98	0.98	0.98	0.94	0.94	0.94
Adj. Flow (vph)	109	408	96	233	403	94	127	879	179	126	1063	95
RTOR Reduction (vph)	0	7	0	0	7	0	0	0	67	0	0	29
Lane Group Flow (vph)	109	497	0	233	490	0	127	879	112	126	1063	66
Confl. Peds. (#/hr)	7		7	4		4	8		8	2		2
Heavy Vehicles (%)	8%	2%	1%	0%	1%	1%	1%	1%	6%	2%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	34.0	29.0		42.0	33.0		66.0	62.0	62.0	66.0	62.0	62.0
Effective Green, g (s)	34.0	29.0		42.0	33.0		66.0	62.0	62.0	66.0	62.0	62.0
Actuated g/C Ratio	0.28	0.24		0.35	0.28		0.55	0.52	0.52	0.55	0.52	0.52
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	128	434		199	499		122	972	748	121	963	812
v/s Ratio Prot	0.04	0.28		c0.09	0.27		0.03	0.47		c0.03	c0.57	
v/s Ratio Perm	0.21			c0.32			0.54		0.08	0.54		0.04
v/c Ratio	0.85	1.15		1.17	0.98		1.04	0.90	0.15	1.04	1.10	0.08
Uniform Delay, d1	38.9	45.5		33.9	43.2		28.2	26.3	15.2	26.5	29.0	14.6
Progression Factor	1.00	1.00		0.96	0.98		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	38.8	89.4		106.9	28.4		92.9	13.4	0.4	93.3	61.8	0.2
Delay (s)	77.7	134.9		139.6	70.7		121.1	39.7	15.6	119.8	90.8	14.8
Level of Service	E	F		F	E		F	D	B	F	F	B
Approach Delay (s)		124.7			92.7			44.8			88.0	
Approach LOS		F			F			D			F	

Intersection Summary			
HCM Average Control Delay	81.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	111.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	0	1	401	6	802	0	889	314	510	1035	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00		0.95	1.00	0.97	1.00	
Frpb, ped/bikes		0.99			1.00	0.96		1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00			0.98	1.00		1.00	1.00	1.00	1.00	
Frt		0.93			1.00	0.85		1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.95	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1715			1751	1542		3574	1572	3400	1863	
Flt Permitted		0.91			0.73	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1594			1336	1542		3574	1572	3400	1863	
Peak-hour factor, PHF	0.50	0.50	0.50	0.95	0.95	0.95	0.90	0.90	0.90	0.98	0.98	0.98
Adj. Flow (vph)	2	0	2	422	6	844	0	988	349	520	1056	0
RTOR Reduction (vph)	0	1	0	0	0	269	0	0	232	0	0	0
Lane Group Flow (vph)	0	3	0	0	428	575	0	988	117	520	1056	0
Confl. Peds. (#/hr)	2		2	15		15	3		3	7		7
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	1%	1%	3%	2%	0%
Turn Type	Perm			Perm		Perm	Perm		Perm	Prot		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2			
Actuated Green, G (s)		29.0			29.0	29.0		28.4	28.4	15.6	48.0	
Effective Green, g (s)		29.0			29.0	29.0		28.4	28.4	15.6	48.0	
Actuated g/C Ratio		0.34			0.34	0.34		0.33	0.33	0.18	0.56	
Clearance Time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		544			456	526		1194	525	624	1052	
v/s Ratio Prot								0.28		0.15	c0.57	
v/s Ratio Perm		0.00			0.32	c0.37			0.07			
v/c Ratio		0.00			0.94	1.09		0.83	0.22	0.83	1.00	
Uniform Delay, d1		18.5			27.1	28.0		26.0	20.4	33.4	18.5	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0			27.1	67.2		6.7	1.0	9.3	28.7	
Delay (s)		18.5			54.2	95.2		32.7	21.3	42.8	47.2	
Level of Service		B			D	F		C	C	D	D	
Approach Delay (s)		18.5			81.4			29.7			45.7	
Approach LOS		B			F			C			D	

Intersection Summary			
HCM Average Control Delay	51.4	HCM Level of Service	D
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	118.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	619	88	25	75	55	30	37	738	52	72	1105	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99			1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	0.97			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1698	1713			1847	1421	1805	3499		1752	3574	
Flt Permitted	0.95	0.97			0.97	1.00	0.17	1.00		0.23	1.00	
Satd. Flow (perm)	1698	1713			1847	1421	317	3499		419	3574	
Peak-hour factor, PHF	0.93	0.93	0.93	0.83	0.83	0.83	0.93	0.93	0.93	0.96	0.96	0.92
Adj. Flow (vph)	666	95	27	90	66	36	40	794	56	75	1151	0
RTOR Reduction (vph)	0	4	0	0	0	32	0	8	0	0	0	0
Lane Group Flow (vph)	393	391	0	0	156	4	40	842	0	75	1151	0
Confl. Peds. (#/hr)	2		2	2		2	1		1			
Heavy Vehicles (%)	1%	0%	0%	0%	0%	11%	0%	2%	2%	3%	1%	0%
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases						8	2			6		
Actuated Green, G (s)	16.1	16.1			7.0	7.0	24.0	24.0		24.0	24.0	
Effective Green, g (s)	16.1	16.1			7.0	7.0	24.0	24.0		24.0	24.0	
Actuated g/C Ratio	0.27	0.27			0.12	0.12	0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	463	467			219	168	129	1421		170	1451	
v/s Ratio Prot	c0.23	0.23			c0.08			0.24			c0.32	
v/s Ratio Perm						0.00	0.13			0.18		
v/c Ratio	0.85	0.84			0.71	0.03	0.31	0.59		0.44	0.79	
Uniform Delay, d1	20.3	20.3			25.1	23.0	11.9	13.7		12.7	15.4	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	13.5	12.3			10.4	0.1	6.1	1.8		8.1	4.5	
Delay (s)	33.9	32.6			35.5	23.1	18.1	15.5		20.8	19.9	
Level of Service	C	C			D	C	B	B		C	B	
Approach Delay (s)		33.2			33.2			15.7			20.0	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	22.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	59.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	364	818	858	195	733	158	897	761	213	97	920	243
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.97	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	3610	1615	1787	4986		3467	3610	1583	1770	3574	1591
Flt Permitted	0.22	1.00	1.00	0.29	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	418	3610	1615	537	4986		3467	3610	1583	1770	3574	1591
Peak-hour factor, PHF	0.99	0.99	0.99	0.96	0.96	0.96	0.97	0.97	0.97	0.99	0.99	0.99
Adj. Flow (vph)	368	826	867	203	764	165	925	785	220	98	929	245
RTOR Reduction (vph)	0	0	383	0	42	0	0	0	165	0	0	145
Lane Group Flow (vph)	368	826	485	203	887	0	925	785	55	98	929	100
Confl. Peds. (#/hr)				2		2				2		2
Heavy Vehicles (%)	1%	0%	0%	1%	1%	1%	1%	0%	2%	2%	1%	0%
Turn Type	pm+pt		Perm	pm+pt			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4		4	8					2			6
Actuated Green, G (s)	29.0	20.0	20.0	19.0	14.0		20.0	20.0	20.0	19.0	19.0	19.0
Effective Green, g (s)	29.0	20.0	20.0	19.0	14.0		20.0	20.0	20.0	19.0	19.0	19.0
Actuated g/C Ratio	0.36	0.25	0.25	0.24	0.18		0.25	0.25	0.25	0.24	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	340	903	404	206	873		867	903	396	420	849	378
v/s Ratio Prot	c0.15	0.23		0.06	0.18		c0.27	0.22		0.06	c0.26	
v/s Ratio Perm	0.24		c0.30	0.17					0.03			0.06
v/c Ratio	1.08	0.91	1.20	0.99	1.02		1.07	0.87	0.14	0.23	1.09	0.26
Uniform Delay, d1	22.5	29.2	30.0	29.8	33.0		30.0	28.7	23.3	24.6	30.5	24.8
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.91	0.91	1.37	1.00	1.00	1.00
Incremental Delay, d2	72.6	13.5	111.3	58.1	34.5		48.6	10.2	0.7	1.3	59.8	1.7
Delay (s)	95.0	42.7	141.3	87.8	67.5		75.9	36.3	32.6	25.9	90.3	26.5
Level of Service	F	D	F	F	E		E	D	C	C	F	C
Approach Delay (s)		93.5			71.1			54.8			73.1	
Approach LOS		F			E			D			E	

Intersection Summary			
HCM Average Control Delay	73.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	594	746	1004	0	0	1889
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	0.97	0.91	0.91			0.86
Frpb, ped/bikes	0.99	0.99	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	0.95	0.85	1.00			1.00
Flt Protected	0.97	1.00	1.00			1.00
Satd. Flow (prot)	3331	1433	5136			6471
Flt Permitted	0.97	1.00	1.00			1.00
Satd. Flow (perm)	3331	1433	5136			6471
Peak-hour factor, PHF	0.97	0.97	0.97	0.92	0.92	0.99
Adj. Flow (vph)	612	769	1035	0	0	1908
RTOR Reduction (vph)	25	25	0	0	0	0
Lane Group Flow (vph)	918	413	1035	0	0	1908
Confl. Peds. (#/hr)	2	2				
Heavy Vehicles (%)	1%	1%	1%	2%	2%	1%
Turn Type		Perm				
Protected Phases	8		2			6
Permitted Phases		8				
Actuated Green, G (s)	31.6	31.6	40.4			40.4
Effective Green, g (s)	31.6	31.6	40.4			40.4
Actuated g/C Ratio	0.40	0.40	0.50			0.50
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	1316	566	2594			3268
v/s Ratio Prot	0.28		0.20			c0.29
v/s Ratio Perm		c0.29				
v/c Ratio	0.70	0.73	0.40			0.58
Uniform Delay, d1	20.2	20.6	12.3			13.9
Progression Factor	1.00	1.00	0.13			0.65
Incremental Delay, d2	1.6	4.8	0.4			0.1
Delay (s)	21.8	25.4	2.0			9.1
Level of Service	C	C	A			A
Approach Delay (s)	23.0		2.0			9.1
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	994	475	828	1653
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0
Lane Util. Factor			0.91		0.97	0.91
Frpb, ped/bikes			0.99		1.00	1.00
Flpb, ped/bikes			1.00		1.00	1.00
Frt			0.95		1.00	1.00
Flt Protected			1.00		0.95	1.00
Satd. Flow (prot)			4861		3467	5136
Flt Permitted			1.00		0.95	1.00
Satd. Flow (perm)			4861		3467	5136
Peak-hour factor, PHF	0.92	0.92	0.97	0.97	0.99	0.99
Adj. Flow (vph)	0	0	1025	490	836	1670
RTOR Reduction (vph)	0	0	31	0	0	0
Lane Group Flow (vph)	0	0	1484	0	836	1670
Confl. Peds. (#/hr)				3		
Heavy Vehicles (%)	2%	2%	1%	1%	1%	1%
Turn Type					Prot	
Protected Phases			2		1	6
Permitted Phases						
Actuated Green, G (s)			46.2		25.8	80.0
Effective Green, g (s)			46.2		25.8	80.0
Actuated g/C Ratio			0.58		0.32	1.00
Clearance Time (s)			4.0		4.0	4.0
Vehicle Extension (s)			3.0		3.0	3.0
Lane Grp Cap (vph)			2807		1118	5136
v/s Ratio Prot			c0.31		c0.24	0.33
v/s Ratio Perm						
v/c Ratio			0.53		0.75	0.33
Uniform Delay, d1			10.3		24.2	0.0
Progression Factor			0.26		0.95	1.00
Incremental Delay, d2			0.4		2.3	0.1
Delay (s)			3.0		25.2	0.1
Level of Service			A		C	A
Approach Delay (s)	0.0		3.0			8.5
Approach LOS	A		A			A

Intersection Summary			
HCM Average Control Delay	6.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	3	2	238	5	112	0	1298	240	196	1354	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.96			0.96			0.98		1.00	1.00	
Flt Protected		0.99			0.97			1.00		0.95	1.00	
Satd. Flow (prot)		1794			1724			3482		1787	3574	
Flt Permitted		0.95			0.79			1.00		0.09	1.00	
Satd. Flow (perm)		1722			1402			3482		175	3574	
Peak-hour factor, PHF	0.31	0.31	0.31	0.85	0.85	0.85	0.95	0.95	0.95	0.94	0.94	0.94
Adj. Flow (vph)	3	10	6	280	6	132	0	1366	253	209	1440	0
RTOR Reduction (vph)	0	4	0	0	21	0	0	19	0	0	0	0
Lane Group Flow (vph)	0	15	0	0	397	0	0	1600	0	209	1440	0
Confl. Peds. (#/hr)	4		4	5		5	2		2	6		6
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	1%	0%	1%	1%	0%
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			39.0		49.0	49.0	
Effective Green, g (s)		23.0			23.0			39.0		49.0	49.0	
Actuated g/C Ratio		0.29			0.29			0.49		0.61	0.61	
Clearance Time (s)		4.0			4.0			4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		495			403			1697		228	2189	
v/s Ratio Prot								0.46		c0.07	0.40	
v/s Ratio Perm		0.01			c0.28					c0.49		
v/c Ratio		0.03			0.99			0.94		0.92	0.66	
Uniform Delay, d1		20.5			28.3			19.4		20.1	10.1	
Progression Factor		1.00			1.00			0.64		1.40	0.73	
Incremental Delay, d2		0.0			40.8			7.4		36.5	1.5	
Delay (s)		20.5			69.1			19.9		64.6	8.9	
Level of Service		C			E			B		E	A	
Approach Delay (s)		20.5			69.1			19.9			16.0	
Approach LOS		C			E			B			B	

Intersection Summary			
HCM Average Control Delay	23.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	118.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	249	394	70	209	352	356	62	745	144	405	896	188
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	1803		1805	1863	1615	1752	3493		1805	3469	
Flt Permitted	0.22	1.00		0.19	1.00	1.00	0.19	1.00		0.16	1.00	
Satd. Flow (perm)	414	1803		362	1863	1615	351	3493		304	3469	
Peak-hour factor, PHF	0.89	0.89	0.89	0.92	0.92	0.92	0.90	0.90	0.90	0.99	0.99	0.99
Adj. Flow (vph)	280	443	79	227	383	387	69	828	160	409	905	190
RTOR Reduction (vph)	0	8	0	0	0	22	0	20	0	0	22	0
Lane Group Flow (vph)	280	514	0	227	383	365	69	968	0	409	1073	0
Heavy Vehicles (%)	1%	3%	3%	0%	2%	0%	3%	1%	0%	0%	1%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	30.0	22.0		28.0	21.0	35.0	24.2	21.0		39.0	31.8	
Effective Green, g (s)	30.0	22.0		28.0	21.0	35.0	24.2	21.0		39.0	31.8	
Actuated g/C Ratio	0.38	0.28		0.35	0.26	0.44	0.30	0.26		0.49	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	293	496		253	489	787	162	917		411	1379	
v/s Ratio Prot	c0.10	c0.29		0.08	0.21	0.08	0.02	0.28		c0.17	0.31	
v/s Ratio Perm	0.26			0.24		0.14	0.11			c0.31		
v/c Ratio	0.96	1.04		0.90	0.78	0.46	0.43	1.06		1.00	0.78	
Uniform Delay, d1	21.6	29.0		22.2	27.4	15.9	20.7	29.5		21.4	21.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.70	0.92	
Incremental Delay, d2	40.3	50.1		30.7	8.0	0.4	1.8	45.5		35.4	3.1	
Delay (s)	61.9	79.1		52.9	35.4	16.3	22.5	75.0		71.7	22.3	
Level of Service	E	E		D	D	B	C	E		E	C	
Approach Delay (s)		73.1			32.0			71.6			35.8	
Approach LOS		E			C			E			D	

Intersection Summary			
HCM Average Control Delay	50.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	97.5%	ICU Level of Service	F
Analysis Period (min)	15		

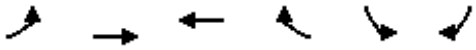
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	111	374	264	170	490	271
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.87	0.87	0.93	0.93
Hourly flow rate (vph)	121	407	303	195	527	291
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				924		
pX, platoon unblocked						
vC, conflicting volume	1329	527	818			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1329	527	818			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	26	63			
cM capacity (veh/h)	107	551	810			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	121	407	303	195	527	291
Volume Left	121	0	303	0	0	0
Volume Right	0	407	0	0	0	291
cSH	107	551	810	1700	1700	1700
Volume to Capacity	1.13	0.74	0.37	0.11	0.31	0.17
Queue Length 95th (ft)	191	157	44	0	0	0
Control Delay (s)	201.9	27.7	12.1	0.0	0.0	0.0
Lane LOS	F	D	B			
Approach Delay (s)	67.6		7.3		0.0	
Approach LOS	F					

Intersection Summary			
Average Delay	21.3		
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	16	374	445	17	106	74
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	17	394	468	18	115	80
Pedestrians		4	4		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	488				911	483
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	488				911	483
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				62	86
cM capacity (veh/h)	1083				301	584

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	411	486	196
Volume Left	17	0	115
Volume Right	0	18	80
cSH	1083	1700	376
Volume to Capacity	0.02	0.29	0.52
Queue Length 95th (ft)	1	0	72
Control Delay (s)	0.5	0.0	24.5
Lane LOS	A		C
Approach Delay (s)	0.5	0.0	24.5
Approach LOS			C

Intersection Summary			
Average Delay	4.6		
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (veh/h)	1269	66	128	1483	63	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.99	0.99	0.91	0.92
Hourly flow rate (vph)	1295	67	129	1498	69	0
Pedestrians	4				1	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	872			236		
pX, platoon unblocked						
vC, conflicting volume			1363		2091	466
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1363		2091	466
tC, single (s)			4.1		6.9	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			74		0	100
cM capacity (veh/h)			505		33	543

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4	SW 1
Volume Total	518	518	326	129	499	499	499	69
Volume Left	0	0	0	129	0	0	0	69
Volume Right	0	0	67	0	0	0	0	0
cSH	1700	1700	1700	505	1700	1700	1700	33
Volume to Capacity	0.30	0.30	0.19	0.26	0.29	0.29	0.29	2.12
Queue Length 95th (ft)	0	0	0	25	0	0	0	197
Control Delay (s)	0.0	0.0	0.0	14.6	0.0	0.0	0.0	778.7
Lane LOS				B				F
Approach Delay (s)	0.0			1.2				778.7
Approach LOS								F

Intersection Summary			
Average Delay	18.2		
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	89	63	76	146	4	18	1	8	11	3	3
Peak Hour Factor	0.86	0.86	0.86	0.81	0.81	0.81	0.68	0.68	0.68	0.71	0.71	0.71
Hourly flow rate (vph)	1	103	73	94	180	5	26	1	12	15	4	4

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	178	274	5	40	24
Volume Left (vph)	1	94	0	26	15
Volume Right (vph)	73	0	5	12	4
Hadj (s)	-0.21	0.19	-0.70	0.02	0.02
Departure Headway (s)	4.3	5.0	4.1	5.0	5.1
Degree Utilization, x	0.21	0.38	0.01	0.06	0.03
Capacity (veh/h)	819	705	855	651	640
Control Delay (s)	8.4	9.8	5.9	8.3	8.2
Approach Delay (s)	8.4	9.7		8.3	8.2
Approach LOS	A	A		A	A

Intersection Summary				
Delay	9.1			
HCM Level of Service	A			
Intersection Capacity Utilization	34.5%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	173	1269	0	0	1611
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.89	0.98	0.92	0.92	0.99
Hourly flow rate (vph)	0	194	1295	0	0	1627
Pedestrians	1					4
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			983			125
pX, platoon unblocked						
vC, conflicting volume	1838	437			1296	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1838	437			1296	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	66			100	
cM capacity (veh/h)	67	568			530	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	194	432	432	432	542	542	542
Volume Left	0	0	0	0	0	0	0
Volume Right	194	0	0	0	0	0	0
cSH	568	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.34	0.25	0.25	0.25	0.32	0.32	0.32
Queue Length 95th (ft)	38	0	0	0	0	0	0
Control Delay (s)	14.6	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	14.6	0.0			0.0		
Approach LOS	B						

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	42.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	33	763	8	40	724	44	4	0	19	239	0	181
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.97	0.97	0.97	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	35	803	8	41	746	45	4	0	21	266	0	201
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					450							
pX, platoon unblocked												
vC, conflicting volume	792			812			1534	1751	406	1321	1710	373
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	792			812			1534	1751	406	1321	1710	373
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			95			91	100	96	0	100	68
cM capacity (veh/h)	825			811			50	77	595	103	82	624

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	35	535	276	41	373	373	45	26	467
Volume Left	35	0	0	41	0	0	0	4	266
Volume Right	0	0	8	0	0	0	45	21	201
cSH	825	1700	1700	811	1700	1700	1700	206	161
Volume to Capacity	0.04	0.31	0.16	0.05	0.22	0.22	0.03	0.12	2.91
Queue Length 95th (ft)	3	0	0	4	0	0	0	10	1060
Control Delay (s)	9.6	0.0	0.0	9.7	0.0	0.0	0.0	25.0	918.2
Lane LOS	A			A				C	F
Approach Delay (s)	0.4			0.5				25.0	918.2
Approach LOS								C	F

Intersection Summary				
Average Delay	197.9			
Intersection Capacity Utilization	65.7%	ICU Level of Service		C
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	785	14	45	862	8	19
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.97	0.97	0.92	0.92
Hourly flow rate (vph)	826	15	46	889	9	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				758		
pX, platoon unblocked						
vC, conflicting volume			841		1815	834
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			841		1815	834
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		89	94
cM capacity (veh/h)			794		81	368

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	841	46	889	29
Volume Left	0	46	0	9
Volume Right	15	0	0	21
cSH	1700	794	1700	179
Volume to Capacity	0.49	0.06	0.52	0.16
Queue Length 95th (ft)	0	5	0	14
Control Delay (s)	0.0	9.8	0.0	29.0
Lane LOS		A		D
Approach Delay (s)	0.0	0.5		29.0
Approach LOS				D

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL2	WBL	NBL	NBR	NER	NER2
Lane Configurations						
Volume (veh/h)	54	734	38	98	670	14
Sign Control		Free	Stop		Free	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.92	0.92	0.95	0.95
Hourly flow rate (vph)	57	773	41	107	705	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None			None	
Median storage veh)						
Upstream signal (ft)		1250				
pX, platoon unblocked						
vC, conflicting volume	720		1592	705		
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	720		1592	705		
tC, single (s)	4.1		6.4	6.2		
tC, 2 stage (s)						
tF (s)	2.2		3.5	3.3		
p0 queue free %	94		63	76		
cM capacity (veh/h)	882		110	436		

Direction, Lane #	WB 1	WB 2	NB 1	NE 1	NE 2
Volume Total	57	773	148	705	15
Volume Left	57	0	41	0	0
Volume Right	0	0	107	0	15
cSH	882	1700	239	1700	1700
Volume to Capacity	0.06	0.45	0.62	0.41	0.01
Queue Length 95th (ft)	5	0	92	0	0
Control Delay (s)	9.4	0.0	41.7	0.0	0.0
Lane LOS	A		E		
Approach Delay (s)	0.6		41.7	0.0	
Approach LOS			E		

Intersection Summary			
Average Delay	3.9		
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBR	SWL	SWR
Lane Configurations						
Volume (veh/h)	577	10	46	107	22	751
Sign Control	Free		Stop		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.95	0.95	0.90	0.90	0.97	0.97
Hourly flow rate (vph)	607	11	51	119	23	774
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None				None	
Median storage veh)						
Upstream signal (ft)	375					
pX, platoon unblocked						
vC, conflicting volume			1427	607	618	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1427	607	618	
tC, single (s)			6.4	6.2	4.1	
tC, 2 stage (s)						
tF (s)			3.5	3.3	2.2	
p0 queue free %			65	76	98	
cM capacity (veh/h)			145	496	962	

Direction, Lane #	EB 1	EB 2	NB 1	SW 1	SW 2
Volume Total	607	11	170	23	774
Volume Left	0	0	51	23	0
Volume Right	0	11	119	0	0
cSH	1700	1700	288	962	1700
Volume to Capacity	0.36	0.01	0.59	0.02	0.46
Queue Length 95th (ft)	0	0	88	2	0
Control Delay (s)	0.0	0.0	34.1	8.8	0.0
Lane LOS			D	A	
Approach Delay (s)	0.0		34.1	0.3	
Approach LOS			D		

Intersection Summary			
Average Delay	3.8		
Intersection Capacity Utilization	54.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	SER	SER2
Lane Configurations					
Volume (veh/h)	0	0	0	0	0
Sign Control	Stop		Free	Free	
Grade	0%		0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0
Pedestrians					
Lane Width (ft)					
Walking Speed (ft/s)					
Percent Blockage					
Right turn flare (veh)					
Median type			None	None	
Median storage veh)					
Upstream signal (ft)				341	
pX, platoon unblocked					
vC, conflicting volume	0	0			
vC1, stage 1 conf vol					
vC2, stage 2 conf vol					
vCu, unblocked vol	0	0			
tC, single (s)	6.8	6.9			
tC, 2 stage (s)					
tF (s)	3.5	3.3			
p0 queue free %	100	100			
cM capacity (veh/h)	1023	1084			

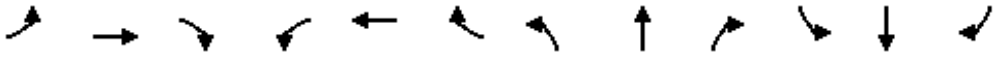
Direction, Lane #	EB 1	NB 1	NB 2	SE 1	SE 2	SE 3
Volume Total	0	0	0	0	0	0
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.00	0.00	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A					
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS	A					

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	28	0	0	174	0	2	40	292	142	4	562	50
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.94	0.94	0.94	0.93	0.93	0.93	0.94	0.94	0.94
Hourly flow rate (vph)	31	0	0	185	0	2	43	314	153	4	598	53
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	878	1186	326	707	1060	157	651			467		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	878	1186	326	707	1060	157	651			467		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	87	100	100	40	100	100	95			100		
cM capacity (veh/h)	232	178	670	310	212	861	931			1091		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	31	185	2	148	209	153	4	399	252
Volume Left	31	185	0	43	0	0	4	0	0
Volume Right	0	0	2	0	0	153	0	0	53
cSH	232	310	861	931	1700	1700	1091	1700	1700
Volume to Capacity	0.13	0.60	0.00	0.05	0.12	0.09	0.00	0.23	0.15
Queue Length 95th (ft)	11	90	0	4	0	0	0	0	0
Control Delay (s)	22.9	32.5	9.2	3.0	0.0	0.0	8.3	0.0	0.0
Lane LOS	C	D	A	A			A		
Approach Delay (s)	22.9	32.2		0.9			0.1		
Approach LOS	C	D							

Intersection Summary				
Average Delay	5.2			
Intersection Capacity Utilization	45.4%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					561							
pX, platoon unblocked												
vC, conflicting volume	0			0			0	0	0	0	0	0
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0			0			0	0	0	0	0	0
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1623			1623			1023	896	1085	1023	896	1085

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2
Volume Total	0	0	0	0	0	0	0	0	0	0
Volume Left	0	0	0	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0	0	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS							A	A	A	A
Approach Delay (s)	0.0			0.0			0.0		0.0	
Approach LOS							A		A	

Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	0.0%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	18	30	12	17	6	23	826	6	1	1282	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			0.95	
Frpb, ped/bikes		0.99			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.94			0.98			1.00			1.00	
Flt Protected		0.98			0.98			1.00			1.00	
Satd. Flow (prot)		1750			1817			1877			3603	
Flt Permitted		0.88			0.95			0.95			0.95	
Satd. Flow (perm)		1558			1754			1786			3440	
Peak-hour factor, PHF	0.94	0.94	0.94	0.82	0.82	0.82	0.91	0.91	0.91	0.98	0.98	0.98
Adj. Flow (vph)	24	19	32	15	21	7	25	908	7	1	1308	15
RTOR Reduction (vph)	0	30	0	0	7	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	45	0	0	36	0	0	940	0	0	1323	0
Confl. Peds. (#/hr)	2		2	3		3	4		4	1		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		3.6			3.6			48.4			48.4	
Effective Green, g (s)		3.6			3.6			48.4			48.4	
Actuated g/C Ratio		0.06			0.06			0.81			0.81	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		93			105			1441			2775	
v/s Ratio Prot												
v/s Ratio Perm		c0.03			0.02			c0.53			0.38	
v/c Ratio		0.48			0.35			0.65			0.48	
Uniform Delay, d1		27.3			27.1			2.4			1.8	
Progression Factor		1.00			0.96			0.50			1.00	
Incremental Delay, d2		3.9			1.9			1.5			0.6	
Delay (s)		31.2			28.0			2.7			2.4	
Level of Service		C			C			A			A	
Approach Delay (s)		31.2			28.0			2.7			2.4	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	3.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	7	3	12	894	664	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	0.95	
Frpb, ped/bikes	1.00			1.00	1.00	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.96			1.00	0.99	
Flt Protected	0.97			1.00	1.00	
Satd. Flow (prot)	1748			1880	3554	
Flt Permitted	0.97			0.99	1.00	
Satd. Flow (perm)	1748			1865	3554	
Peak-hour factor, PHF	0.75	0.75	0.98	0.98	0.95	0.95
Adj. Flow (vph)	9	4	12	912	699	25
RTOR Reduction (vph)	4	0	0	0	4	0
Lane Group Flow (vph)	9	0	0	924	721	0
Confl. Peds. (#/hr)	2	2	2			2
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	0.4			51.6	51.6	
Effective Green, g (s)	0.4			51.6	51.6	
Actuated g/C Ratio	0.01			0.86	0.86	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	12			1604	3056	
v/s Ratio Prot	c0.01				0.20	
v/s Ratio Perm				c0.50		
v/c Ratio	0.75			0.58	0.24	
Uniform Delay, d1	29.8			1.2	0.7	
Progression Factor	0.53			0.61	1.00	
Incremental Delay, d2	120.5			1.1	0.2	
Delay (s)	136.3			1.8	0.9	
Level of Service	F			A	A	
Approach Delay (s)	136.3			1.8	0.9	
Approach LOS	F			A	A	

Intersection Summary			
HCM Average Control Delay	2.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	872	872	0	1327	656	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		0.95	0.97	
Frpb, ped/bikes	1.00	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		1.00	0.95	
Satd. Flow (prot)	1881	1561		3574	3502	
Flt Permitted	1.00	1.00		1.00	0.95	
Satd. Flow (perm)	1881	1561		3574	3502	
Peak-hour factor, PHF	0.96	0.96	0.92	0.94	0.93	0.92
Adj. Flow (vph)	908	908	0	1412	705	0
RTOR Reduction (vph)	0	342	0	0	0	0
Lane Group Flow (vph)	908	566	0	1412	705	0
Confl. Peds. (#/hr)		2	1		1	
Heavy Vehicles (%)	1%	1%	2%	1%	0%	2%
Turn Type		Perm				
Protected Phases	2			6	8	
Permitted Phases		2				
Actuated Green, G (s)	37.4	37.4		37.4	14.6	
Effective Green, g (s)	37.4	37.4		37.4	14.6	
Actuated g/C Ratio	0.62	0.62		0.62	0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	1172	973		2228	852	
v/s Ratio Prot	c0.48			0.40	c0.20	
v/s Ratio Perm		0.36				
v/c Ratio	0.77	0.58		0.63	0.83	
Uniform Delay, d1	8.2	6.7		7.0	21.5	
Progression Factor	1.00	1.00		0.79	0.99	
Incremental Delay, d2	5.0	2.5		1.3	6.6	
Delay (s)	13.3	9.2		6.8	27.8	
Level of Service	B	A		A	C	
Approach Delay (s)	11.2			6.8	27.8	
Approach LOS	B			A	C	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	96	1708	181	298	1272	424	340	744	371	267	532	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		0.97	0.95	1.00	1.00	0.91		1.00	0.91	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	5055		3467	3610	1577	1803	4824		1769	4889	
Flt Permitted	0.11	1.00		0.95	1.00	1.00	0.21	1.00		0.26	1.00	
Satd. Flow (perm)	217	5055		3467	3610	1577	399	4824		484	4889	
Peak-hour factor, PHF	0.95	0.95	0.95	0.99	0.99	0.99	0.98	0.98	0.98	0.91	0.91	0.91
Adj. Flow (vph)	101	1798	191	301	1285	428	347	759	379	293	585	120
RTOR Reduction (vph)	0	14	0	0	0	243	0	100	0	0	35	0
Lane Group Flow (vph)	101	1975	0	301	1285	185	347	1038	0	293	670	0
Confl. Peds. (#/hr)	1		1	1		1	19		19	12		12
Heavy Vehicles (%)	0%	1%	1%	1%	0%	1%	0%	1%	0%	2%	3%	2%
Turn Type	pm+pt			Prot		Perm	pm+pt			pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6					2	4			8		
Actuated Green, G (s)	39.0	35.0		8.0	39.0	39.0	34.6	19.0		27.4	15.4	
Effective Green, g (s)	39.0	35.0		8.0	39.0	39.0	34.6	19.0		27.4	15.4	
Actuated g/C Ratio	0.43	0.39		0.09	0.43	0.43	0.38	0.21		0.30	0.17	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	165	1966		308	1564	683	397	1018		319	837	
v/s Ratio Prot	0.03	c0.39		c0.09	c0.36		c0.15	c0.22		0.12	0.14	
v/s Ratio Perm	0.24					0.12	0.18			0.16		
v/c Ratio	0.61	1.00		0.98	0.82	0.27	0.87	1.02		0.92	0.80	
Uniform Delay, d1	18.7	27.5		40.9	22.4	16.4	22.3	35.5		27.3	35.8	
Progression Factor	1.00	1.00		1.16	0.87	1.11	0.57	0.69		1.00	1.00	
Incremental Delay, d2	6.6	21.4		36.4	3.5	0.7	16.3	30.9		30.0	5.5	
Delay (s)	25.3	48.9		84.1	22.9	18.9	29.0	55.5		57.2	41.4	
Level of Service	C	D		F	C	B	C	E		E	D	
Approach Delay (s)		47.8			31.2			49.3			46.0	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM Average Control Delay	42.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	97.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	2230	15	59	1842	23	187
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	5080		1805	3539	1805	1561
Flt Permitted	1.00		0.07	1.00	0.95	1.00
Satd. Flow (perm)	5080		126	3539	1805	1561
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.64	0.64
Adj. Flow (vph)	2253	15	60	1861	36	292
RTOR Reduction (vph)	1	0	0	0	0	9
Lane Group Flow (vph)	2267	0	60	1861	36	283
Confl. Peds. (#/hr)		6	1		7	7
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Turn Type			Perm			Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	60.3		60.3	60.3	21.7	21.7
Effective Green, g (s)	60.3		60.3	60.3	21.7	21.7
Actuated g/C Ratio	0.67		0.67	0.67	0.24	0.24
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3404		84	2371	435	376
v/s Ratio Prot	0.45			c0.53	0.02	
v/s Ratio Perm			0.48			c0.18
v/c Ratio	0.67		0.71	0.78	0.08	0.75
Uniform Delay, d1	8.9		9.4	10.3	26.4	31.7
Progression Factor	0.88		0.46	0.45	1.00	1.00
Incremental Delay, d2	0.1		15.8	1.1	0.4	13.0
Delay (s)	7.9		20.2	5.8	26.8	44.7
Level of Service	A		C	A	C	D
Approach Delay (s)	7.9			6.2	42.7	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	9.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	2147	469	556	1520	0	0	0	0	1116	305	389
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.99	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		6471	1599	3433	3610					1643	3137	1447
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		6471	1599	3433	3610					1643	3137	1447
Peak-hour factor, PHF	0.92	0.99	0.99	0.93	0.93	0.92	0.92	0.92	0.92	0.98	0.98	0.98
Adj. Flow (vph)	0	2169	474	598	1634	0	0	0	0	1139	311	397
RTOR Reduction (vph)	0	0	146	0	0	0	0	0	0	0	3	14
Lane Group Flow (vph)	0	2169	328	598	1634	0	0	0	0	569	918	343
Confl. Peds. (#/hr)										2		2
Heavy Vehicles (%)	0%	1%	1%	2%	0%	0%	0%	0%	0%	0%	1%	0%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		32.0	32.0	15.0	51.0					31.0	31.0	31.0
Effective Green, g (s)		32.0	32.0	15.0	51.0					31.0	31.0	31.0
Actuated g/C Ratio		0.36	0.36	0.17	0.57					0.34	0.34	0.34
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2301	569	572	2046					566	1081	498
v/s Ratio Prot		c0.34		c0.17	0.45					c0.35	0.29	
v/s Ratio Perm			0.20									0.24
v/c Ratio		0.94	0.58	1.05	0.80					1.01	1.00dl	0.69
Uniform Delay, d1		28.1	23.5	37.5	15.4					29.5	27.3	25.3
Progression Factor		0.80	0.93	0.41	0.78					1.00	1.00	1.00
Incremental Delay, d2		7.6	3.2	38.4	1.6					39.1	6.4	3.9
Delay (s)		30.2	25.1	53.9	13.6					68.6	33.7	29.3
Level of Service		C	C	D	B					E	C	C
Approach Delay (s)		29.3			24.4			0.0			43.6	
Approach LOS		C			C			A			D	

Intersection Summary			
HCM Average Control Delay	31.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	255	738	1013	2073	0	0	1748	889	0	0	498
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.95			0.86	0.88			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1787	2814	3502	3610			6536	2814			1644
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1787	2814	3502	3610			6536	2814			1644
Peak-hour factor, PHF	0.93	0.93	0.98	0.98	0.92	0.92	0.99	0.99	0.92	0.92	0.86
Adj. Flow (vph)	274	794	1034	2115	0	0	1766	898	0	0	579
RTOR Reduction (vph)	0	14	0	0	0	0	0	186	0	0	375
Lane Group Flow (vph)	274	780	1034	2115	0	0	1766	712	0	0	205
Confl. Peds. (#/hr)	1	1	1								1
Heavy Vehicles (%)	1%	1%	0%	0%	2%	2%	0%	1%	2%	2%	0%
Turn Type		Prot	Prot					Perm			Over
Protected Phases	4	4	1	6			2				1
Permitted Phases								2			
Actuated Green, G (s)	25.0	25.0	27.0	57.0			26.0	26.0			27.0
Effective Green, g (s)	25.0	25.0	27.0	57.0			26.0	26.0			27.0
Actuated g/C Ratio	0.28	0.28	0.30	0.63			0.29	0.29			0.30
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	496	782	1051	2286			1888	813			493
v/s Ratio Prot	0.15	c0.28	c0.30	c0.59			0.27				0.12
v/s Ratio Perm								0.25			
v/c Ratio	0.55	1.00	0.98	0.93			0.94	0.88			0.41
Uniform Delay, d1	27.7	32.5	31.3	14.6			31.2	30.5			25.2
Progression Factor	1.00	1.00	1.15	1.09			0.68	0.63			1.00
Incremental Delay, d2	1.3	31.2	12.7	3.1			6.5	7.9			0.6
Delay (s)	29.1	63.6	48.8	19.0			27.7	27.0			25.8
Level of Service	C	E	D	B			C	C			C
Approach Delay (s)	54.8			28.8			27.5		25.8		
Approach LOS	D			C			C		C		

Intersection Summary			
HCM Average Control Delay	31.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	89.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	797	37	368	38	47	135	66	2095	842	295	1529	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1743	1521	1805	1900	1593	1769	5136	2752	1805	5181	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.12	1.00	1.00	0.11	1.00	
Satd. Flow (perm)	3433	1743	1521	1805	1900	1593	219	5136	2752	200	5181	
Peak-hour factor, PHF	0.97	0.97	0.97	0.80	0.80	0.80	0.98	0.98	0.98	0.97	0.97	0.97
Adj. Flow (vph)	822	38	379	48	59	169	67	2138	859	304	1576	10
RTOR Reduction (vph)	0	0	248	0	0	72	0	0	363	0	1	0
Lane Group Flow (vph)	822	38	131	48	59	97	67	2138	496	304	1585	0
Confl. Peds. (#/hr)	5		5	1		1	5		5	4		4
Heavy Vehicles (%)	2%	9%	4%	0%	0%	0%	2%	1%	1%	0%	0%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		pm+ov	pm+pt		
Protected Phases	4	4		8	8		1	6	4	5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	18.0	18.0	18.0	10.6	10.6	10.6	38.9	34.0	52.0	49.4	40.5	
Effective Green, g (s)	18.0	18.0	18.0	10.6	10.6	10.6	38.9	34.0	52.0	49.4	40.5	
Actuated g/C Ratio	0.20	0.20	0.20	0.12	0.12	0.12	0.43	0.38	0.58	0.55	0.45	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	687	349	304	213	224	188	179	1940	1712	313	2331	
v/s Ratio Prot	c0.24	0.02		0.03	0.03		0.02	c0.42	0.06	c0.12	0.31	
v/s Ratio Perm			0.09			c0.06	0.14		0.12	0.41		
v/c Ratio	1.20	0.11	0.43	0.23	0.26	0.51	0.37	1.10	0.29	0.97	0.68	
Uniform Delay, d1	36.0	29.4	31.5	36.0	36.1	37.3	16.2	28.0	9.6	25.7	19.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.13	1.05	1.49	1.67	0.29	
Incremental Delay, d2	102.2	0.1	1.0	0.5	0.6	2.4	0.6	49.8	0.0	26.4	0.7	
Delay (s)	138.2	29.6	32.5	36.5	36.8	39.6	19.0	79.1	14.4	69.3	6.3	
Level of Service	F	C	C	D	D	D	B	E	B	E	A	
Approach Delay (s)		102.6			38.5			59.7			16.5	
Approach LOS		F			D			E			B	

Intersection Summary			
HCM Average Control Delay	54.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	577	562	81	119	264	174	410	1468	651	164	919	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	3470		1805	1900	1553	1805	3610	1599	1787	3557	
Flt Permitted	0.95	1.00		0.34	1.00	1.00	0.13	1.00	1.00	0.15	1.00	
Satd. Flow (perm)	3467	3470		644	1900	1553	253	3610	1599	289	3557	
Peak-hour factor, PHF	0.96	0.96	0.96	0.92	0.92	0.92	0.94	0.94	0.94	0.92	0.92	0.92
Adj. Flow (vph)	601	585	84	129	287	189	436	1562	693	178	999	36
RTOR Reduction (vph)	0	12	0	0	0	160	0	0	274	0	3	0
Lane Group Flow (vph)	601	657	0	129	287	29	436	1562	419	178	1032	0
Confl. Peds. (#/hr)	2		2									
Heavy Vehicles (%)	1%	1%	8%	0%	0%	4%	0%	0%	1%	1%	1%	0%
Turn Type	Prot			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases				8		8	6		6	2		
Actuated Green, G (s)	16.0	24.0		20.0	14.0	14.0	48.0	39.0	39.0	31.0	26.0	
Effective Green, g (s)	16.0	24.0		20.0	14.0	14.0	48.0	39.0	39.0	31.0	26.0	
Actuated g/C Ratio	0.18	0.27		0.22	0.16	0.16	0.53	0.43	0.43	0.34	0.29	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	616	925		221	296	242	445	1564	693	183	1028	
v/s Ratio Prot	c0.17	0.19		0.04	c0.15		c0.20	c0.43		0.05	0.29	
v/s Ratio Perm				0.09		0.02	0.33		0.26	0.28		
v/c Ratio	0.98	0.71		0.58	0.97	0.12	0.98	1.00	0.61	0.97	1.00	
Uniform Delay, d1	36.8	29.8		29.3	37.8	32.7	25.5	25.5	19.6	28.2	32.0	
Progression Factor	1.14	1.00		0.92	0.98	1.44	1.59	0.27	0.33	1.00	1.00	
Incremental Delay, d2	19.9	1.3		3.7	42.5	0.2	17.5	11.6	1.1	58.2	29.1	
Delay (s)	61.8	31.1		30.7	79.4	47.2	58.2	18.6	7.5	86.3	61.1	
Level of Service	E	C		C	E	D	E	B	A	F	E	
Approach Delay (s)		45.6			59.0			22.2			64.8	
Approach LOS		D			E			C			E	

Intersection Summary			
HCM Average Control Delay	40.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	243	672	227	136	336	122	210	728	79	96	1059	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1805	3494		1805	3535	
Flt Permitted	0.31	1.00	1.00	0.45	1.00	1.00	0.16	1.00		0.24	1.00	
Satd. Flow (perm)	588	3574	1599	855	3574	1599	306	3494		459	3535	
Peak-hour factor, PHF	0.97	0.97	0.97	0.93	0.93	0.93	0.97	0.97	0.97	0.93	0.93	0.93
Adj. Flow (vph)	251	693	234	146	361	131	216	751	81	103	1139	97
RTOR Reduction (vph)	0	0	168	0	0	112	0	13	0	0	10	0
Lane Group Flow (vph)	251	693	66	146	361	19	216	819	0	103	1226	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	2%	0%	0%	1%	0%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	20.8	13.6	13.6	12.0	8.8	8.8	29.8	24.8		27.8	23.8	
Effective Green, g (s)	20.8	13.6	13.6	12.0	8.8	8.8	29.8	24.8		27.8	23.8	
Actuated g/C Ratio	0.34	0.22	0.22	0.19	0.14	0.14	0.48	0.40		0.45	0.39	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	354	789	353	215	511	228	270	1407		295	1366	
v/s Ratio Prot	c0.09	c0.19		0.04	0.10		c0.07	0.23		0.02	c0.35	
v/s Ratio Perm	0.15		0.04	0.10		0.01	0.32			0.14		
v/c Ratio	0.71	0.88	0.19	0.68	0.71	0.08	0.80	0.58		0.35	0.90	
Uniform Delay, d1	16.1	23.2	19.5	22.7	25.2	22.9	12.7	14.4		10.3	17.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.4	10.9	0.3	8.2	4.4	0.2	15.5	1.8		0.7	9.5	
Delay (s)	22.5	34.1	19.8	31.0	29.6	23.1	28.2	16.1		11.0	27.3	
Level of Service	C	C	B	C	C	C	C	B		B	C	
Approach Delay (s)		28.8			28.6			18.6			26.0	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM Average Control Delay	25.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	61.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	214	597	258	99	175	119	94	796	85	479	1528	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1787	3447		1787	1881	1538	1752	3518		1805	3610	1577
Flt Permitted	0.40	1.00		0.22	1.00	1.00	0.15	1.00		0.13	1.00	1.00
Satd. Flow (perm)	752	3447		423	1881	1538	271	3518		244	3610	1577
Peak-hour factor, PHF	0.93	0.93	0.93	0.95	0.95	0.95	0.96	0.96	0.96	0.99	0.99	0.99
Adj. Flow (vph)	230	642	277	104	184	125	98	829	89	484	1543	200
RTOR Reduction (vph)	0	52	0	0	0	100	0	9	0	0	0	102
Lane Group Flow (vph)	230	867	0	104	184	25	98	909	0	484	1543	98
Confl. Peds. (#/hr)							1		1	7		7
Heavy Vehicles (%)	1%	0%	0%	1%	1%	5%	3%	1%	1%	0%	0%	0%
Turn Type	pm+pt			pm+pt		Perm	pm+pt			pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	30.8	23.6		21.0	17.8	17.8	30.4	27.2		51.2	44.0	44.0
Effective Green, g (s)	30.8	23.6		21.0	17.8	17.8	30.4	27.2		51.2	44.0	44.0
Actuated g/C Ratio	0.34	0.26		0.23	0.20	0.20	0.34	0.30		0.57	0.49	0.49
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	361	904		147	372	304	144	1063		486	1765	771
v/s Ratio Prot	c0.06	c0.25		0.03	0.10		0.02	0.26		c0.22	0.43	
v/s Ratio Perm	0.15			0.14		0.02	0.21			c0.35		0.06
v/c Ratio	0.64	0.96		0.71	0.49	0.08	0.68	0.86		1.00	0.87	0.13
Uniform Delay, d1	22.8	32.7		32.0	32.1	29.4	24.0	29.5		25.7	20.5	12.5
Progression Factor	0.55	0.63		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.3	14.7		14.4	1.0	0.1	12.4	8.8		39.5	6.4	0.3
Delay (s)	14.9	35.3		46.4	33.1	29.5	36.4	38.3		65.2	26.9	12.9
Level of Service	B	D		D	C	C	D	D		E	C	B
Approach Delay (s)		31.2			35.4			38.2			34.0	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	34.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	279	526	233	1065	813	161
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.97	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1554	1719	1881	1881	1583
Flt Permitted	0.95	1.00	0.08	1.00	1.00	1.00
Satd. Flow (perm)	1770	1554	142	1881	1881	1583
Peak-hour factor, PHF	0.95	0.95	0.94	0.94	0.94	0.94
Adj. Flow (vph)	294	554	248	1133	865	171
RTOR Reduction (vph)	0	213	0	0	0	82
Lane Group Flow (vph)	294	341	248	1133	865	89
Confl. Peds. (#/hr)	3	3				
Heavy Vehicles (%)	2%	1%	5%	1%	1%	2%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	21.0	21.0	61.0	61.0	47.1	47.1
Effective Green, g (s)	21.0	21.0	61.0	61.0	47.1	47.1
Actuated g/C Ratio	0.23	0.23	0.68	0.68	0.52	0.52
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	413	363	270	1275	984	828
v/s Ratio Prot	0.17		0.10	c0.60	0.46	
v/s Ratio Perm		c0.22	c0.52			0.06
v/c Ratio	0.71	0.94	0.92	0.89	0.88	0.11
Uniform Delay, d1	31.7	33.9	26.8	11.7	18.9	10.8
Progression Factor	1.00	1.08	1.00	1.00	0.54	0.75
Incremental Delay, d2	5.0	28.7	33.6	9.5	6.5	0.1
Delay (s)	36.8	65.5	60.4	21.2	16.8	8.2
Level of Service	D	E	E	C	B	A
Approach Delay (s)	55.5			28.3	15.4	
Approach LOS	E			C	B	

Intersection Summary			
HCM Average Control Delay	31.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	392	92	224	387	90	124	861	175	118	999	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.95	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1671	1797		1805	1881	1545	1787	1881	1450	1770	1863	1571
Flt Permitted	0.16	1.00		0.14	1.00	1.00	0.07	1.00	1.00	0.07	1.00	1.00
Satd. Flow (perm)	280	1797		262	1881	1545	123	1881	1450	139	1863	1571
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.98	0.98	0.98	0.94	0.94	0.94
Adj. Flow (vph)	109	408	96	233	403	94	127	879	179	126	1063	95
RTOR Reduction (vph)	0	8	0	0	0	70	0	0	70	0	0	31
Lane Group Flow (vph)	109	496	0	233	403	24	127	879	109	126	1063	64
Confl. Peds. (#/hr)	7		7	4		4	8		8	2		2
Heavy Vehicles (%)	8%	2%	1%	0%	1%	1%	1%	1%	6%	2%	2%	0%
Turn Type	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)	32.0	27.0		36.0	29.0	29.0	65.0	61.0	61.0	65.0	61.0	61.0
Effective Green, g (s)	32.0	27.0		36.0	29.0	29.0	65.0	61.0	61.0	65.0	61.0	61.0
Actuated g/C Ratio	0.28	0.23		0.31	0.25	0.25	0.57	0.53	0.53	0.57	0.53	0.53
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	138	422		176	474	390	127	998	769	135	988	833
v/s Ratio Prot	0.03	0.28		c0.08	0.21		c0.03	0.47		0.03	c0.57	
v/s Ratio Perm	0.18			c0.33		0.02	0.53		0.08	0.49		0.04
v/c Ratio	0.79	1.18		1.32	0.85	0.06	1.00	0.88	0.14	0.93	1.08	0.08
Uniform Delay, d1	35.9	44.0		36.5	40.9	32.7	27.7	23.8	13.7	24.0	27.0	13.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	25.2	101.5		179.7	13.6	0.1	79.9	11.0	0.4	57.1	51.3	0.2
Delay (s)	61.2	145.5		216.1	54.6	32.7	107.5	34.8	14.1	81.1	78.3	13.4
Level of Service	E	F		F	D	C	F	C	B	F	E	B
Approach Delay (s)		130.5			103.3			39.5			73.8	
Approach LOS		F			F			D			E	

Intersection Summary			
HCM Average Control Delay	77.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	111.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	0	1	401	6	802	0	889	314	510	1035	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00		0.95	1.00	0.97	1.00	
Frpb, ped/bikes		0.99			1.00	0.96		1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00			0.98	1.00		1.00	1.00	1.00	1.00	
Frt		0.93			1.00	0.85		1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.95	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1715			1751	1542		3574	1572	3400	1863	
Flt Permitted		0.91			0.73	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1594			1336	1542		3574	1572	3400	1863	
Peak-hour factor, PHF	0.50	0.50	0.50	0.95	0.95	0.95	0.90	0.90	0.90	0.98	0.98	0.98
Adj. Flow (vph)	2	0	2	422	6	844	0	988	349	520	1056	0
RTOR Reduction (vph)	0	1	0	0	0	269	0	0	232	0	0	0
Lane Group Flow (vph)	0	3	0	0	428	575	0	988	117	520	1056	0
Confl. Peds. (#/hr)	2		2	15		15	3		3	7		7
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	1%	1%	3%	2%	0%
Turn Type	Perm			Perm		Perm	Perm		Perm	Prot		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2			
Actuated Green, G (s)		29.0			29.0	29.0		28.4	28.4	15.6	48.0	
Effective Green, g (s)		29.0			29.0	29.0		28.4	28.4	15.6	48.0	
Actuated g/C Ratio		0.34			0.34	0.34		0.33	0.33	0.18	0.56	
Clearance Time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		544			456	526		1194	525	624	1052	
v/s Ratio Prot								0.28		0.15	c0.57	
v/s Ratio Perm		0.00			0.32	c0.37			0.07			
v/c Ratio		0.00			0.94	1.09		0.83	0.22	0.83	1.00	
Uniform Delay, d1		18.5			27.1	28.0		26.0	20.4	33.4	18.5	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0			27.1	67.2		6.7	1.0	9.3	28.7	
Delay (s)		18.5			54.2	95.2		32.7	21.3	42.8	47.2	
Level of Service		B			D	F		C	C	D	D	
Approach Delay (s)		18.5			81.4			29.7			45.7	
Approach LOS		B			F			C			D	

Intersection Summary			
HCM Average Control Delay	51.4	HCM Level of Service	D
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	118.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	619	88	25	75	55	30	37	738	52	72	1105	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99			1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	0.97			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1698	1713			1847	1421	1805	3499		1752	3574	
Flt Permitted	0.95	0.97			0.97	1.00	0.17	1.00		0.23	1.00	
Satd. Flow (perm)	1698	1713			1847	1421	317	3499		419	3574	
Peak-hour factor, PHF	0.93	0.93	0.93	0.83	0.83	0.83	0.93	0.93	0.93	0.96	0.96	0.92
Adj. Flow (vph)	666	95	27	90	66	36	40	794	56	75	1151	0
RTOR Reduction (vph)	0	4	0	0	0	32	0	8	0	0	0	0
Lane Group Flow (vph)	393	391	0	0	156	4	40	842	0	75	1151	0
Confl. Peds. (#/hr)	2		2	2		2	1		1			
Heavy Vehicles (%)	1%	0%	0%	0%	0%	11%	0%	2%	2%	3%	1%	0%
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases						8	2			6		
Actuated Green, G (s)	16.1	16.1			7.0	7.0	24.0	24.0		24.0	24.0	
Effective Green, g (s)	16.1	16.1			7.0	7.0	24.0	24.0		24.0	24.0	
Actuated g/C Ratio	0.27	0.27			0.12	0.12	0.41	0.41		0.41	0.41	
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	463	467			219	168	129	1421		170	1451	
v/s Ratio Prot	c0.23	0.23			c0.08			0.24			c0.32	
v/s Ratio Perm						0.00	0.13			0.18		
v/c Ratio	0.85	0.84			0.71	0.03	0.31	0.59		0.44	0.79	
Uniform Delay, d1	20.3	20.3			25.1	23.0	11.9	13.7		12.7	15.4	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	13.5	12.3			10.4	0.1	6.1	1.8		8.1	4.5	
Delay (s)	33.9	32.6			35.5	23.1	18.1	15.5		20.8	19.9	
Level of Service	C	C			D	C	B	B		C	B	
Approach Delay (s)		33.2			33.2			15.7			20.0	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	22.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	59.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	111	374	264	170	490	271
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.95	1.00	0.36	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	666	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.87	0.87	0.93	0.93
Adj. Flow (vph)	121	407	303	195	527	291
RTOR Reduction (vph)	0	352	0	0	0	111
Lane Group Flow (vph)	121	55	303	195	527	180
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	12.2	12.2	69.8	69.8	55.8	55.8
Effective Green, g (s)	12.2	12.2	69.8	69.8	55.8	55.8
Actuated g/C Ratio	0.14	0.14	0.78	0.78	0.62	0.62
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	240	215	639	1445	1155	981
v/s Ratio Prot	c0.07		c0.05	0.10	0.28	
v/s Ratio Perm		0.03	c0.32			0.11
v/c Ratio	0.50	0.26	0.47	0.13	0.46	0.18
Uniform Delay, d1	36.1	34.8	4.4	2.5	9.1	7.3
Progression Factor	0.96	1.19	1.36	0.76	1.00	1.00
Incremental Delay, d2	1.2	0.5	0.5	0.2	1.3	0.4
Delay (s)	35.9	42.1	6.5	2.1	10.4	7.7
Level of Service	D	D	A	A	B	A
Approach Delay (s)	40.7			4.8	9.4	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	17.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	364	818	858	195	733	158	897	761	213	97	920	243
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.97	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	3610	1615	1787	4985		3467	3610	1583	1770	3574	1590
Flt Permitted	0.20	1.00	1.00	0.25	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	376	3610	1615	470	4985		3467	3610	1583	1770	3574	1590
Peak-hour factor, PHF	0.99	0.99	0.99	0.96	0.96	0.96	0.97	0.97	0.97	0.99	0.99	0.99
Adj. Flow (vph)	368	826	867	203	764	165	925	785	220	98	929	245
RTOR Reduction (vph)	0	0	375	0	38	0	0	0	164	0	0	158
Lane Group Flow (vph)	368	826	492	203	891	0	925	785	56	98	929	87
Confl. Peds. (#/hr)				2		2				2		2
Heavy Vehicles (%)	1%	0%	0%	1%	1%	1%	1%	0%	2%	2%	1%	0%
Turn Type	pm+pt		Perm	pm+pt			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4		4	8					2			6
Actuated Green, G (s)	33.0	24.0	24.0	21.0	16.0		23.0	23.0	23.0	22.0	22.0	22.0
Effective Green, g (s)	33.0	24.0	24.0	21.0	16.0		23.0	23.0	23.0	22.0	22.0	22.0
Actuated g/C Ratio	0.37	0.27	0.27	0.23	0.18		0.26	0.26	0.26	0.24	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	342	963	431	183	886		886	923	405	433	874	389
v/s Ratio Prot	c0.16	0.23		0.06	0.18		c0.27	0.22		0.06	c0.26	
v/s Ratio Perm	0.24		c0.30	0.20					0.04			0.05
v/c Ratio	1.08	0.86	1.14	1.11	1.01		1.04	0.85	0.14	0.23	1.06	0.22
Uniform Delay, d1	24.5	31.4	33.0	33.4	37.0		33.5	31.9	25.9	27.2	34.0	27.2
Progression Factor	1.00	1.00	1.00	0.60	0.73		1.09	1.09	2.25	1.00	1.00	1.00
Incremental Delay, d2	70.4	7.7	87.7	80.0	22.8		41.0	8.9	0.7	1.2	48.6	1.3
Delay (s)	94.9	39.0	120.7	100.0	49.8		77.6	43.6	58.9	28.4	82.6	28.5
Level of Service	F	D	F	F	D		E	D	E	C	F	C
Approach Delay (s)		83.3			58.8			61.6			68.0	
Approach LOS		F			E			E			E	

Intersection Summary			
HCM Average Control Delay	69.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	594	746	1004	0	0	1889
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	0.97	0.91	0.91			0.86
Frpb, ped/bikes	0.99	0.98	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	0.95	0.85	1.00			1.00
Flt Protected	0.97	1.00	1.00			1.00
Satd. Flow (prot)	3331	1433	5136			6471
Flt Permitted	0.97	1.00	1.00			1.00
Satd. Flow (perm)	3331	1433	5136			6471
Peak-hour factor, PHF	0.97	0.97	0.97	0.92	0.92	0.99
Adj. Flow (vph)	612	769	1035	0	0	1908
RTOR Reduction (vph)	27	27	0	0	0	0
Lane Group Flow (vph)	916	411	1035	0	0	1908
Confl. Peds. (#/hr)	2	2				
Heavy Vehicles (%)	1%	1%	1%	2%	2%	1%
Turn Type		Perm				
Protected Phases	8		2			6
Permitted Phases		8				
Actuated Green, G (s)	34.9	34.9	47.1			47.1
Effective Green, g (s)	34.9	34.9	47.1			47.1
Actuated g/C Ratio	0.39	0.39	0.52			0.52
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	1292	556	2688			3386
v/s Ratio Prot	0.28		0.20			c0.29
v/s Ratio Perm		c0.29				
v/c Ratio	0.71	0.74	0.39			0.56
Uniform Delay, d1	23.3	23.6	12.8			14.5
Progression Factor	1.00	1.00	0.47			0.65
Incremental Delay, d2	1.8	5.1	0.4			0.1
Delay (s)	25.1	28.8	6.4			9.5
Level of Service	C	C	A			A
Approach Delay (s)	26.2		6.4			9.5
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	994	475	828	1653
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0
Lane Util. Factor			0.91		0.97	0.91
Frpb, ped/bikes			0.99		1.00	1.00
Flpb, ped/bikes			1.00		1.00	1.00
Frt			0.95		1.00	1.00
Flt Protected			1.00		0.95	1.00
Satd. Flow (prot)			4860		3467	5136
Flt Permitted			1.00		0.95	1.00
Satd. Flow (perm)			4860		3467	5136
Peak-hour factor, PHF	0.92	0.92	0.97	0.97	0.99	0.99
Adj. Flow (vph)	0	0	1025	490	836	1670
RTOR Reduction (vph)	0	0	32	0	0	0
Lane Group Flow (vph)	0	0	1483	0	836	1670
Confl. Peds. (#/hr)				3		
Heavy Vehicles (%)	2%	2%	1%	1%	1%	1%
Turn Type					Prot	
Protected Phases			2		1	6
Permitted Phases						
Actuated Green, G (s)			53.5		28.5	90.0
Effective Green, g (s)			53.5		28.5	90.0
Actuated g/C Ratio			0.59		0.32	1.00
Clearance Time (s)			4.0		4.0	4.0
Vehicle Extension (s)			3.0		3.0	3.0
Lane Grp Cap (vph)			2889		1098	5136
v/s Ratio Prot			c0.31		c0.24	0.33
v/s Ratio Perm						
v/c Ratio			0.51		0.76	0.33
Uniform Delay, d1			10.7		27.7	0.0
Progression Factor			0.26		0.81	1.00
Incremental Delay, d2			0.6		2.6	0.1
Delay (s)			3.4		25.1	0.1
Level of Service			A		C	A
Approach Delay (s)	0.0		3.4			8.5
Approach LOS	A		A			A

Intersection Summary			
HCM Average Control Delay	6.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	1269	66	128	1483	63	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	1.00	
Flt Protected	1.00		0.95	1.00	0.95	
Satd. Flow (prot)	5090		1787	5136	1736	
Flt Permitted	1.00		0.16	1.00	0.95	
Satd. Flow (perm)	5090		298	5136	1736	
Peak-hour factor, PHF	0.98	0.98	0.99	0.99	0.91	0.92
Adj. Flow (vph)	1295	67	129	1498	69	0
RTOR Reduction (vph)	4	0	0	0	0	0
Lane Group Flow (vph)	1358	0	129	1498	69	0
Confl. Peds. (#/hr)		1			4	
Heavy Vehicles (%)	1%	2%	1%	1%	4%	2%
Turn Type			pm+pt			
Protected Phases	2		1	6	8	
Permitted Phases			6			
Actuated Green, G (s)	62.7		74.2	74.2	7.8	
Effective Green, g (s)	62.7		74.2	74.2	7.8	
Actuated g/C Ratio	0.70		0.82	0.82	0.09	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	3546		370	4234	150	
v/s Ratio Prot	c0.27		0.03	c0.29	c0.04	
v/s Ratio Perm			0.26			
v/c Ratio	0.38		0.35	0.35	0.46	
Uniform Delay, d1	5.6		2.5	2.0	39.1	
Progression Factor	0.40		3.08	1.23	1.00	
Incremental Delay, d2	0.1		0.5	0.2	2.2	
Delay (s)	2.4		8.1	2.6	41.3	
Level of Service	A		A	A	D	
Approach Delay (s)	2.4			3.1	41.3	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	3.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

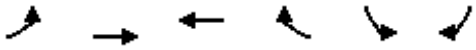
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	3	2	238	5	112	0	1298	240	196	1354	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			0.99			1.00		1.00	1.00	
Frt		0.96			0.96			0.98		1.00	1.00	
Flt Protected		0.99			0.97			1.00		0.95	1.00	
Satd. Flow (prot)		1794			1722			3482		1787	3574	
Flt Permitted		0.95			0.79			1.00		0.08	1.00	
Satd. Flow (perm)		1724			1401			3482		157	3574	
Peak-hour factor, PHF	0.31	0.31	0.31	0.85	0.85	0.85	0.95	0.95	0.95	0.94	0.94	0.94
Adj. Flow (vph)	3	10	6	280	6	132	0	1366	253	209	1440	0
RTOR Reduction (vph)	0	4	0	0	18	0	0	17	0	0	0	0
Lane Group Flow (vph)	0	15	0	0	400	0	0	1602	0	209	1440	0
Confl. Peds. (#/hr)	4		4	5		5	2		2	6		6
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	1%	0%	1%	1%	0%
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		26.0			26.0			44.0		56.0	56.0	
Effective Green, g (s)		26.0			26.0			44.0		56.0	56.0	
Actuated g/C Ratio		0.29			0.29			0.49		0.62	0.62	
Clearance Time (s)		4.0			4.0			4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		498			405			1702		243	2224	
v/s Ratio Prot								c0.46		c0.08	0.40	
v/s Ratio Perm		0.01			c0.29					0.46		
v/c Ratio		0.03			0.99			0.94		0.86	0.65	
Uniform Delay, d1		23.0			31.8			21.8		24.0	10.8	
Progression Factor		1.00			0.97			0.66		1.43	0.76	
Incremental Delay, d2		0.0			40.1			7.7		24.5	1.4	
Delay (s)		23.0			70.8			22.1		58.7	9.6	
Level of Service		C			E			C		E	A	
Approach Delay (s)		23.0			70.8			22.1			15.9	
Approach LOS		C			E			C			B	

Intersection Summary			
HCM Average Control Delay	24.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	118.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	249	394	70	209	352	356	62	745	144	405	896	188
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	1803		1805	1863	1615	1752	3493		1805	3469	
Flt Permitted	0.19	1.00		0.17	1.00	1.00	0.17	1.00		0.14	1.00	
Satd. Flow (perm)	358	1803		330	1863	1615	309	3493		262	3469	
Peak-hour factor, PHF	0.89	0.89	0.89	0.92	0.92	0.92	0.90	0.90	0.90	0.99	0.99	0.99
Adj. Flow (vph)	280	443	79	227	383	387	69	828	160	409	905	190
RTOR Reduction (vph)	0	7	0	0	0	24	0	18	0	0	19	0
Lane Group Flow (vph)	280	515	0	227	383	363	69	970	0	409	1076	0
Heavy Vehicles (%)	1%	3%	3%	0%	2%	0%	3%	1%	0%	0%	1%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	35.0	25.0		31.0	23.0	39.0	29.0	25.0		45.0	37.0	
Effective Green, g (s)	35.0	25.0		31.0	23.0	39.0	29.0	25.0		45.0	37.0	
Actuated g/C Ratio	0.39	0.28		0.34	0.26	0.43	0.32	0.28		0.50	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	298	501		245	476	772	164	970		405	1426	
v/s Ratio Prot	c0.10	c0.29		0.08	0.21	0.08	0.02	0.28		c0.18	0.31	
v/s Ratio Perm	0.26			0.24		0.14	0.12			c0.33		
v/c Ratio	0.94	1.03		0.93	0.80	0.47	0.42	1.00		1.01	0.75	
Uniform Delay, d1	22.2	32.5		25.2	31.4	18.1	22.0	32.5		25.5	22.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.66	0.70	
Incremental Delay, d2	35.9	47.4		37.7	9.6	0.5	1.7	28.9		39.9	2.7	
Delay (s)	58.2	79.9		62.9	40.9	18.6	23.8	61.4		82.2	18.6	
Level of Service	E	E		E	D	B	C	E		F	B	
Approach Delay (s)		72.3			37.3			58.9			35.9	
Approach LOS		E			D			E			D	

Intersection Summary			
HCM Average Control Delay	48.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	97.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	16	374	445	17	106	74
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.92	0.92
Hourly flow rate (vph)	17	394	468	18	115	80
Pedestrians		4	4		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	488				911	483
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	488				911	483
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				62	86
cM capacity (veh/h)	1083				301	584

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	411	486	196
Volume Left	17	0	115
Volume Right	0	18	80
cSH	1083	1700	376
Volume to Capacity	0.02	0.29	0.52
Queue Length 95th (ft)	1	0	72
Control Delay (s)	0.5	0.0	24.5
Lane LOS	A		C
Approach Delay (s)	0.5	0.0	24.5
Approach LOS			C

Intersection Summary			
Average Delay	4.6		
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	89	63	76	146	4	18	1	8	11	3	3
Peak Hour Factor	0.86	0.86	0.86	0.81	0.81	0.81	0.68	0.68	0.68	0.71	0.71	0.71
Hourly flow rate (vph)	1	103	73	94	180	5	26	1	12	15	4	4

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	178	274	5	40	24
Volume Left (vph)	1	94	0	26	15
Volume Right (vph)	73	0	5	12	4
Hadj (s)	-0.21	0.19	-0.70	0.02	0.02
Departure Headway (s)	4.3	5.0	4.1	5.0	5.1
Degree Utilization, x	0.21	0.38	0.01	0.06	0.03
Capacity (veh/h)	819	705	855	651	640
Control Delay (s)	8.4	9.8	5.9	8.3	8.2
Approach Delay (s)	8.4	9.7		8.3	8.2
Approach LOS	A	A		A	A

Intersection Summary				
Delay	9.1			
HCM Level of Service	A			
Intersection Capacity Utilization	34.5%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	173	1269	0	0	1611
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.89	0.98	0.92	0.92	0.99
Hourly flow rate (vph)	0	194	1295	0	0	1627
Pedestrians	1					4
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			111			125
pX, platoon unblocked	0.89	0.89			0.89	
vC, conflicting volume	1838	437			1296	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1518	0			910	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	80			100	
cM capacity (veh/h)	98	967			664	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	194	432	432	432	542	542	542
Volume Left	0	0	0	0	0	0	0
Volume Right	194	0	0	0	0	0	0
cSH	967	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.20	0.25	0.25	0.25	0.32	0.32	0.32
Queue Length 95th (ft)	19	0	0	0	0	0	0
Control Delay (s)	9.7	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A						
Approach Delay (s)	9.7	0.0			0.0		
Approach LOS	A						

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	42.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	1411	352	667	1404	0	0	0	0	645	157	461
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00	0.98	1.00	1.00					1.00	1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.96	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		6536	1590	3467	3574					1643	3035	1432
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.98	1.00
Satd. Flow (perm)		6536	1590	3467	3574					1643	3035	1432
Peak-hour factor, PHF	0.92	0.97	0.97	0.98	0.98	0.92	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	0	1455	363	681	1433	0	0	0	0	741	180	530
RTOR Reduction (vph)	0	0	243	0	0	0	0	0	0	0	24	24
Lane Group Flow (vph)	0	1455	120	681	1433	0	0	0	0	378	715	310
Confl. Peds. (#/hr)	2		2							2		2
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	1%	1%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		27.8	27.8	25.2	57.0					35.0	35.0	35.0
Effective Green, g (s)		27.8	27.8	25.2	57.0					35.0	35.0	35.0
Actuated g/C Ratio		0.28	0.28	0.25	0.57					0.35	0.35	0.35
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1817	442	874	2037					575	1062	501
v/s Ratio Prot		c0.22		c0.20	0.40					0.23	c0.24	
v/s Ratio Perm			0.08									0.22
v/c Ratio		0.80	0.27	0.78	0.70					0.66	0.67	0.62
Uniform Delay, d1		33.5	28.2	34.8	15.4					27.4	27.6	27.0
Progression Factor		1.00	1.00	0.39	0.53					1.00	1.00	1.00
Incremental Delay, d2		3.8	1.5	3.5	1.6					2.7	1.7	2.3
Delay (s)		37.3	29.7	17.1	9.9					30.2	29.3	29.2
Level of Service		D	C	B	A					C	C	C
Approach Delay (s)		35.8			12.2			0.0			29.5	
Approach LOS		D			B			A			C	

Intersection Summary			
HCM Average Control Delay	24.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	97	751	412	1620	0	0	1701	603	0	0	313
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.95			0.86	0.88			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1805	2814	3502	3574			6471	2787			1644
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1805	2814	3502	3574			6471	2787			1644
Peak-hour factor, PHF	0.94	0.94	0.98	0.98	0.92	0.92	0.99	0.99	0.92	0.92	0.93
Adj. Flow (vph)	103	799	420	1653	0	0	1718	609	0	0	337
RTOR Reduction (vph)	0	25	0	0	0	0	0	369	0	0	281
Lane Group Flow (vph)	103	774	420	1653	0	0	1718	240	0	0	56
Confl. Peds. (#/hr)	1	1	3		3						
Heavy Vehicles (%)	0%	1%	0%	1%	2%	2%	1%	2%	2%	2%	0%
Turn Type		Prot	Prot					Perm			Over
Protected Phases	4	4	1	6			2				1
Permitted Phases								2			
Actuated Green, G (s)	32.0	32.0	16.6	60.0			39.4	39.4			16.6
Effective Green, g (s)	32.0	32.0	16.6	60.0			39.4	39.4			16.6
Actuated g/C Ratio	0.32	0.32	0.17	0.60			0.39	0.39			0.17
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	578	900	581	2144			2550	1098			273
v/s Ratio Prot	0.06	c0.27	0.12	c0.46			0.27				0.03
v/s Ratio Perm								0.09			
v/c Ratio	0.18	0.86	0.72	0.77			0.67	0.22			0.20
Uniform Delay, d1	24.5	31.9	39.5	14.9			25.0	20.1			36.0
Progression Factor	1.00	1.00	1.15	0.65			0.61	2.56			1.00
Incremental Delay, d2	0.1	8.2	2.9	1.8			0.9	0.3			0.4
Delay (s)	24.7	40.1	48.2	11.5			16.2	51.7			36.4
Level of Service	C	D	D	B			B	D			D
Approach Delay (s)	38.4			19.0			25.5		36.4		
Approach LOS	D			B			C		D		

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	632	20	365	62	18	91	102	1647	492	381	1643	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1900	1531	1805	1900	1615	1805	5187	1587	1770	5129	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.12	1.00	1.00	0.11	1.00	
Satd. Flow (perm)	3433	1900	1531	1805	1900	1615	224	5187	1587	197	5129	
Peak-hour factor, PHF	0.93	0.93	0.93	0.94	0.94	0.94	0.94	0.94	0.94	0.95	0.95	0.95
Adj. Flow (vph)	680	22	392	66	19	97	109	1752	523	401	1729	15
RTOR Reduction (vph)	0	0	310	0	0	89	0	0	323	0	1	0
Lane Group Flow (vph)	680	22	82	66	19	8	109	1752	200	401	1743	0
Confl. Peds. (#/hr)	1		1				3		3			
Heavy Vehicles (%)	2%	0%	4%	0%	0%	0%	0%	0%	0%	2%	1%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		Perm	pm+pt		
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	18.0	18.0	18.0	7.9	7.9	7.9	41.9	33.9	33.9	62.1	50.1	
Effective Green, g (s)	18.0	18.0	18.0	7.9	7.9	7.9	41.9	33.9	33.9	62.1	50.1	
Actuated g/C Ratio	0.18	0.18	0.18	0.08	0.08	0.08	0.42	0.34	0.34	0.62	0.50	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	618	342	276	143	150	128	220	1758	538	503	2570	
v/s Ratio Prot	c0.20	0.01		c0.04	0.01		0.04	c0.34		c0.19	0.34	
v/s Ratio Perm			0.05			0.00	0.17		0.13	0.30		
v/c Ratio	1.10	0.06	0.30	0.46	0.13	0.06	0.50	1.00	0.37	0.80	0.68	
Uniform Delay, d1	41.0	34.0	35.5	44.0	42.8	42.6	18.4	33.0	25.0	26.1	18.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.94	0.99	1.83	1.26	0.39	
Incremental Delay, d2	66.8	0.1	0.6	2.4	0.4	0.2	1.1	15.9	1.2	2.5	0.4	
Delay (s)	107.8	34.1	36.1	46.4	43.2	42.8	18.4	48.6	46.9	35.3	7.8	
Level of Service	F	C	D	D	D	D	B	D	D	D	A	
Approach Delay (s)		80.6			44.1			46.8			12.9	
Approach LOS		F			D			D			B	

Intersection Summary			
HCM Average Control Delay	40.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	602	374	150	96	370	357	309	991	487	196	1041	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	3397		1787	1881	1599	1805	3574	1552	1787	3555	
Flt Permitted	0.95	1.00		0.44	1.00	1.00	0.12	1.00	1.00	0.13	1.00	
Satd. Flow (perm)	3467	3397		819	1881	1599	228	3574	1552	249	3555	
Peak-hour factor, PHF	0.91	0.91	0.91	0.92	0.92	0.92	0.93	0.93	0.93	0.95	0.95	0.95
Adj. Flow (vph)	662	411	165	104	402	388	332	1066	524	206	1096	40
RTOR Reduction (vph)	0	42	0	0	0	158	0	0	287	0	3	0
Lane Group Flow (vph)	662	534	0	104	402	230	332	1066	237	206	1133	0
Confl. Peds. (#/hr)							3		3	2		2
Heavy Vehicles (%)	1%	2%	1%	1%	1%	1%	0%	1%	1%	1%	1%	0%
Turn Type	Prot			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases				8		8	6		6	2		
Actuated Green, G (s)	19.0	36.0		26.6	21.8	21.8	46.3	33.3	33.3	40.1	30.2	
Effective Green, g (s)	19.0	36.0		26.6	21.8	21.8	46.3	33.3	33.3	40.1	30.2	
Actuated g/C Ratio	0.19	0.36		0.27	0.22	0.22	0.46	0.33	0.33	0.40	0.30	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	659	1223		264	410	349	311	1190	517	252	1074	
v/s Ratio Prot	c0.19	0.16		0.02	c0.21		c0.14	0.30		0.08	0.32	
v/s Ratio Perm				0.09		0.14	c0.36		0.15	0.25		
v/c Ratio	1.00	0.44		0.39	0.98	0.66	1.07	0.90	0.46	0.82	1.06	
Uniform Delay, d1	40.5	24.3		28.6	38.9	35.7	28.3	31.7	26.2	23.6	34.9	
Progression Factor	0.91	0.89		1.00	1.00	1.00	1.50	0.45	0.86	1.00	1.00	
Incremental Delay, d2	33.5	0.2		1.0	39.1	4.5	52.6	4.9	1.2	18.2	43.2	
Delay (s)	70.4	21.8		29.6	78.0	40.2	95.0	19.3	23.9	41.8	78.1	
Level of Service	E	C		C	E	D	F	B	C	D	E	
Approach Delay (s)		47.8			56.0			33.6			72.5	
Approach LOS		D			E			C			E	

Intersection Summary			
HCM Average Control Delay	50.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	97.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	184	224	183	833	762	176
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1787	1562	1770	1881	1881	1599
Flt Permitted	0.95	1.00	0.21	1.00	1.00	1.00
Satd. Flow (perm)	1787	1562	391	1881	1881	1599
Peak-hour factor, PHF	0.93	0.93	0.94	0.94	0.95	0.95
Adj. Flow (vph)	198	241	195	886	802	185
RTOR Reduction (vph)	0	204	0	0	0	66
Lane Group Flow (vph)	198	37	195	886	802	119
Confl. Peds. (#/hr)	1	1	1			
Heavy Vehicles (%)	1%	1%	2%	1%	1%	1%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	15.3	15.3	76.7	76.7	64.2	64.2
Effective Green, g (s)	15.3	15.3	76.7	76.7	64.2	64.2
Actuated g/C Ratio	0.15	0.15	0.77	0.77	0.64	0.64
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	273	239	417	1443	1208	1027
v/s Ratio Prot	c0.11		0.04	c0.47	c0.43	
v/s Ratio Perm		0.02	0.32			0.07
v/c Ratio	0.73	0.15	0.47	0.61	0.66	0.12
Uniform Delay, d1	40.3	36.7	8.9	5.1	11.2	6.9
Progression Factor	1.00	1.00	1.00	1.00	0.42	0.35
Incremental Delay, d2	9.2	0.3	0.8	2.0	1.6	0.1
Delay (s)	49.5	37.0	9.7	7.1	6.3	2.6
Level of Service	D	D	A	A	A	A
Approach Delay (s)	42.7			7.6	5.6	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	118	288	83	162	344	105	150	726	148	138	669	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1796		1805	1820		1719	1881	1540	1805	1900	1547
Flt Permitted	0.20	1.00		0.19	1.00		0.11	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)	369	1796		362	1820		207	1881	1540	217	1900	1547
Peak-hour factor, PHF	0.86	0.86	0.86	0.91	0.91	0.91	0.96	0.96	0.96	0.90	0.90	0.90
Adj. Flow (vph)	137	335	97	178	378	115	156	756	154	153	743	153
RTOR Reduction (vph)	0	13	0	0	14	0	0	0	87	0	0	86
Lane Group Flow (vph)	137	419	0	178	479	0	156	756	67	153	743	67
Confl. Peds. (#/hr)	2		2				7		7	5		5
Heavy Vehicles (%)	3%	1%	4%	0%	1%	0%	5%	1%	1%	0%	0%	1%
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	24.0	20.0		26.0	21.0		39.0	35.0	35.0	39.0	35.0	35.0
Effective Green, g (s)	24.0	20.0		26.0	21.0		39.0	35.0	35.0	39.0	35.0	35.0
Actuated g/C Ratio	0.30	0.25		0.32	0.26		0.49	0.44	0.44	0.49	0.44	0.44
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	180	449		208	478		177	823	674	185	831	677
v/s Ratio Prot	0.04	0.23		c0.05	c0.26		c0.04	c0.40		0.04	0.39	
v/s Ratio Perm	0.19			0.22			0.39		0.04	0.36		0.04
v/c Ratio	0.76	0.93		0.86	1.00		0.88	0.92	0.10	0.83	0.89	0.10
Uniform Delay, d1	24.9	29.4		23.9	29.5		17.6	21.2	13.2	17.3	20.8	13.2
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	17.1	26.5		27.4	41.7		36.3	16.9	0.3	25.1	14.1	0.3
Delay (s)	42.0	55.9		51.3	71.2		53.9	38.1	13.5	42.4	34.9	13.5
Level of Service	D	E		D	E		D	D	B	D	C	B
Approach Delay (s)		52.6			65.9			36.8			32.9	
Approach LOS		D			E			D			C	

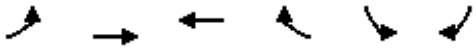
Intersection Summary			
HCM Average Control Delay	44.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	141	242	235	165	155	133
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.97	0.97	0.90	0.90
Hourly flow rate (vph)	153	263	242	170	172	148
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				869		
pX, platoon unblocked						
vC, conflicting volume	827	172	320			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	827	172	320			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	44	70	80			
cM capacity (veh/h)	275	871	1240			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	153	263	242	170	172	148
Volume Left	153	0	242	0	0	0
Volume Right	0	263	0	0	0	148
cSH	275	871	1240	1700	1700	1700
Volume to Capacity	0.56	0.30	0.20	0.10	0.10	0.09
Queue Length 95th (ft)	78	32	18	0	0	0
Control Delay (s)	33.5	10.9	8.6	0.0	0.0	0.0
Lane LOS	D	B	A			
Approach Delay (s)	19.2		5.1		0.0	
Approach LOS	C					

Intersection Summary			
Average Delay	8.8		
Intersection Capacity Utilization	39.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	2	316	357	24	30	24
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.96	0.96	0.86	0.86
Hourly flow rate (vph)	2	333	372	25	35	28
Pedestrians		4	4			
Lane Width (ft)		12.0	12.0			
Walking Speed (ft/s)		4.0	4.0			
Percent Blockage		0	0			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	397				725	388
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	397				725	388
tC, single (s)	5.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	3.1				3.5	3.3
p0 queue free %	100				91	96
cM capacity (veh/h)	781				387	653

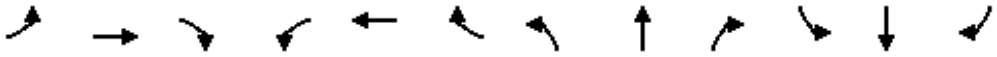
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	335	397	63
Volume Left	2	0	35
Volume Right	0	25	28
cSH	781	1700	472
Volume to Capacity	0.00	0.23	0.13
Queue Length 95th (ft)	0	0	11
Control Delay (s)	0.1	0.0	13.8
Lane LOS	A		B
Approach Delay (s)	0.1	0.0	13.8
Approach LOS			B

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	31.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (veh/h)	1369	32	67	1202	13	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.97	0.97	0.95	0.95	0.83	0.92
Hourly flow rate (vph)	1411	33	71	1265	16	0
Pedestrians	2				1	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1445		1994	488
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1445		1994	488
tC, single (s)			4.3		7.2	6.9
tC, 2 stage (s)						
tF (s)			2.3		3.7	3.3
p0 queue free %			84		56	100
cM capacity (veh/h)			435		35	525

Direction, Lane #	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3	SB 4	SW 1
Volume Total	565	565	315	71	422	422	422	16
Volume Left	0	0	0	71	0	0	0	16
Volume Right	0	0	33	0	0	0	0	0
cSH	1700	1700	1700	435	1700	1700	1700	35
Volume to Capacity	0.33	0.33	0.19	0.16	0.25	0.25	0.25	0.44
Queue Length 95th (ft)	0	0	0	14	0	0	0	37
Control Delay (s)	0.0	0.0	0.0	14.9	0.0	0.0	0.0	170.3
Lane LOS				B				F
Approach Delay (s)	0.0			0.8				170.3
Approach LOS								F

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	93	22	19	73	1	30	1	21	3	1	4
Peak Hour Factor	0.92	0.92	0.92	0.87	0.87	0.87	0.82	0.82	0.82	0.67	0.67	0.67
Hourly flow rate (vph)	1	101	24	22	84	1	37	1	26	4	1	6

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	126	107	63	12
Volume Left (vph)	1	22	37	4
Volume Right (vph)	24	1	26	6
Hadj (s)	-0.01	0.13	-0.09	-0.23
Departure Headway (s)	4.2	4.3	4.3	4.3
Degree Utilization, x	0.15	0.13	0.08	0.01
Capacity (veh/h)	841	812	782	783
Control Delay (s)	7.9	8.0	7.7	7.3
Approach Delay (s)	7.9	8.0	7.7	7.3
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.9			
HCM Level of Service	A			
Intersection Capacity Utilization	23.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	75	1369	0	0	1270
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.88	0.97	0.92	0.92	0.95
Hourly flow rate (vph)	0	85	1411	0	0	1337
Pedestrians	1					2
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1858	473			1412	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1858	473			1412	
tC, single (s)	6.8	7.0			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	100	84			100	
cM capacity (veh/h)	65	525			478	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	85	470	470	470	446	446	446
Volume Left	0	0	0	0	0	0	0
Volume Right	85	0	0	0	0	0	0
cSH	525	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.16	0.28	0.28	0.28	0.26	0.26	0.26
Queue Length 95th (ft)	14	0	0	0	0	0	0
Control Delay (s)	13.2	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	13.2	0.0			0.0		
Approach LOS	B						

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	38.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	18	338	7	55	334	24	5	0	24	22	0	16
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	19	356	7	58	352	25	6	0	27	24	0	18
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					450							
pX, platoon unblocked												
vC, conflicting volume	377			363			707	890	182	710	868	176
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	377			363			707	890	182	710	868	176
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			95			98	100	97	92	100	98
cM capacity (veh/h)	1178			1192			300	263	830	295	270	837

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	19	237	126	58	176	176	25	32	42
Volume Left	19	0	0	58	0	0	0	6	24
Volume Right	0	0	7	0	0	0	25	27	18
cSH	1178	1700	1700	1192	1700	1700	1700	636	406
Volume to Capacity	0.02	0.14	0.07	0.05	0.10	0.10	0.01	0.05	0.10
Queue Length 95th (ft)	1	0	0	4	0	0	0	4	9
Control Delay (s)	8.1	0.0	0.0	8.2	0.0	0.0	0.0	11.0	14.9
Lane LOS	A			A				B	B
Approach Delay (s)	0.4			1.1				11.0	14.9
Approach LOS								B	B

Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	28.7%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	340	11	53	301	10	23
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.97	0.97	0.92	0.92
Hourly flow rate (vph)	358	12	55	310	11	25
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				889		
pX, platoon unblocked						
vC, conflicting volume			369		783	364
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			369		783	364
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		97	96
cM capacity (veh/h)			1189		346	681

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	369	55	310	36
Volume Left	0	55	0	11
Volume Right	12	0	0	25
cSH	1700	1189	1700	526
Volume to Capacity	0.22	0.05	0.18	0.07
Queue Length 95th (ft)	0	4	0	5
Control Delay (s)	0.0	8.2	0.0	12.3
Lane LOS		A		B
Approach Delay (s)	0.0	1.2		12.3
Approach LOS				B

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL2	WBL	NBL	NBR	NER	NER2
Lane Configurations						
Volume (veh/h)	60	237	8	29	276	10
Sign Control		Free	Stop		Free	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.92	0.92	0.95	0.95
Hourly flow rate (vph)	63	249	9	32	291	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None			None	
Median storage veh)						
Upstream signal (ft)		1258				
pX, platoon unblocked						
vC, conflicting volume	301		666	291		
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	301		666	291		
tC, single (s)	4.1		6.4	6.2		
tC, 2 stage (s)						
tF (s)	2.2		3.5	3.3		
p0 queue free %	95		98	96		
cM capacity (veh/h)	1260		403	749		

Direction, Lane #	WB 1	WB 2	NB 1	NE 1	NE 2
Volume Total	63	249	40	291	11
Volume Left	63	0	9	0	0
Volume Right	0	0	32	0	11
cSH	1260	1700	632	1700	1700
Volume to Capacity	0.05	0.15	0.06	0.17	0.01
Queue Length 95th (ft)	4	0	5	0	0
Control Delay (s)	8.0	0.0	11.1	0.0	0.0
Lane LOS	A		B		
Approach Delay (s)	1.6		11.1	0.0	
Approach LOS			B		

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	23.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBR	SWL	SWR
Lane Configurations						
Volume (veh/h)	276	7	6	10	13	230
Sign Control	Free		Stop		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.95	0.95	0.90	0.90	0.95	0.95
Hourly flow rate (vph)	291	7	7	11	14	242
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None				None	
Median storage veh)						
Upstream signal (ft)	434					
pX, platoon unblocked						
vC, conflicting volume			560	291	298	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			560	291	298	
tC, single (s)			6.4	6.2	4.1	
tC, 2 stage (s)						
tF (s)			3.5	3.3	2.2	
p0 queue free %			99	99	99	
cM capacity (veh/h)			484	749	1263	

Direction, Lane #	EB 1	EB 2	NB 1	SW 1	SW 2
Volume Total	291	7	18	14	242
Volume Left	0	0	7	14	0
Volume Right	0	7	11	0	0
cSH	1700	1700	621	1263	1700
Volume to Capacity	0.17	0.00	0.03	0.01	0.14
Queue Length 95th (ft)	0	0	2	1	0
Control Delay (s)	0.0	0.0	11.0	7.9	0.0
Lane LOS			B	A	
Approach Delay (s)	0.0		11.0	0.4	
Approach LOS			B		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	32.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	SER	SER2
Lane Configurations					
Volume (veh/h)	0	0	0	0	0
Sign Control	Stop		Free	Free	
Grade	0%		0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0
Pedestrians					
Lane Width (ft)					
Walking Speed (ft/s)					
Percent Blockage					
Right turn flare (veh)					
Median type			None	None	
Median storage veh)					
Upstream signal (ft)				346	
pX, platoon unblocked					
vC, conflicting volume	0	0			
vC1, stage 1 conf vol					
vC2, stage 2 conf vol					
vCu, unblocked vol	0	0			
tC, single (s)	6.8	6.9			
tC, 2 stage (s)					
tF (s)	3.5	3.3			
p0 queue free %	100	100			
cM capacity (veh/h)	1023	1084			

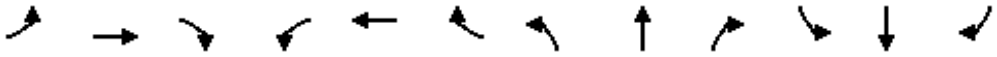
Direction, Lane #	EB 1	NB 1	NB 2	SE 1	SE 2	SE 3
Volume Total	0	0	0	0	0	0
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.00	0.00	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A					
Approach Delay (s)	0.0	0.0		0.0		
Approach LOS	A					

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	0	0	151	0	2	25	181	174	3	136	32
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.93	0.93	0.93	0.92	0.92	0.92
Hourly flow rate (vph)	33	0	0	164	0	2	27	195	187	3	148	35
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	325	607	91	329	438	97	183			382		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	325	607	91	329	438	97	183			382		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	94	100	100	72	100	100	98			100		
cM capacity (veh/h)	593	400	948	591	500	940	1390			1173		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	33	164	2	92	130	187	3	99	84
Volume Left	33	164	0	27	0	0	3	0	0
Volume Right	0	0	2	0	0	187	0	0	35
cSH	593	591	940	1390	1700	1700	1173	1700	1700
Volume to Capacity	0.06	0.28	0.00	0.02	0.08	0.11	0.00	0.06	0.05
Queue Length 95th (ft)	4	28	0	1	0	0	0	0	0
Control Delay (s)	11.4	13.4	8.8	2.3	0.0	0.0	8.1	0.0	0.0
Lane LOS	B	B	A	A			A		
Approach Delay (s)	11.4	13.4		0.5			0.1		
Approach LOS	B	B							

Intersection Summary				
Average Delay	3.6			
Intersection Capacity Utilization	28.9%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					515							
pX, platoon unblocked												
vC, conflicting volume	0			0			0	0	0	0	0	0
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0			0			0	0	0	0	0	0
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1623			1623			1023	896	1085	1023	896	1085

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2
Volume Total	0	0	0	0	0	0	0	0	0	0
Volume Left	0	0	0	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0	0	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS							A	A	A	A
Approach Delay (s)	0.0			0.0			0.0		0.0	
Approach LOS							A		A	

Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	0.0%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	1411	352	667	1404	0	0	0	0	645	157	461
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00	0.98	1.00	1.00					1.00	1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.96	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.98	1.00
Satd. Flow (prot)		6536	1590	3467	3574					1643	3035	1432
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.98	1.00
Satd. Flow (perm)		6536	1590	3467	3574					1643	3035	1432
Peak-hour factor, PHF	0.92	0.97	0.97	0.98	0.98	0.92	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	0	1455	363	681	1433	0	0	0	0	741	180	530
RTOR Reduction (vph)	0	0	243	0	0	0	0	0	0	0	24	24
Lane Group Flow (vph)	0	1455	120	681	1433	0	0	0	0	378	715	310
Confl. Peds. (#/hr)	2		2							2		2
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	1%	1%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		27.8	27.8	25.2	57.0					35.0	35.0	35.0
Effective Green, g (s)		27.8	27.8	25.2	57.0					35.0	35.0	35.0
Actuated g/C Ratio		0.28	0.28	0.25	0.57					0.35	0.35	0.35
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1817	442	874	2037					575	1062	501
v/s Ratio Prot		c0.22		c0.20	0.40					0.23	c0.24	
v/s Ratio Perm			0.08									0.22
v/c Ratio		0.80	0.27	0.78	0.70					0.66	0.67	0.62
Uniform Delay, d1		33.5	28.2	34.8	15.4					27.4	27.6	27.0
Progression Factor		1.00	1.00	0.39	0.54					1.00	1.00	1.00
Incremental Delay, d2		3.8	1.5	3.5	1.6					2.7	1.7	2.3
Delay (s)		37.3	29.7	17.2	9.9					30.2	29.3	29.2
Level of Service		D	C	B	A					C	C	C
Approach Delay (s)		35.8			12.2			0.0			29.5	
Approach LOS		D			B			A			C	

Intersection Summary			
HCM Average Control Delay	24.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	97	751	412	1620	0	0	1701	603	0	0	313
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.95			0.86	0.88			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1805	2814	3502	3574			6471	2787			1644
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1805	2814	3502	3574			6471	2787			1644
Peak-hour factor, PHF	0.94	0.94	0.98	0.98	0.92	0.92	0.99	0.99	0.92	0.92	0.93
Adj. Flow (vph)	103	799	420	1653	0	0	1718	609	0	0	337
RTOR Reduction (vph)	0	25	0	0	0	0	0	369	0	0	281
Lane Group Flow (vph)	103	774	420	1653	0	0	1718	240	0	0	56
Confl. Peds. (#/hr)	1	1	3		3						
Heavy Vehicles (%)	0%	1%	0%	1%	2%	2%	1%	2%	2%	2%	0%
Turn Type		Prot	Prot					Perm			Over
Protected Phases	4	4	1	6			2				1
Permitted Phases								2			
Actuated Green, G (s)	32.0	32.0	16.6	60.0			39.4	39.4			16.6
Effective Green, g (s)	32.0	32.0	16.6	60.0			39.4	39.4			16.6
Actuated g/C Ratio	0.32	0.32	0.17	0.60			0.39	0.39			0.17
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	578	900	581	2144			2550	1098			273
v/s Ratio Prot	0.06	c0.27	0.12	c0.46			0.27				0.03
v/s Ratio Perm								0.09			
v/c Ratio	0.18	0.86	0.72	0.77			0.67	0.22			0.20
Uniform Delay, d1	24.5	31.9	39.5	14.9			25.0	20.1			36.0
Progression Factor	1.00	1.00	1.15	0.65			0.70	1.05			1.00
Incremental Delay, d2	0.1	8.2	2.9	1.8			0.9	0.3			0.4
Delay (s)	24.7	40.1	48.2	11.5			18.5	21.4			36.4
Level of Service	C	D	D	B			B	C			D
Approach Delay (s)	38.4			19.0			19.3		36.4		
Approach LOS	D			B			B		D		

Intersection Summary			
HCM Average Control Delay	23.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	632	20	365	62	18	91	102	1647	615	381	1643	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1900	1531	1805	1900	1615	1805	5187	2788	1770	5129	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.12	1.00	1.00	0.11	1.00	
Satd. Flow (perm)	3433	1900	1531	1805	1900	1615	224	5187	2788	197	5129	
Peak-hour factor, PHF	0.93	0.93	0.93	0.94	0.94	0.94	0.94	0.94	0.94	0.95	0.95	0.95
Adj. Flow (vph)	680	22	392	66	19	97	109	1752	654	401	1729	15
RTOR Reduction (vph)	0	0	310	0	0	89	0	0	315	0	1	0
Lane Group Flow (vph)	680	22	82	66	19	8	109	1752	339	401	1743	0
Confl. Peds. (#/hr)	1		1				3		3			
Heavy Vehicles (%)	2%	0%	4%	0%	0%	0%	0%	0%	0%	2%	1%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		pm+ov	pm+pt		
Protected Phases	4	4		8	8		1	6	4	5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	18.0	18.0	18.0	7.9	7.9	7.9	41.9	33.9	51.9	62.1	50.1	
Effective Green, g (s)	18.0	18.0	18.0	7.9	7.9	7.9	41.9	33.9	51.9	62.1	50.1	
Actuated g/C Ratio	0.18	0.18	0.18	0.08	0.08	0.08	0.42	0.34	0.52	0.62	0.50	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	618	342	276	143	150	128	220	1758	1558	503	2570	
v/s Ratio Prot	c0.20	0.01		c0.04	0.01		0.04	c0.34	0.04	c0.19	0.34	
v/s Ratio Perm			0.05			0.00	0.17		0.08	0.30		
v/c Ratio	1.10	0.06	0.30	0.46	0.13	0.06	0.50	1.00	0.22	0.80	0.68	
Uniform Delay, d1	41.0	34.0	35.5	44.0	42.8	42.6	18.4	33.0	13.0	26.1	18.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.17	1.00	0.98	0.93	0.54	
Incremental Delay, d2	66.8	0.1	0.6	2.4	0.4	0.2	1.1	16.3	0.0	2.5	0.4	
Delay (s)	107.8	34.1	36.1	46.4	43.2	42.8	22.7	49.4	12.8	26.7	10.6	
Level of Service	F	C	D	D	D	D	C	D	B	C	B	
Approach Delay (s)		80.6			44.1			38.7			13.6	
Approach LOS		F			D			D			B	

Intersection Summary			
HCM Average Control Delay	37.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	602	374	150	96	370	357	309	991	487	196	1041	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	3397		1787	1881	1599	1805	3574	1552	1787	3555	
Flt Permitted	0.95	1.00		0.44	1.00	1.00	0.12	1.00	1.00	0.13	1.00	
Satd. Flow (perm)	3467	3397		819	1881	1599	228	3574	1552	249	3555	
Peak-hour factor, PHF	0.91	0.91	0.91	0.92	0.92	0.92	0.93	0.93	0.93	0.95	0.95	0.95
Adj. Flow (vph)	662	411	165	104	402	388	332	1066	524	206	1096	40
RTOR Reduction (vph)	0	42	0	0	0	158	0	0	287	0	3	0
Lane Group Flow (vph)	662	534	0	104	402	230	332	1066	237	206	1133	0
Confl. Peds. (#/hr)							3		3	2		2
Heavy Vehicles (%)	1%	2%	1%	1%	1%	1%	0%	1%	1%	1%	1%	0%
Turn Type	Prot			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases				8		8	6		6	2		
Actuated Green, G (s)	19.0	36.0		26.6	21.8	21.8	46.3	33.3	33.3	40.1	30.2	
Effective Green, g (s)	19.0	36.0		26.6	21.8	21.8	46.3	33.3	33.3	40.1	30.2	
Actuated g/C Ratio	0.19	0.36		0.27	0.22	0.22	0.46	0.33	0.33	0.40	0.30	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	659	1223		264	410	349	311	1190	517	252	1074	
v/s Ratio Prot	c0.19	0.16		0.02	c0.21		c0.14	0.30		0.08	0.32	
v/s Ratio Perm				0.09		0.14	c0.36		0.15	0.25		
v/c Ratio	1.00	0.44		0.39	0.98	0.66	1.07	0.90	0.46	0.82	1.06	
Uniform Delay, d1	40.5	24.3		28.6	38.9	35.7	28.3	31.7	26.2	23.6	34.9	
Progression Factor	0.92	0.87		1.00	1.00	1.00	2.06	0.26	0.14	1.00	1.00	
Incremental Delay, d2	33.5	0.2		1.0	39.1	4.5	52.6	4.9	1.2	18.2	43.2	
Delay (s)	70.6	21.4		29.6	78.0	40.2	111.0	13.2	5.0	41.8	78.1	
Level of Service	E	C		C	E	D	F	B	A	D	E	
Approach Delay (s)		47.7			56.0			27.9			72.5	
Approach LOS		D			E			C			E	

Intersection Summary			
HCM Average Control Delay	48.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	97.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	184	224	183	833	762	176
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1787	1562	1770	1881	1881	1599
Flt Permitted	0.95	1.00	0.21	1.00	1.00	1.00
Satd. Flow (perm)	1787	1562	391	1881	1881	1599
Peak-hour factor, PHF	0.93	0.93	0.94	0.94	0.95	0.95
Adj. Flow (vph)	198	241	195	886	802	185
RTOR Reduction (vph)	0	204	0	0	0	66
Lane Group Flow (vph)	198	37	195	886	802	119
Confl. Peds. (#/hr)	1	1	1			
Heavy Vehicles (%)	1%	1%	2%	1%	1%	1%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	15.3	15.3	76.7	76.7	64.2	64.2
Effective Green, g (s)	15.3	15.3	76.7	76.7	64.2	64.2
Actuated g/C Ratio	0.15	0.15	0.77	0.77	0.64	0.64
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	273	239	417	1443	1208	1027
v/s Ratio Prot	c0.11		0.04	c0.47	c0.43	
v/s Ratio Perm		0.02	0.32			0.07
v/c Ratio	0.73	0.15	0.47	0.61	0.66	0.12
Uniform Delay, d1	40.3	36.7	8.9	5.1	11.2	6.9
Progression Factor	0.96	1.08	1.00	1.00	0.49	0.59
Incremental Delay, d2	9.0	0.3	0.8	2.0	1.6	0.1
Delay (s)	47.5	40.0	9.7	7.1	7.1	4.2
Level of Service	D	D	A	A	A	A
Approach Delay (s)	43.4			7.6	6.5	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	118	288	83	162	344	105	150	726	148	138	669	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	1.00	1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1795		1805	1881	1615	1719	1881	1536	1805	1900	1545
Flt Permitted	0.22	1.00		0.17	1.00	1.00	0.11	1.00	1.00	0.10	1.00	1.00
Satd. Flow (perm)	414	1795		330	1881	1615	202	1881	1536	193	1900	1545
Peak-hour factor, PHF	0.86	0.86	0.86	0.91	0.91	0.91	0.96	0.96	0.96	0.90	0.90	0.90
Adj. Flow (vph)	137	335	97	178	378	115	156	756	154	153	743	153
RTOR Reduction (vph)	0	11	0	0	0	86	0	0	82	0	0	82
Lane Group Flow (vph)	137	421	0	178	378	29	156	756	72	153	743	71
Confl. Peds. (#/hr)	2		2				7		7	5		5
Heavy Vehicles (%)	3%	1%	4%	0%	1%	0%	5%	1%	1%	0%	0%	1%
Turn Type	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)	27.0	22.0		29.0	23.0	23.0	46.0	42.0	42.0	46.0	42.0	42.0
Effective Green, g (s)	27.0	22.0		29.0	23.0	23.0	46.0	42.0	42.0	46.0	42.0	42.0
Actuated g/C Ratio	0.30	0.24		0.32	0.26	0.26	0.51	0.47	0.47	0.51	0.47	0.47
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	199	439		205	481	413	171	878	717	170	887	721
v/s Ratio Prot	0.04	c0.23		c0.06	0.20		c0.04	0.40		0.04	0.39	
v/s Ratio Perm	0.17			0.22		0.02	c0.43		0.05	0.42		0.05
v/c Ratio	0.69	0.96		0.87	0.79	0.07	0.91	0.86	0.10	0.90	0.84	0.10
Uniform Delay, d1	25.7	33.5		26.5	31.2	25.4	19.9	21.4	13.4	18.8	21.0	13.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	9.5	32.0		29.9	8.2	0.1	44.2	10.8	0.3	41.6	9.3	0.3
Delay (s)	35.2	65.6		56.3	39.5	25.5	64.1	32.2	13.7	60.4	30.3	13.7
Level of Service	D	E		E	D	C	E	C	B	E	C	B
Approach Delay (s)		58.2			41.5			34.2			32.3	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM Average Control Delay	39.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

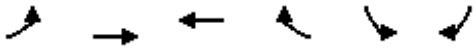


Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	141	242	235	165	155	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.95	1.00	0.61	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	1137	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.97	0.97	0.90	0.90
Adj. Flow (vph)	153	263	242	170	172	148
RTOR Reduction (vph)	0	226	0	0	0	53
Lane Group Flow (vph)	153	37	242	170	172	95
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	14.2	14.2	77.8	77.8	64.5	64.5
Effective Green, g (s)	14.2	14.2	77.8	77.8	64.5	64.5
Actuated g/C Ratio	0.14	0.14	0.78	0.78	0.64	0.64
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	251	225	943	1449	1202	1021
v/s Ratio Prot	c0.09		c0.02	0.09	0.09	
v/s Ratio Perm		0.02	c0.18			0.06
v/c Ratio	0.61	0.17	0.26	0.12	0.14	0.09
Uniform Delay, d1	40.3	37.7	3.0	2.7	6.9	6.7
Progression Factor	1.00	1.00	0.33	0.32	1.00	1.00
Incremental Delay, d2	4.2	0.3	0.1	0.2	0.2	0.2
Delay (s)	44.5	38.0	1.1	1.0	7.2	6.9
Level of Service	D	D	A	A	A	A
Approach Delay (s)	40.4			1.1	7.1	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	17.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	1369	32	67	1202	13	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	1.00		1.00	1.00	1.00	
Flt Protected	1.00		0.95	1.00	0.95	
Satd. Flow (prot)	5162		1671	5187	1504	
Flt Permitted	1.00		0.14	1.00	0.95	
Satd. Flow (perm)	5162		241	5187	1504	
Peak-hour factor, PHF	0.97	0.97	0.95	0.95	0.83	0.92
Adj. Flow (vph)	1411	33	71	1265	16	0
RTOR Reduction (vph)	2	0	0	0	0	0
Lane Group Flow (vph)	1442	0	71	1265	16	0
Confl. Peds. (#/hr)		1			2	
Heavy Vehicles (%)	0%	4%	8%	0%	20%	2%
Turn Type			pm+pt			
Protected Phases	2		1	6	8	
Permitted Phases			6			
Actuated Green, G (s)	32.3		40.8	40.8	1.2	
Effective Green, g (s)	32.3		40.8	40.8	1.2	
Actuated g/C Ratio	0.65		0.82	0.82	0.02	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	3335		325	4233	36	
v/s Ratio Prot	c0.28		0.02	c0.24	c0.01	
v/s Ratio Perm			0.16			
v/c Ratio	0.43		0.22	0.30	0.44	
Uniform Delay, d1	4.3		1.6	1.1	24.1	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.1		0.3	0.0	8.5	
Delay (s)	4.4		1.9	1.2	32.6	
Level of Service	A		A	A	C	
Approach Delay (s)	4.4			1.2	32.6	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	3.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	2	316	357	24	30	24
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.96	0.96	0.86	0.86
Hourly flow rate (vph)	2	333	372	25	35	28
Pedestrians		4	4			
Lane Width (ft)		12.0	12.0			
Walking Speed (ft/s)		4.0	4.0			
Percent Blockage		0	0			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	397				725	388
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	397				725	388
tC, single (s)	5.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	3.1				3.5	3.3
p0 queue free %	100				91	96
cM capacity (veh/h)	781				387	653

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	335	397	63
Volume Left	2	0	35
Volume Right	0	25	28
cSH	781	1700	472
Volume to Capacity	0.00	0.23	0.13
Queue Length 95th (ft)	0	0	11
Control Delay (s)	0.1	0.0	13.8
Lane LOS	A		B
Approach Delay (s)	0.1	0.0	13.8
Approach LOS			B

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	31.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	93	22	19	73	1	30	1	21	3	1	4
Peak Hour Factor	0.92	0.92	0.92	0.87	0.87	0.87	0.82	0.82	0.82	0.67	0.67	0.67
Hourly flow rate (vph)	1	101	24	22	84	1	37	1	26	4	1	6

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	126	107	63	12
Volume Left (vph)	1	22	37	4
Volume Right (vph)	24	1	26	6
Hadj (s)	-0.01	0.13	-0.09	-0.23
Departure Headway (s)	4.2	4.3	4.3	4.3
Degree Utilization, x	0.15	0.13	0.08	0.01
Capacity (veh/h)	841	812	782	783
Control Delay (s)	7.9	8.0	7.7	7.3
Approach Delay (s)	7.9	8.0	7.7	7.3
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.9			
HCM Level of Service	A			
Intersection Capacity Utilization	23.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	75	1369	0	0	1270
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.88	0.97	0.92	0.92	0.95
Hourly flow rate (vph)	0	85	1411	0	0	1337
Pedestrians	1					2
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			111			
pX, platoon unblocked	0.86	0.86			0.86	
vC, conflicting volume	1858	473			1412	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1444	0			929	
tC, single (s)	6.8	7.0			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	100	91			100	
cM capacity (veh/h)	106	924			632	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	85	470	470	470	446	446	446
Volume Left	0	0	0	0	0	0	0
Volume Right	85	0	0	0	0	0	0
cSH	924	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.09	0.28	0.28	0.28	0.26	0.26	0.26
Queue Length 95th (ft)	8	0	0	0	0	0	0
Control Delay (s)	9.3	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A						
Approach Delay (s)	9.3	0.0			0.0		
Approach LOS	A						

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	38.5%	ICU Level of Service	A
Analysis Period (min)	15		

Appendix I
2016 Build Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	7	39	14	15	82	8	1499	8	6	977	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.93			0.90			1.00			1.00	
Flt Protected		0.98			0.99			1.00			1.00	
Satd. Flow (prot)		1733			1680			3568			3570	
Flt Permitted		0.57			0.94			0.95			0.95	
Satd. Flow (perm)		1003			1597			3390			3378	
Peak-hour factor, PHF	0.85	0.85	0.85	0.90	0.90	0.90	0.99	0.99	0.99	0.96	0.96	0.96
Adj. Flow (vph)	35	8	46	16	17	91	8	1514	8	6	1018	6
RTOR Reduction (vph)	0	39	0	0	73	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	50	0	0	51	0	0	1530	0	0	1030	0
Confl. Peds. (#/hr)				2		2				1		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	14%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		9.2			9.2			87.8			87.8	
Effective Green, g (s)		9.2			9.2			87.8			87.8	
Actuated g/C Ratio		0.09			0.09			0.84			0.84	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		88			140			2835			2825	
v/s Ratio Prot												
v/s Ratio Perm		c0.05			0.03			c0.45			0.30	
v/c Ratio		0.57			0.36			0.54			0.36	
Uniform Delay, d1		46.0			45.1			2.6			2.0	
Progression Factor		1.00			0.73			0.27			1.00	
Incremental Delay, d2		8.1			1.4			0.5			0.4	
Delay (s)		54.1			34.5			1.2			2.4	
Level of Service		D			C			A			A	
Approach Delay (s)		54.1			34.5			1.2			2.4	
Approach LOS		D			C			A			A	

Intersection Summary			
HCM Average Control Delay	4.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	15	7	84	803	1080	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	0.95	
Frpb, ped/bikes	0.99			1.00	1.00	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.96			1.00	1.00	
Flt Protected	0.97			1.00	1.00	
Satd. Flow (prot)	1749			1857	3567	
Flt Permitted	0.97			0.80	1.00	
Satd. Flow (perm)	1749			1495	3567	
Peak-hour factor, PHF	0.77	0.77	0.99	0.99	0.99	0.99
Adj. Flow (vph)	19	9	85	811	1091	14
RTOR Reduction (vph)	9	0	0	0	1	0
Lane Group Flow (vph)	19	0	0	896	1104	0
Confl. Peds. (#/hr)	2	2	1			1
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	2.4			94.6	94.6	
Effective Green, g (s)	2.4			94.6	94.6	
Actuated g/C Ratio	0.02			0.90	0.90	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	40			1347	3214	
v/s Ratio Prot	c0.01				0.31	
v/s Ratio Perm				c0.60		
v/c Ratio	0.48			0.67	0.34	
Uniform Delay, d1	50.7			1.3	0.7	
Progression Factor	0.88			0.40	1.00	
Incremental Delay, d2	8.4			1.8	0.3	
Delay (s)	53.2			2.3	1.0	
Level of Service	D			A	A	
Approach Delay (s)	53.2			2.3	1.0	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	2.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	1472	891	0	1079	1096	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	1.00		0.95	0.97	
Frpb, ped/bikes	1.00	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		1.00	0.95	
Satd. Flow (prot)	3574	1562		3574	3467	
Flt Permitted	1.00	1.00		1.00	0.95	
Satd. Flow (perm)	3574	1562		3574	3467	
Peak-hour factor, PHF	0.99	0.99	0.92	0.97	0.99	0.92
Adj. Flow (vph)	1487	900	0	1112	1107	0
RTOR Reduction (vph)	0	400	0	0	0	0
Lane Group Flow (vph)	1487	500	0	1112	1107	0
Confl. Peds. (#/hr)		1				
Heavy Vehicles (%)	1%	1%	2%	1%	1%	2%
Turn Type		Perm				
Protected Phases	2			6	8	
Permitted Phases		2				
Actuated Green, G (s)	57.9	57.9		57.9	39.1	
Effective Green, g (s)	57.9	57.9		57.9	39.1	
Actuated g/C Ratio	0.55	0.55		0.55	0.37	
Clearance Time (s)	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	1971	861		1971	1291	
v/s Ratio Prot	c0.42			0.31	c0.32	
v/s Ratio Perm		0.32				
v/c Ratio	0.75	0.58		0.56	0.86	
Uniform Delay, d1	18.1	15.5		15.3	30.4	
Progression Factor	0.53	0.86		0.90	0.98	
Incremental Delay, d2	0.6	0.6		1.1	5.6	
Delay (s)	10.3	14.0		14.9	35.3	
Level of Service	B	B		B	D	
Approach Delay (s)	11.7			14.9	35.3	
Approach LOS	B			B	D	

Intersection Summary			
HCM Average Control Delay	18.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	84	1605	322	596	1984	276	308	444	366	397	730	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.95	1.00	0.97	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	5136	1574	3467	3574	1561	3467	4749		3433	4834	
Flt Permitted	0.10	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	181	5136	1574	3467	3574	1561	3467	4749		3433	4834	
Peak-hour factor, PHF	0.99	0.99	0.99	0.98	0.98	0.98	0.96	0.96	0.96	0.99	0.99	0.99
Adj. Flow (vph)	85	1621	325	608	2024	282	321	462	381	401	737	149
RTOR Reduction (vph)	0	0	161	0	0	98	0	142	0	0	29	0
Lane Group Flow (vph)	85	1621	164	608	2024	184	321	701	0	401	857	0
Confl. Peds. (#/hr)	2		2	1		1	2		2	21		21
Heavy Vehicles (%)	3%	1%	1%	1%	1%	2%	1%	2%	0%	2%	4%	2%
Turn Type	pm+pt		Perm	Prot		Perm	Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6			2						
Actuated Green, G (s)	44.0	40.8	40.8	21.2	58.8	58.8	10.0	15.0		12.0	17.0	
Effective Green, g (s)	44.0	40.8	40.8	21.2	58.8	58.8	10.0	15.0		12.0	17.0	
Actuated g/C Ratio	0.42	0.39	0.39	0.20	0.56	0.56	0.10	0.14		0.11	0.16	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	124	1996	612	700	2001	874	330	678		392	783	
v/s Ratio Prot	0.02	0.32		c0.18	c0.57		0.09	0.15		c0.12	c0.18	
v/s Ratio Perm	0.27		0.10			0.12						
v/c Ratio	0.69	0.81	0.27	0.87	1.01	0.21	0.97	1.03		1.02	1.09	
Uniform Delay, d1	25.4	28.7	21.9	40.6	23.1	11.5	47.4	45.0		46.5	44.0	
Progression Factor	0.71	0.89	1.22	1.08	0.77	0.60	1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.9	1.9	0.2	7.1	18.5	0.3	41.9	43.5		51.4	60.9	
Delay (s)	28.9	27.6	26.9	50.8	36.3	7.3	89.3	88.5		97.9	104.9	
Level of Service	C	C	C	D	D	A	F	F		F	F	
Approach Delay (s)		27.5			36.5			88.7			102.7	
Approach LOS		C			D			F			F	

Intersection Summary			
HCM Average Control Delay	53.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	2318	18	141	2625	23	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	5079		1805	3539	1805	1574
Flt Permitted	1.00		0.06	1.00	0.95	1.00
Satd. Flow (perm)	5079		110	3539	1805	1574
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.85	0.85
Adj. Flow (vph)	2365	18	144	2679	27	67
RTOR Reduction (vph)	1	0	0	0	0	29
Lane Group Flow (vph)	2382	0	144	2679	27	38
Confl. Peds. (#/hr)		6	1		7	7
Heavy Vehicles (%)	2%	0%	0%	2%	0%	0%
Turn Type			Perm			Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	94.0		94.0	94.0	3.0	3.0
Effective Green, g (s)	94.0		94.0	94.0	3.0	3.0
Actuated g/C Ratio	0.90		0.90	0.90	0.03	0.03
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	4547		98	3168	52	45
v/s Ratio Prot	0.47			0.76	0.01	
v/s Ratio Perm			c1.30			c0.02
v/c Ratio	0.52		1.47	0.85	0.52	0.84
Uniform Delay, d1	1.1		5.5	2.4	50.3	50.8
Progression Factor	1.98		1.09	0.76	1.00	1.00
Incremental Delay, d2	0.0		238.2	1.2	32.5	92.4
Delay (s)	2.2		244.2	3.0	82.8	143.2
Level of Service	A		F	A	F	F
Approach Delay (s)	2.2			15.3	125.8	
Approach LOS	A			B	F	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	1.44		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	92.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	1580	774	841	1756	0	0	0	0	1356	207	725
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00	0.99	1.00	1.00					1.00	1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.97	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		6471	1546	3467	3574					1626	3029	1418
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		6471	1546	3467	3574					1626	3029	1418
Peak-hour factor, PHF	0.92	0.97	0.97	0.99	0.99	0.92	0.92	0.92	0.92	0.96	0.96	0.96
Adj. Flow (vph)	0	1629	798	849	1774	0	0	0	0	1412	216	755
RTOR Reduction (vph)	0	0	227	0	0	0	0	0	0	0	8	8
Lane Group Flow (vph)	0	1629	571	849	1774	0	0	0	0	706	1148	513
Confl. Peds. (#/hr)	1		1	1		1				2		2
Heavy Vehicles (%)	0%	1%	3%	1%	1%	0%	0%	0%	0%	1%	1%	2%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		32.0	32.0	22.0	58.0					39.0	39.0	39.0
Effective Green, g (s)		32.0	32.0	22.0	58.0					39.0	39.0	39.0
Actuated g/C Ratio		0.30	0.30	0.21	0.55					0.37	0.37	0.37
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1972	471	726	1974					604	1125	527
v/s Ratio Prot		0.25		c0.24	0.50					c0.43	0.38	
v/s Ratio Perm			c0.37									0.36
v/c Ratio		0.83	1.21	1.17	0.90					1.17	1.16dl	0.97
Uniform Delay, d1		33.9	36.5	41.5	20.9					33.0	33.0	32.5
Progression Factor		0.66	0.69	0.44	0.57					1.00	1.00	1.00
Incremental Delay, d2		3.5	111.2	83.5	3.5					92.9	32.1	32.2
Delay (s)		25.8	136.4	101.9	15.4					125.9	65.1	64.6
Level of Service		C	F	F	B					F	E	E
Approach Delay (s)		62.1			43.4			0.0			83.0	
Approach LOS		E			D			A			F	

Intersection Summary			
HCM Average Control Delay	62.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	119.6%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	252	950	526	2262	0	0	2386	859	0	0	397
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.95			0.86	0.88			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	0.97			1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1770	2787	3433	3539			6536	2740			1627
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1770	2787	3433	3539			6536	2740			1627
Peak-hour factor, PHF	0.95	0.95	0.97	0.97	0.92	0.92	0.98	0.98	0.92	0.92	0.94
Adj. Flow (vph)	265	1000	542	2332	0	0	2435	877	0	0	422
RTOR Reduction (vph)	0	7	0	0	0	0	0	249	0	0	354
Lane Group Flow (vph)	265	993	542	2332	0	0	2435	628	0	0	68
Confl. Peds. (#/hr)	3	3	3					2			8
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	1%	2%	2%	1%
Turn Type		Prot	Prot					Perm			Over
Protected Phases	4	4	1	6			2				1
Permitted Phases								2			
Actuated Green, G (s)	33.0	33.0	17.0	64.0			43.0	43.0			17.0
Effective Green, g (s)	33.0	33.0	17.0	64.0			43.0	43.0			17.0
Actuated g/C Ratio	0.31	0.31	0.16	0.61			0.41	0.41			0.16
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	556	876	556	2157			2677	1122			263
v/s Ratio Prot	0.15	c0.36	0.16	c0.66			0.37				0.04
v/s Ratio Perm								0.23			
v/c Ratio	0.48	1.13	0.97	1.08			0.91	0.56			0.26
Uniform Delay, d1	29.0	36.0	43.8	20.5			29.2	23.8			38.5
Progression Factor	1.00	1.00	1.15	0.51			0.48	0.21			1.00
Incremental Delay, d2	0.6	74.3	15.9	39.8			0.6	0.2			0.5
Delay (s)	29.7	110.3	66.2	50.2			14.5	5.1			39.0
Level of Service	C	F	E	D			B	A			D
Approach Delay (s)	93.4			53.3			12.0		39.0		
Approach LOS	F			D			B		D		

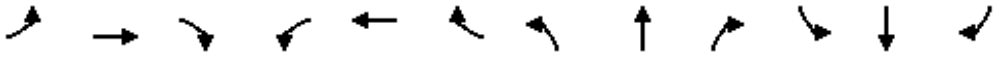
Intersection Summary			
HCM Average Control Delay	41.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	102.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	543	73	105	35	53	95	272	1869	1262	219	2664	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3502	1900	1405	1805	1900	1577	1736	4988	2731	1805	5166	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.08	1.00	1.00	0.08	1.00	
Satd. Flow (perm)	3502	1900	1405	1805	1900	1577	145	4988	2731	158	5166	
Peak-hour factor, PHF	0.97	0.97	0.97	0.80	0.80	0.80	0.97	0.97	0.97	0.99	0.99	0.99
Adj. Flow (vph)	560	75	108	44	66	119	280	1927	1301	221	2691	62
RTOR Reduction (vph)	0	0	92	0	0	109	0	0	623	0	2	0
Lane Group Flow (vph)	560	75	16	44	66	10	280	1927	678	221	2751	0
Confl. Peds. (#/hr)			7	6		6	3		3	2		2
Heavy Vehicles (%)	0%	0%	12%	0%	0%	0%	4%	4%	1%	0%	0%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		Perm	pm+pt		
Protected Phases	4	4		8	8		1	6		5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	16.0	16.0	16.0	9.0	9.0	9.0	66.3	50.3	50.3	61.7	48.0	
Effective Green, g (s)	16.0	16.0	16.0	9.0	9.0	9.0	66.3	50.3	50.3	61.7	48.0	
Actuated g/C Ratio	0.15	0.15	0.15	0.09	0.09	0.09	0.63	0.48	0.48	0.59	0.46	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	534	290	214	155	163	135	334	2389	1308	308	2362	
v/s Ratio Prot	c0.16	0.04		0.02	c0.03		c0.13	0.39		0.09	c0.53	
v/s Ratio Perm			0.01			0.01	0.40		0.25	0.33		
v/c Ratio	1.05	0.26	0.08	0.28	0.40	0.08	0.84	0.81	0.52	0.72	1.16	
Uniform Delay, d1	44.5	39.3	38.2	45.0	45.5	44.2	31.2	23.2	19.0	24.6	28.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.04	0.96	0.91	1.33	0.81	
Incremental Delay, d2	52.3	0.5	0.2	1.0	1.6	0.2	1.8	0.3	0.1	5.9	78.0	
Delay (s)	96.8	39.7	38.3	46.0	47.1	44.4	34.3	22.7	17.3	38.6	101.1	
Level of Service	F	D	D	D	D	D	C	C	B	D	F	
Approach Delay (s)		82.6			45.5			21.6			96.5	
Approach LOS		F			D			C			F	

Intersection Summary			
HCM Average Control Delay	58.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	100.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	567	311	79	125	363	351	144	1095	596	183	1807	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3367	3327		1770	1881	1615	1703	3505	1524	1770	3564	
Flt Permitted	0.95	1.00		0.52	1.00	1.00	0.09	1.00	1.00	0.10	1.00	
Satd. Flow (perm)	3367	3327		960	1881	1615	159	3505	1524	194	3564	
Peak-hour factor, PHF	0.97	0.97	0.97	0.93	0.93	0.93	0.98	0.98	0.98	0.99	0.99	0.99
Adj. Flow (vph)	585	321	81	134	390	377	147	1117	608	185	1825	21
RTOR Reduction (vph)	0	22	0	0	0	61	0	0	241	0	1	0
Lane Group Flow (vph)	585	380	0	134	390	316	147	1117	367	185	1845	0
Confl. Peds. (#/hr)										1		1
Heavy Vehicles (%)	4%	3%	14%	2%	1%	0%	6%	3%	6%	2%	1%	11%
Turn Type	Prot			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases				8		8	6		6	2		
Actuated Green, G (s)	16.0	27.1		26.9	19.0	19.0	49.1	45.1	45.1	58.0	50.0	
Effective Green, g (s)	16.0	27.1		26.9	19.0	19.0	49.1	45.1	45.1	58.0	50.0	
Actuated g/C Ratio	0.15	0.26		0.26	0.18	0.18	0.47	0.43	0.43	0.55	0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	513	859		307	340	292	133	1505	655	241	1697	
v/s Ratio Prot	c0.17	0.11		0.03	c0.21		c0.04	0.32		c0.07	c0.52	
v/s Ratio Perm				0.08		0.20	0.47		0.24	0.36		
v/c Ratio	1.14	0.44		0.44	1.15	1.08	1.11	0.74	0.56	0.77	1.09	
Uniform Delay, d1	44.5	32.6		31.4	43.0	43.0	28.5	25.1	22.5	18.3	27.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	2.33	0.29	0.34	1.80	0.31	
Incremental Delay, d2	84.5	0.4		1.0	95.0	75.8	102.6	2.8	2.9	1.4	40.5	
Delay (s)	129.0	33.0		32.4	138.0	118.8	168.9	10.1	10.5	34.4	49.2	
Level of Service	F	C		C	F	F	F	B	B	C	D	
Approach Delay (s)		89.9			114.3			22.7			47.8	
Approach LOS		F			F			C			D	

Intersection Summary			
HCM Average Control Delay	57.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	107.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	123	207	179	118	894	148	521	1988	48	91	859	206
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3574	1553	1765	3574	1537	1787	3560		1687	3443	
Flt Permitted	0.16	1.00	1.00	0.53	1.00	1.00	0.11	1.00		0.12	1.00	
Satd. Flow (perm)	304	3574	1553	980	3574	1537	203	3560		215	3443	
Peak-hour factor, PHF	0.85	0.85	0.85	0.95	0.95	0.95	0.99	0.99	0.99	0.96	0.96	0.96
Adj. Flow (vph)	145	244	211	124	941	156	526	2008	48	95	895	215
RTOR Reduction (vph)	0	0	161	0	0	66	0	1	0	0	20	0
Lane Group Flow (vph)	145	244	50	124	941	90	526	2055	0	95	1090	0
Confl. Peds. (#/hr)				4		4						
Heavy Vehicles (%)	0%	1%	4%	2%	1%	3%	1%	1%	3%	7%	2%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	30.0	25.0	25.0	32.0	26.0	26.0	62.0	54.0		37.0	33.0	
Effective Green, g (s)	30.0	25.0	25.0	32.0	26.0	26.0	62.0	54.0		37.0	33.0	
Actuated g/C Ratio	0.29	0.24	0.24	0.30	0.25	0.25	0.59	0.51		0.35	0.31	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	158	851	370	344	885	381	497	1831		132	1082	
v/s Ratio Prot	c0.04	0.07		0.02	c0.26		c0.25	c0.58		0.03	0.32	
v/s Ratio Perm	0.22		0.03	0.09		0.06	0.37			0.23		
v/c Ratio	0.92	0.29	0.14	0.36	1.06	0.24	1.06	1.12		0.72	1.01	
Uniform Delay, d1	35.2	32.7	31.5	27.3	39.5	31.6	31.7	25.5		27.8	36.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		2.10	0.65	
Incremental Delay, d2	47.6	0.2	0.2	0.6	48.5	0.3	56.7	62.8		12.5	24.9	
Delay (s)	82.8	32.9	31.7	28.0	88.0	31.9	88.4	88.3		70.9	48.3	
Level of Service	F	C	C	C	F	C	F	F		E	D	
Approach Delay (s)		44.5			74.8			88.3			50.1	
Approach LOS		D			E			F			D	

Intersection Summary			
HCM Average Control Delay	72.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	106.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	267	235	137	96	416	787	84	1195	8	177	1080	338
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	0.88	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.97	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.94		1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1787	3399		1747	1845	2740	1735	3570		1770	3574	1577
Flt Permitted	0.15	1.00		0.52	1.00	1.00	0.14	1.00		0.11	1.00	1.00
Satd. Flow (perm)	281	3399		950	1845	2740	248	3570		197	3574	1577
Peak-hour factor, PHF	0.93	0.93	0.93	0.95	0.95	0.95	0.97	0.97	0.97	0.96	0.96	0.96
Adj. Flow (vph)	287	253	147	101	438	828	87	1232	8	184	1125	352
RTOR Reduction (vph)	0	90	0	0	0	27	0	1	0	0	0	177
Lane Group Flow (vph)	287	310	0	101	438	801	87	1239	0	184	1125	175
Confl. Peds. (#/hr)				6		6	7		7	1		1
Heavy Vehicles (%)	1%	0%	1%	3%	3%	1%	4%	1%	0%	2%	1%	1%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	36.8	28.8		26.8	22.8	31.8	37.0	33.8		46.8	39.6	39.6
Effective Green, g (s)	36.8	28.8		26.8	22.8	31.8	37.0	33.8		46.8	39.6	39.6
Actuated g/C Ratio	0.40	0.31		0.29	0.25	0.35	0.40	0.37		0.51	0.43	0.43
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	277	1069		313	459	1071	152	1317		255	1545	682
v/s Ratio Prot	c0.11	0.09		0.01	0.24	c0.07	0.02	c0.35		c0.07	0.31	
v/s Ratio Perm	c0.30			0.08		0.22	0.21			0.30		0.11
v/c Ratio	1.04	0.29		0.32	0.95	0.75	0.57	0.94		0.72	0.73	0.26
Uniform Delay, d1	22.7	23.7		24.3	33.9	26.4	18.8	27.9		18.9	21.5	16.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	63.8	0.2		0.6	30.4	2.9	5.1	14.2		9.6	3.0	0.9
Delay (s)	86.5	23.8		24.9	64.3	29.3	23.9	42.1		28.6	24.6	17.5
Level of Service	F	C		C	E	C	C	D		C	C	B
Approach Delay (s)		50.0			40.2			41.0			23.5	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM Average Control Delay	36.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	91.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	162	283	601	892	771	422
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.96	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1719	1511	1770	1845	1845	1568
Flt Permitted	0.95	1.00	0.09	1.00	1.00	1.00
Satd. Flow (perm)	1719	1511	166	1845	1845	1568
Peak-hour factor, PHF	0.91	0.91	0.96	0.96	0.95	0.95
Adj. Flow (vph)	178	311	626	929	812	444
RTOR Reduction (vph)	0	276	0	0	0	200
Lane Group Flow (vph)	178	35	626	929	812	244
Confl. Peds. (#/hr)	6	6				
Heavy Vehicles (%)	5%	3%	2%	3%	3%	3%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	10.0	10.0	72.0	72.0	41.0	41.0
Effective Green, g (s)	10.0	10.0	72.0	72.0	41.0	41.0
Actuated g/C Ratio	0.11	0.11	0.80	0.80	0.46	0.46
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	191	168	614	1476	841	714
v/s Ratio Prot	c0.10		c0.31	0.50	0.44	
v/s Ratio Perm		0.02	c0.51			0.16
v/c Ratio	0.93	0.21	1.02	0.63	0.97	0.34
Uniform Delay, d1	39.7	36.4	26.9	3.6	23.8	15.8
Progression Factor	0.90	1.46	0.76	1.11	1.00	1.00
Incremental Delay, d2	44.9	0.6	38.4	1.7	23.7	1.3
Delay (s)	80.8	53.9	58.8	5.8	47.5	17.1
Level of Service	F	D	E	A	D	B
Approach Delay (s)	63.7			27.1	36.8	
Approach LOS	E			C	D	

Intersection Summary			
HCM Average Control Delay	36.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	251	205	248	641	77	147	1006	102	47	970	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.98		1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1703	1684		1736	1863	1554	1703	3471	1455	1597	3505	1519
Flt Permitted	0.15	1.00		0.13	1.00	1.00	0.12	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	261	1684		239	1863	1554	217	3471	1455	226	3505	1519
Peak-hour factor, PHF	0.94	0.94	0.94	0.96	0.96	0.96	0.97	0.97	0.97	0.99	0.99	0.99
Adj. Flow (vph)	91	267	218	258	668	80	152	1037	105	47	980	62
RTOR Reduction (vph)	0	33	0	0	0	49	0	0	66	0	0	42
Lane Group Flow (vph)	91	452	0	258	668	31	152	1037	39	47	980	20
Confl. Peds. (#/hr)	7		7	3		3				4		4
Heavy Vehicles (%)	6%	2%	5%	4%	2%	1%	6%	4%	11%	13%	3%	3%
Turn Type	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)	30.7	27.5		42.5	35.3	35.3	38.9	33.1	33.1	32.1	29.7	29.7
Effective Green, g (s)	30.7	27.5		42.5	35.3	35.3	38.9	33.1	33.1	32.1	29.7	29.7
Actuated g/C Ratio	0.34	0.31		0.47	0.39	0.39	0.43	0.37	0.37	0.36	0.33	0.33
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	140	515		296	731	610	190	1277	535	117	1157	501
v/s Ratio Prot	0.02	0.27		c0.11	c0.36		c0.05	c0.30		0.01	0.28	
v/s Ratio Perm	0.20			0.31		0.02	0.30		0.03	0.13		0.01
v/c Ratio	0.65	0.88		0.87	0.91	0.05	0.80	0.81	0.07	0.40	0.85	0.04
Uniform Delay, d1	23.9	29.7		20.3	25.9	17.0	19.8	25.6	18.5	21.0	28.0	20.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.57	0.49	0.20
Incremental Delay, d2	10.3	15.6		23.3	15.9	0.0	20.9	5.7	0.3	1.0	3.5	0.1
Delay (s)	34.2	45.2		43.6	41.8	17.0	40.7	31.4	18.7	13.0	17.3	4.2
Level of Service	C	D		D	D	B	D	C	B	B	B	A
Approach Delay (s)		43.5			40.3			31.4			16.4	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM Average Control Delay	31.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	1	336	2	568	1	885	336	1005	835	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	0.88		0.95	1.00	0.97	1.00	
Frpb, ped/bikes		1.00			1.00	0.99		1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Frt		0.86			1.00	0.85		1.00	0.85	1.00	1.00	
Flt Protected		1.00			0.95	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1644			1752	2554		3505	1559	3400	1845	
Flt Permitted		1.00			0.73	1.00		0.95	1.00	0.95	1.00	
Satd. Flow (perm)		1644			1334	2554		3345	1559	3400	1845	
Peak-hour factor, PHF	0.25	0.25	0.25	0.95	0.95	0.95	0.99	0.99	0.99	0.97	0.97	0.97
Adj. Flow (vph)	0	0	4	354	2	598	1	894	339	1036	861	0
RTOR Reduction (vph)	0	3	0	0	0	13	0	0	239	0	0	0
Lane Group Flow (vph)	0	1	0	0	356	585	0	895	100	1036	861	0
Confl. Peds. (#/hr)				2		2	2		2	4		4
Heavy Vehicles (%)	0%	0%	0%	3%	0%	10%	0%	3%	2%	3%	3%	0%
Turn Type	Perm			Perm		pm+ov	Perm		Perm	Prot		
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2		2			
Actuated Green, G (s)		22.0			22.0	48.0		25.0	25.0	26.0	55.0	
Effective Green, g (s)		22.0			22.0	48.0		25.0	25.0	26.0	55.0	
Actuated g/C Ratio		0.26			0.26	0.56		0.29	0.29	0.31	0.65	
Clearance Time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		426			345	1562		984	459	1040	1194	
v/s Ratio Prot		0.00				0.11				c0.30	0.47	
v/s Ratio Perm					c0.27	0.11		c0.27	0.06			
v/c Ratio		0.00			1.03	0.37		0.91	0.22	1.00	0.72	
Uniform Delay, d1		23.4			31.5	10.2		28.9	22.6	29.5	9.9	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0			56.9	0.2		13.8	1.1	26.8	3.8	
Delay (s)		23.4			88.4	10.4		42.7	23.7	56.2	13.7	
Level of Service		C			F	B		D	C	E	B	
Approach Delay (s)		23.4			39.5			37.5			36.9	
Approach LOS		C			D			D			D	

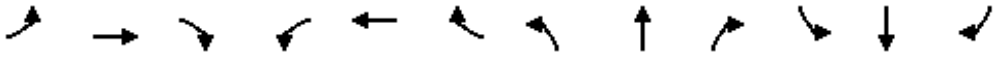
Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	103.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	668	28	22	15	12	35	36	915	15	57	659	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	0.96			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1684			1849	1474	1805	3532		1671	3505	
Flt Permitted	0.95	0.96			0.97	1.00	0.34	1.00		0.22	1.00	
Satd. Flow (perm)	1681	1684			1849	1474	641	3532		392	3505	
Peak-hour factor, PHF	0.96	0.96	0.96	0.98	0.98	0.98	0.99	0.99	0.99	0.95	0.95	0.95
Adj. Flow (vph)	696	29	23	15	12	36	36	924	15	60	694	0
RTOR Reduction (vph)	0	4	0	0	0	35	0	2	0	0	0	0
Lane Group Flow (vph)	376	368	0	0	27	1	36	937	0	60	694	0
Confl. Peds. (#/hr)	2		2	2		2						
Heavy Vehicles (%)	2%	0%	0%	0%	0%	7%	0%	2%	0%	8%	3%	1%
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases						8	2			6		
Actuated Green, G (s)	16.2	16.2			1.1	1.1	26.5	26.5		26.5	26.5	
Effective Green, g (s)	16.2	16.2			1.1	1.1	26.5	26.5		26.5	26.5	
Actuated g/C Ratio	0.29	0.29			0.02	0.02	0.47	0.47		0.47	0.47	
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	488	489			36	29	304	1677		186	1665	
v/s Ratio Prot	c0.22	0.22			c0.01			c0.27			0.20	
v/s Ratio Perm						0.00	0.06			0.15		
v/c Ratio	0.77	0.75			0.75	0.02	0.12	0.56		0.32	0.42	
Uniform Delay, d1	18.1	18.0			27.2	26.8	8.2	10.5		9.1	9.6	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	7.4	6.4			59.8	0.3	0.8	1.4		4.5	0.8	
Delay (s)	25.5	24.4			87.0	27.2	8.9	11.8		13.6	10.4	
Level of Service	C	C			F	C	A	B		B	B	
Approach Delay (s)		24.9			52.8			11.7			10.6	
Approach LOS		C			D			B			B	

Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	55.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Volume (vph)	336	670	234	101	132	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.97	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	1845	1759	1499	1805	1568
Flt Permitted	0.54	1.00	1.00	1.00	1.00	1.00
Satd. Flow (perm)	1005	1845	1759	1499	1900	1568
Peak-hour factor, PHF	0.84	0.84	0.92	0.92	0.87	0.87
Adj. Flow (vph)	400	798	254	110	152	207
RTOR Reduction (vph)	0	0	0	44	0	178
Lane Group Flow (vph)	400	798	254	66	152	29
Confl. Peds. (#/hr)				2		
Heavy Vehicles (%)	2%	3%	8%	5%	0%	3%
Turn Type	pm+pt			Perm		custom
Protected Phases	5	2	6			4
Permitted Phases	2			6	4	
Actuated Green, G (s)	69.6	69.6	53.7	53.7	12.4	12.4
Effective Green, g (s)	69.6	69.6	53.7	53.7	12.4	12.4
Actuated g/C Ratio	0.77	0.77	0.60	0.60	0.14	0.14
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	878	1427	1050	894	262	216
v/s Ratio Prot	0.06	c0.43	0.14			0.02
v/s Ratio Perm	0.29			0.04	c0.08	
v/c Ratio	0.46	0.56	0.24	0.07	0.58	0.13
Uniform Delay, d1	3.3	4.1	8.6	7.7	36.4	34.1
Progression Factor	0.53	0.43	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	1.1	0.5	0.2	3.2	0.3
Delay (s)	2.0	2.9	9.1	7.8	39.6	34.4
Level of Service	A	A	A	A	D	C
Approach Delay (s)		2.6	8.7		36.6	
Approach LOS		A	A		D	

Intersection Summary			
HCM Average Control Delay	10.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	321	606	822	149	949	83	1316	914	144	86	502	332
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.88	1.00	0.91		0.97	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3502	3574	2793	1787	5071		3502	3574	1562	1769	3574	1591
Flt Permitted	0.95	1.00	1.00	0.27	1.00		0.95	1.00	1.00	0.33	1.00	1.00
Satd. Flow (perm)	3502	3574	2793	501	5071		3502	3574	1562	621	3574	1591
Peak-hour factor, PHF	0.97	0.97	0.97	0.99	0.99	0.99	0.99	0.99	0.99	0.96	0.96	0.96
Adj. Flow (vph)	331	625	847	151	959	84	1329	923	145	90	523	346
RTOR Reduction (vph)	0	0	46	0	13	0	0	0	82	0	0	106
Lane Group Flow (vph)	331	625	801	151	1030	0	1329	923	63	90	523	240
Confl. Peds. (#/hr)	5		5	3		3	1		1	2		2
Heavy Vehicles (%)	0%	1%	1%	1%	1%	0%	0%	1%	2%	2%	1%	0%
Turn Type	Prot		pm+ov	pm+pt			Prot		Perm	pm+pt		Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4	8					2	6		6
Actuated Green, G (s)	8.0	18.0	47.0	20.0	15.0		29.0	35.0	35.0	18.0	12.0	12.0
Effective Green, g (s)	8.0	18.0	47.0	20.0	15.0		29.0	35.0	35.0	18.0	12.0	12.0
Actuated g/C Ratio	0.10	0.22	0.59	0.25	0.19		0.36	0.44	0.44	0.22	0.15	0.15
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	350	804	1781	206	951		1269	1564	683	226	536	239
v/s Ratio Prot	c0.09	c0.17	0.16	0.05	c0.20		c0.38	0.26		0.03	0.15	
v/s Ratio Perm			0.12	0.14					0.04	0.06		c0.15
v/c Ratio	0.95	0.78	0.45	0.73	1.08		1.05	0.59	0.09	0.40	0.98	1.00
Uniform Delay, d1	35.8	29.1	9.2	25.6	32.5		25.5	17.1	13.2	25.3	33.9	34.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.01	0.89	1.07	1.00	1.00	1.00
Incremental Delay, d2	33.9	4.8	0.2	12.6	54.4		35.9	1.3	0.2	5.2	33.3	59.0
Delay (s)	69.7	33.9	9.4	38.2	86.9		61.7	16.6	14.4	30.5	67.2	93.0
Level of Service	E	C	A	D	F		E	B	B	C	E	F
Approach Delay (s)		29.0			80.7			41.5			73.1	
Approach LOS		C			F			D			E	

Intersection Summary			
HCM Average Control Delay	50.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	94.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	440	1042	1368	0	0	1514
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	0.97	0.91	0.91			0.86
Frpb, ped/bikes	0.99	0.99	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	0.92	0.85	1.00			1.00
Flt Protected	0.98	1.00	1.00			1.00
Satd. Flow (prot)	3251	1433	5136			6471
Flt Permitted	0.98	1.00	1.00			1.00
Satd. Flow (perm)	3251	1433	5136			6471
Peak-hour factor, PHF	0.99	0.99	0.98	0.92	0.92	0.97
Adj. Flow (vph)	444	1053	1396	0	0	1561
RTOR Reduction (vph)	3	3	0	0	0	0
Lane Group Flow (vph)	968	523	1396	0	0	1561
Confl. Peds. (#/hr)	2	2				
Heavy Vehicles (%)	1%	1%	1%	2%	2%	1%
Turn Type		Perm				
Protected Phases	8		2			6
Permitted Phases		8				
Actuated Green, G (s)	37.2	37.2	34.8			34.8
Effective Green, g (s)	37.2	37.2	34.8			34.8
Actuated g/C Ratio	0.46	0.46	0.43			0.43
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	1512	666	2234			2815
v/s Ratio Prot	0.30		c0.27			0.24
v/s Ratio Perm		c0.37				
v/c Ratio	0.64	0.79	0.62			0.55
Uniform Delay, d1	16.3	18.0	17.5			16.8
Progression Factor	1.00	1.00	0.30			0.66
Incremental Delay, d2	0.9	6.1	1.1			0.6
Delay (s)	17.2	24.1	6.3			11.7
Level of Service	B	C	A			B
Approach Delay (s)	19.7		6.3			11.7
Approach LOS	B		A			B

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	1460	424	545	1466
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0
Lane Util. Factor			0.91		0.97	0.91
Frpb, ped/bikes			1.00		1.00	1.00
Flpb, ped/bikes			1.00		1.00	1.00
Frt			0.97		1.00	1.00
Flt Protected			1.00		0.95	1.00
Satd. Flow (prot)			4945		3467	5136
Flt Permitted			1.00		0.95	1.00
Satd. Flow (perm)			4945		3467	5136
Peak-hour factor, PHF	0.92	0.92	0.96	0.96	0.99	0.99
Adj. Flow (vph)	0	0	1521	442	551	1481
RTOR Reduction (vph)	0	0	28	0	0	0
Lane Group Flow (vph)	0	0	1935	0	551	1481
Confl. Peds. (#/hr)				2	4	
Heavy Vehicles (%)	2%	2%	1%	1%	1%	1%
Turn Type					Prot	
Protected Phases			2		1	6
Permitted Phases						
Actuated Green, G (s)			53.9		18.1	80.0
Effective Green, g (s)			53.9		18.1	80.0
Actuated g/C Ratio			0.67		0.23	1.00
Clearance Time (s)			4.0		4.0	4.0
Vehicle Extension (s)			3.0		3.0	3.0
Lane Grp Cap (vph)			3332		784	5136
v/s Ratio Prot			c0.39		c0.16	0.29
v/s Ratio Perm						
v/c Ratio			0.58		0.70	0.29
Uniform Delay, d1			7.0		28.5	0.0
Progression Factor			0.29		0.84	1.00
Incremental Delay, d2			0.7		2.4	0.1
Delay (s)			2.7		26.3	0.1
Level of Service			A		C	A
Approach Delay (s)	0.0		2.7			7.2
Approach LOS	A		A			A

Intersection Summary			
HCM Average Control Delay	5.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	1692	100	283	1238	28	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	1.00	
Flt Protected	1.00		0.95	1.00	0.95	
Satd. Flow (prot)	5088		1752	5136	1719	
Flt Permitted	1.00		0.08	1.00	0.95	
Satd. Flow (perm)	5088		150	5136	1719	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.90	0.92
Adj. Flow (vph)	1709	101	286	1251	31	0
RTOR Reduction (vph)	5	0	0	0	0	0
Lane Group Flow (vph)	1805	0	286	1251	31	0
Confl. Peds. (#/hr)		2			3	
Heavy Vehicles (%)	1%	0%	3%	1%	5%	2%
Turn Type			pm+pt			
Protected Phases	2		1	6	8	
Permitted Phases			6			
Actuated Green, G (s)	51.4		68.7	68.7	3.3	
Effective Green, g (s)	51.4		68.7	68.7	3.3	
Actuated g/C Ratio	0.64		0.86	0.86	0.04	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	3269		395	4411	71	
v/s Ratio Prot	0.35		c0.12	0.24	c0.02	
v/s Ratio Perm			c0.50			
v/c Ratio	0.55		0.72	0.28	0.44	
Uniform Delay, d1	7.9		18.4	1.1	37.4	
Progression Factor	0.44		0.73	2.15	1.00	
Incremental Delay, d2	0.2		6.3	0.2	4.3	
Delay (s)	3.6		19.7	2.4	41.7	
Level of Service	A		B	A	D	
Approach Delay (s)	3.6			5.7	41.7	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	4.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	0	1	358	2	269	6	1396	174	111	1289	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.93			0.94			0.98		1.00	1.00	
Flt Protected		0.98			0.97			1.00		0.95	1.00	
Satd. Flow (prot)		1713			1710			3472		1787	3539	
Flt Permitted		0.90			0.82			0.95		0.10	1.00	
Satd. Flow (perm)		1585			1447			3299		189	3539	
Peak-hour factor, PHF	0.75	0.75	0.75	0.96	0.96	0.96	0.99	0.99	0.99	0.98	0.98	0.98
Adj. Flow (vph)	1	0	1	373	2	280	6	1410	176	113	1315	1
RTOR Reduction (vph)	0	1	0	0	34	0	0	12	0	0	0	0
Lane Group Flow (vph)	0	1	0	0	621	0	0	1580	0	113	1316	0
Confl. Peds. (#/hr)	4		4	2		2	4		4			
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	2%	1%	1%	2%	0%
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		29.0			29.0			35.8		43.0	43.0	
Effective Green, g (s)		29.0			29.0			35.8		43.0	43.0	
Actuated g/C Ratio		0.36			0.36			0.45		0.54	0.54	
Clearance Time (s)		4.0			4.0			4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		575			525			1476		166	1902	
v/s Ratio Prot										0.03	c0.37	
v/s Ratio Perm		0.00			c0.43			c0.48		0.34		
v/c Ratio		0.00			1.18			1.07		0.68	0.69	
Uniform Delay, d1		16.3			25.5			22.1		17.7	13.6	
Progression Factor		1.00			1.00			0.91		1.26	0.71	
Incremental Delay, d2		0.0			100.6			39.5		10.8	2.1	
Delay (s)		16.3			126.1			59.7		33.1	11.8	
Level of Service		B			F			E		C	B	
Approach Delay (s)		16.3			126.1			59.7			13.4	
Approach LOS		B			F			E			B	

Intersection Summary			
HCM Average Control Delay	53.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	133.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	250	311	55	281	521	409	120	807	78	422	804	377
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1725		1787	1863	1599	1752	3574	1568	1752	3539	1599
Flt Permitted	0.20	1.00		0.17	1.00	1.00	0.29	1.00	1.00	0.17	1.00	1.00
Satd. Flow (perm)	369	1725		327	1863	1599	535	3574	1568	321	3539	1599
Peak-hour factor, PHF	0.94	0.94	0.94	0.95	0.95	0.95	0.96	0.96	0.96	0.95	0.95	0.95
Adj. Flow (vph)	266	331	59	296	548	431	125	841	81	444	846	397
RTOR Reduction (vph)	0	8	0	0	0	16	0	0	62	0	0	222
Lane Group Flow (vph)	266	382	0	296	548	415	125	841	19	444	846	175
Heavy Vehicles (%)	3%	6%	17%	1%	2%	1%	3%	1%	3%	3%	2%	1%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)	27.0	20.0		33.0	23.0	38.0	23.8	19.0	19.0	38.0	29.2	29.2
Effective Green, g (s)	27.0	20.0		33.0	23.0	38.0	23.8	19.0	19.0	38.0	29.2	29.2
Actuated g/C Ratio	0.34	0.25		0.41	0.29	0.48	0.30	0.24	0.24	0.48	0.36	0.36
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	246	431		317	536	839	232	849	372	421	1292	584
v/s Ratio Prot	0.09	0.22		c0.12	c0.29	0.09	0.03	0.24		c0.20	0.24	
v/s Ratio Perm	0.27			0.27		0.17	0.13		0.01	c0.30		0.11
v/c Ratio	1.08	0.89		0.93	1.02	0.49	0.54	0.99	0.05	1.05	0.65	0.30
Uniform Delay, d1	24.6	28.9		18.7	28.5	14.4	21.3	30.4	23.5	21.2	21.2	18.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.84	0.94	1.44
Incremental Delay, d2	80.7	19.1		33.5	44.7	0.5	2.4	28.7	0.3	48.6	1.5	0.8
Delay (s)	105.3	48.0		52.2	73.2	14.9	23.7	59.1	23.8	66.5	21.5	26.8
Level of Service	F	D		D	E	B	C	E	C	E	C	C
Approach Delay (s)		71.2			48.6			52.1			34.6	
Approach LOS		E			D			D			C	

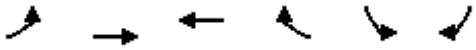
Intersection Summary			
HCM Average Control Delay	47.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	216	68	1906	115	120	2782
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.91	1.00	1.00	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583	4988	1583	1770	5187
Flt Permitted	0.95	1.00	1.00	1.00	0.07	1.00
Satd. Flow (perm)	3433	1583	4988	1583	135	5187
Peak-hour factor, PHF	0.96	0.96	0.98	0.98	0.99	0.99
Adj. Flow (vph)	225	71	1945	117	121	2810
RTOR Reduction (vph)	0	63	0	36	0	0
Lane Group Flow (vph)	225	8	1945	81	121	2810
Heavy Vehicles (%)	2%	2%	4%	2%	2%	0%
Turn Type		Perm		Perm	pm+pt	
Protected Phases	4		6		5	2
Permitted Phases		4		6	2	
Actuated Green, G (s)	12.2	12.2	72.4	72.4	84.8	84.8
Effective Green, g (s)	12.2	12.2	72.4	72.4	84.8	84.8
Actuated g/C Ratio	0.12	0.12	0.69	0.69	0.81	0.81
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	399	184	3439	1092	240	4189
v/s Ratio Prot	c0.07		0.39		0.04	c0.54
v/s Ratio Perm		0.01		0.05	0.37	
v/c Ratio	0.56	0.04	0.57	0.07	0.50	0.67
Uniform Delay, d1	43.9	41.2	8.3	5.3	8.2	4.2
Progression Factor	1.00	1.00	0.17	0.00	0.90	1.68
Incremental Delay, d2	1.8	0.1	0.4	0.1	0.2	0.1
Delay (s)	45.7	41.3	1.8	0.1	7.5	7.2
Level of Service	D	D	A	A	A	A
Approach Delay (s)	44.7		1.7			7.2
Approach LOS	D		A			A

Intersection Summary			
HCM Average Control Delay	7.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	50	249	405	53	21	41
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.98	0.98	0.87	0.87
Hourly flow rate (vph)	56	277	413	54	24	47
Pedestrians		2	2		4	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	471				834	446
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	471				834	446
tC, single (s)	4.1				6.4	6.3
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.4
p0 queue free %	95				93	92
cM capacity (veh/h)	1097				322	593

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	332	467	71
Volume Left	56	0	24
Volume Right	0	54	47
cSH	1097	1700	461
Volume to Capacity	0.05	0.27	0.15
Queue Length 95th (ft)	4	0	14
Control Delay (s)	1.8	0.0	14.2
Lane LOS	A		B
Approach Delay (s)	1.8	0.0	14.2
Approach LOS			B

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	2	375	32	22	160	15	41	8	25	1	1	2
Peak Hour Factor	0.92	0.92	0.92	0.90	0.90	0.90	0.73	0.73	0.73	0.75	0.75	0.75
Hourly flow rate (vph)	2	408	35	24	178	17	56	11	34	1	1	3

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	445	219	101	5
Volume Left (vph)	2	24	56	1
Volume Right (vph)	35	17	34	3
Hadj (s)	0.01	0.07	-0.09	-0.25
Departure Headway (s)	4.5	4.8	5.3	5.4
Degree Utilization, x	0.55	0.29	0.15	0.01
Capacity (veh/h)	789	723	595	570
Control Delay (s)	12.8	9.7	9.3	8.4
Approach Delay (s)	12.8	9.7	9.3	8.4
Approach LOS	B	A	A	A

Intersection Summary				
Delay	11.4			
HCM Level of Service	B			
Intersection Capacity Utilization	41.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	199	614	4	28	1724	264	9	0	9	35	0	27
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.98	0.98	0.98	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	209	646	4	29	1759	269	10	0	10	39	0	30
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					450							
pX, platoon unblocked												
vC, conflicting volume	2029			651			2034	3153	325	2568	2886	880
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2029			651			2034	3153	325	2568	2886	880
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	24			97			9	100	99	0	100	90
cM capacity (veh/h)	276			932			11	2	670	5	4	290

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	209	431	220	29	880	880	269	20	69
Volume Left	209	0	0	29	0	0	0	10	39
Volume Right	0	0	4	0	0	0	269	10	30
cSH	276	1700	1700	932	1700	1700	1700	22	8
Volume to Capacity	0.76	0.25	0.13	0.03	0.52	0.52	0.16	0.92	8.41
Queue Length 95th (ft)	141	0	0	2	0	0	0	66	Err
Control Delay (s)	49.9	0.0	0.0	9.0	0.0	0.0	0.0	417.4	Err
Lane LOS	E			A				F	F
Approach Delay (s)	12.2			0.1				417.4	Err
Approach LOS								F	F

Intersection Summary				
Average Delay	235.5			
Intersection Capacity Utilization	73.4%	ICU Level of Service		D
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	803	7	34	1719	16	10
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.98	0.98	0.92	0.92
Hourly flow rate (vph)	845	7	35	1754	17	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				838		
pX, platoon unblocked						
vC, conflicting volume			853		2672	849
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			853		2672	849
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		26	97
cM capacity (veh/h)			786		23	361

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	853	35	1754	28
Volume Left	0	35	0	17
Volume Right	7	0	0	11
cSH	1700	786	1700	37
Volume to Capacity	0.50	0.04	1.03	0.77
Queue Length 95th (ft)	0	3	0	69
Control Delay (s)	0.0	9.8	0.0	243.3
Lane LOS		A		F
Approach Delay (s)	0.0	0.2		243.3
Approach LOS				F

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	100.5%	ICU Level of Service	G
Analysis Period (min)	15		

Movement	WBL2	WBL	NBL	NBR	NER	NER2
Lane Configurations						
Volume (veh/h)	118	1505	14	15	816	43
Sign Control		Free	Stop		Free	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	128	1636	15	16	887	47
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None			None	
Median storage veh)						
Upstream signal (ft)		1272				
pX, platoon unblocked						
vC, conflicting volume	934		2779	887		
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	934		2779	887		
tC, single (s)	4.1		6.4	6.2		
tC, 2 stage (s)						
tF (s)	2.2		3.5	3.3		
p0 queue free %	83		12	95		
cM capacity (veh/h)	733		17	343		

Direction, Lane #	WB 1	WB 2	NB 1	NE 1	NE 2
Volume Total	128	1636	32	887	47
Volume Left	128	0	15	0	0
Volume Right	0	0	16	0	47
cSH	733	1700	34	1700	1700
Volume to Capacity	0.17	0.96	0.93	0.52	0.03
Queue Length 95th (ft)	16	0	82	0	0
Control Delay (s)	10.9	0.0	305.9	0.0	0.0
Lane LOS	B		F		
Approach Delay (s)	0.8		305.9	0.0	
Approach LOS			F		

Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	93.4%	ICU Level of Service	F
Analysis Period (min)	15		



Movement	EBL	EBR	NWL	NWR	SWL	SWR
Lane Configurations						
Volume (veh/h)	840	51	9	18	121	1397
Sign Control	Free		Stop		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.95	0.95	0.90	0.90	0.97	0.97
Hourly flow rate (vph)	884	54	10	20	125	1440
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None				None	
Median storage veh)						
Upstream signal (ft)	277					
pX, platoon unblocked						
vC, conflicting volume			2574	884	938	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			2574	884	938	
tC, single (s)			6.4	6.2	4.1	
tC, 2 stage (s)						
tF (s)			3.5	3.3	2.2	
p0 queue free %			58	94	83	
cM capacity (veh/h)			24	344	731	

Direction, Lane #	EB 1	EB 2	NW 1	SW 1	SW 2
Volume Total	884	54	30	125	1440
Volume Left	0	0	10	125	0
Volume Right	0	54	20	0	0
cSH	1700	1700	62	731	1700
Volume to Capacity	0.52	0.03	0.48	0.17	0.85
Queue Length 95th (ft)	0	0	47	15	0
Control Delay (s)	0.0	0.0	108.0	10.9	0.0
Lane LOS			F	B	
Approach Delay (s)	0.0		108.0	0.9	
Approach LOS			F		

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	89.8%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	16	0	810	450	192
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.80	0.92	0.92	0.90	0.90
Hourly flow rate (vph)	0	20	0	880	500	213
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					376	
pX, platoon unblocked						
vC, conflicting volume	940	250	713			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	940	250	713			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	97	100			
cM capacity (veh/h)	262	750	882			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	20	440	440	250	250	213
Volume Left	0	0	0	0	0	0
Volume Right	20	0	0	0	0	213
cSH	750	1700	1700	1700	1700	1700
Volume to Capacity	0.03	0.26	0.26	0.15	0.15	0.13
Queue Length 95th (ft)	2	0	0	0	0	0
Control Delay (s)	9.9	0.0	0.0	0.0	0.0	0.0
Lane LOS	A					
Approach Delay (s)	9.9	0.0		0.0		
Approach LOS	A					

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	25.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	52	0	134	1	39	10	771	154	17	438	11
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	58	0	146	1	42	11	820	164	18	466	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											897	
pX, platoon unblocked												
vC, conflicting volume	982	1513	239	1140	1355	410	478			984		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	982	1513	239	1140	1355	410	478			984		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	50	100	0	99	93	99			97		
cM capacity (veh/h)	183	115	762	92	143	591	1081			698		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	58	147	42	284	547	164	18	311	167
Volume Left	0	146	0	11	0	0	18	0	0
Volume Right	0	0	42	0	0	164	0	0	12
cSH	115	92	591	1081	1700	1700	698	1700	1700
Volume to Capacity	0.50	1.60	0.07	0.01	0.32	0.10	0.03	0.18	0.10
Queue Length 95th (ft)	58	290	6	1	0	0	2	0	0
Control Delay (s)	64.8	393.0	11.6	0.4	0.0	0.0	10.3	0.0	0.0
Lane LOS	F	F	B	A			B		
Approach Delay (s)	64.8	307.5		0.1			0.4		
Approach LOS	F	F							

Intersection Summary				
Average Delay	35.8			
Intersection Capacity Utilization	49.2%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	115	423	162	320	557	366	20	0	48	46	0	15
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	128	470	180	348	605	398	25	0	60	58	0	19
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					634							
pX, platoon unblocked												
vC, conflicting volume	1003			650			2045	2424	470	2087	2207	605
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1003			650			2045	2424	470	2087	2207	605
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	81			63			0	100	90	0	100	96
cM capacity (veh/h)	690			936			25	16	594	21	23	497

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2
Volume Total	128	470	180	348	605	398	25	60	58	19
Volume Left	128	0	0	348	0	0	25	0	58	0
Volume Right	0	0	180	0	0	398	0	60	0	19
cSH	690	1700	1700	936	1700	1700	25	594	21	497
Volume to Capacity	0.19	0.28	0.11	0.37	0.36	0.23	1.02	0.10	2.68	0.04
Queue Length 95th (ft)	17	0	0	43	0	0	77	8	185	3
Control Delay (s)	11.4	0.0	0.0	11.1	0.0	0.0	414.6	11.7	1139.2	12.5
Lane LOS	B			B			F	B	F	B
Approach Delay (s)	1.9			2.9			130.2		862.1	
Approach LOS							F		F	

Intersection Summary				
Average Delay	35.9			
Intersection Capacity Utilization	53.3%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	200	1692	0	0	1521
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.96	0.99	0.92	0.92	0.99
Hourly flow rate (vph)	0	208	1709	0	0	1536
Pedestrians	2					3
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			111			125
pX, platoon unblocked	0.80	0.80			0.80	
vC, conflicting volume	2223	575			1711	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1669	0			1033	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	76			100	
cM capacity (veh/h)	70	871			537	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	208	570	570	570	512	512	512
Volume Left	0	0	0	0	0	0	0
Volume Right	208	0	0	0	0	0	0
cSH	871	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.24	0.34	0.34	0.34	0.30	0.30	0.30
Queue Length 95th (ft)	23	0	0	0	0	0	0
Control Delay (s)	10.4	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	10.4	0.0			0.0		
Approach LOS	B						

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	7	39	14	15	82	8	1499	8	6	977	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		1.00			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.93			0.90			1.00			1.00	
Flt Protected		0.98			0.99			1.00			1.00	
Satd. Flow (prot)		1733			1680			3568			3570	
Flt Permitted		0.55			0.94			0.95			0.95	
Satd. Flow (perm)		970			1592			3389			3377	
Peak-hour factor, PHF	0.85	0.85	0.85	0.90	0.90	0.90	0.99	0.99	0.99	0.96	0.96	0.96
Adj. Flow (vph)	35	8	46	16	17	91	8	1514	8	6	1018	6
RTOR Reduction (vph)	0	37	0	0	76	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	52	0	0	48	0	0	1530	0	0	1030	0
Confl. Peds. (#/hr)				2		2				1		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	14%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		9.5			9.5			92.5			92.5	
Effective Green, g (s)		9.5			9.5			92.5			92.5	
Actuated g/C Ratio		0.09			0.09			0.84			0.84	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		84			137			2850			2840	
v/s Ratio Prot												
v/s Ratio Perm		c0.05			0.03			c0.45			0.30	
v/c Ratio		0.61			0.35			0.54			0.36	
Uniform Delay, d1		48.5			47.3			2.5			2.0	
Progression Factor		1.00			0.75			0.28			1.00	
Incremental Delay, d2		12.6			1.4			0.5			0.4	
Delay (s)		61.0			36.9			1.2			2.4	
Level of Service		E			D			A			A	
Approach Delay (s)		61.0			36.9			1.2			2.4	
Approach LOS		E			D			A			A	

Intersection Summary			
HCM Average Control Delay	5.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	15	7	84	803	1080	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	0.95	
Frpb, ped/bikes	0.99			1.00	1.00	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.96			1.00	1.00	
Flt Protected	0.97			1.00	1.00	
Satd. Flow (prot)	1749			1857	3567	
Flt Permitted	0.97			0.80	1.00	
Satd. Flow (perm)	1749			1491	3567	
Peak-hour factor, PHF	0.77	0.77	0.99	0.99	0.99	0.99
Adj. Flow (vph)	19	9	85	811	1091	14
RTOR Reduction (vph)	9	0	0	0	1	0
Lane Group Flow (vph)	19	0	0	896	1104	0
Confl. Peds. (#/hr)	2	2	1			1
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	2.4			99.6	99.6	
Effective Green, g (s)	2.4			99.6	99.6	
Actuated g/C Ratio	0.02			0.91	0.91	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	38			1350	3230	
v/s Ratio Prot	c0.01				0.31	
v/s Ratio Perm				c0.60		
v/c Ratio	0.51			0.66	0.34	
Uniform Delay, d1	53.2			1.2	0.7	
Progression Factor	0.87			0.41	1.00	
Incremental Delay, d2	9.6			1.8	0.3	
Delay (s)	56.1			2.3	1.0	
Level of Service	E			A	A	
Approach Delay (s)	56.1			2.3	1.0	
Approach LOS	E			A	A	

Intersection Summary			
HCM Average Control Delay	2.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	1472	891	0	1079	1096	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	1.00		0.95	0.97	
Frpb, ped/bikes	1.00	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		1.00	0.95	
Satd. Flow (prot)	3574	1562		3574	3467	
Flt Permitted	1.00	1.00		1.00	0.95	
Satd. Flow (perm)	3574	1562		3574	3467	
Peak-hour factor, PHF	0.99	0.99	0.92	0.97	0.99	0.92
Adj. Flow (vph)	1487	900	0	1112	1107	0
RTOR Reduction (vph)	0	381	0	0	0	0
Lane Group Flow (vph)	1487	519	0	1112	1107	0
Confl. Peds. (#/hr)		1				
Heavy Vehicles (%)	1%	1%	2%	1%	1%	2%
Turn Type		Perm				
Protected Phases	2			6	8	
Permitted Phases		2				
Actuated Green, G (s)	61.2	61.2		61.2	40.8	
Effective Green, g (s)	61.2	61.2		61.2	40.8	
Actuated g/C Ratio	0.56	0.56		0.56	0.37	
Clearance Time (s)	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	1988	869		1988	1286	
v/s Ratio Prot	c0.42			0.31	c0.32	
v/s Ratio Perm		0.33				
v/c Ratio	0.75	0.60		0.56	0.86	
Uniform Delay, d1	18.5	16.2		15.7	32.0	
Progression Factor	0.52	0.75		0.91	0.98	
Incremental Delay, d2	0.6	0.7		1.1	5.9	
Delay (s)	10.2	12.9		15.3	37.2	
Level of Service	B	B		B	D	
Approach Delay (s)	11.3			15.3	37.2	
Approach LOS	B			B	D	

Intersection Summary			
HCM Average Control Delay	18.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	84	1605	322	596	1984	276	308	444	366	397	730	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.98	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1752	5136	1573	3467	3574	1561	3467	5085	1589	3433	4833	
Flt Permitted	0.09	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	168	5136	1573	3467	3574	1561	3467	5085	1589	3433	4833	
Peak-hour factor, PHF	0.99	0.99	0.99	0.98	0.98	0.98	0.96	0.96	0.96	0.99	0.99	0.99
Adj. Flow (vph)	85	1621	325	608	2024	282	321	462	381	401	737	149
RTOR Reduction (vph)	0	0	154	0	0	94	0	0	251	0	28	0
Lane Group Flow (vph)	85	1621	171	608	2024	188	321	462	130	401	858	0
Confl. Peds. (#/hr)	2		2	1		1	2		2	21		21
Heavy Vehicles (%)	3%	1%	1%	1%	1%	2%	1%	2%	0%	2%	4%	2%
Turn Type	pm+pt		Perm	Prot		Perm	Prot		Perm	Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6			2			4			
Actuated Green, G (s)	47.1	43.9	43.9	22.1	62.8	62.8	10.0	15.0	15.0	13.0	18.0	
Effective Green, g (s)	47.1	43.9	43.9	22.1	62.8	62.8	10.0	15.0	15.0	13.0	18.0	
Actuated g/C Ratio	0.43	0.40	0.40	0.20	0.57	0.57	0.09	0.14	0.14	0.12	0.16	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	118	2050	628	697	2040	891	315	693	217	406	791	
v/s Ratio Prot	0.02	0.32		c0.18	c0.57		0.09	0.09		c0.12	c0.18	
v/s Ratio Perm	0.29		0.11			0.12			0.08			
v/c Ratio	0.72	0.79	0.27	0.87	0.99	0.21	1.02	0.67	0.60	0.99	1.09	
Uniform Delay, d1	26.5	29.0	22.3	42.6	23.4	11.5	50.0	45.1	44.7	48.4	46.0	
Progression Factor	0.68	0.89	1.19	0.90	0.85	0.38	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	14.7	1.6	0.2	10.1	16.6	0.5	55.7	5.0	11.6	41.0	57.6	
Delay (s)	32.6	27.4	26.7	48.6	36.5	4.8	105.7	50.2	56.2	89.4	103.6	
Level of Service	C	C	C	D	D	A	F	D	E	F	F	
Approach Delay (s)		27.5			36.0			67.5			99.2	
Approach LOS		C			D			E			F	

Intersection Summary			
HCM Average Control Delay	49.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	99.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	2318	18	141	2625	23	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.91	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	5079		1805	5085	1805	1573
Flt Permitted	1.00		0.06	1.00	0.95	1.00
Satd. Flow (perm)	5079		111	5085	1805	1573
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.85	0.85
Adj. Flow (vph)	2365	18	144	2679	27	67
RTOR Reduction (vph)	1	0	0	0	0	30
Lane Group Flow (vph)	2382	0	144	2679	27	37
Confl. Peds. (#/hr)		6	1		7	7
Heavy Vehicles (%)	2%	0%	0%	2%	0%	0%
Turn Type			Perm			Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	99.0		99.0	99.0	3.0	3.0
Effective Green, g (s)	99.0		99.0	99.0	3.0	3.0
Actuated g/C Ratio	0.90		0.90	0.90	0.03	0.03
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	4571		100	4577	49	43
v/s Ratio Prot	0.47			0.53	0.01	
v/s Ratio Perm			c1.30			c0.02
v/c Ratio	0.52		1.44	0.59	0.55	0.86
Uniform Delay, d1	1.0		5.5	1.2	52.8	53.3
Progression Factor	1.52		2.03	0.12	1.00	1.00
Incremental Delay, d2	0.1		235.2	0.1	38.0	98.9
Delay (s)	1.6		246.4	0.3	90.8	152.1
Level of Service	A		F	A	F	F
Approach Delay (s)	1.6			12.8	134.5	
Approach LOS	A			B	F	

Intersection Summary			
HCM Average Control Delay	10.0	HCM Level of Service	A
HCM Volume to Capacity ratio	1.42		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	1580	774	841	1756	0	0	0	0	1356	207	725
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.81	1.00	0.97	0.91					0.91	0.86	0.91
Frpb, ped/bikes		1.00	0.99	1.00	1.00					1.00	1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.97	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		7619	1546	3467	5136					1626	3028	1418
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		7619	1546	3467	5136					1626	3028	1418
Peak-hour factor, PHF	0.92	0.97	0.97	0.99	0.99	0.92	0.92	0.92	0.92	0.96	0.96	0.96
Adj. Flow (vph)	0	1629	798	849	1774	0	0	0	0	1412	216	755
RTOR Reduction (vph)	0	0	237	0	0	0	0	0	0	0	8	8
Lane Group Flow (vph)	0	1629	561	849	1774	0	0	0	0	706	1148	513
Confl. Peds. (#/hr)	1		1	1		1				2		2
Heavy Vehicles (%)	0%	1%	3%	1%	1%	0%	0%	0%	0%	1%	1%	2%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		33.0	33.0	23.0	60.0					42.0	42.0	42.0
Effective Green, g (s)		33.0	33.0	23.0	60.0					42.0	42.0	42.0
Actuated g/C Ratio		0.30	0.30	0.21	0.55					0.38	0.38	0.38
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2286	464	725	2801					621	1156	541
v/s Ratio Prot		0.21		c0.24	0.35					c0.43	0.38	
v/s Ratio Perm			c0.36									0.36
v/c Ratio		0.71	1.21	1.17	0.63					1.14	1.13dl	0.95
Uniform Delay, d1		34.3	38.5	43.5	17.4					34.0	33.9	32.9
Progression Factor		0.64	0.52	0.32	0.15					1.00	1.00	1.00
Incremental Delay, d2		1.7	110.8	84.4	0.5					80.1	24.6	26.0
Delay (s)		23.4	130.8	98.3	3.1					114.1	58.5	59.0
Level of Service		C	F	F	A					F	E	E
Approach Delay (s)		58.7			33.9			0.0			75.1	
Approach LOS		E			C			A			E	

Intersection Summary			
HCM Average Control Delay	55.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	119.6%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	252	950	526	2262	0	0	2386	859	0	0	397
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.91			0.81	0.88			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	0.97			1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1770	2787	3433	5085			7695	2739			1627
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1770	2787	3433	5085			7695	2739			1627
Peak-hour factor, PHF	0.95	0.95	0.97	0.97	0.92	0.92	0.98	0.98	0.92	0.92	0.94
Adj. Flow (vph)	265	1000	542	2332	0	0	2435	877	0	0	422
RTOR Reduction (vph)	0	3	0	0	0	0	0	342	0	0	349
Lane Group Flow (vph)	265	997	542	2332	0	0	2435	535	0	0	73
Confl. Peds. (#/hr)	3	3	3					2			8
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	0%	1%	2%	2%	1%
Turn Type		Prot	Prot					Perm			Over
Protected Phases	4	4	1	6			2				1
Permitted Phases								2			
Actuated Green, G (s)	40.9	40.9	19.1	61.1			38.0	38.0			19.1
Effective Green, g (s)	40.9	40.9	19.1	61.1			38.0	38.0			19.1
Actuated g/C Ratio	0.37	0.37	0.17	0.56			0.35	0.35			0.17
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	658	1036	596	2824			2658	946			283
v/s Ratio Prot	0.15	c0.36	c0.16	0.46			c0.32				0.05
v/s Ratio Perm								0.20			
v/c Ratio	0.40	0.96	0.91	0.83			0.92	0.57			0.26
Uniform Delay, d1	25.5	33.8	44.6	20.1			34.5	29.3			39.3
Progression Factor	1.00	1.00	1.14	0.28			0.58	0.29			1.00
Incremental Delay, d2	0.4	19.4	9.4	1.4			0.7	0.2			0.5
Delay (s)	25.9	53.2	60.2	7.0			20.5	8.8			39.8
Level of Service	C	D	E	A			C	A			D
Approach Delay (s)	47.5			17.1			17.4		39.8		
Approach LOS	D			B			B		D		

Intersection Summary			
HCM Average Control Delay	23.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	543	73	105	35	53	95	272	1869	1262	219	2664	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3502	1900	1404	1805	1900	1576	1736	4988	2749	1805	5166	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.07	1.00	1.00	0.08	1.00	
Satd. Flow (perm)	3502	1900	1404	1805	1900	1576	134	4988	2749	146	5166	
Peak-hour factor, PHF	0.92	0.92	0.92	0.80	0.80	0.80	0.97	0.97	0.97	0.99	0.99	0.99
Adj. Flow (vph)	590	79	114	44	66	119	280	1927	1301	221	2691	62
RTOR Reduction (vph)	0	0	97	0	0	109	0	0	249	0	2	0
Lane Group Flow (vph)	590	79	17	44	66	10	280	1927	1052	221	2751	0
Confl. Peds. (#/hr)			7	6		6	3		3	2		2
Heavy Vehicles (%)	0%	0%	12%	0%	0%	0%	4%	4%	1%	0%	0%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		pm+ov	pm+pt		
Protected Phases	4	4		8	8		1	6	4	5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	16.0	16.0	16.0	9.2	9.2	9.2	71.5	54.7	70.7	66.1	52.0	
Effective Green, g (s)	16.0	16.0	16.0	9.2	9.2	9.2	71.5	54.7	70.7	66.1	52.0	
Actuated g/C Ratio	0.15	0.15	0.15	0.08	0.08	0.08	0.65	0.50	0.64	0.60	0.47	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	509	276	204	151	159	132	332	2480	1867	300	2442	
v/s Ratio Prot	c0.17	0.04		0.02	c0.03		c0.13	0.39	0.08	0.09	c0.53	
v/s Ratio Perm			0.01			0.01	0.42		0.30	0.35		
v/c Ratio	1.16	0.29	0.08	0.29	0.42	0.08	0.84	0.78	0.56	0.74	1.13	
Uniform Delay, d1	47.0	41.9	40.6	47.3	47.8	46.5	33.8	22.7	11.0	26.9	29.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.07	1.06	0.48	1.31	0.75	
Incremental Delay, d2	91.7	0.6	0.2	1.1	1.8	0.2	10.2	1.3	0.2	7.0	61.5	
Delay (s)	138.7	42.5	40.8	48.4	49.6	46.7	46.4	25.4	5.5	42.3	83.1	
Level of Service	F	D	D	D	D	D	D	C	A	D	F	
Approach Delay (s)		114.8			47.9			19.7			80.1	
Approach LOS		F			D			B			F	

Intersection Summary			
HCM Average Control Delay	54.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	100.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	567	311	79	125	363	351	144	1095	596	183	1807	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	0.88	0.97	0.95	0.88	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3367	3327		1770	1881	2842	3303	3505	2682	1770	3564	
Flt Permitted	0.95	1.00		0.52	1.00	1.00	0.95	1.00	1.00	0.10	1.00	
Satd. Flow (perm)	3367	3327		960	1881	2842	3303	3505	2682	193	3564	
Peak-hour factor, PHF	0.97	0.97	0.97	0.93	0.93	0.93	0.98	0.98	0.98	0.99	0.99	0.99
Adj. Flow (vph)	585	321	81	134	390	377	147	1117	608	185	1825	21
RTOR Reduction (vph)	0	20	0	0	0	8	0	0	68	0	1	0
Lane Group Flow (vph)	585	382	0	134	390	369	147	1117	540	185	1845	0
Confl. Peds. (#/hr)										1		1
Heavy Vehicles (%)	4%	3%	14%	2%	1%	0%	6%	3%	6%	2%	1%	11%
Turn Type	Prot			pm+pt		pm+ov	Prot		pm+ov	pm+pt		
Protected Phases	7	4		3	8	1	1	6	7	5	2	
Permitted Phases				8		8			6	2		
Actuated Green, G (s)	17.0	29.1		27.9	20.0	24.0	4.0	47.3	64.3	61.0	53.0	
Effective Green, g (s)	17.0	29.1		27.9	20.0	24.0	4.0	47.3	64.3	61.0	53.0	
Actuated g/C Ratio	0.15	0.26		0.25	0.18	0.22	0.04	0.43	0.58	0.55	0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	520	880		302	342	723	120	1507	1665	246	1717	
v/s Ratio Prot	c0.17	0.11		0.03	c0.21	0.02	c0.04	0.32	0.05	0.07	c0.52	
v/s Ratio Perm				0.08		0.11			0.15	0.35		
v/c Ratio	1.12	0.43		0.44	1.14	0.51	1.23	0.74	0.32	0.75	1.07	
Uniform Delay, d1	46.5	33.6		33.1	45.0	37.8	53.0	26.2	11.7	19.1	28.5	
Progression Factor	0.97	1.06		0.66	0.71	0.67	1.42	0.47	0.46	1.71	0.33	
Incremental Delay, d2	77.5	0.3		0.8	86.2	0.5	148.3	2.8	0.1	1.2	35.0	
Delay (s)	122.5	36.0		22.8	118.2	25.9	223.5	15.2	5.5	33.7	44.5	
Level of Service	F	D		C	F	C	F	B	A	C	D	
Approach Delay (s)		87.3			65.4			28.4			43.5	
Approach LOS		F			E			C			D	

Intersection Summary			
HCM Average Control Delay	49.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	103.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	123	207	179	118	894	148	521	1988	48	91	859	206
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3574	1553	1765	3574	1536	1787	3560		1687	3443	
Flt Permitted	0.15	1.00	1.00	0.52	1.00	1.00	0.10	1.00		0.11	1.00	
Satd. Flow (perm)	292	3574	1553	973	3574	1536	188	3560		197	3443	
Peak-hour factor, PHF	0.85	0.85	0.85	0.95	0.95	0.95	0.99	0.99	0.99	0.96	0.96	0.96
Adj. Flow (vph)	145	244	211	124	941	156	526	2008	48	95	895	215
RTOR Reduction (vph)	0	0	161	0	0	63	0	1	0	0	19	0
Lane Group Flow (vph)	145	244	50	124	941	93	526	2055	0	95	1091	0
Confl. Peds. (#/hr)				4		4						
Heavy Vehicles (%)	0%	1%	4%	2%	1%	3%	1%	1%	3%	7%	2%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	31.0	26.0	26.0	33.0	27.0	27.0	66.0	58.0		40.0	36.0	
Effective Green, g (s)	31.0	26.0	26.0	33.0	27.0	27.0	66.0	58.0		40.0	36.0	
Actuated g/C Ratio	0.28	0.24	0.24	0.30	0.25	0.25	0.60	0.53		0.36	0.33	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	151	845	367	335	877	377	491	1877		126	1127	
v/s Ratio Prot	c0.04	0.07		0.02	c0.26		c0.25	c0.58		0.03	0.32	
v/s Ratio Perm	0.23		0.03	0.09		0.06	0.39			0.25		
v/c Ratio	0.96	0.29	0.14	0.37	1.07	0.25	1.07	1.09		0.75	0.97	
Uniform Delay, d1	37.9	34.4	33.1	29.0	41.5	33.3	33.8	26.0		29.4	36.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.51	0.97	
Incremental Delay, d2	61.1	0.2	0.2	0.7	51.9	0.3	61.0	51.7		16.5	16.2	
Delay (s)	99.0	34.6	33.3	29.7	93.4	33.7	94.8	77.7		60.9	51.5	
Level of Service	F	C	C	C	F	C	F	E		E	D	
Approach Delay (s)		49.7			79.3			81.2			52.2	
Approach LOS		D			E			F			D	

Intersection Summary			
HCM Average Control Delay	71.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	106.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	267	235	137	96	416	787	84	1195	8	177	1080	338
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	0.88	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.97	1.00	1.00		1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.94		1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1787	3399		1746	1845	2733	1736	3570		1770	3574	1577
Flt Permitted	0.13	1.00		0.52	1.00	1.00	0.15	1.00		0.08	1.00	1.00
Satd. Flow (perm)	243	3399		949	1845	2733	275	3570		158	3574	1577
Peak-hour factor, PHF	0.93	0.93	0.93	0.95	0.95	0.95	0.97	0.97	0.97	0.96	0.96	0.96
Adj. Flow (vph)	287	253	147	101	438	828	87	1232	8	184	1125	352
RTOR Reduction (vph)	0	75	0	0	0	33	0	1	0	0	0	186
Lane Group Flow (vph)	287	325	0	101	438	795	87	1239	0	184	1125	166
Confl. Peds. (#/hr)				6		6	7		7	1		1
Heavy Vehicles (%)	1%	0%	1%	3%	3%	1%	4%	1%	0%	2%	1%	1%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	44.0	34.0		33.0	27.0	37.7	46.5	43.3		58.0	50.8	50.8
Effective Green, g (s)	44.0	34.0		33.0	27.0	37.7	46.5	43.3		58.0	50.8	50.8
Actuated g/C Ratio	0.40	0.31		0.30	0.25	0.34	0.42	0.39		0.53	0.46	0.46
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	280	1051		328	453	1036	159	1405		240	1651	728
v/s Ratio Prot	c0.12	0.10		0.02	0.24	c0.07	0.02	c0.35		c0.07	0.31	
v/s Ratio Perm	c0.29			0.08		0.22	0.22			0.33		0.11
v/c Ratio	1.02	0.31		0.31	0.97	0.77	0.55	0.88		0.77	0.68	0.23
Uniform Delay, d1	30.3	29.0		28.6	41.1	32.2	21.6	31.0		25.8	23.2	17.8
Progression Factor	0.89	0.27		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	56.9	0.1		0.5	33.5	3.5	3.8	8.3		13.6	2.3	0.7
Delay (s)	83.8	7.9		29.1	74.5	35.7	25.4	39.3		39.4	25.5	18.5
Level of Service	F	A		C	E	D	C	D		D	C	B
Approach Delay (s)		39.6			47.7			38.4			25.6	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM Average Control Delay	36.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	162	283	601	892	771	422
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1719	1530	1770	3505	3505	1568
Flt Permitted	0.95	1.00	0.21	1.00	1.00	1.00
Satd. Flow (perm)	1719	1530	397	3505	3505	1568
Peak-hour factor, PHF	0.91	0.91	0.96	0.96	0.95	0.95
Adj. Flow (vph)	178	311	626	929	812	444
RTOR Reduction (vph)	0	267	0	0	0	254
Lane Group Flow (vph)	178	44	626	929	812	190
Confl. Peds. (#/hr)	6	6				
Heavy Vehicles (%)	5%	3%	2%	3%	3%	3%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	15.4	15.4	86.6	86.6	47.1	47.1
Effective Green, g (s)	15.4	15.4	86.6	86.6	47.1	47.1
Actuated g/C Ratio	0.14	0.14	0.79	0.79	0.43	0.43
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	241	214	756	2759	1501	671
v/s Ratio Prot	c0.10		c0.27	0.27	0.23	
v/s Ratio Perm		0.03	c0.39			0.12
v/c Ratio	0.74	0.20	0.83	0.34	0.54	0.28
Uniform Delay, d1	45.4	41.9	18.1	3.4	23.4	20.5
Progression Factor	0.92	1.16	1.00	1.00	0.65	0.99
Incremental Delay, d2	10.9	0.5	7.4	0.3	1.1	0.8
Delay (s)	52.6	48.9	25.6	3.7	16.4	21.1
Level of Service	D	D	C	A	B	C
Approach Delay (s)	50.3			12.5	18.1	
Approach LOS	D			B	B	

Intersection Summary			
HCM Average Control Delay	20.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	251	205	248	641	77	147	1006	102	47	970	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.98		1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1703	1686		1736	1863	1573	1703	3471	1455	1597	3505	1522
Flt Permitted	0.18	1.00		0.15	1.00	1.00	0.15	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	319	1686		276	1863	1573	263	3471	1455	262	3505	1522
Peak-hour factor, PHF	0.94	0.94	0.94	0.96	0.96	0.96	0.97	0.97	0.97	0.99	0.99	0.99
Adj. Flow (vph)	91	267	218	258	668	80	152	1037	105	47	980	62
RTOR Reduction (vph)	0	40	0	0	0	51	0	0	67	0	0	41
Lane Group Flow (vph)	91	445	0	258	668	29	152	1037	38	47	980	21
Confl. Peds. (#/hr)	7		7	3		3				4		4
Heavy Vehicles (%)	6%	2%	5%	4%	2%	1%	6%	4%	11%	13%	3%	3%
Turn Type	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)	25.6	22.5		34.5	27.4	27.4	31.3	27.3	27.3	28.1	25.7	25.7
Effective Green, g (s)	25.6	22.5		34.5	27.4	27.4	31.3	27.3	27.3	28.1	25.7	25.7
Actuated g/C Ratio	0.34	0.30		0.45	0.36	0.36	0.41	0.36	0.36	0.37	0.34	0.34
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	163	498		278	670	566	184	1244	521	139	1182	513
v/s Ratio Prot	0.02	0.26		c0.10	c0.36		c0.04	c0.30		0.01	0.28	
v/s Ratio Perm	0.16			0.32		0.02	0.30		0.03	0.11		0.01
v/c Ratio	0.56	0.89		0.93	1.00	0.05	0.83	0.83	0.07	0.34	0.83	0.04
Uniform Delay, d1	20.1	25.7		16.8	24.4	15.9	18.4	22.4	16.1	17.4	23.2	17.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.1	18.1		35.0	33.8	0.0	25.1	6.7	0.3	1.4	6.8	0.1
Delay (s)	24.2	43.8		51.8	58.1	16.0	43.4	29.0	16.4	18.8	30.0	17.1
Level of Service	C	D		D	E	B	D	C	B	B	C	B
Approach Delay (s)		40.7			53.1			29.7			28.8	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	37.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	76.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	1	336	2	568	1	885	336	1005	835	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	0.88		0.95	1.00	0.97	1.00	
Frpb, ped/bikes		1.00			1.00	0.99		1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Frt		0.86			1.00	0.85		1.00	0.85	1.00	1.00	
Flt Protected		1.00			0.95	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1644			1752	2554		3505	1559	3400	1845	
Flt Permitted		1.00			0.73	1.00		0.95	1.00	0.95	1.00	
Satd. Flow (perm)		1644			1334	2554		3345	1559	3400	1845	
Peak-hour factor, PHF	0.25	0.25	0.25	0.95	0.95	0.95	0.99	0.99	0.99	0.97	0.97	0.97
Adj. Flow (vph)	0	0	4	354	2	598	1	894	339	1036	861	0
RTOR Reduction (vph)	0	3	0	0	0	13	0	0	239	0	0	0
Lane Group Flow (vph)	0	1	0	0	356	585	0	895	100	1036	861	0
Confl. Peds. (#/hr)				2		2	2		2	4		4
Heavy Vehicles (%)	0%	0%	0%	3%	0%	10%	0%	3%	2%	3%	3%	0%
Turn Type	Perm			Perm		pm+ov	Perm		Perm	Prot		
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2		2			
Actuated Green, G (s)		22.0			22.0	48.0		25.0	25.0	26.0	55.0	
Effective Green, g (s)		22.0			22.0	48.0		25.0	25.0	26.0	55.0	
Actuated g/C Ratio		0.26			0.26	0.56		0.29	0.29	0.31	0.65	
Clearance Time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		426			345	1562		984	459	1040	1194	
v/s Ratio Prot		0.00				0.11				c0.30	0.47	
v/s Ratio Perm					c0.27	0.11		c0.27	0.06			
v/c Ratio		0.00			1.03	0.37		0.91	0.22	1.00	0.72	
Uniform Delay, d1		23.4			31.5	10.2		28.9	22.6	29.5	9.9	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0			56.9	0.2		13.8	1.1	26.8	3.8	
Delay (s)		23.4			88.4	10.4		42.7	23.7	56.2	13.7	
Level of Service		C			F	B		D	C	E	B	
Approach Delay (s)		23.4			39.5			37.5			36.9	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	37.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	103.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	668	28	22	15	12	35	36	915	15	57	659	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	0.96			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1681	1684			1849	1474	1805	3532		1671	3505	
Flt Permitted	0.95	0.96			0.97	1.00	0.34	1.00		0.22	1.00	
Satd. Flow (perm)	1681	1684			1849	1474	641	3532		392	3505	
Peak-hour factor, PHF	0.96	0.96	0.96	0.98	0.98	0.98	0.99	0.99	0.99	0.95	0.95	0.95
Adj. Flow (vph)	696	29	23	15	12	36	36	924	15	60	694	0
RTOR Reduction (vph)	0	4	0	0	0	35	0	2	0	0	0	0
Lane Group Flow (vph)	376	368	0	0	27	1	36	937	0	60	694	0
Confl. Peds. (#/hr)	2		2	2		2						
Heavy Vehicles (%)	2%	0%	0%	0%	0%	7%	0%	2%	0%	8%	3%	1%
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases						8	2			6		
Actuated Green, G (s)	16.2	16.2			1.1	1.1	26.5	26.5		26.5	26.5	
Effective Green, g (s)	16.2	16.2			1.1	1.1	26.5	26.5		26.5	26.5	
Actuated g/C Ratio	0.29	0.29			0.02	0.02	0.47	0.47		0.47	0.47	
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	488	489			36	29	304	1677		186	1665	
v/s Ratio Prot	c0.22	0.22			c0.01			c0.27			0.20	
v/s Ratio Perm						0.00	0.06			0.15		
v/c Ratio	0.77	0.75			0.75	0.02	0.12	0.56		0.32	0.42	
Uniform Delay, d1	18.1	18.0			27.2	26.8	8.2	10.5		9.1	9.6	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	7.4	6.4			59.8	0.3	0.8	1.4		4.5	0.8	
Delay (s)	25.5	24.4			87.0	27.2	8.9	11.8		13.6	10.4	
Level of Service	C	C			F	C	A	B		B	B	
Approach Delay (s)		24.9			52.8			11.7			10.6	
Approach LOS		C			D			B			B	

Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	55.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBL	NBT	SBT	SBR	NEL	NER
Lane Configurations						
Volume (vph)	336	670	234	101	132	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.97	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	1845	1759	1497	1805	1568
Flt Permitted	0.55	1.00	1.00	1.00	1.00	1.00
Satd. Flow (perm)	1027	1845	1759	1497	1900	1568
Peak-hour factor, PHF	0.84	0.84	0.92	0.92	0.87	0.87
Adj. Flow (vph)	400	798	254	110	152	207
RTOR Reduction (vph)	0	0	0	39	0	180
Lane Group Flow (vph)	400	798	254	72	152	27
Confl. Peds. (#/hr)				2		
Heavy Vehicles (%)	2%	3%	8%	5%	0%	3%
Turn Type	pm+pt			Perm		custom
Protected Phases	5	2	6			4
Permitted Phases	2			6	4	
Actuated Green, G (s)	87.9	87.9	71.5	71.5	14.1	14.1
Effective Green, g (s)	87.9	87.9	71.5	71.5	14.1	14.1
Actuated g/C Ratio	0.80	0.80	0.65	0.65	0.13	0.13
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	904	1474	1143	973	244	201
v/s Ratio Prot	0.05	c0.43	0.14			0.02
v/s Ratio Perm	0.30			0.05	c0.08	
v/c Ratio	0.44	0.54	0.22	0.07	0.62	0.13
Uniform Delay, d1	3.2	3.9	7.9	7.1	45.4	42.5
Progression Factor	0.35	0.37	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	1.2	0.4	0.1	4.9	0.3
Delay (s)	1.4	2.7	8.3	7.2	50.3	42.8
Level of Service	A	A	A	A	D	D
Approach Delay (s)		2.2	8.0		46.0	
Approach LOS		A	A		D	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	321	606	822	149	949	83	1316	914	144	86	502	332
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.88	1.00	0.91		0.97	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.99	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3502	3574	2793	1787	5071		3502	3574	1562	1769	3574	1591
Flt Permitted	0.95	1.00	1.00	0.27	1.00		0.95	1.00	1.00	0.33	1.00	1.00
Satd. Flow (perm)	3502	3574	2793	501	5071		3502	3574	1562	621	3574	1591
Peak-hour factor, PHF	0.97	0.97	0.97	0.99	0.99	0.99	0.99	0.99	0.99	0.96	0.96	0.96
Adj. Flow (vph)	331	625	847	151	959	84	1329	923	145	90	523	346
RTOR Reduction (vph)	0	0	46	0	13	0	0	0	82	0	0	106
Lane Group Flow (vph)	331	625	801	151	1030	0	1329	923	63	90	523	240
Confl. Peds. (#/hr)	5		5	3		3	1		1	2		2
Heavy Vehicles (%)	0%	1%	1%	1%	1%	0%	0%	1%	2%	2%	1%	0%
Turn Type	Prot		pm+ov	pm+pt			Prot		Perm	pm+pt		Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4	8					2	6		6
Actuated Green, G (s)	8.0	18.0	47.0	20.0	15.0		29.0	35.0	35.0	18.0	12.0	12.0
Effective Green, g (s)	8.0	18.0	47.0	20.0	15.0		29.0	35.0	35.0	18.0	12.0	12.0
Actuated g/C Ratio	0.10	0.22	0.59	0.25	0.19		0.36	0.44	0.44	0.22	0.15	0.15
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	350	804	1781	206	951		1269	1564	683	226	536	239
v/s Ratio Prot	c0.09	c0.17	0.16	0.05	c0.20		c0.38	0.26		0.03	0.15	
v/s Ratio Perm			0.12	0.14					0.04	0.06		c0.15
v/c Ratio	0.95	0.78	0.45	0.73	1.08		1.05	0.59	0.09	0.40	0.98	1.00
Uniform Delay, d1	35.8	29.1	9.2	25.6	32.5		25.5	17.1	13.2	25.3	33.9	34.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.03	0.91	1.14	1.00	1.00	1.00
Incremental Delay, d2	33.9	4.8	0.2	12.6	54.4		35.9	1.3	0.2	5.2	33.3	59.0
Delay (s)	69.7	33.9	9.4	38.2	86.9		62.1	16.9	15.2	30.5	67.2	93.0
Level of Service	E	C	A	D	F		E	B	B	C	E	F
Approach Delay (s)		29.0			80.7			41.8			73.1	
Approach LOS		C			F			D			E	

Intersection Summary			
HCM Average Control Delay	50.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	94.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	440	1042	1368	0	0	1514
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	0.97	0.91	0.91			0.86
Frpb, ped/bikes	0.99	0.99	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	0.92	0.85	1.00			1.00
Flt Protected	0.98	1.00	1.00			1.00
Satd. Flow (prot)	3251	1433	5136			6471
Flt Permitted	0.98	1.00	1.00			1.00
Satd. Flow (perm)	3251	1433	5136			6471
Peak-hour factor, PHF	0.99	0.99	0.98	0.92	0.92	0.97
Adj. Flow (vph)	444	1053	1396	0	0	1561
RTOR Reduction (vph)	3	3	0	0	0	0
Lane Group Flow (vph)	968	523	1396	0	0	1561
Confl. Peds. (#/hr)	2	2				
Heavy Vehicles (%)	1%	1%	1%	2%	2%	1%
Turn Type		Perm				
Protected Phases	8		2			6
Permitted Phases		8				
Actuated Green, G (s)	37.2	37.2	34.8			34.8
Effective Green, g (s)	37.2	37.2	34.8			34.8
Actuated g/C Ratio	0.46	0.46	0.43			0.43
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	1512	666	2234			2815
v/s Ratio Prot	0.30		c0.27			0.24
v/s Ratio Perm		c0.37				
v/c Ratio	0.64	0.79	0.62			0.55
Uniform Delay, d1	16.3	18.0	17.5			16.8
Progression Factor	1.00	1.00	0.34			0.66
Incremental Delay, d2	0.9	6.1	1.1			0.6
Delay (s)	17.2	24.1	7.1			11.7
Level of Service	B	C	A			B
Approach Delay (s)	19.7		7.1			11.7
Approach LOS	B		A			B

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	1460	424	545	1466
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0
Lane Util. Factor			0.91		0.97	0.91
Frpb, ped/bikes			1.00		1.00	1.00
Flpb, ped/bikes			1.00		1.00	1.00
Frt			0.97		1.00	1.00
Flt Protected			1.00		0.95	1.00
Satd. Flow (prot)			4945		3467	5136
Flt Permitted			1.00		0.95	1.00
Satd. Flow (perm)			4945		3467	5136
Peak-hour factor, PHF	0.92	0.92	0.96	0.96	0.99	0.99
Adj. Flow (vph)	0	0	1521	442	551	1481
RTOR Reduction (vph)	0	0	28	0	0	0
Lane Group Flow (vph)	0	0	1935	0	551	1481
Confl. Peds. (#/hr)				2	4	
Heavy Vehicles (%)	2%	2%	1%	1%	1%	1%
Turn Type					Prot	
Protected Phases			2		1	6
Permitted Phases						
Actuated Green, G (s)			53.9		18.1	80.0
Effective Green, g (s)			53.9		18.1	80.0
Actuated g/C Ratio			0.67		0.23	1.00
Clearance Time (s)			4.0		4.0	4.0
Vehicle Extension (s)			3.0		3.0	3.0
Lane Grp Cap (vph)			3332		784	5136
v/s Ratio Prot			c0.39		c0.16	0.29
v/s Ratio Perm						
v/c Ratio			0.58		0.70	0.29
Uniform Delay, d1			7.0		28.5	0.0
Progression Factor			0.30		0.85	1.00
Incremental Delay, d2			0.7		2.4	0.1
Delay (s)			2.8		26.7	0.1
Level of Service			A		C	A
Approach Delay (s)	0.0		2.8			7.3
Approach LOS	A		A			A

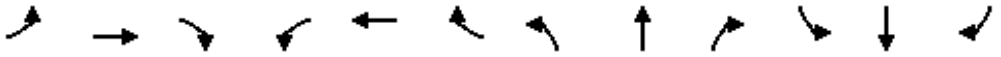
Intersection Summary			
HCM Average Control Delay	5.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	1692	100	283	1238	28	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	1.00	
Flt Protected	1.00		0.95	1.00	0.95	
Satd. Flow (prot)	5088		1752	5136	1719	
Flt Permitted	1.00		0.08	1.00	0.95	
Satd. Flow (perm)	5088		150	5136	1719	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.90	0.92
Adj. Flow (vph)	1709	101	286	1251	31	0
RTOR Reduction (vph)	5	0	0	0	0	0
Lane Group Flow (vph)	1805	0	286	1251	31	0
Confl. Peds. (#/hr)		2			3	
Heavy Vehicles (%)	1%	0%	3%	1%	5%	2%
Turn Type			pm+pt			
Protected Phases	2		1	6	8	
Permitted Phases			6			
Actuated Green, G (s)	51.4		68.7	68.7	3.3	
Effective Green, g (s)	51.4		68.7	68.7	3.3	
Actuated g/C Ratio	0.64		0.86	0.86	0.04	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	3269		395	4411	71	
v/s Ratio Prot	0.35		c0.12	0.24	c0.02	
v/s Ratio Perm			c0.50			
v/c Ratio	0.55		0.72	0.28	0.44	
Uniform Delay, d1	7.9		18.4	1.1	37.4	
Progression Factor	0.54		0.73	2.15	1.00	
Incremental Delay, d2	0.4		6.3	0.2	4.3	
Delay (s)	4.7		19.7	2.4	41.7	
Level of Service	A		B	A	D	
Approach Delay (s)	4.7			5.7	41.7	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	5.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	0	1	358	2	269	6	1396	174	111	1289	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00		0.95		1.00	0.95	
Frpb, ped/bikes		0.99			1.00	0.99		1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00	1.00		1.00		1.00	1.00	
Frt		0.93			1.00	0.85		0.98		1.00	1.00	
Flt Protected		0.98			0.95	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1711			1787	1575		3472		1787	3539	
Flt Permitted		0.92			0.73	1.00		0.95		0.09	1.00	
Satd. Flow (perm)		1605			1363	1575		3300		164	3539	
Peak-hour factor, PHF	0.75	0.75	0.75	0.96	0.96	0.96	0.99	0.99	0.99	0.98	0.98	0.98
Adj. Flow (vph)	1	0	1	373	2	280	6	1410	176	113	1315	1
RTOR Reduction (vph)	0	1	0	0	0	86	0	12	0	0	0	0
Lane Group Flow (vph)	0	1	0	0	375	195	0	1580	0	113	1316	0
Confl. Peds. (#/hr)	4		4	2		2	4		4			
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	2%	1%	1%	2%	0%
Turn Type	Perm			Perm		Perm	Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		23.0			23.0	23.0		41.8		49.0	49.0	
Effective Green, g (s)		23.0			23.0	23.0		41.8		49.0	49.0	
Actuated g/C Ratio		0.29			0.29	0.29		0.52		0.61	0.61	
Clearance Time (s)		4.0			4.0	4.0		4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)		461			392	453		1724		165	2168	
v/s Ratio Prot										0.03	c0.37	
v/s Ratio Perm		0.00			c0.28	0.12		c0.48		0.39		
v/c Ratio		0.00			0.96	0.43		0.92		0.68	0.61	
Uniform Delay, d1		20.3			28.0	23.2		17.5		14.9	9.6	
Progression Factor		1.00			1.00	1.00		0.74		1.85	0.61	
Incremental Delay, d2		0.0			34.0	0.7		5.2		11.0	1.3	
Delay (s)		20.3			62.0	23.8		18.1		38.6	7.1	
Level of Service		C			E	C		B		D	A	
Approach Delay (s)		20.3			45.7			18.1			9.6	
Approach LOS		C			D			B			A	

Intersection Summary			
HCM Average Control Delay	19.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	116.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	250	311	55	281	521	409	120	807	78	422	804	377
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1725		1787	1863	1599	1752	3574	1568	1752	3539	1599
Flt Permitted	0.20	1.00		0.17	1.00	1.00	0.29	1.00	1.00	0.17	1.00	1.00
Satd. Flow (perm)	369	1725		327	1863	1599	535	3574	1568	321	3539	1599
Peak-hour factor, PHF	0.94	0.94	0.94	0.95	0.95	0.95	0.96	0.96	0.96	0.95	0.95	0.95
Adj. Flow (vph)	266	331	59	296	548	431	125	841	81	444	846	397
RTOR Reduction (vph)	0	8	0	0	0	16	0	0	62	0	0	222
Lane Group Flow (vph)	266	382	0	296	548	415	125	841	19	444	846	175
Heavy Vehicles (%)	3%	6%	17%	1%	2%	1%	3%	1%	3%	3%	2%	1%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)	27.0	20.0		33.0	23.0	38.0	23.8	19.0	19.0	38.0	29.2	29.2
Effective Green, g (s)	27.0	20.0		33.0	23.0	38.0	23.8	19.0	19.0	38.0	29.2	29.2
Actuated g/C Ratio	0.34	0.25		0.41	0.29	0.48	0.30	0.24	0.24	0.48	0.36	0.36
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	246	431		317	536	839	232	849	372	421	1292	584
v/s Ratio Prot	0.09	0.22		c0.12	c0.29	0.09	0.03	0.24		c0.20	0.24	
v/s Ratio Perm	0.27			0.27		0.17	0.13		0.01	c0.30		0.11
v/c Ratio	1.08	0.89		0.93	1.02	0.49	0.54	0.99	0.05	1.05	0.65	0.30
Uniform Delay, d1	24.6	28.9		18.7	28.5	14.4	21.3	30.4	23.5	21.2	21.2	18.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.50	0.84	0.96
Incremental Delay, d2	80.7	19.1		33.5	44.7	0.5	2.4	28.7	0.3	52.4	1.9	0.9
Delay (s)	105.3	48.0		52.2	73.2	14.9	23.7	59.1	23.8	84.2	19.6	18.3
Level of Service	F	D		D	E	B	C	E	C	F	B	B
Approach Delay (s)		71.2			48.6			52.1			36.3	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM Average Control Delay	48.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

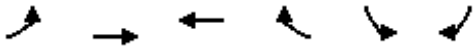
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)						
Lane Util. Factor						
Frt						
Flt Protected						
Satd. Flow (prot)						
Flt Permitted						
Satd. Flow (perm)						
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0
Turn Type	Perm			Perm		Perm
Protected Phases		6	2		8	
Permitted Phases	6			2		8
Actuated Green, G (s)						
Effective Green, g (s)						
Actuated g/C Ratio						
Clearance Time (s)						
Vehicle Extension (s)						
Lane Grp Cap (vph)						
v/s Ratio Prot						
v/s Ratio Perm						
v/c Ratio						
Uniform Delay, d1						
Progression Factor						
Incremental Delay, d2						
Delay (s)						
Level of Service						
Approach Delay (s)		0.0	0.0		0.0	
Approach LOS		A	A		A	

Intersection Summary			
HCM Average Control Delay	0.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.00		
Actuated Cycle Length (s)	24.5	Sum of lost time (s)	0.0
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	216	68	1906	115	120	2782
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.91	0.88	0.97	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583	4988	2787	3433	5187
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583	4988	2787	3433	5187
Peak-hour factor, PHF	0.96	0.96	0.98	0.98	0.99	0.99
Adj. Flow (vph)	225	71	1945	117	121	2810
RTOR Reduction (vph)	0	63	0	22	0	0
Lane Group Flow (vph)	225	8	1945	95	121	2810
Heavy Vehicles (%)	2%	2%	4%	2%	2%	0%
Turn Type		Perm		pm+ov	Prot	
Protected Phases	4		6	4	5	2
Permitted Phases		4		6		
Actuated Green, G (s)	12.7	12.7	76.2	88.9	9.1	89.3
Effective Green, g (s)	12.7	12.7	76.2	88.9	9.1	89.3
Actuated g/C Ratio	0.12	0.12	0.69	0.81	0.08	0.81
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	396	183	3455	2354	284	4211
v/s Ratio Prot	c0.07		0.39	0.00	0.04	c0.54
v/s Ratio Perm		0.01		0.03		
v/c Ratio	0.57	0.04	0.56	0.04	0.43	0.67
Uniform Delay, d1	46.1	43.3	8.5	2.1	48.0	4.3
Progression Factor	1.00	1.00	0.16	0.00	0.98	1.53
Incremental Delay, d2	1.9	0.1	0.4	0.0	0.3	0.3
Delay (s)	47.9	43.4	1.8	0.0	47.3	6.8
Level of Service	D	D	A	A	D	A
Approach Delay (s)	46.8		1.7			8.4
Approach LOS	D		A			A

Intersection Summary			
HCM Average Control Delay	8.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		

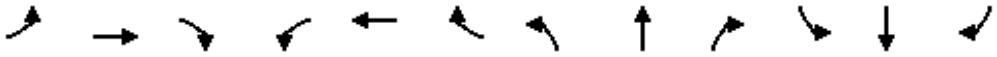
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	50	249	405	53	21	41
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.98	0.98	0.87	0.87
Hourly flow rate (vph)	56	277	413	54	24	47
Pedestrians		2	2		4	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	471				834	446
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	471				834	446
tC, single (s)	4.1				6.4	6.3
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.4
p0 queue free %	95				93	92
cM capacity (veh/h)	1097				322	593

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	332	467	71
Volume Left	56	0	24
Volume Right	0	54	47
cSH	1097	1700	461
Volume to Capacity	0.05	0.27	0.15
Queue Length 95th (ft)	4	0	14
Control Delay (s)	1.8	0.0	14.2
Lane LOS	A		B
Approach Delay (s)	1.8	0.0	14.2
Approach LOS			B

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	2	375	32	22	160	15	41	8	25	1	1	2
Peak Hour Factor	0.92	0.92	0.92	0.90	0.90	0.90	0.73	0.73	0.73	0.75	0.75	0.75
Hourly flow rate (vph)	2	408	35	24	178	17	56	11	34	1	1	3

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	445	219	101	5
Volume Left (vph)	2	24	56	1
Volume Right (vph)	35	17	34	3
Hadj (s)	0.01	0.07	-0.09	-0.25
Departure Headway (s)	4.5	4.8	5.3	5.4
Degree Utilization, x	0.55	0.29	0.15	0.01
Capacity (veh/h)	789	723	595	570
Control Delay (s)	12.8	9.7	9.3	8.4
Approach Delay (s)	12.8	9.7	9.3	8.4
Approach LOS	B	A	A	A

Intersection Summary				
Delay	11.4			
HCM Level of Service	B			
Intersection Capacity Utilization	41.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	200	1692	0	0	1521
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.96	0.99	0.92	0.92	0.99
Hourly flow rate (vph)	0	208	1709	0	0	1536
Pedestrians	2					3
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			111			125
pX, platoon unblocked	0.80	0.80			0.80	
vC, conflicting volume	2223	575			1711	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1669	0			1033	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	76			100	
cM capacity (veh/h)	70	871			537	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	208	570	570	570	512	512	512
Volume Left	0	0	0	0	0	0	0
Volume Right	208	0	0	0	0	0	0
cSH	871	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.24	0.34	0.34	0.34	0.30	0.30	0.30
Queue Length 95th (ft)	23	0	0	0	0	0	0
Control Delay (s)	10.4	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	10.4	0.0			0.0		
Approach LOS	B						

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	20	44	13	19	7	48	1052	7	1	1528	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.93			0.97			1.00			1.00	
Flt Protected		0.99			0.98			1.00			1.00	
Satd. Flow (prot)		1735			1814			3564			3604	
Flt Permitted		0.92			0.83			0.80			0.95	
Satd. Flow (perm)		1623			1538			2844			3440	
Peak-hour factor, PHF	0.94	0.94	0.94	0.82	0.82	0.82	0.91	0.91	0.91	0.98	0.98	0.98
Adj. Flow (vph)	28	21	47	16	23	9	53	1156	8	1	1559	16
RTOR Reduction (vph)	0	43	0	0	8	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	53	0	0	40	0	0	1217	0	0	1575	0
Confl. Peds. (#/hr)	2		2	3		3	4		4	1		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		7.0			7.0			70.0			70.0	
Effective Green, g (s)		7.0			7.0			70.0			70.0	
Actuated g/C Ratio		0.08			0.08			0.82			0.82	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		134			127			2342			2833	
v/s Ratio Prot												
v/s Ratio Perm		c0.03			0.03			0.43			c0.46	
v/c Ratio		0.39			0.31			0.52			0.56	
Uniform Delay, d1		37.0			36.7			2.3			2.4	
Progression Factor		1.00			0.93			0.23			1.00	
Incremental Delay, d2		1.9			1.4			0.7			0.8	
Delay (s)		38.9			35.7			1.3			3.2	
Level of Service		D			D			A			A	
Approach Delay (s)		38.9			35.7			1.3			3.2	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	4.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	8	4	13	1131	810	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	0.95	
Frpb, ped/bikes	1.00			1.00	1.00	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.96			1.00	1.00	
Flt Protected	0.97			1.00	1.00	
Satd. Flow (prot)	1745			1880	3555	
Flt Permitted	0.97			0.99	1.00	
Satd. Flow (perm)	1745			1862	3555	
Peak-hour factor, PHF	0.75	0.75	0.98	0.98	0.95	0.95
Adj. Flow (vph)	11	5	13	1154	853	28
RTOR Reduction (vph)	5	0	0	0	2	0
Lane Group Flow (vph)	11	0	0	1167	879	0
Confl. Peds. (#/hr)	2	2	2			2
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	0.8			76.2	76.2	
Effective Green, g (s)	0.8			76.2	76.2	
Actuated g/C Ratio	0.01			0.90	0.90	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	16			1669	3187	
v/s Ratio Prot	c0.01				0.25	
v/s Ratio Perm				c0.63		
v/c Ratio	0.69			0.70	0.28	
Uniform Delay, d1	42.0			1.2	0.6	
Progression Factor	0.56			0.48	1.00	
Incremental Delay, d2	77.9			1.5	0.2	
Delay (s)	101.4			2.0	0.8	
Level of Service	F			A	A	
Approach Delay (s)	101.4			2.0	0.8	
Approach LOS	F			A	A	

Intersection Summary			
HCM Average Control Delay	2.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	1127	1106	0	1590	801	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	1.00		0.95	0.97	
Frpb, ped/bikes	1.00	0.97		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		1.00	0.95	
Satd. Flow (prot)	3574	1559		3574	3502	
Flt Permitted	1.00	1.00		1.00	0.95	
Satd. Flow (perm)	3574	1559		3574	3502	
Peak-hour factor, PHF	0.98	0.98	0.92	0.96	0.95	0.92
Adj. Flow (vph)	1150	1129	0	1656	843	0
RTOR Reduction (vph)	0	408	0	0	0	0
Lane Group Flow (vph)	1150	721	0	1656	843	0
Confl. Peds. (#/hr)		2	1		1	
Heavy Vehicles (%)	1%	1%	2%	1%	0%	2%
Turn Type		Perm				
Protected Phases	2			6	8	
Permitted Phases		2				
Actuated Green, G (s)	53.2	53.2		53.2	23.8	
Effective Green, g (s)	53.2	53.2		53.2	23.8	
Actuated g/C Ratio	0.63	0.63		0.63	0.28	
Clearance Time (s)	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	2237	976		2237	981	
v/s Ratio Prot	0.32			c0.46	c0.24	
v/s Ratio Perm		0.46				
v/c Ratio	0.51	0.74		0.74	0.86	
Uniform Delay, d1	8.8	11.1		11.1	29.0	
Progression Factor	0.20	5.62		0.79	0.99	
Incremental Delay, d2	0.3	1.9		1.9	7.5	
Delay (s)	2.1	64.0		10.7	36.1	
Level of Service	A	E		B	D	
Approach Delay (s)	32.7			10.7	36.1	
Approach LOS	C			B	D	

Intersection Summary			
HCM Average Control Delay	25.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	105	2072	200	394	1685	514	375	821	470	320	587	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.95	1.00	0.97	0.91		0.97	0.91	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	0.98		1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	5136	1577	3467	3610	1579	3502	4799		3433	4889	
Flt Permitted	0.12	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	230	5136	1577	3467	3610	1579	3502	4799		3433	4889	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.96	0.96	0.96
Adj. Flow (vph)	106	2093	202	398	1702	519	379	829	475	333	611	126
RTOR Reduction (vph)	0	0	123	0	0	198	0	93	0	0	37	0
Lane Group Flow (vph)	106	2093	79	398	1702	321	379	1211	0	333	700	0
Confl. Peds. (#/hr)	1		1	1		1	19		19	12		12
Heavy Vehicles (%)	0%	1%	1%	1%	0%	1%	0%	1%	0%	2%	3%	2%
Turn Type	pm+pt		Perm	Prot		Perm	Prot			Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6		2	2						
Actuated Green, G (s)	36.2	33.0	33.0	9.0	38.8	38.8	11.8	19.0		8.0	15.2	
Effective Green, g (s)	36.2	33.0	33.0	9.0	38.8	38.8	11.8	19.0		8.0	15.2	
Actuated g/C Ratio	0.43	0.39	0.39	0.11	0.46	0.46	0.14	0.22		0.09	0.18	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	157	1994	612	367	1648	721	486	1073		323	874	
v/s Ratio Prot	0.03	0.41		c0.11	c0.47		0.11	c0.25		c0.10	0.14	
v/s Ratio Perm	0.26		0.05			0.20						
v/c Ratio	0.68	1.05	0.13	1.08	1.03	0.44	0.78	1.13		1.03	0.80	
Uniform Delay, d1	20.1	26.0	16.7	38.0	23.1	15.8	35.3	33.0		38.5	33.5	
Progression Factor	1.04	1.01	1.11	1.14	0.57	0.37	1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.9	30.9	0.3	53.4	22.5	0.7	7.8	70.0		58.3	5.3	
Delay (s)	27.9	57.2	18.9	96.8	35.7	6.6	43.1	103.0		96.8	38.8	
Level of Service	C	E	B	F	D	A	D	F		F	D	
Approach Delay (s)		52.7			39.2			89.5			56.8	
Approach LOS		D			D			F			E	

Intersection Summary			
HCM Average Control Delay	56.7	HCM Level of Service	E
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	2760	16	66	2452	26	206
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.95	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	5080		1805	3539	1805	1562
Flt Permitted	1.00		0.07	1.00	0.95	1.00
Satd. Flow (perm)	5080		127	3539	1805	1562
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.64	0.64
Adj. Flow (vph)	2788	16	67	2477	41	322
RTOR Reduction (vph)	1	0	0	0	0	3
Lane Group Flow (vph)	2803	0	67	2477	41	319
Confl. Peds. (#/hr)		6	1		7	7
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Turn Type			Perm			Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	60.0		60.0	60.0	17.0	17.0
Effective Green, g (s)	60.0		60.0	60.0	17.0	17.0
Actuated g/C Ratio	0.71		0.71	0.71	0.20	0.20
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3586		90	2498	361	312
v/s Ratio Prot	0.55			c0.70	0.02	
v/s Ratio Perm			0.53			c0.20
v/c Ratio	0.78		0.74	0.99	0.11	1.02
Uniform Delay, d1	8.2		7.7	12.3	27.8	34.0
Progression Factor	1.68		0.83	0.84	1.00	1.00
Incremental Delay, d2	0.1		8.8	7.6	0.6	56.6
Delay (s)	13.9		15.3	17.9	28.5	90.6
Level of Service	B		B	B	C	F
Approach Delay (s)	13.9			17.8	83.6	
Approach LOS	B			B	F	

Intersection Summary			
HCM Average Control Delay	20.0	HCM Level of Service	C
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	2663	518	728	2079	0	0	0	0	1316	336	430
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.99	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		6471	1599	3433	3610					1643	3136	1447
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		6471	1599	3433	3610					1643	3136	1447
Peak-hour factor, PHF	0.92	0.99	0.99	0.99	0.99	0.99	0.92	0.92	0.92	0.99	0.99	0.99
Adj. Flow (vph)	0	2690	523	735	2100	0	0	0	0	1329	339	434
RTOR Reduction (vph)	0	0	120	0	0	0	0	0	0	0	3	5
Lane Group Flow (vph)	0	2690	403	735	2100	0	0	0	0	664	1044	386
Confl. Peds. (#/hr)										2		2
Heavy Vehicles (%)	0%	1%	1%	2%	0%	0%	0%	0%	0%	0%	1%	0%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		30.0	30.0	15.0	49.0					28.0	28.0	28.0
Effective Green, g (s)		30.0	30.0	15.0	49.0					28.0	28.0	28.0
Actuated g/C Ratio		0.35	0.35	0.18	0.58					0.33	0.33	0.33
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2284	564	606	2081					541	1033	477
v/s Ratio Prot		c0.42		c0.21	0.58					c0.40	0.33	
v/s Ratio Perm			0.25									0.27
v/c Ratio		1.18	0.72	1.21	1.01					1.23	1.22dl	0.81
Uniform Delay, d1		27.5	23.8	35.0	18.0					28.5	28.5	26.1
Progression Factor		0.80	0.78	0.94	1.62					1.00	1.00	1.00
Incremental Delay, d2		83.0	4.6	97.3	8.3					117.9	30.6	9.8
Delay (s)		105.0	23.2	130.1	37.6					146.4	59.1	35.9
Level of Service		F	C	F	D					F	E	D
Approach Delay (s)		91.7			61.6			0.0			82.3	
Approach LOS		F			E			A			F	

Intersection Summary			
HCM Average Control Delay	78.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	105.8%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	281	865	1119	2656	0	0	2454	1140	0	0	550
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.95			0.86	0.88			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1787	2814	3502	3610			6536	2814			1644
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1787	2814	3502	3610			6536	2814			1644
Peak-hour factor, PHF	0.97	0.97	0.99	0.99	0.92	0.92	0.99	0.99	0.92	0.92	0.95
Adj. Flow (vph)	290	892	1130	2683	0	0	2479	1152	0	0	579
RTOR Reduction (vph)	0	4	0	0	0	0	0	147	0	0	350
Lane Group Flow (vph)	290	888	1130	2683	0	0	2479	1005	0	0	229
Confl. Peds. (#/hr)	1	1	1								1
Heavy Vehicles (%)	1%	1%	0%	0%	2%	2%	0%	1%	2%	2%	0%
Turn Type		Prot	Prot					Perm			Over
Protected Phases	4	4	1	6			2				1
Permitted Phases								2			
Actuated Green, G (s)	22.0	22.0	23.0	55.0			28.0	28.0			23.0
Effective Green, g (s)	22.0	22.0	23.0	55.0			28.0	28.0			23.0
Actuated g/C Ratio	0.26	0.26	0.27	0.65			0.33	0.33			0.27
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	463	728	948	2336			2153	927			445
v/s Ratio Prot	0.16	c0.32	0.32	c0.74			0.38				0.14
v/s Ratio Perm								0.36			
v/c Ratio	0.63	1.22	1.19	1.15			1.15	1.08			0.51
Uniform Delay, d1	27.9	31.5	31.0	15.0			28.5	28.5			26.3
Progression Factor	1.00	1.00	1.21	0.67			0.74	0.68			1.00
Incremental Delay, d2	2.6	110.9	87.4	67.4			68.7	40.1			1.0
Delay (s)	30.5	142.4	125.1	77.5			89.8	59.4			27.3
Level of Service	C	F	F	E			F	E			C
Approach Delay (s)	114.9			91.6			80.2		27.3		
Approach LOS	F			F			F		C		

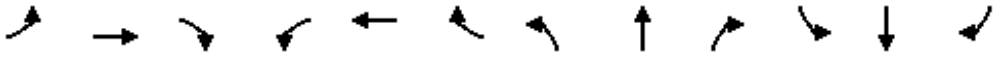
Intersection Summary			
HCM Average Control Delay	86.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	110.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	953	41	328	42	52	149	73	2727	951	192	2301	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1743	1522	1805	1900	1593	1770	5136	2757	1805	5183	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.13	1.00	1.00	0.12	1.00	
Satd. Flow (perm)	3433	1743	1522	1805	1900	1593	248	5136	2757	224	5183	
Peak-hour factor, PHF	0.97	0.97	0.97	0.87	0.87	0.87	0.98	0.98	0.98	0.97	0.97	0.97
Adj. Flow (vph)	982	42	338	48	60	171	74	2783	970	198	2372	11
RTOR Reduction (vph)	0	0	262	0	0	73	0	0	411	0	1	0
Lane Group Flow (vph)	982	42	76	48	60	98	74	2783	559	198	2382	0
Confl. Peds. (#/hr)	5		5	1		1	5		5	4		4
Heavy Vehicles (%)	2%	9%	4%	0%	0%	0%	2%	1%	1%	0%	0%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		pm+ov	pm+pt		
Protected Phases	4	4		8	8		1	6	4	5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	19.0	19.0	19.0	10.5	10.5	10.5	35.0	30.0	49.0	43.5	34.5	
Effective Green, g (s)	19.0	19.0	19.0	10.5	10.5	10.5	35.0	30.0	49.0	43.5	34.5	
Actuated g/C Ratio	0.22	0.22	0.22	0.12	0.12	0.12	0.41	0.35	0.58	0.51	0.41	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	767	390	340	223	235	197	192	1813	1719	291	2104	
v/s Ratio Prot	c0.29	0.02		0.03	0.03		0.02	c0.54	0.07	c0.08	c0.46	
v/s Ratio Perm			0.05			c0.06	0.14		0.13	0.27		
v/c Ratio	1.28	0.11	0.22	0.22	0.26	0.50	0.39	1.54	0.33	0.68	1.13	
Uniform Delay, d1	33.0	26.3	27.0	33.5	33.7	34.8	19.5	27.5	9.4	17.3	25.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.45	0.97	0.57	
Incremental Delay, d2	136.1	0.1	0.3	0.5	0.6	2.0	0.1	241.0	0.0	5.0	64.7	
Delay (s)	169.1	26.4	27.3	34.0	34.3	36.8	19.7	267.9	4.3	21.8	79.0	
Level of Service	F	C	C	C	C	D	B	F	A	C	E	
Approach Delay (s)		129.5			35.8			196.3			74.6	
Approach LOS		F			D			F			E	

Intersection Summary			
HCM Average Control Delay	140.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	107.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	672	663	158	131	301	238	511	1770	762	202	1114	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	3416		1805	1900	1553	1805	3610	1599	1787	3558	
Flt Permitted	0.95	1.00		0.36	1.00	1.00	0.12	1.00	1.00	0.14	1.00	
Satd. Flow (perm)	3467	3416		691	1900	1553	238	3610	1599	269	3558	
Peak-hour factor, PHF	0.98	0.98	0.98	0.96	0.96	0.96	0.99	0.99	0.99	0.98	0.98	0.98
Adj. Flow (vph)	686	677	161	136	314	248	516	1788	770	206	1137	37
RTOR Reduction (vph)	0	24	0	0	0	216	0	0	246	0	3	0
Lane Group Flow (vph)	686	814	0	136	314	32	516	1788	524	206	1171	0
Confl. Peds. (#/hr)	2		2									
Heavy Vehicles (%)	1%	1%	8%	0%	0%	4%	0%	0%	1%	1%	1%	0%
Turn Type	Prot			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases				8		8	6		6	2		
Actuated Green, G (s)	14.0	21.0		15.0	11.0	11.0	48.0	40.0	40.0	32.0	28.0	
Effective Green, g (s)	14.0	21.0		15.0	11.0	11.0	48.0	40.0	40.0	32.0	28.0	
Actuated g/C Ratio	0.16	0.25		0.18	0.13	0.13	0.56	0.47	0.47	0.38	0.33	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	571	844		174	246	201	429	1699	752	173	1172	
v/s Ratio Prot	c0.20	0.24		0.04	c0.17		c0.23	0.50		0.06	0.33	
v/s Ratio Perm				0.10		0.02	c0.45		0.33	0.39		
v/c Ratio	1.20	0.96		0.78	1.28	0.16	1.20	1.05	0.70	1.19	1.00	
Uniform Delay, d1	35.5	31.6		33.3	37.0	32.9	24.7	22.5	17.7	26.9	28.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.33	0.28	0.43	0.99	1.04	
Incremental Delay, d2	106.6	22.5		20.0	152.0	0.4	98.3	28.8	1.6	121.5	23.1	
Delay (s)	142.1	54.1		53.3	189.0	33.3	131.1	35.1	9.2	148.3	52.8	
Level of Service	F	D		D	F	C	F	D	A	F	D	
Approach Delay (s)		93.7			107.2			44.7			67.0	
Approach LOS		F			F			D			E	

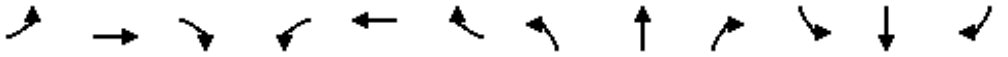
Intersection Summary			
HCM Average Control Delay	67.1	HCM Level of Service	E
HCM Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	108.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	273	741	249	150	370	155	231	878	87	133	1314	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1805	3497		1805	3536	
Flt Permitted	0.25	1.00	1.00	0.33	1.00	1.00	0.10	1.00		0.18	1.00	
Satd. Flow (perm)	470	3574	1599	627	3574	1599	198	3497		343	3536	
Peak-hour factor, PHF	0.99	0.99	0.99	0.96	0.96	0.96	0.98	0.98	0.98	0.95	0.95	0.95
Adj. Flow (vph)	276	748	252	156	385	161	236	896	89	140	1383	115
RTOR Reduction (vph)	0	0	157	0	0	138	0	9	0	0	7	0
Lane Group Flow (vph)	276	748	95	156	385	23	236	976	0	140	1491	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	2%	0%	0%	1%	0%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	27.0	18.0	18.0	17.0	12.0	12.0	46.4	38.4		45.6	38.0	
Effective Green, g (s)	27.0	18.0	18.0	17.0	12.0	12.0	46.4	38.4		45.6	38.0	
Actuated g/C Ratio	0.32	0.21	0.21	0.20	0.14	0.14	0.55	0.45		0.54	0.45	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	320	757	339	194	505	226	259	1580		315	1581	
v/s Ratio Prot	c0.11	c0.21		0.05	0.11		c0.09	0.28		0.04	c0.42	
v/s Ratio Perm	0.16		0.06	0.11		0.01	0.41			0.20		
v/c Ratio	0.86	0.99	0.28	0.80	0.76	0.10	0.91	0.62		0.44	0.94	
Uniform Delay, d1	24.1	33.4	28.1	31.8	35.1	31.8	21.0	17.7		11.5	22.5	
Progression Factor	0.83	0.82	0.56	1.00	1.00	1.00	1.00	1.00		0.81	0.49	
Incremental Delay, d2	18.7	27.6	0.4	20.9	6.7	0.2	33.3	1.8		0.1	1.6	
Delay (s)	38.7	54.9	16.3	52.7	41.8	32.0	54.3	19.5		9.5	12.7	
Level of Service	D	D	B	D	D	C	D	B		A	B	
Approach Delay (s)		43.8			42.0			26.3			12.4	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM Average Control Delay	28.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	263	694	307	109	213	131	118	897	94	528	1687	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	0.88	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1787	3444		1787	1881	2707	1752	3519		1805	3610	1572
Flt Permitted	0.31	1.00		0.18	1.00	1.00	0.12	1.00		0.11	1.00	1.00
Satd. Flow (perm)	592	3444		339	1881	2707	217	3519		200	3610	1572
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.98	0.98	0.98	0.99	0.99	0.99
Adj. Flow (vph)	271	715	316	112	220	135	120	915	96	533	1704	229
RTOR Reduction (vph)	0	43	0	0	0	52	0	7	0	0	0	88
Lane Group Flow (vph)	271	988	0	112	220	83	120	1004	0	533	1704	141
Confl. Peds. (#/hr)							1		1	7		7
Heavy Vehicles (%)	1%	0%	0%	1%	1%	5%	3%	1%	1%	0%	0%	0%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	40.0	32.0		26.2	22.2	51.2	39.0	34.0		67.0	58.0	58.0
Effective Green, g (s)	40.0	32.0		26.2	22.2	51.2	39.0	34.0		67.0	58.0	58.0
Actuated g/C Ratio	0.35	0.28		0.23	0.19	0.45	0.34	0.30		0.58	0.50	0.50
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	349	958		128	363	1299	140	1040		521	1821	793
v/s Ratio Prot	c0.09	c0.29		0.03	0.12	0.02	0.04	0.29		c0.26	0.47	
v/s Ratio Perm	0.18			0.17		0.01	0.25			c0.34		0.09
v/c Ratio	0.78	1.03		0.88	0.61	0.06	0.86	0.97		1.02	0.94	0.18
Uniform Delay, d1	29.8	41.5		43.0	42.4	18.2	33.0	39.9		34.8	26.8	15.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	10.4	37.3		43.8	2.9	0.0	37.2	20.7		45.4	10.5	0.5
Delay (s)	40.1	78.8		86.8	45.3	18.2	70.2	60.6		80.2	37.3	16.0
Level of Service	D	E		F	D	B	E	E		F	D	B
Approach Delay (s)		70.8			47.4			61.6			44.6	
Approach LOS		E			D			E			D	

Intersection Summary			
HCM Average Control Delay	54.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	105.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	420	722	311	1209	939	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.97	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1552	1719	1881	1881	1583
Flt Permitted	0.95	1.00	0.08	1.00	1.00	1.00
Satd. Flow (perm)	1770	1552	137	1881	1881	1583
Peak-hour factor, PHF	0.96	0.96	0.97	0.97	0.96	0.96
Adj. Flow (vph)	438	752	321	1246	978	219
RTOR Reduction (vph)	0	189	0	0	0	89
Lane Group Flow (vph)	438	563	321	1246	978	130
Confl. Peds. (#/hr)	3	3				
Heavy Vehicles (%)	2%	1%	5%	1%	1%	2%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	28.0	28.0	64.0	64.0	49.0	49.0
Effective Green, g (s)	28.0	28.0	64.0	64.0	49.0	49.0
Actuated g/C Ratio	0.28	0.28	0.64	0.64	0.49	0.49
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	496	435	262	1204	922	776
v/s Ratio Prot	0.25		c0.13	0.66	0.52	
v/s Ratio Perm		c0.36	c0.65			0.08
v/c Ratio	0.88	1.30	1.23	1.03	1.06	0.17
Uniform Delay, d1	34.4	36.0	32.5	18.0	25.5	14.2
Progression Factor	0.90	0.86	1.00	1.00	1.00	1.00
Incremental Delay, d2	11.7	143.6	130.4	35.4	47.1	0.5
Delay (s)	42.8	174.7	162.9	53.4	72.6	14.6
Level of Service	D	F	F	D	E	B
Approach Delay (s)	126.2			75.8	62.0	
Approach LOS	F			E	E	

Intersection Summary			
HCM Average Control Delay	86.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	119	432	100	247	428	109	136	1021	193	149	1252	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1668	1801		1805	1881	1550	1787	3574	1461	1770	3539	1574
Flt Permitted	0.34	1.00		0.13	1.00	1.00	0.14	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	594	1801		255	1881	1550	258	3574	1461	239	3539	1574
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.99	0.99	0.99	0.96	0.96	0.96
Adj. Flow (vph)	121	441	102	252	437	111	137	1031	195	155	1304	114
RTOR Reduction (vph)	0	10	0	0	0	71	0	0	128	0	0	72
Lane Group Flow (vph)	121	533	0	252	437	40	137	1031	67	155	1304	42
Confl. Peds. (#/hr)	7		7	4		4	8		8	2		2
Heavy Vehicles (%)	8%	2%	1%	0%	1%	1%	1%	1%	6%	2%	2%	0%
Turn Type	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)	29.0	25.8		37.8	30.6	30.6	33.2	29.2	29.2	37.2	31.2	31.2
Effective Green, g (s)	29.0	25.8		37.8	30.6	30.6	33.2	29.2	29.2	37.2	31.2	31.2
Actuated g/C Ratio	0.34	0.30		0.44	0.36	0.36	0.39	0.34	0.34	0.44	0.37	0.37
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	243	547		259	677	558	173	1228	502	213	1299	578
v/s Ratio Prot	0.02	0.30		c0.09	0.23		0.04	0.29		c0.05	c0.37	
v/s Ratio Perm	0.15			c0.34		0.03	0.27		0.05	0.27		0.03
v/c Ratio	0.50	0.97		0.97	0.65	0.07	0.79	0.84	0.13	0.73	1.00	0.07
Uniform Delay, d1	22.3	29.3		19.7	22.7	17.9	22.3	25.7	19.2	18.3	26.9	17.5
Progression Factor	1.00	1.00		2.19	0.71	0.60	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.6	31.8		36.5	1.3	0.0	21.5	7.0	0.6	11.7	25.9	0.2
Delay (s)	23.9	61.1		79.6	17.4	10.8	43.7	32.7	19.7	30.0	52.8	17.7
Level of Service	C	E		E	B	B	D	C	B	C	D	B
Approach Delay (s)		54.3			36.1			32.0			48.0	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	41.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	0	1	439	7	911	0	1023	342	614	1238	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	0.88		0.95	1.00	0.97	1.00	
Frpb, ped/bikes		0.99			1.00	0.96		1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00			0.97	1.00		1.00	1.00	1.00	1.00	
Frt		0.93			1.00	0.85		1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.95	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1715			1744	2705		3574	1571	3400	1863	
Flt Permitted		0.90			0.73	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1584			1331	2705		3574	1571	3400	1863	
Peak-hour factor, PHF	0.50	0.50	0.50	0.98	0.98	0.98	0.93	0.93	0.93	0.99	0.99	0.99
Adj. Flow (vph)	2	0	2	448	7	930	0	1100	368	620	1251	0
RTOR Reduction (vph)	0	1	0	0	0	16	0	0	232	0	0	0
Lane Group Flow (vph)	0	3	0	0	455	914	0	1100	136	620	1251	0
Confl. Peds. (#/hr)	2		2	15		15	3		3	7		7
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	1%	1%	3%	2%	0%
Turn Type	Perm			Perm		pm+ov	Perm		Perm	Prot		
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2		2			
Actuated Green, G (s)		30.0			30.0	51.0		37.0	37.0	21.0	62.0	
Effective Green, g (s)		30.0			30.0	51.0		37.0	37.0	21.0	62.0	
Actuated g/C Ratio		0.30			0.30	0.51		0.37	0.37	0.21	0.62	
Clearance Time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		475			399	1488		1322	581	714	1155	
v/s Ratio Prot						0.13		0.31		0.18	c0.67	
v/s Ratio Perm		0.00			c0.34	0.21			0.09			
v/c Ratio		0.01			1.14	0.61		0.83	0.23	0.87	1.08	
Uniform Delay, d1		24.5			35.0	17.5		28.7	21.7	38.2	19.0	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0			89.1	0.8		6.2	0.9	10.9	52.0	
Delay (s)		24.5			124.1	18.2		34.9	22.7	49.1	71.0	
Level of Service		C			F	B		C	C	D	E	
Approach Delay (s)		24.5			53.0			31.8			63.7	
Approach LOS		C			D			C			E	

Intersection Summary			
HCM Average Control Delay	50.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	134.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	701	97	28	83	61	33	41	834	57	80	1266	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99			1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	0.97			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1698	1713			1847	1420	1805	3501		1752	3574	
Flt Permitted	0.95	0.97			0.97	1.00	0.15	1.00		0.20	1.00	
Satd. Flow (perm)	1698	1713			1847	1420	281	3501		360	3574	
Peak-hour factor, PHF	0.95	0.95	0.95	0.85	0.85	0.85	0.96	0.96	0.96	0.98	0.98	0.92
Adj. Flow (vph)	738	102	29	98	72	39	43	869	59	82	1292	0
RTOR Reduction (vph)	0	4	0	0	0	35	0	8	0	0	0	0
Lane Group Flow (vph)	435	430	0	0	170	4	43	920	0	82	1292	0
Confl. Peds. (#/hr)	2		2	2		2	1		1			
Heavy Vehicles (%)	1%	0%	0%	0%	0%	11%	0%	2%	2%	3%	1%	0%
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases						8	2			6		
Actuated Green, G (s)	18.3	18.3			7.0	7.0	27.0	27.0		27.0	27.0	
Effective Green, g (s)	18.3	18.3			7.0	7.0	27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.28	0.28			0.11	0.11	0.42	0.42		0.42	0.42	
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	483	488			201	155	118	1470		151	1501	
v/s Ratio Prot	c0.26	0.25			c0.09			0.26			c0.36	
v/s Ratio Perm						0.00	0.15			0.23		
v/c Ratio	0.90	0.88			0.85	0.03	0.36	0.63		0.54	0.86	
Uniform Delay, d1	22.1	22.0			28.1	25.6	12.8	14.7		14.0	16.9	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	19.7	16.8			26.5	0.1	8.5	2.0		13.3	6.7	
Delay (s)	41.8	38.7			54.6	25.7	21.3	16.7		27.3	23.6	
Level of Service	D	D			D	C	C	B		C	C	
Approach Delay (s)		40.3			49.2			16.9			23.9	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM Average Control Delay	27.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	64.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	188	409	287	278	796	384
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.95	1.00	0.17	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	310	1863	1863	1583
Peak-hour factor, PHF	0.95	0.95	0.92	0.92	0.96	0.96
Adj. Flow (vph)	198	431	312	302	829	400
RTOR Reduction (vph)	0	290	0	0	0	159
Lane Group Flow (vph)	198	141	312	302	829	241
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	15.5	15.5	76.5	76.5	60.2	60.2
Effective Green, g (s)	15.5	15.5	76.5	76.5	60.2	60.2
Actuated g/C Ratio	0.16	0.16	0.76	0.76	0.60	0.60
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	274	245	417	1425	1122	953
v/s Ratio Prot	c0.11		c0.09	0.16	0.45	
v/s Ratio Perm		0.09	c0.48			0.15
v/c Ratio	0.72	0.58	0.75	0.21	0.74	0.25
Uniform Delay, d1	40.2	39.2	14.4	3.3	14.3	9.3
Progression Factor	0.96	0.91	0.77	0.82	1.00	1.00
Incremental Delay, d2	4.5	1.6	4.9	0.2	4.4	0.6
Delay (s)	43.2	37.1	15.9	2.9	18.6	10.0
Level of Service	D	D	B	A	B	A
Approach Delay (s)	39.0			9.5	15.8	
Approach LOS	D			A	B	

Intersection Summary			
HCM Average Control Delay	20.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	402	933	975	218	842	197	1086	867	244	128	1025	268
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.88	1.00	0.91		0.97	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	3610	2842	1787	4975		3467	3610	1583	1769	3574	1590
Flt Permitted	0.95	1.00	1.00	0.22	1.00		0.95	1.00	1.00	0.32	1.00	1.00
Satd. Flow (perm)	3467	3610	2842	418	4975		3467	3610	1583	604	3574	1590
Peak-hour factor, PHF	0.99	0.99	0.99	0.98	0.98	0.98	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	406	942	985	222	859	201	1097	876	246	129	1035	271
RTOR Reduction (vph)	0	0	13	0	39	0	0	0	133	0	0	116
Lane Group Flow (vph)	406	942	972	222	1021	0	1097	876	113	129	1035	155
Confl. Peds. (#/hr)				2		2				2		2
Heavy Vehicles (%)	1%	0%	0%	1%	1%	1%	1%	0%	2%	2%	1%	0%
Turn Type	Prot		pm+ov	pm+pt			Prot		Perm	pm+pt		Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4	8					2	6		6
Actuated Green, G (s)	11.0	23.0	51.0	24.0	18.0		28.0	46.0	46.0	36.0	27.0	27.0
Effective Green, g (s)	11.0	23.0	51.0	24.0	18.0		28.0	46.0	46.0	36.0	27.0	27.0
Actuated g/C Ratio	0.11	0.23	0.51	0.24	0.18		0.28	0.46	0.46	0.36	0.27	0.27
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	381	830	1563	182	896		971	1661	728	322	965	429
v/s Ratio Prot	c0.12	c0.26	0.17	0.07	0.21		c0.32	0.24		0.04	c0.29	
v/s Ratio Perm			0.17	0.22					0.07	0.11		0.10
v/c Ratio	1.07	1.13	0.62	1.22	1.14		1.13	0.53	0.16	0.40	1.07	0.36
Uniform Delay, d1	44.5	38.5	17.6	36.8	41.0		36.0	19.3	15.7	22.1	36.5	29.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.99	0.97	2.07	1.00	1.00	1.00
Incremental Delay, d2	64.6	75.4	0.8	138.2	76.5		70.0	1.0	0.4	3.7	50.5	2.4
Delay (s)	109.1	113.9	18.4	175.0	117.5		105.7	19.8	32.9	25.8	87.0	31.9
Level of Service	F	F	B	F	F		F	B	C	C	F	C
Approach Delay (s)		72.7			127.4			63.7			71.1	
Approach LOS		E			F			E			E	

Intersection Summary			
HCM Average Control Delay	79.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	110.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	657	824	1241	0	0	2125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	0.97	0.91	0.91			0.86
Frpb, ped/bikes	0.99	0.98	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	0.95	0.85	1.00			1.00
Flt Protected	0.97	1.00	1.00			1.00
Satd. Flow (prot)	3330	1432	5136			6471
Flt Permitted	0.97	1.00	1.00			1.00
Satd. Flow (perm)	3330	1432	5136			6471
Peak-hour factor, PHF	0.98	0.98	0.98	0.92	0.92	0.99
Adj. Flow (vph)	670	841	1266	0	0	2146
RTOR Reduction (vph)	12	12	0	0	0	0
Lane Group Flow (vph)	1020	467	1266	0	0	2146
Confl. Peds. (#/hr)	2	2				
Heavy Vehicles (%)	1%	1%	1%	2%	2%	1%
Turn Type		Perm				
Protected Phases	8		2			6
Permitted Phases		8				
Actuated Green, G (s)	41.8	41.8	50.2			50.2
Effective Green, g (s)	41.8	41.8	50.2			50.2
Actuated g/C Ratio	0.42	0.42	0.50			0.50
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	1392	599	2578			3248
v/s Ratio Prot	0.31		0.25			c0.33
v/s Ratio Perm		c0.33				
v/c Ratio	0.73	0.78	0.49			0.66
Uniform Delay, d1	24.4	25.1	16.5			18.6
Progression Factor	1.00	1.00	1.56			0.78
Incremental Delay, d2	2.0	6.5	0.5			0.5
Delay (s)	26.4	31.7	26.1			14.9
Level of Service	C	C	C			B
Approach Delay (s)	28.1		26.1			14.9
Approach LOS	C		C			B

Intersection Summary			
HCM Average Control Delay	21.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	1230	551	914	1866
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0
Lane Util. Factor			0.91		0.97	0.91
Frpb, ped/bikes			0.99		1.00	1.00
Flpb, ped/bikes			1.00		1.00	1.00
Frt			0.95		1.00	1.00
Flt Protected			1.00		0.95	1.00
Satd. Flow (prot)			4871		3467	5136
Flt Permitted			1.00		0.95	1.00
Satd. Flow (perm)			4871		3467	5136
Peak-hour factor, PHF	0.92	0.92	0.99	0.99	0.99	0.99
Adj. Flow (vph)	0	0	1242	557	923	1885
RTOR Reduction (vph)	0	0	20	0	0	0
Lane Group Flow (vph)	0	0	1779	0	923	1885
Confl. Peds. (#/hr)				3		
Heavy Vehicles (%)	2%	2%	1%	1%	1%	1%
Turn Type					Prot	
Protected Phases			2		1	6
Permitted Phases						
Actuated Green, G (s)			58.7		33.3	100.0
Effective Green, g (s)			58.7		33.3	100.0
Actuated g/C Ratio			0.59		0.33	1.00
Clearance Time (s)			4.0		4.0	4.0
Vehicle Extension (s)			3.0		3.0	3.0
Lane Grp Cap (vph)			2859		1155	5136
v/s Ratio Prot			c0.37		c0.27	0.37
v/s Ratio Perm						
v/c Ratio			0.62		0.80	0.37
Uniform Delay, d1			13.4		30.3	0.0
Progression Factor			0.30		1.04	1.00
Incremental Delay, d2			1.0		3.0	0.2
Delay (s)			5.0		34.4	0.2
Level of Service			A		C	A
Approach Delay (s)	0.0		5.0			11.4
Approach LOS	A		A			B

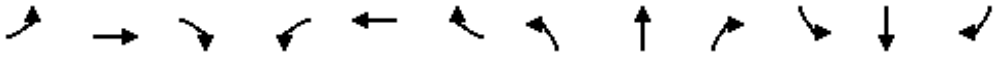
Intersection Summary			
HCM Average Control Delay	8.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	1400	88	185	1635	103	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	1.00	
Flt Protected	1.00		0.95	1.00	0.95	
Satd. Flow (prot)	5080		1787	5136	1736	
Flt Permitted	1.00		0.13	1.00	0.95	
Satd. Flow (perm)	5080		241	5136	1736	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.98	0.92
Adj. Flow (vph)	1414	89	187	1652	105	0
RTOR Reduction (vph)	5	0	0	0	0	0
Lane Group Flow (vph)	1498	0	187	1652	105	0
Confl. Peds. (#/hr)		1			4	
Heavy Vehicles (%)	1%	2%	1%	1%	4%	2%
Turn Type			pm+pt			
Protected Phases	2		1	6	8	
Permitted Phases			6			
Actuated Green, G (s)	66.9		82.0	82.0	10.0	
Effective Green, g (s)	66.9		82.0	82.0	10.0	
Actuated g/C Ratio	0.67		0.82	0.82	0.10	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	3399		369	4212	174	
v/s Ratio Prot	0.29		c0.06	0.32	c0.06	
v/s Ratio Perm			c0.36			
v/c Ratio	0.44		0.51	0.39	0.60	
Uniform Delay, d1	7.8		4.6	2.4	43.1	
Progression Factor	0.32		3.21	0.47	1.00	
Incremental Delay, d2	0.0		1.0	0.3	5.8	
Delay (s)	2.5		15.7	1.4	48.9	
Level of Service	A		B	A	D	
Approach Delay (s)	2.5			2.8	48.9	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	4.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	4	2	365	6	122	0	1448	329	214	1528	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00			0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99			1.00		1.00	1.00	
Flpb, ped/bikes		1.00			0.99			1.00		1.00	1.00	
Frt		0.96			0.97			0.97		1.00	1.00	
Flt Protected		0.99			0.96			1.00		0.95	1.00	
Satd. Flow (prot)		1808			1733			3465		1787	3574	
Flt Permitted		0.95			0.77			1.00		0.08	1.00	
Satd. Flow (perm)		1736			1380			3465		142	3574	
Peak-hour factor, PHF	0.31	0.31	0.31	0.90	0.90	0.90	0.97	0.97	0.97	0.98	0.98	0.98
Adj. Flow (vph)	3	13	6	406	7	136	0	1493	339	218	1559	0
RTOR Reduction (vph)	0	4	0	0	12	0	0	19	0	0	0	0
Lane Group Flow (vph)	0	18	0	0	537	0	0	1813	0	218	1559	0
Confl. Peds. (#/hr)	4		4	5		5	2		2	6		6
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	1%	0%	1%	1%	0%
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.0			33.0			49.0		59.0	59.0	
Effective Green, g (s)		33.0			33.0			49.0		59.0	59.0	
Actuated g/C Ratio		0.33			0.33			0.49		0.59	0.59	
Clearance Time (s)		4.0			4.0			4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		573			455			1698		182	2109	
v/s Ratio Prot								0.52		c0.07	0.44	
v/s Ratio Perm		0.01			c0.39					c0.63		
v/c Ratio		0.03			1.18			1.07		1.20	0.74	
Uniform Delay, d1		22.7			33.5			25.5		28.0	14.9	
Progression Factor		1.00			0.99			0.64		1.62	0.77	
Incremental Delay, d2		0.0			100.3			38.4		128.2	2.2	
Delay (s)		22.7			133.4			54.6		173.7	13.8	
Level of Service		C			F			D		F	B	
Approach Delay (s)		22.7			133.4			54.6			33.4	
Approach LOS		C			F			D			C	

Intersection Summary			
HCM Average Control Delay	55.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	137.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	299	435	77	225	387	403	68	866	152	465	1067	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	1803		1805	1863	1615	1752	3574	1615	1805	3574	1568
Flt Permitted	0.14	1.00		0.17	1.00	1.00	0.20	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	269	1803		317	1863	1615	376	3574	1615	245	3574	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.96	0.96	0.96	0.94	0.94	0.94	0.99	0.99	0.99
Adj. Flow (vph)	315	458	81	234	403	420	72	921	162	470	1078	247
RTOR Reduction (vph)	0	6	0	0	0	18	0	0	118	0	0	141
Lane Group Flow (vph)	315	533	0	234	403	402	72	921	44	470	1078	106
Heavy Vehicles (%)	1%	3%	3%	0%	2%	0%	3%	1%	0%	0%	1%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)	41.0	28.0		33.0	24.0	44.0	31.0	27.0	27.0	51.0	43.0	43.0
Effective Green, g (s)	41.0	28.0		33.0	24.0	44.0	31.0	27.0	27.0	51.0	43.0	43.0
Actuated g/C Ratio	0.41	0.28		0.33	0.24	0.44	0.31	0.27	0.27	0.51	0.43	0.43
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	308	505		239	447	775	172	965	436	437	1537	674
v/s Ratio Prot	c0.13	c0.30		0.09	0.22	0.10	0.02	0.26		c0.22	0.30	
v/s Ratio Perm	0.29			0.24		0.15	0.11		0.03	c0.33		0.07
v/c Ratio	1.02	1.05		0.98	0.90	0.52	0.42	0.95	0.10	1.08	0.70	0.16
Uniform Delay, d1	26.8	36.0		29.6	36.9	20.3	25.1	35.9	27.4	29.4	23.3	17.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.40	0.97	1.89
Incremental Delay, d2	57.2	55.2		51.7	21.0	0.6	1.6	19.8	0.5	53.8	1.5	0.3
Delay (s)	84.0	91.2		81.3	57.9	20.9	26.7	55.7	27.8	95.0	24.0	33.1
Level of Service	F	F		F	E	C	C	E	C	F	C	C
Approach Delay (s)		88.5			48.4			50.0			43.8	
Approach LOS		F			D			D			D	

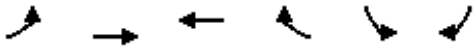
Intersection Summary			
HCM Average Control Delay	54.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	103.1%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	593	304	2783	337	300	1942
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.91	1.00	1.00	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583	5136	1583	1770	5187
Flt Permitted	0.95	1.00	1.00	1.00	0.08	1.00
Satd. Flow (perm)	3433	1583	5136	1583	146	5187
Peak-hour factor, PHF	0.96	0.96	0.99	0.99	0.98	0.98
Adj. Flow (vph)	618	317	2811	340	306	1982
RTOR Reduction (vph)	0	156	0	152	0	0
Lane Group Flow (vph)	618	161	2811	188	306	1982
Heavy Vehicles (%)	2%	2%	1%	2%	2%	0%
Turn Type		Perm		Perm	pm+pt	
Protected Phases	4		6		5	2
Permitted Phases		4		6	2	
Actuated Green, G (s)	16.0	16.0	47.0	47.0	61.0	61.0
Effective Green, g (s)	16.0	16.0	47.0	47.0	61.0	61.0
Actuated g/C Ratio	0.19	0.19	0.55	0.55	0.72	0.72
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	646	298	2840	875	296	3722
v/s Ratio Prot	c0.18		0.55		c0.12	0.38
v/s Ratio Perm		0.10		0.12	c0.62	
v/c Ratio	0.96	0.54	0.99	0.21	1.03	0.53
Uniform Delay, d1	34.2	31.2	18.8	9.6	28.3	5.5
Progression Factor	1.00	1.00	0.94	0.01	1.15	0.47
Incremental Delay, d2	24.9	2.0	3.2	0.1	41.1	0.2
Delay (s)	59.0	33.2	20.8	0.1	73.6	2.8
Level of Service	E	C	C	A	E	A
Approach Delay (s)	50.3		18.6			12.2
Approach LOS	D		B			B

Intersection Summary			
HCM Average Control Delay	21.0	HCM Level of Service	C
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	97.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	23	474	574	19	117	109
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.93	0.93
Hourly flow rate (vph)	24	494	598	20	126	117
Pedestrians		4	4		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	620				1155	614
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	620				1155	614
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				41	76
cM capacity (veh/h)	969				213	493

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	518	618	243
Volume Left	24	0	126
Volume Right	0	20	117
cSH	969	1700	293
Volume to Capacity	0.02	0.36	0.83
Queue Length 95th (ft)	2	0	173
Control Delay (s)	0.7	0.0	56.5
Lane LOS	A		F
Approach Delay (s)	0.7	0.0	56.5
Approach LOS			F

Intersection Summary			
Average Delay		10.2	
Intersection Capacity Utilization		63.7%	ICU Level of Service B
Analysis Period (min)		15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	156	69	84	355	5	20	1	9	12	4	4
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.70	0.70	0.70	0.71	0.71	0.71
Hourly flow rate (vph)	1	173	77	91	386	5	29	1	13	17	6	6

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	251	477	5	43	28
Volume Left (vph)	1	91	0	29	17
Volume Right (vph)	77	0	5	13	6
Hadj (s)	-0.14	0.12	-0.70	0.02	0.00
Departure Headway (s)	4.6	5.0	4.2	5.7	5.7
Degree Utilization, x	0.32	0.67	0.01	0.07	0.04
Capacity (veh/h)	754	704	835	544	542
Control Delay (s)	9.9	16.3	6.0	9.1	9.0
Approach Delay (s)	9.9	16.2		9.1	9.0
Approach LOS	A	C		A	A

Intersection Summary				
Delay	13.6			
HCM Level of Service	B			
Intersection Capacity Utilization	49.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	351	1400	0	0	1819
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.96	0.99	0.92	0.92	0.99
Hourly flow rate (vph)	0	366	1414	0	0	1837
Pedestrians	1					4
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			111			125
pX, platoon unblocked	0.86	0.86			0.86	
vC, conflicting volume	2028	476			1415	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1638	0			929	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	61			100	
cM capacity (veh/h)	79	936			632	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	366	471	471	471	612	612	612
Volume Left	0	0	0	0	0	0	0
Volume Right	366	0	0	0	0	0	0
cSH	936	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.39	0.28	0.28	0.28	0.36	0.36	0.36
Queue Length 95th (ft)	47	0	0	0	0	0	0
Control Delay (s)	11.3	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	11.3	0.0			0.0		
Approach LOS	B						

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	55.9%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	33	1378	8	86	997	44	4	0	40	239	0	181
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.97	0.97	0.97	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	35	1451	8	89	1028	45	4	0	44	266	0	201
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					450							
pX, platoon unblocked												
vC, conflicting volume	1073			1459			2417	2775	729	2044	2734	514
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1073			1459			2417	2775	729	2044	2734	514
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			81			47	100	88	0	100	60
cM capacity (veh/h)	645			459			8	14	365	23	15	506

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	35	967	492	89	514	514	45	49	467
Volume Left	35	0	0	89	0	0	0	4	266
Volume Right	0	0	8	0	0	0	45	44	201
cSH	645	1700	1700	459	1700	1700	1700	75	40
Volume to Capacity	0.05	0.57	0.29	0.19	0.30	0.30	0.03	0.66	11.71
Queue Length 95th (ft)	4	0	0	18	0	0	0	74	Err
Control Delay (s)	10.9	0.0	0.0	14.7	0.0	0.0	0.0	118.1	Err
Lane LOS	B			B				F	F
Approach Delay (s)	0.3			1.1				118.1	Err
Approach LOS								F	F

Intersection Summary				
Average Delay	1473.8			
Intersection Capacity Utilization	84.1%	ICU Level of Service		E
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1377	14	101	1077	8	37
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.97	0.97	0.92	0.92
Hourly flow rate (vph)	1449	15	104	1110	9	40
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				758		
pX, platoon unblocked						
vC, conflicting volume			1464		2775	1457
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1464		2775	1457
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			77		47	75
cM capacity (veh/h)			461		16	159

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	1464	104	1110	49
Volume Left	0	104	0	9
Volume Right	15	0	0	40
cSH	1700	461	1700	62
Volume to Capacity	0.86	0.23	0.65	0.79
Queue Length 95th (ft)	0	21	0	88
Control Delay (s)	0.0	15.1	0.0	165.6
Lane LOS		C		F
Approach Delay (s)	0.0	1.3		165.6
Approach LOS				F

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	92.3%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	WBL2	WBL	NBL	NBR	NER	NER2
Lane Configurations						
Volume (veh/h)	97	890	38	118	1228	14
Sign Control		Free	Stop		Free	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.92	0.92	0.95	0.95
Hourly flow rate (vph)	102	937	41	128	1293	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None			None	
Median storage veh)						
Upstream signal (ft)		1250				
pX, platoon unblocked						
vC, conflicting volume	1307		2434	1293		
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1307		2434	1293		
tC, single (s)	4.1		6.4	6.2		
tC, 2 stage (s)						
tF (s)	2.2		3.5	3.3		
p0 queue free %	81		0	36		
cM capacity (veh/h)	529		28	199		

Direction, Lane #	WB 1	WB 2	NB 1	NE 1	NE 2
Volume Total	102	937	170	1293	15
Volume Left	102	0	41	0	0
Volume Right	0	0	128	0	15
cSH	529	1700	80	1700	1700
Volume to Capacity	0.19	0.55	2.11	0.76	0.01
Queue Length 95th (ft)	18	0	382	0	0
Control Delay (s)	13.4	0.0	622.6	0.0	0.0
Lane LOS	B		F		
Approach Delay (s)	1.3		622.6	0.0	
Approach LOS			F		

Intersection Summary			
Average Delay	42.5		
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBR	SWL	SWR
Lane Configurations						
Volume (veh/h)	1129	10	46	107	28	899
Sign Control	Free		Stop		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.95	0.95	0.90	0.90	0.97	0.97
Hourly flow rate (vph)	1188	11	51	119	29	927
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None				None	
Median storage veh)						
Upstream signal (ft)	375					
pX, platoon unblocked						
vC, conflicting volume			2173	1188	1199	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			2173	1188	1199	
tC, single (s)			6.4	6.2	4.1	
tC, 2 stage (s)						
tF (s)			3.5	3.3	2.2	
p0 queue free %			0	48	95	
cM capacity (veh/h)			49	229	582	

Direction, Lane #	EB 1	EB 2	NB 1	SW 1	SW 2
Volume Total	1188	11	170	29	927
Volume Left	0	0	51	29	0
Volume Right	0	11	119	0	0
cSH	1700	1700	108	582	1700
Volume to Capacity	0.70	0.01	1.57	0.05	0.55
Queue Length 95th (ft)	0	0	318	4	0
Control Delay (s)	0.0	0.0	365.8	11.5	0.0
Lane LOS			F	B	
Approach Delay (s)	0.0		365.8	0.3	
Approach LOS			F		

Intersection Summary			
Average Delay	26.9		
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	SER	SER2
Lane Configurations					
Volume (veh/h)	0	110	371	768	33
Sign Control	Stop		Free	Free	
Grade	0%		0%	0%	
Peak Hour Factor	0.92	0.90	0.92	0.95	0.95
Hourly flow rate (vph)	0	122	403	808	35
Pedestrians					
Lane Width (ft)					
Walking Speed (ft/s)					
Percent Blockage					
Right turn flare (veh)					
Median type			None	None	
Median storage veh)					
Upstream signal (ft)				341	
pX, platoon unblocked					
vC, conflicting volume	1010	404			
vC1, stage 1 conf vol					
vC2, stage 2 conf vol					
vCu, unblocked vol	1010	404			
tC, single (s)	6.8	6.9			
tC, 2 stage (s)					
tF (s)	3.5	3.3			
p0 queue free %	100	79			
cM capacity (veh/h)	236	596			

Direction, Lane #	EB 1	NB 1	NB 2	SE 1	SE 2	SE 3
Volume Total	122	202	202	404	404	35
Volume Left	0	0	0	0	0	0
Volume Right	122	0	0	0	0	35
cSH	596	1700	1700	1700	1700	1700
Volume to Capacity	0.21	0.12	0.12	0.24	0.24	0.02
Queue Length 95th (ft)	19	0	0	0	0	0
Control Delay (s)	12.6	0.0	0.0	0.0	0.0	0.0
Lane LOS	B					
Approach Delay (s)	12.6	0.0		0.0		
Approach LOS	B					

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	40.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	33	0	288	5	13	40	358	261	42	786	50
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.94	0.94	0.94	0.93	0.93	0.93	0.94	0.94	0.94
Hourly flow rate (vph)	0	37	0	306	5	14	43	385	281	45	836	53
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1247	1704	445	997	1450	192	889			666		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1247	1704	445	997	1450	192	889			666		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	55	100	0	95	98	94			95		
cM capacity (veh/h)	114	81	561	119	117	817	758			920		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	37	312	14	171	257	281	45	557	332
Volume Left	0	306	0	43	0	0	45	0	0
Volume Right	0	0	14	0	0	281	0	0	53
cSH	81	119	817	758	1700	1700	920	1700	1700
Volume to Capacity	0.45	2.62	0.02	0.06	0.15	0.17	0.05	0.33	0.20
Queue Length 95th (ft)	46	705	1	5	0	0	4	0	0
Control Delay (s)	81.4	808.6	9.5	3.0	0.0	0.0	9.1	0.0	0.0
Lane LOS	F	F	A	A			A		
Approach Delay (s)	81.4	774.6		0.7			0.4		
Approach LOS	F	F							

Intersection Summary				
Average Delay	127.7			
Intersection Capacity Utilization	67.3%	ICU Level of Service		C
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	488	28	55	309	63	140	0	331	316	0	100
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.91	0.91	0.91	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	22	530	30	60	340	69	149	0	352	336	0	106
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					561							
pX, platoon unblocked												
vC, conflicting volume	409			561			1141	1104	530	1386	1065	340
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	409			561			1141	1104	530	1386	1065	340
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			94			0	100	36	0	100	85
cM capacity (veh/h)	1150			1010			142	195	549	41	205	703

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2
Volume Total	22	530	30	60	340	69	149	352	336	106
Volume Left	22	0	0	60	0	0	149	0	336	0
Volume Right	0	0	30	0	0	69	0	352	0	106
cSH	1150	1700	1700	1010	1700	1700	142	549	41	703
Volume to Capacity	0.02	0.31	0.02	0.06	0.20	0.04	1.05	0.64	8.29	0.15
Queue Length 95th (ft)	1	0	0	5	0	0	198	113	Err	13
Control Delay (s)	8.2	0.0	0.0	8.8	0.0	0.0	151.4	22.6	Err	11.0
Lane LOS	A			A			F	C	F	B
Approach Delay (s)	0.3			1.1			60.9		7598.0	
Approach LOS							F		F	

Intersection Summary				
Average Delay	1700.7			
Intersection Capacity Utilization	73.7%	ICU Level of Service		D
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	20	44	13	19	7	48	1052	7	1	1528	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.93			0.97			1.00			1.00	
Flt Protected		0.99			0.98			1.00			1.00	
Satd. Flow (prot)		1736			1815			3564			3604	
Flt Permitted		0.88			0.89			0.82			0.95	
Satd. Flow (perm)		1558			1651			2926			3440	
Peak-hour factor, PHF	0.94	0.94	0.94	0.82	0.82	0.82	0.91	0.91	0.91	0.98	0.98	0.98
Adj. Flow (vph)	28	21	47	16	23	9	53	1156	8	1	1559	16
RTOR Reduction (vph)	0	43	0	0	8	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	53	0	0	40	0	0	1216	0	0	1575	0
Confl. Peds. (#/hr)	2		2	3		3	4		4	1		1
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		5.4			5.4			46.6			46.6	
Effective Green, g (s)		5.4			5.4			46.6			46.6	
Actuated g/C Ratio		0.09			0.09			0.78			0.78	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		140			149			2273			2672	
v/s Ratio Prot												
v/s Ratio Perm		c0.03			0.02			0.42			c0.46	
v/c Ratio		0.38			0.27			0.54			0.59	
Uniform Delay, d1		25.7			25.5			2.6			2.8	
Progression Factor		1.00			0.95			0.43			1.00	
Incremental Delay, d2		1.7			0.9			0.8			1.0	
Delay (s)		27.4			25.2			1.9			3.7	
Level of Service		C			C			A			A	
Approach Delay (s)		27.4			25.2			1.9			3.7	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	4.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	8	4	13	1131	810	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			1.00	0.95	
Frpb, ped/bikes	1.00			1.00	1.00	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.96			1.00	1.00	
Flt Protected	0.97			1.00	1.00	
Satd. Flow (prot)	1747			1880	3556	
Flt Permitted	0.97			0.99	1.00	
Satd. Flow (perm)	1747			1863	3556	
Peak-hour factor, PHF	0.75	0.75	0.98	0.98	0.95	0.95
Adj. Flow (vph)	11	5	13	1154	853	28
RTOR Reduction (vph)	5	0	0	0	3	0
Lane Group Flow (vph)	11	0	0	1167	878	0
Confl. Peds. (#/hr)	2	2	2			2
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	0.4			51.6	51.6	
Effective Green, g (s)	0.4			51.6	51.6	
Actuated g/C Ratio	0.01			0.86	0.86	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	12			1602	3058	
v/s Ratio Prot	c0.01				0.25	
v/s Ratio Perm				c0.63		
v/c Ratio	0.92			0.73	0.29	
Uniform Delay, d1	29.8			1.6	0.8	
Progression Factor	1.37			0.48	1.00	
Incremental Delay, d2	201.8			1.7	0.2	
Delay (s)	242.5			2.5	1.0	
Level of Service	F			A	A	
Approach Delay (s)	242.5			2.5	1.0	
Approach LOS	F			A	A	

Intersection Summary			
HCM Average Control Delay	3.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	1127	1106	0	1590	801	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	1.00		0.95	0.97	
Frpb, ped/bikes	1.00	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		1.00	0.95	
Satd. Flow (prot)	3574	1561		3574	3502	
Flt Permitted	1.00	1.00		1.00	0.95	
Satd. Flow (perm)	3574	1561		3574	3502	
Peak-hour factor, PHF	0.98	0.98	0.92	0.96	0.95	0.92
Adj. Flow (vph)	1150	1129	0	1656	843	0
RTOR Reduction (vph)	0	447	0	0	0	0
Lane Group Flow (vph)	1150	682	0	1656	843	0
Confl. Peds. (#/hr)		2	1		1	
Heavy Vehicles (%)	1%	1%	2%	1%	0%	2%
Turn Type		Perm				
Protected Phases	2			6	8	
Permitted Phases		2				
Actuated Green, G (s)	35.4	35.4		35.4	16.6	
Effective Green, g (s)	35.4	35.4		35.4	16.6	
Actuated g/C Ratio	0.59	0.59		0.59	0.28	
Clearance Time (s)	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	2109	921		2109	969	
v/s Ratio Prot	0.32			c0.46	c0.24	
v/s Ratio Perm		0.44				
v/c Ratio	0.55	0.74		0.79	0.87	
Uniform Delay, d1	7.4	9.0		9.4	20.7	
Progression Factor	1.00	1.00		0.72	0.99	
Incremental Delay, d2	1.0	5.3		2.6	8.3	
Delay (s)	8.5	14.3		9.3	28.7	
Level of Service	A	B		A	C	
Approach Delay (s)	11.3			9.3	28.7	
Approach LOS	B			A	C	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	105	2072	200	394	1685	514	375	821	470	320	587	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.91	1.00	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	0.95	1.00	0.99	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1805	5136	1576	3467	3610	1579	3502	5136	1531	3433	4884	
Flt Permitted	0.08	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	152	5136	1576	3467	3610	1579	3502	5136	1531	3433	4884	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.96	0.96	0.96
Adj. Flow (vph)	106	2093	202	398	1702	519	379	829	475	333	611	126
RTOR Reduction (vph)	0	0	90	0	0	172	0	0	112	0	28	0
Lane Group Flow (vph)	106	2093	112	398	1702	347	379	829	363	333	709	0
Confl. Peds. (#/hr)	1		1	1		1	19		19	12		12
Heavy Vehicles (%)	0%	1%	1%	1%	0%	1%	0%	1%	0%	2%	3%	2%
Turn Type	pm+pt		Perm	Prot		Perm	Prot		Perm	Prot		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6		2	2			4			
Actuated Green, G (s)	54.0	50.0	50.0	13.0	59.0	59.0	14.7	25.0	25.0	11.0	21.3	
Effective Green, g (s)	54.0	50.0	50.0	13.0	59.0	59.0	14.7	25.0	25.0	11.0	21.3	
Actuated g/C Ratio	0.47	0.43	0.43	0.11	0.51	0.51	0.13	0.22	0.22	0.10	0.19	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	129	2233	685	392	1852	810	448	1117	333	328	905	
v/s Ratio Prot	0.03	0.41		c0.11	c0.47		0.11	0.16		c0.10	0.15	
v/s Ratio Perm	0.36		0.07			0.22			c0.24			
v/c Ratio	0.82	0.94	0.16	1.02	0.92	0.43	0.85	0.74	1.09	1.02	0.78	
Uniform Delay, d1	26.0	31.0	19.8	51.0	25.8	17.5	49.0	42.0	45.0	52.0	44.7	
Progression Factor	1.00	1.00	1.00	1.22	0.43	0.48	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	32.6	9.1	0.5	43.5	7.0	1.3	13.7	4.5	75.7	53.6	4.5	
Delay (s)	58.5	40.1	20.3	105.5	18.1	9.6	62.8	46.5	120.7	105.6	49.1	
Level of Service	E	D	C	F	B	A	E	D	F	F	D	
Approach Delay (s)		39.3			29.7			71.1			66.7	
Approach LOS		D			C			E			E	

Intersection Summary			
HCM Average Control Delay	46.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	2760	16	66	2452	26	206
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.91		1.00	0.91	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	5080		1805	5085	1805	1556
Flt Permitted	1.00		0.05	1.00	0.95	1.00
Satd. Flow (perm)	5080		93	5085	1805	1556
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.64	0.64
Adj. Flow (vph)	2788	16	67	2477	41	322
RTOR Reduction (vph)	1	0	0	0	0	4
Lane Group Flow (vph)	2803	0	67	2477	41	318
Confl. Peds. (#/hr)		6	1		7	7
Heavy Vehicles (%)	2%	0%	0%	2%	0%	1%
Turn Type			Perm			Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	82.0		82.0	82.0	25.0	25.0
Effective Green, g (s)	82.0		82.0	82.0	25.0	25.0
Actuated g/C Ratio	0.71		0.71	0.71	0.22	0.22
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3622		66	3626	392	338
v/s Ratio Prot	0.55			0.49	0.02	
v/s Ratio Perm			c0.72			c0.20
v/c Ratio	0.77		1.02	0.68	0.10	0.94
Uniform Delay, d1	10.6		16.5	9.2	36.0	44.3
Progression Factor	0.31		1.41	1.47	1.00	1.00
Incremental Delay, d2	0.3		95.4	0.4	0.5	36.0
Delay (s)	3.5		118.7	13.9	36.6	80.3
Level of Service	A		F	B	D	F
Approach Delay (s)	3.5			16.7	75.4	
Approach LOS	A			B	E	

Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	2663	518	728	2079	0	0	0	0	1316	336	430
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.81	1.00	0.97	0.91					0.91	0.86	0.91
Frpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.99	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		7619	1599	3433	5187					1643	3136	1446
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		7619	1599	3433	5187					1643	3136	1446
Peak-hour factor, PHF	0.92	0.99	0.99	0.99	0.99	0.99	0.92	0.92	0.92	0.99	0.99	0.99
Adj. Flow (vph)	0	2690	523	735	2100	0	0	0	0	1329	339	434
RTOR Reduction (vph)	0	0	141	0	0	0	0	0	0	0	3	4
Lane Group Flow (vph)	0	2690	382	735	2100	0	0	0	0	664	1044	387
Confl. Peds. (#/hr)										2		2
Heavy Vehicles (%)	0%	1%	1%	2%	0%	0%	0%	0%	0%	0%	1%	0%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		38.0	38.0	23.0	65.0					42.0	42.0	42.0
Effective Green, g (s)		38.0	38.0	23.0	65.0					42.0	42.0	42.0
Actuated g/C Ratio		0.33	0.33	0.20	0.57					0.37	0.37	0.37
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2518	528	687	2932					600	1145	528
v/s Ratio Prot		c0.35		c0.21	0.40					c0.40	0.33	
v/s Ratio Perm			0.24									0.27
v/c Ratio		1.07	0.72	1.07	0.72					1.11	1.10dl	0.73
Uniform Delay, d1		38.5	33.9	46.0	18.3					36.5	34.7	31.6
Progression Factor		0.73	0.54	0.42	0.60					1.00	1.00	1.00
Incremental Delay, d2		36.6	5.3	42.6	0.6					69.5	10.9	5.2
Delay (s)		64.5	23.5	62.0	11.5					106.0	45.7	36.9
Level of Service		E	C	E	B					F	D	D
Approach Delay (s)		57.8			24.6			0.0			63.1	
Approach LOS		E			C			A			E	

Intersection Summary			
HCM Average Control Delay	47.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	99.3%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	281	865	1119	2656	0	0	2454	1140	0	0	550
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.91			0.81	0.88			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1787	2814	3502	5187			7695	2814			1644
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1787	2814	3502	5187			7695	2814			1644
Peak-hour factor, PHF	0.97	0.97	0.99	0.99	0.92	0.92	0.99	0.99	0.92	0.92	0.95
Adj. Flow (vph)	290	892	1130	2683	0	0	2479	1152	0	0	579
RTOR Reduction (vph)	0	5	0	0	0	0	0	153	0	0	345
Lane Group Flow (vph)	290	887	1130	2683	0	0	2479	999	0	0	234
Confl. Peds. (#/hr)	1	1	1								1
Heavy Vehicles (%)	1%	1%	0%	0%	2%	2%	0%	1%	2%	2%	0%
Turn Type		Prot	Prot					Perm			Over
Protected Phases	4	4	1	6			2				1
Permitted Phases								2			
Actuated Green, G (s)	31.0	31.0	34.0	76.0			38.0	38.0			34.0
Effective Green, g (s)	31.0	31.0	34.0	76.0			38.0	38.0			34.0
Actuated g/C Ratio	0.27	0.27	0.30	0.66			0.33	0.33			0.30
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	482	759	1035	3428			2543	930			486
v/s Ratio Prot	0.16	c0.32	c0.32	0.52			0.32				0.14
v/s Ratio Perm								c0.35			
v/c Ratio	0.60	1.17	1.09	0.78			0.97	1.07			0.48
Uniform Delay, d1	36.6	42.0	40.5	13.7			38.0	38.5			33.3
Progression Factor	1.00	1.00	1.27	0.39			0.97	0.96			1.00
Incremental Delay, d2	2.1	89.7	43.1	0.2			5.0	39.4			0.8
Delay (s)	38.7	131.7	94.3	5.5			41.9	76.5			34.0
Level of Service	D	F	F	A			D	E			C
Approach Delay (s)	108.9			31.8			52.9		34.0		
Approach LOS	F			C			D		C		

Intersection Summary			
HCM Average Control Delay	50.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	953	41	328	42	52	149	73	2727	951	192	2301	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1743	1518	1805	1900	1592	1770	5136	2744	1805	5183	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.08	1.00	1.00	0.07	1.00	
Satd. Flow (perm)	3433	1743	1518	1805	1900	1592	143	5136	2744	136	5183	
Peak-hour factor, PHF	0.97	0.97	0.97	0.87	0.87	0.87	0.98	0.98	0.98	0.97	0.97	0.97
Adj. Flow (vph)	982	42	338	48	60	171	74	2783	970	198	2372	11
RTOR Reduction (vph)	0	0	168	0	0	48	0	0	283	0	1	0
Lane Group Flow (vph)	982	42	170	48	60	123	74	2783	687	198	2382	0
Confl. Peds. (#/hr)	5		5	1		1	5		5	4		4
Heavy Vehicles (%)	2%	9%	4%	0%	0%	0%	2%	1%	1%	0%	0%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		pm+ov	pm+pt		
Protected Phases	4	4		8	8		1	6	4	5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	26.0	26.0	26.0	12.9	12.9	12.9	56.2	52.0	78.0	64.0	55.9	
Effective Green, g (s)	26.0	26.0	26.0	12.9	12.9	12.9	56.2	52.0	78.0	64.0	55.9	
Actuated g/C Ratio	0.23	0.23	0.23	0.11	0.11	0.11	0.49	0.45	0.68	0.56	0.49	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	776	394	343	202	213	179	129	2322	1957	193	2519	
v/s Ratio Prot	c0.29	0.02		0.03	0.03		0.02	c0.54	0.08	c0.07	0.46	
v/s Ratio Perm			0.11			c0.08	0.26		0.17	0.50		
v/c Ratio	1.27	0.11	0.50	0.24	0.28	0.69	0.57	1.20	0.35	1.03	0.95	
Uniform Delay, d1	44.5	35.3	38.8	46.6	46.8	49.1	26.0	31.5	7.8	33.9	28.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.87	0.81	1.71	1.16	0.73	
Incremental Delay, d2	129.6	0.1	1.1	0.6	0.7	10.5	3.3	91.8	0.1	64.1	7.5	
Delay (s)	174.1	35.4	39.9	47.2	47.5	59.6	25.9	117.2	13.4	103.5	27.9	
Level of Service	F	D	D	D	D	E	C	F	B	F	C	
Approach Delay (s)		136.6			54.8			89.1			33.7	
Approach LOS		F			D			F			C	

Intersection Summary			
HCM Average Control Delay	78.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	107.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

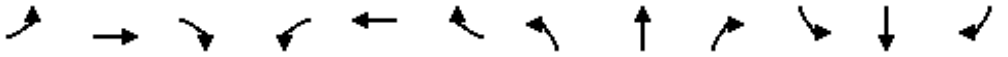
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	672	663	158	131	301	238	511	1770	762	202	1114	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	0.88	0.97	0.95	0.88	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	3415		1805	1900	2733	3502	3610	2814	1787	3558	
Flt Permitted	0.95	1.00		0.22	1.00	1.00	0.95	1.00	1.00	0.10	1.00	
Satd. Flow (perm)	3467	3415		422	1900	2733	3502	3610	2814	183	3558	
Peak-hour factor, PHF	0.98	0.98	0.98	0.96	0.96	0.96	0.99	0.99	0.99	0.98	0.98	0.98
Adj. Flow (vph)	686	677	161	136	314	248	516	1788	770	206	1137	37
RTOR Reduction (vph)	0	18	0	0	0	14	0	0	282	0	2	0
Lane Group Flow (vph)	686	820	0	136	314	234	516	1788	488	206	1172	0
Confl. Peds. (#/hr)	2		2									
Heavy Vehicles (%)	1%	1%	8%	0%	0%	4%	0%	0%	1%	1%	1%	0%
Turn Type	Prot			pm+pt		pm+ov	Prot		Perm	pm+pt		
Protected Phases	7	4		3	8	1	1	6		5	2	
Permitted Phases				8		8			6	2		
Actuated Green, G (s)	21.0	31.0		26.0	18.0	36.8	18.8	53.0	53.0	48.2	41.2	
Effective Green, g (s)	21.0	31.0		26.0	18.0	36.8	18.8	53.0	53.0	48.2	41.2	
Actuated g/C Ratio	0.18	0.27		0.23	0.16	0.32	0.16	0.46	0.46	0.42	0.36	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	633	921		192	297	970	573	1664	1297	174	1275	
v/s Ratio Prot	c0.20	0.24		0.05	c0.17	0.04	0.15	c0.50		c0.07	0.33	
v/s Ratio Perm				0.11		0.05			0.17	c0.42		
v/c Ratio	1.08	0.89		0.71	1.06	0.24	0.90	1.07	0.38	1.18	0.92	
Uniform Delay, d1	47.0	40.4		37.8	48.5	28.8	47.2	31.0	20.2	28.8	35.3	
Progression Factor	0.84	0.86		0.96	0.79	0.88	1.06	0.56	0.51	0.75	1.18	
Incremental Delay, d2	57.1	8.8		10.5	66.0	0.1	7.9	38.8	0.3	120.1	10.2	
Delay (s)	96.3	43.4		46.6	104.4	25.4	58.0	56.2	10.7	141.8	51.9	
Level of Service	F	D		D	F	C	E	E	B	F	D	
Approach Delay (s)		67.2			65.1			45.1			65.3	
Approach LOS		E			E			D			E	

Intersection Summary			
HCM Average Control Delay	56.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	108.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	273	741	249	150	370	155	231	878	87	133	1314	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1805	3497		1805	3536	
Flt Permitted	0.23	1.00	1.00	0.22	1.00	1.00	0.07	1.00		0.21	1.00	
Satd. Flow (perm)	431	3574	1599	420	3574	1599	132	3497		398	3536	
Peak-hour factor, PHF	0.99	0.99	0.99	0.96	0.96	0.96	0.98	0.98	0.98	0.95	0.95	0.95
Adj. Flow (vph)	276	748	252	156	385	161	236	896	89	140	1383	115
RTOR Reduction (vph)	0	0	132	0	0	136	0	6	0	0	5	0
Lane Group Flow (vph)	276	748	120	156	385	25	236	979	0	140	1493	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	2%	0%	0%	1%	0%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Actuated Green, G (s)	36.9	25.9	25.9	24.9	17.9	17.9	70.1	57.7		61.9	53.5	
Effective Green, g (s)	36.9	25.9	25.9	24.9	17.9	17.9	70.1	57.7		61.9	53.5	
Actuated g/C Ratio	0.32	0.23	0.23	0.22	0.16	0.16	0.61	0.50		0.54	0.47	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	315	805	360	174	556	249	264	1755		317	1645	
v/s Ratio Prot	c0.11	c0.21		0.05	0.11		c0.10	0.28		0.03	0.42	
v/s Ratio Perm	0.17		0.08	0.14		0.02	c0.45			0.21		
v/c Ratio	0.88	0.93	0.33	0.90	0.69	0.10	0.89	0.56		0.44	0.91	
Uniform Delay, d1	32.3	43.7	37.3	41.6	45.9	41.6	34.9	19.8		14.6	28.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		0.39	0.27	
Incremental Delay, d2	22.7	16.8	0.6	39.8	3.7	0.2	29.3	1.3		0.1	0.9	
Delay (s)	55.0	60.4	37.9	81.4	49.7	41.8	64.2	21.1		5.8	8.5	
Level of Service	E	E	D	F	D	D	E	C		A	A	
Approach Delay (s)		54.8			54.9			29.4			8.3	
Approach LOS		D			D			C			A	

Intersection Summary			
HCM Average Control Delay	32.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	94.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	263	694	307	109	213	131	118	897	94	528	1687	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	0.88	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1787	3444		1787	1881	2707	1752	3519		1805	3610	1572
Flt Permitted	0.31	1.00		0.18	1.00	1.00	0.12	1.00		0.11	1.00	1.00
Satd. Flow (perm)	592	3444		339	1881	2707	217	3519		200	3610	1572
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.98	0.98	0.98	0.99	0.99	0.99
Adj. Flow (vph)	271	715	316	112	220	135	120	915	96	533	1704	229
RTOR Reduction (vph)	0	43	0	0	0	52	0	7	0	0	0	88
Lane Group Flow (vph)	271	988	0	112	220	83	120	1004	0	533	1704	141
Confl. Peds. (#/hr)							1		1	7		7
Heavy Vehicles (%)	1%	0%	0%	1%	1%	5%	3%	1%	1%	0%	0%	0%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt			pm+pt		Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	40.0	32.0		26.2	22.2	51.2	39.0	34.0		67.0	58.0	58.0
Effective Green, g (s)	40.0	32.0		26.2	22.2	51.2	39.0	34.0		67.0	58.0	58.0
Actuated g/C Ratio	0.35	0.28		0.23	0.19	0.45	0.34	0.30		0.58	0.50	0.50
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	349	958		128	363	1299	140	1040		521	1821	793
v/s Ratio Prot	c0.09	c0.29		0.03	0.12	0.02	0.04	0.29		c0.26	0.47	
v/s Ratio Perm	0.18			0.17		0.01	0.25			c0.34		0.09
v/c Ratio	0.78	1.03		0.88	0.61	0.06	0.86	0.97		1.02	0.94	0.18
Uniform Delay, d1	29.8	41.5		43.0	42.4	18.2	33.0	39.9		34.8	26.8	15.5
Progression Factor	0.46	0.32		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.5	29.1		43.8	2.9	0.0	37.2	20.7		45.4	10.5	0.5
Delay (s)	19.3	42.4		86.8	45.3	18.2	70.2	60.6		80.2	37.3	16.0
Level of Service	B	D		F	D	B	E	E		F	D	B
Approach Delay (s)		37.6			47.4			61.6			44.6	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM Average Control Delay	46.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	105.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	420	722	311	1209	939	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1570	1719	3574	3574	1583
Flt Permitted	0.95	1.00	0.13	1.00	1.00	1.00
Satd. Flow (perm)	1770	1570	228	3574	3574	1583
Peak-hour factor, PHF	0.96	0.96	0.97	0.97	0.96	0.96
Adj. Flow (vph)	438	752	321	1246	978	219
RTOR Reduction (vph)	0	265	0	0	0	133
Lane Group Flow (vph)	438	487	321	1246	978	86
Confl. Peds. (#/hr)	3	3				
Heavy Vehicles (%)	2%	1%	5%	1%	1%	2%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	39.0	39.0	68.0	68.0	45.1	45.1
Effective Green, g (s)	39.0	39.0	68.0	68.0	45.1	45.1
Actuated g/C Ratio	0.34	0.34	0.59	0.59	0.39	0.39
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	600	532	380	2113	1402	621
v/s Ratio Prot	0.25		c0.14	0.35	0.27	
v/s Ratio Perm		c0.31	c0.36			0.05
v/c Ratio	0.73	0.92	0.84	0.59	0.70	0.14
Uniform Delay, d1	33.4	36.4	26.5	14.7	29.2	22.5
Progression Factor	0.88	0.83	1.00	1.00	0.60	0.86
Incremental Delay, d2	3.1	15.1	15.7	1.2	1.9	0.3
Delay (s)	32.5	45.5	42.1	16.0	19.5	19.6
Level of Service	C	D	D	B	B	B
Approach Delay (s)	40.7			21.3	19.6	
Approach LOS	D			C	B	

Intersection Summary			
HCM Average Control Delay	26.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	119	432	100	247	428	109	136	1021	193	149	1252	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.98	1.00	1.00	0.96	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1670	1802		1805	1881	1572	1787	3574	1468	1769	3539	1576
Flt Permitted	0.24	1.00		0.20	1.00	1.00	0.17	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	429	1802		388	1881	1572	316	3574	1468	303	3539	1576
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.99	0.99	0.99	0.96	0.96	0.96
Adj. Flow (vph)	121	441	102	252	437	111	137	1031	195	155	1304	114
RTOR Reduction (vph)	0	12	0	0	0	78	0	0	125	0	0	72
Lane Group Flow (vph)	121	531	0	252	437	33	137	1031	70	155	1304	42
Confl. Peds. (#/hr)	7		7	4		4	8		8	2		2
Heavy Vehicles (%)	8%	2%	1%	0%	1%	1%	1%	1%	6%	2%	2%	0%
Turn Type	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)	21.0	17.8		24.6	19.6	19.6	27.0	23.8	23.8	28.6	24.6	24.6
Effective Green, g (s)	21.0	17.8		24.6	19.6	19.6	27.0	23.8	23.8	28.6	24.6	24.6
Actuated g/C Ratio	0.32	0.27		0.37	0.29	0.29	0.41	0.36	0.36	0.43	0.37	0.37
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	195	482		250	554	463	199	1277	525	218	1307	582
v/s Ratio Prot	0.03	0.29		c0.08	0.23		0.03	0.29		c0.04	c0.37	
v/s Ratio Perm	0.17			c0.30		0.02	0.25		0.05	0.26		0.03
v/c Ratio	0.62	1.10		1.01	0.79	0.07	0.69	0.81	0.13	0.71	1.00	0.07
Uniform Delay, d1	18.3	24.4		20.4	21.6	16.9	16.3	19.3	14.4	14.1	21.0	13.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.0	71.3		59.0	7.3	0.1	9.5	5.6	0.5	10.4	24.4	0.2
Delay (s)	24.3	95.7		79.4	28.9	17.0	25.8	24.9	15.0	24.5	45.3	13.8
Level of Service	C	F		E	C	B	C	C	B	C	D	B
Approach Delay (s)		82.7			43.2			23.6			41.0	
Approach LOS		F			D			C			D	

Intersection Summary			
HCM Average Control Delay	42.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	66.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	0	1	439	7	911	0	1023	342	614	1238	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00			1.00	0.88		0.95	1.00	0.97	1.00	
Frpb, ped/bikes		0.99			1.00	0.96		1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00			0.97	1.00		1.00	1.00	1.00	1.00	
Frt		0.93			1.00	0.85		1.00	0.85	1.00	1.00	
Flt Protected		0.98			0.95	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1715			1744	2705		3574	1571	3400	1863	
Flt Permitted		0.90			0.73	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1584			1331	2705		3574	1571	3400	1863	
Peak-hour factor, PHF	0.50	0.50	0.50	0.98	0.98	0.98	0.93	0.93	0.93	0.99	0.99	0.99
Adj. Flow (vph)	2	0	2	448	7	930	0	1100	368	620	1251	0
RTOR Reduction (vph)	0	1	0	0	0	16	0	0	232	0	0	0
Lane Group Flow (vph)	0	3	0	0	455	914	0	1100	136	620	1251	0
Confl. Peds. (#/hr)	2		2	15		15	3		3	7		7
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	1%	1%	3%	2%	0%
Turn Type	Perm			Perm		pm+ov	Perm		Perm	Prot		
Protected Phases		4			8	1		2		1	6	
Permitted Phases	4			8		8	2		2			
Actuated Green, G (s)		30.0			30.0	51.0		37.0	37.0	21.0	62.0	
Effective Green, g (s)		30.0			30.0	51.0		37.0	37.0	21.0	62.0	
Actuated g/C Ratio		0.30			0.30	0.51		0.37	0.37	0.21	0.62	
Clearance Time (s)		4.0			4.0	4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		475			399	1488		1322	581	714	1155	
v/s Ratio Prot						0.13		0.31		0.18	c0.67	
v/s Ratio Perm		0.00			c0.34	0.21			0.09			
v/c Ratio		0.01			1.14	0.61		0.83	0.23	0.87	1.08	
Uniform Delay, d1		24.5			35.0	17.5		28.7	21.7	38.2	19.0	
Progression Factor		1.00			1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0			89.1	0.8		6.2	0.9	10.9	52.0	
Delay (s)		24.5			124.1	18.2		34.9	22.7	49.1	71.0	
Level of Service		C			F	B		C	C	D	E	
Approach Delay (s)		24.5			53.0			31.8			63.7	
Approach LOS		C			D			C			E	

Intersection Summary			
HCM Average Control Delay	50.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	134.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	701	97	28	83	61	33	41	834	57	80	1266	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00			1.00	0.98	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99			1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	0.97			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1698	1713			1847	1420	1805	3501		1752	3574	
Flt Permitted	0.95	0.97			0.97	1.00	0.15	1.00		0.20	1.00	
Satd. Flow (perm)	1698	1713			1847	1420	281	3501		360	3574	
Peak-hour factor, PHF	0.95	0.95	0.95	0.85	0.85	0.85	0.96	0.96	0.96	0.98	0.98	0.92
Adj. Flow (vph)	738	102	29	98	72	39	43	869	59	82	1292	0
RTOR Reduction (vph)	0	4	0	0	0	35	0	8	0	0	0	0
Lane Group Flow (vph)	435	430	0	0	170	4	43	920	0	82	1292	0
Confl. Peds. (#/hr)	2		2	2		2	1		1			
Heavy Vehicles (%)	1%	0%	0%	0%	0%	11%	0%	2%	2%	3%	1%	0%
Turn Type	Split			Split		Perm	Perm			Perm		
Protected Phases	4	4		8	8			2			6	
Permitted Phases						8	2			6		
Actuated Green, G (s)	18.3	18.3			7.0	7.0	27.0	27.0		27.0	27.0	
Effective Green, g (s)	18.3	18.3			7.0	7.0	27.0	27.0		27.0	27.0	
Actuated g/C Ratio	0.28	0.28			0.11	0.11	0.42	0.42		0.42	0.42	
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	483	488			201	155	118	1470		151	1501	
v/s Ratio Prot	c0.26	0.25			c0.09			0.26			c0.36	
v/s Ratio Perm						0.00	0.15			0.23		
v/c Ratio	0.90	0.88			0.85	0.03	0.36	0.63		0.54	0.86	
Uniform Delay, d1	22.1	22.0			28.1	25.6	12.8	14.7		14.0	16.9	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	19.7	16.8			26.5	0.1	8.5	2.0		13.3	6.7	
Delay (s)	41.8	38.7			54.6	25.7	21.3	16.7		27.3	23.6	
Level of Service	D	D			D	C	C	B		C	C	
Approach Delay (s)		40.3			49.2			16.9			23.9	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM Average Control Delay	27.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	64.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	188	409	287	278	796	384
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.95	1.00	0.18	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	326	1863	1863	1583
Peak-hour factor, PHF	0.95	0.95	0.92	0.92	0.96	0.96
Adj. Flow (vph)	198	431	312	302	829	400
RTOR Reduction (vph)	0	287	0	0	0	144
Lane Group Flow (vph)	198	144	312	302	829	256
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	18.1	18.1	88.9	88.9	70.8	70.8
Effective Green, g (s)	18.1	18.1	88.9	88.9	70.8	70.8
Actuated g/C Ratio	0.16	0.16	0.77	0.77	0.62	0.62
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	279	249	429	1440	1147	975
v/s Ratio Prot	c0.11		c0.09	0.16	0.45	
v/s Ratio Perm		0.09	c0.47			0.16
v/c Ratio	0.71	0.58	0.73	0.21	0.72	0.26
Uniform Delay, d1	46.0	44.9	15.4	3.5	15.3	10.1
Progression Factor	1.00	1.00	1.20	0.81	1.00	1.00
Incremental Delay, d2	8.0	3.2	5.3	0.3	4.0	0.7
Delay (s)	54.0	48.1	23.8	3.1	19.3	10.8
Level of Service	D	D	C	A	B	B
Approach Delay (s)	50.0			13.6	16.5	
Approach LOS	D			B	B	

Intersection Summary			
HCM Average Control Delay	24.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	402	933	975	218	842	197	1086	867	244	128	1025	268
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.88	1.00	0.91		0.97	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3467	3610	2842	1787	4974		3467	3610	1583	1769	3574	1589
Flt Permitted	0.95	1.00	1.00	0.19	1.00		0.95	1.00	1.00	0.32	1.00	1.00
Satd. Flow (perm)	3467	3610	2842	358	4974		3467	3610	1583	604	3574	1589
Peak-hour factor, PHF	0.99	0.99	0.99	0.98	0.98	0.98	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	406	942	985	222	859	201	1097	876	246	129	1035	271
RTOR Reduction (vph)	0	0	13	0	35	0	0	0	130	0	0	116
Lane Group Flow (vph)	406	942	972	222	1025	0	1097	876	116	129	1035	155
Confl. Peds. (#/hr)				2		2				2		2
Heavy Vehicles (%)	1%	0%	0%	1%	1%	1%	1%	0%	2%	2%	1%	0%
Turn Type	Prot		pm+ov	pm+pt			Prot		Perm	pm+pt		Perm
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases			4	8					2	6		6
Actuated Green, G (s)	12.0	26.0	58.0	28.0	21.0		32.0	52.0	52.0	38.0	29.0	29.0
Effective Green, g (s)	12.0	26.0	58.0	28.0	21.0		32.0	52.0	52.0	38.0	29.0	29.0
Actuated g/C Ratio	0.11	0.24	0.53	0.25	0.19		0.29	0.47	0.47	0.35	0.26	0.26
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	378	853	1602	182	950		1009	1707	748	304	942	419
v/s Ratio Prot	c0.12	c0.26	0.18	0.08	0.21		c0.32	0.24		0.03	c0.29	
v/s Ratio Perm			0.17	0.23					0.07	0.11		0.10
v/c Ratio	1.07	1.10	0.61	1.22	1.08		1.09	0.51	0.16	0.42	1.10	0.37
Uniform Delay, d1	49.0	42.0	18.1	38.9	44.5		39.0	20.2	16.5	25.4	40.5	33.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.07	1.15	3.04	1.00	1.00	1.00
Incremental Delay, d2	67.5	63.5	0.7	138.2	53.0		53.4	1.0	0.4	4.3	60.1	2.5
Delay (s)	116.5	105.5	18.7	177.1	97.5		95.1	24.2	50.5	29.7	100.6	35.6
Level of Service	F	F	B	F	F		F	C	D	C	F	D
Approach Delay (s)		70.8			111.3			62.1			82.0	
Approach LOS		E			F			E			F	

Intersection Summary			
HCM Average Control Delay	77.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	110.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	657	824	1241	0	0	2125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	0.97	0.91	0.91			0.86
Frpb, ped/bikes	0.99	0.98	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00			1.00
Frt	0.95	0.85	1.00			1.00
Flt Protected	0.97	1.00	1.00			1.00
Satd. Flow (prot)	3330	1432	5136			6471
Flt Permitted	0.97	1.00	1.00			1.00
Satd. Flow (perm)	3330	1432	5136			6471
Peak-hour factor, PHF	0.98	0.98	0.98	0.92	0.92	0.99
Adj. Flow (vph)	670	841	1266	0	0	2146
RTOR Reduction (vph)	12	12	0	0	0	0
Lane Group Flow (vph)	1020	467	1266	0	0	2146
Confl. Peds. (#/hr)	2	2				
Heavy Vehicles (%)	1%	1%	1%	2%	2%	1%
Turn Type		Perm				
Protected Phases	8		2			6
Permitted Phases		8				
Actuated Green, G (s)	45.6	45.6	56.4			56.4
Effective Green, g (s)	45.6	45.6	56.4			56.4
Actuated g/C Ratio	0.41	0.41	0.51			0.51
Clearance Time (s)	4.0	4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0			3.0
Lane Grp Cap (vph)	1380	594	2633			3318
v/s Ratio Prot	0.31		0.25			c0.33
v/s Ratio Perm		c0.33				
v/c Ratio	0.74	0.79	0.48			0.65
Uniform Delay, d1	27.2	28.0	17.3			19.5
Progression Factor	1.00	1.00	1.57			0.67
Incremental Delay, d2	2.1	6.8	0.5			0.4
Delay (s)	29.3	34.7	27.7			13.5
Level of Service	C	C	C			B
Approach Delay (s)	31.0		27.7			13.5
Approach LOS	C		C			B

Intersection Summary			
HCM Average Control Delay	22.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	1230	551	914	1866
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0
Lane Util. Factor			0.91		0.97	0.91
Frpb, ped/bikes			0.99		1.00	1.00
Flpb, ped/bikes			1.00		1.00	1.00
Frt			0.95		1.00	1.00
Flt Protected			1.00		0.95	1.00
Satd. Flow (prot)			4870		3467	5136
Flt Permitted			1.00		0.95	1.00
Satd. Flow (perm)			4870		3467	5136
Peak-hour factor, PHF	0.92	0.92	0.99	0.99	0.99	0.99
Adj. Flow (vph)	0	0	1242	557	923	1885
RTOR Reduction (vph)	0	0	21	0	0	0
Lane Group Flow (vph)	0	0	1778	0	923	1885
Confl. Peds. (#/hr)				3		
Heavy Vehicles (%)	2%	2%	1%	1%	1%	1%
Turn Type					Prot	
Protected Phases			2		1	6
Permitted Phases						
Actuated Green, G (s)			65.5		36.5	110.0
Effective Green, g (s)			65.5		36.5	110.0
Actuated g/C Ratio			0.60		0.33	1.00
Clearance Time (s)			4.0		4.0	4.0
Vehicle Extension (s)			3.0		3.0	3.0
Lane Grp Cap (vph)			2900		1150	5136
v/s Ratio Prot			c0.37		c0.27	0.37
v/s Ratio Perm						
v/c Ratio			0.61		0.80	0.37
Uniform Delay, d1			14.2		33.5	0.0
Progression Factor			0.25		0.94	1.00
Incremental Delay, d2			0.9		3.2	0.2
Delay (s)			4.4		34.6	0.2
Level of Service			A		C	A
Approach Delay (s)	0.0		4.4			11.5
Approach LOS	A		A			B

Intersection Summary			
HCM Average Control Delay	8.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	1400	88	185	1635	103	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	1.00	
Flt Protected	1.00		0.95	1.00	0.95	
Satd. Flow (prot)	5080		1787	5136	1736	
Flt Permitted	1.00		0.13	1.00	0.95	
Satd. Flow (perm)	5080		243	5136	1736	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.98	0.92
Adj. Flow (vph)	1414	89	187	1652	105	0
RTOR Reduction (vph)	4	0	0	0	0	0
Lane Group Flow (vph)	1499	0	187	1652	105	0
Confl. Peds. (#/hr)		1			4	
Heavy Vehicles (%)	1%	2%	1%	1%	4%	2%
Turn Type			pm+pt			
Protected Phases	2		1	6	8	
Permitted Phases			6			
Actuated Green, G (s)	74.3		90.0	90.0	12.0	
Effective Green, g (s)	74.3		90.0	90.0	12.0	
Actuated g/C Ratio	0.68		0.82	0.82	0.11	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	3431		363	4202	189	
v/s Ratio Prot	0.30		c0.05	0.32	c0.06	
v/s Ratio Perm			c0.37			
v/c Ratio	0.44		0.52	0.39	0.56	
Uniform Delay, d1	8.2		5.0	2.7	46.5	
Progression Factor	0.21		3.02	0.44	1.00	
Incremental Delay, d2	0.1		1.2	0.3	3.5	
Delay (s)	1.9		16.1	1.4	50.0	
Level of Service	A		B	A	D	
Approach Delay (s)	1.9			2.9	50.0	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	3.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	4	2	365	6	122	0	1448	329	214	1528	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00	1.00		0.95		1.00	0.95	
Frpb, ped/bikes		0.99			1.00	0.98		1.00		1.00	1.00	
Flpb, ped/bikes		1.00			0.99	1.00		1.00		1.00	1.00	
Frt		0.96			1.00	0.85		0.97		1.00	1.00	
Flt Protected		0.99			0.95	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		1808			1776	1564		3464		1787	3574	
Flt Permitted		0.96			0.71	1.00		1.00		0.07	1.00	
Satd. Flow (perm)		1749			1330	1564		3464		128	3574	
Peak-hour factor, PHF	0.31	0.31	0.31	0.90	0.90	0.90	0.97	0.97	0.97	0.98	0.98	0.98
Adj. Flow (vph)	3	13	6	406	7	136	0	1493	339	218	1559	0
RTOR Reduction (vph)	0	4	0	0	0	95	0	18	0	0	0	0
Lane Group Flow (vph)	0	18	0	0	413	41	0	1814	0	218	1559	0
Confl. Peds. (#/hr)	4		4	5		5	2		2	6		6
Heavy Vehicles (%)	0%	0%	0%	1%	0%	1%	0%	1%	0%	1%	1%	0%
Turn Type	Perm			Perm		Perm	Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		33.0			33.0	33.0		55.0		69.0	69.0	
Effective Green, g (s)		33.0			33.0	33.0		55.0		69.0	69.0	
Actuated g/C Ratio		0.30			0.30	0.30		0.50		0.63	0.63	
Clearance Time (s)		4.0			4.0	4.0		4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)		525			399	469		1732		231	2242	
v/s Ratio Prot								c0.52		c0.09	0.44	
v/s Ratio Perm		0.01			c0.31	0.03				0.51		
v/c Ratio		0.03			1.04	0.09		1.05		0.94	0.70	
Uniform Delay, d1		27.2			38.5	27.7		27.5		34.7	13.6	
Progression Factor		1.00			1.00	1.00		0.70		1.42	0.67	
Incremental Delay, d2		0.0			54.4	0.1		31.0		41.9	1.7	
Delay (s)		27.3			92.9	27.8		50.2		91.0	10.7	
Level of Service		C			F	C		D		F	B	
Approach Delay (s)		27.3			76.8			50.2			20.6	
Approach LOS		C			E			D			C	

Intersection Summary			
HCM Average Control Delay	41.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	130.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	299	435	77	225	387	403	68	866	152	465	1067	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	1803		1805	1863	1615	1752	3574	1615	1805	3574	1568
Flt Permitted	0.17	1.00		0.14	1.00	1.00	0.21	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	318	1803		262	1863	1615	389	3574	1615	238	3574	1568
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.96	0.96	0.96	0.99	0.99	0.99
Adj. Flow (vph)	308	448	79	232	399	415	71	902	158	470	1078	247
RTOR Reduction (vph)	0	6	0	0	0	17	0	0	118	0	0	141
Lane Group Flow (vph)	308	521	0	232	399	398	71	902	40	470	1078	106
Heavy Vehicles (%)	1%	3%	3%	0%	2%	0%	3%	1%	0%	0%	1%	3%
Turn Type	pm+pt			pm+pt		pm+ov	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)	44.0	31.0		40.0	29.0	53.0	32.8	28.0	28.0	56.0	47.2	47.2
Effective Green, g (s)	44.0	31.0		40.0	29.0	53.0	32.8	28.0	28.0	56.0	47.2	47.2
Actuated g/C Ratio	0.40	0.28		0.36	0.26	0.48	0.30	0.25	0.25	0.51	0.43	0.43
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	301	508		250	491	837	175	910	411	463	1534	673
v/s Ratio Prot	c0.12	c0.29		0.09	0.21	0.10	0.02	0.25		c0.22	0.30	
v/s Ratio Perm	0.29			0.25		0.14	0.10		0.02	c0.30		0.07
v/c Ratio	1.02	1.03		0.93	0.81	0.48	0.41	0.99	0.10	1.02	0.70	0.16
Uniform Delay, d1	27.2	39.5		28.8	38.0	19.2	28.4	40.9	31.3	32.9	25.7	19.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.26	1.07	2.37
Incremental Delay, d2	58.0	46.7		37.5	9.9	0.4	1.5	27.8	0.5	36.9	1.7	0.3
Delay (s)	85.2	86.2		66.3	47.9	19.6	29.9	68.7	31.8	78.2	29.2	45.9
Level of Service	F	F		E	D	B	C	E	C	E	C	D
Approach Delay (s)		85.9			40.7			61.1			44.3	
Approach LOS		F			D			E			D	

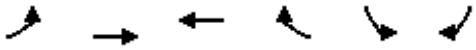
Intersection Summary			
HCM Average Control Delay	54.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	103.1%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	593	304	2783	337	300	1942
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.91	1.00	1.00	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583	5136	1583	1770	5187
Flt Permitted	0.95	1.00	1.00	1.00	0.06	1.00
Satd. Flow (perm)	3433	1583	5136	1583	105	5187
Peak-hour factor, PHF	0.96	0.96	0.99	0.99	0.98	0.98
Adj. Flow (vph)	618	317	2811	340	306	1982
RTOR Reduction (vph)	0	164	0	114	0	0
Lane Group Flow (vph)	618	153	2811	226	306	1982
Heavy Vehicles (%)	2%	2%	1%	2%	2%	0%
Turn Type		Perm		Perm	pm+pt	
Protected Phases	4		6		5	2
Permitted Phases		4		6	2	
Actuated Green, G (s)	21.0	21.0	67.0	67.0	86.0	86.0
Effective Green, g (s)	21.0	21.0	67.0	67.0	86.0	86.0
Actuated g/C Ratio	0.18	0.18	0.58	0.58	0.75	0.75
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	627	289	2992	922	296	3879
v/s Ratio Prot	c0.18		0.55		c0.14	0.38
v/s Ratio Perm		0.10		0.14	c0.64	
v/c Ratio	0.99	0.53	0.94	0.25	1.03	0.51
Uniform Delay, d1	46.8	42.5	22.1	11.7	41.3	5.9
Progression Factor	1.00	1.00	0.39	0.00	1.01	0.74
Incremental Delay, d2	32.0	1.7	0.8	0.1	48.1	0.3
Delay (s)	78.9	44.3	9.4	0.1	89.8	4.6
Level of Service	E	D	A	A	F	A
Approach Delay (s)	67.1		8.4			16.0
Approach LOS	E		A			B

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	97.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	23	474	574	19	117	109
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.93	0.93
Hourly flow rate (vph)	24	494	598	20	126	117
Pedestrians		4	4		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	620				1155	614
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	620				1155	614
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				41	76
cM capacity (veh/h)	969				213	493

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	518	618	243
Volume Left	24	0	126
Volume Right	0	20	117
cSH	969	1700	293
Volume to Capacity	0.02	0.36	0.83
Queue Length 95th (ft)	2	0	173
Control Delay (s)	0.7	0.0	56.5
Lane LOS	A		F
Approach Delay (s)	0.7	0.0	56.5
Approach LOS			F

Intersection Summary			
Average Delay	10.2		
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	156	69	84	355	5	20	1	9	12	4	4
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.70	0.70	0.70	0.71	0.71	0.71
Hourly flow rate (vph)	1	173	77	91	386	5	29	1	13	17	6	6

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total (vph)	251	477	5	43	28
Volume Left (vph)	1	91	0	29	17
Volume Right (vph)	77	0	5	13	6
Hadj (s)	-0.14	0.12	-0.70	0.02	0.00
Departure Headway (s)	4.6	5.0	4.2	5.7	5.7
Degree Utilization, x	0.32	0.67	0.01	0.07	0.04
Capacity (veh/h)	754	704	835	544	542
Control Delay (s)	9.9	16.3	6.0	9.1	9.0
Approach Delay (s)	9.9	16.2		9.1	9.0
Approach LOS	A	C		A	A

Intersection Summary				
Delay	13.6			
HCM Level of Service	B			
Intersection Capacity Utilization	49.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	351	1400	0	0	1819
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.96	0.99	0.92	0.92	0.99
Hourly flow rate (vph)	0	366	1414	0	0	1837
Pedestrians	1					4
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			111			125
pX, platoon unblocked	0.87	0.87			0.87	
vC, conflicting volume	2028	476			1415	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1646	0			939	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	61			100	
cM capacity (veh/h)	78	938			628	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	366	471	471	471	612	612	612
Volume Left	0	0	0	0	0	0	0
Volume Right	366	0	0	0	0	0	0
cSH	938	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.39	0.28	0.28	0.28	0.36	0.36	0.36
Queue Length 95th (ft)	47	0	0	0	0	0	0
Control Delay (s)	11.3	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	11.3	0.0			0.0		
Approach LOS	B						

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	55.9%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	1879	389	787	1853	0	0	0	0	815	173	509
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.91	0.86	0.91
Frpb, ped/bikes		1.00	0.98	1.00	1.00					1.00	1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.97	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		6536	1590	3467	3574					1643	3049	1432
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		6536	1590	3467	3574					1643	3049	1432
Peak-hour factor, PHF	0.92	0.99	0.99	0.99	0.99	0.92	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	0	1898	393	795	1872	0	0	0	0	867	184	541
RTOR Reduction (vph)	0	0	182	0	0	0	0	0	0	0	13	13
Lane Group Flow (vph)	0	1898	211	795	1872	0	0	0	0	433	784	349
Confl. Peds. (#/hr)	2		2							2		2
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	1%	1%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		33.0	33.0	25.0	62.0					30.0	30.0	30.0
Effective Green, g (s)		33.0	33.0	25.0	62.0					30.0	30.0	30.0
Actuated g/C Ratio		0.33	0.33	0.25	0.62					0.30	0.30	0.30
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2157	525	867	2216					493	915	430
v/s Ratio Prot		0.29		0.23	c0.52					c0.26	0.26	
v/s Ratio Perm			0.13									0.24
v/c Ratio		0.88	0.40	0.92	0.84					0.88	0.86	0.81
Uniform Delay, d1		31.6	25.9	36.5	15.2					33.3	33.0	32.4
Progression Factor		1.00	1.00	0.39	0.72					1.00	1.00	1.00
Incremental Delay, d2		5.5	2.3	9.5	2.6					16.1	8.0	11.2
Delay (s)		37.2	28.2	23.6	13.5					49.4	41.0	43.6
Level of Service		D	C	C	B					D	D	D
Approach Delay (s)		35.6			16.5			0.0			43.8	
Approach LOS		D			B			A			D	

Intersection Summary			
HCM Average Control Delay	29.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	107	883	455	2223	0	0	2244	756	0	0	346
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.95			0.86	0.88			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1805	2814	3502	3574			6471	2787			1644
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1805	2814	3502	3574			6471	2787			1644
Peak-hour factor, PHF	0.97	0.97	0.99	0.99	0.92	0.92	0.99	0.99	0.92	0.92	0.96
Adj. Flow (vph)	110	910	460	2245	0	0	2267	764	0	0	360
RTOR Reduction (vph)	0	9	0	0	0	0	0	440	0	0	304
Lane Group Flow (vph)	110	901	460	2245	0	0	2267	324	0	0	56
Confl. Peds. (#/hr)	1	1	3		3						
Heavy Vehicles (%)	0%	1%	0%	1%	2%	2%	1%	2%	2%	2%	0%
Turn Type		Prot	Prot					Perm			Over
Protected Phases	4	4	1	6			2				1
Permitted Phases								2			
Actuated Green, G (s)	30.0	30.0	15.6	62.0			42.4	42.4			15.6
Effective Green, g (s)	30.0	30.0	15.6	62.0			42.4	42.4			15.6
Actuated g/C Ratio	0.30	0.30	0.16	0.62			0.42	0.42			0.16
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	542	844	546	2216			2744	1182			256
v/s Ratio Prot	0.06	c0.32	0.13	c0.63			0.35				0.03
v/s Ratio Perm								0.12			
v/c Ratio	0.20	1.07	0.84	1.01			0.83	0.27			0.22
Uniform Delay, d1	26.1	35.0	41.0	19.0			25.5	18.8			36.9
Progression Factor	1.00	1.00	1.21	0.85			0.53	0.34			1.00
Incremental Delay, d2	0.2	50.6	5.5	16.2			1.1	0.2			0.4
Delay (s)	26.3	85.6	55.3	32.3			14.7	6.7			37.3
Level of Service	C	F	E	C			B	A			D
Approach Delay (s)	79.2			36.2			12.7		37.3		
Approach LOS	E			D			B		D		

Intersection Summary			
HCM Average Control Delay	32.4	HCM Level of Service	C
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	99.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	488	22	280	68	20	101	112	2367	620	215	2474	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1900	1531	1805	1900	1615	1805	5187	2781	1770	5131	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.09	1.00	1.00	0.08	1.00	
Satd. Flow (perm)	3433	1900	1531	1805	1900	1615	165	5187	2781	149	5131	
Peak-hour factor, PHF	0.96	0.96	0.96	0.95	0.95	0.95	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	508	23	292	72	21	106	113	2391	626	217	2499	15
RTOR Reduction (vph)	0	0	181	0	0	63	0	0	238	0	0	0
Lane Group Flow (vph)	508	23	111	72	21	43	113	2391	388	217	2514	0
Confl. Peds. (#/hr)	1		1				3		3			
Heavy Vehicles (%)	2%	0%	4%	0%	0%	0%	0%	0%	0%	2%	1%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		pm+ov	pm+pt		
Protected Phases	4	4		8	8		1	6	4	5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	16.0	16.0	16.0	9.3	9.3	9.3	54.0	46.0	62.0	62.7	50.7	
Effective Green, g (s)	16.0	16.0	16.0	9.3	9.3	9.3	54.0	46.0	62.0	62.7	50.7	
Actuated g/C Ratio	0.16	0.16	0.16	0.09	0.09	0.09	0.54	0.46	0.62	0.63	0.51	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	549	304	245	168	177	150	220	2386	1835	299	2601	
v/s Ratio Prot	c0.15	0.01		c0.04	0.01		0.04	0.46	0.03	c0.09	c0.49	
v/s Ratio Perm			0.07			0.03	0.24		0.11	0.36		
v/c Ratio	0.93	0.08	0.45	0.43	0.12	0.28	0.51	1.00	0.21	0.73	0.97	
Uniform Delay, d1	41.4	35.7	38.0	42.8	41.6	42.2	20.7	27.0	8.3	26.6	23.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.02	0.99	0.56	1.41	0.44	
Incremental Delay, d2	21.6	0.1	1.3	1.8	0.3	1.0	0.2	6.0	0.0	6.4	9.2	
Delay (s)	63.0	35.8	39.4	44.6	41.9	43.3	21.4	32.7	4.6	43.9	19.8	
Level of Service	E	D	D	D	D	D	C	C	A	D	B	
Approach Delay (s)		53.9			43.6			26.7			21.7	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	720	419	179	105	415	464	404	1219	600	230	1282	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	3390		1787	1881	1599	1805	3574	1552	1787	3557	
Flt Permitted	0.95	1.00		0.39	1.00	1.00	0.11	1.00	1.00	0.12	1.00	
Satd. Flow (perm)	3467	3390		727	1881	1599	200	3574	1552	221	3557	
Peak-hour factor, PHF	0.95	0.95	0.95	0.96	0.96	0.96	0.98	0.98	0.98	0.97	0.97	0.97
Adj. Flow (vph)	758	441	188	109	432	483	412	1244	612	237	1322	43
RTOR Reduction (vph)	0	47	0	0	0	172	0	0	250	0	2	0
Lane Group Flow (vph)	758	582	0	109	432	311	412	1244	362	237	1363	0
Confl. Peds. (#/hr)							3		3	2		2
Heavy Vehicles (%)	1%	2%	1%	1%	1%	1%	0%	1%	1%	1%	1%	0%
Turn Type	Prot			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases				8		8	6		6	2		
Actuated Green, G (s)	18.0	28.1		23.9	17.0	17.0	53.0	41.0	41.0	42.0	34.0	
Effective Green, g (s)	18.0	28.1		23.9	17.0	17.0	53.0	41.0	41.0	42.0	34.0	
Actuated g/C Ratio	0.18	0.28		0.24	0.17	0.17	0.53	0.41	0.41	0.42	0.34	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	624	953		247	320	272	347	1465	636	218	1209	
v/s Ratio Prot	c0.22	0.17		0.03	c0.23		c0.18	0.35		0.09	0.38	
v/s Ratio Perm				0.08		0.19	c0.45		0.23	0.37		
v/c Ratio	1.21	0.61		0.44	1.35	1.14	1.19	0.85	0.57	1.09	1.13	
Uniform Delay, d1	41.0	31.2		30.8	41.5	41.5	30.1	26.7	22.7	23.1	33.0	
Progression Factor	0.92	0.90		1.00	1.00	1.00	1.15	0.48	0.96	1.00	1.00	
Incremental Delay, d2	107.3	0.8		1.3	176.8	99.2	95.3	2.5	1.4	86.1	68.4	
Delay (s)	145.0	28.8		32.1	218.3	140.7	130.1	15.4	23.2	109.3	101.4	
Level of Service	F	C		C	F	F	F	B	C	F	F	
Approach Delay (s)		92.3			161.9			38.4			102.5	
Approach LOS		F			F			D			F	

Intersection Summary			
HCM Average Control Delay	86.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	114.9%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	223	290	255	974	903	216
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1787	1562	1770	1881	1881	1599
Flt Permitted	0.95	1.00	0.09	1.00	1.00	1.00
Satd. Flow (perm)	1787	1562	169	1881	1881	1599
Peak-hour factor, PHF	0.93	0.93	0.94	0.94	0.95	0.95
Adj. Flow (vph)	240	312	271	1036	951	227
RTOR Reduction (vph)	0	253	0	0	0	91
Lane Group Flow (vph)	240	59	271	1036	951	136
Confl. Peds. (#/hr)	1	1	1			
Heavy Vehicles (%)	1%	1%	2%	1%	1%	1%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	16.1	16.1	75.9	75.9	59.6	59.6
Effective Green, g (s)	16.1	16.1	75.9	75.9	59.6	59.6
Actuated g/C Ratio	0.16	0.16	0.76	0.76	0.60	0.60
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	288	251	325	1428	1121	953
v/s Ratio Prot	c0.13		c0.10	0.55	0.51	
v/s Ratio Perm		0.04	c0.53			0.09
v/c Ratio	0.83	0.23	0.83	0.73	0.85	0.14
Uniform Delay, d1	40.6	36.6	27.3	6.5	16.5	8.9
Progression Factor	0.89	0.93	1.00	1.00	0.50	0.42
Incremental Delay, d2	18.0	0.5	16.6	3.2	2.2	0.1
Delay (s)	54.4	34.5	43.9	9.7	10.4	3.9
Level of Service	D	C	D	A	B	A
Approach Delay (s)	43.2			16.8	9.2	
Approach LOS	D			B	A	

Intersection Summary			
HCM Average Control Delay	18.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	84.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	134	318	91	179	380	131	165	884	163	166	817	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1797		1805	1881	1615	1718	3574	1546	1804	3610	1552
Flt Permitted	0.29	1.00		0.22	1.00	1.00	0.21	1.00	1.00	0.21	1.00	1.00
Satd. Flow (perm)	537	1797		422	1881	1615	381	3574	1546	400	3610	1552
Peak-hour factor, PHF	0.90	0.90	0.90	0.93	0.93	0.93	0.98	0.98	0.98	0.95	0.95	0.95
Adj. Flow (vph)	149	353	101	192	409	141	168	902	166	175	860	166
RTOR Reduction (vph)	0	17	0	0	0	99	0	0	114	0	0	114
Lane Group Flow (vph)	149	437	0	192	409	42	168	902	52	175	860	52
Confl. Peds. (#/hr)	2		2				7		7	5		5
Heavy Vehicles (%)	3%	1%	4%	0%	1%	0%	5%	1%	1%	0%	0%	1%
Turn Type	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)	20.4	17.2		22.0	18.0	18.0	23.0	19.0	19.0	23.0	19.0	19.0
Effective Green, g (s)	20.4	17.2		22.0	18.0	18.0	23.0	19.0	19.0	23.0	19.0	19.0
Actuated g/C Ratio	0.34	0.29		0.37	0.30	0.30	0.38	0.32	0.32	0.38	0.32	0.32
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	247	513		246	562	483	234	1128	488	246	1139	490
v/s Ratio Prot	0.03	c0.24		c0.05	0.22		c0.05	c0.25		0.05	0.24	
v/s Ratio Perm	0.17			0.23		0.03	0.23		0.03	0.22		0.03
v/c Ratio	0.60	0.85		0.78	0.73	0.09	0.72	0.80	0.11	0.71	0.76	0.11
Uniform Delay, d1	15.8	20.3		15.9	18.9	15.2	13.8	18.9	14.6	13.9	18.5	14.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.1	12.8		14.8	4.7	0.1	10.1	6.0	0.4	9.3	4.7	0.4
Delay (s)	19.9	33.1		30.7	23.6	15.3	23.9	24.8	15.0	23.2	23.2	15.0
Level of Service	B	C		C	C	B	C	C	B	C	C	B
Approach Delay (s)		29.9			23.8			23.4			22.1	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	24.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	60.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	255	263	257	258	236	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.56	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	1034	3539	3539	1583
Peak-hour factor, PHF	0.95	0.95	0.97	0.97	0.93	0.93
Adj. Flow (vph)	268	277	265	266	254	263
RTOR Reduction (vph)	0	219	0	0	0	115
Lane Group Flow (vph)	268	58	265	266	254	148
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	20.8	20.8	71.2	71.2	56.2	56.2
Effective Green, g (s)	20.8	20.8	71.2	71.2	56.2	56.2
Actuated g/C Ratio	0.21	0.21	0.71	0.71	0.56	0.56
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	368	329	817	2520	1989	890
v/s Ratio Prot	c0.15		c0.04	0.08	0.07	
v/s Ratio Perm		0.04	c0.20			0.09
v/c Ratio	0.73	0.18	0.32	0.11	0.13	0.17
Uniform Delay, d1	37.0	32.5	5.0	4.5	10.3	10.6
Progression Factor	1.00	1.00	0.58	0.50	1.00	1.00
Incremental Delay, d2	7.0	0.3	0.2	0.1	0.1	0.4
Delay (s)	44.0	32.8	3.1	2.3	10.5	11.0
Level of Service	D	C	A	A	B	B
Approach Delay (s)	38.3			2.7	10.7	
Approach LOS	D			A	B	

Intersection Summary			
HCM Average Control Delay	17.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

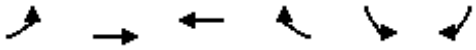
Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	1510	43	99	1326	17	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	1.00		1.00	1.00	1.00	
Flt Protected	1.00		0.95	1.00	0.95	
Satd. Flow (prot)	5157		1671	5187	1504	
Flt Permitted	1.00		0.11	1.00	0.95	
Satd. Flow (perm)	5157		193	5187	1504	
Peak-hour factor, PHF	0.97	0.97	0.95	0.95	0.83	0.92
Adj. Flow (vph)	1557	44	104	1396	20	0
RTOR Reduction (vph)	1	0	0	0	0	0
Lane Group Flow (vph)	1600	0	104	1396	20	0
Confl. Peds. (#/hr)		1			2	
Heavy Vehicles (%)	0%	4%	8%	0%	20%	2%
Turn Type			pm+pt			
Protected Phases	2		1	6	8	
Permitted Phases			6			
Actuated Green, G (s)	34.5		44.9	44.9	1.3	
Effective Green, g (s)	34.5		44.9	44.9	1.3	
Actuated g/C Ratio	0.64		0.83	0.83	0.02	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	3283		334	4297	36	
v/s Ratio Prot	c0.31		0.04	c0.27	c0.01	
v/s Ratio Perm			0.22			
v/c Ratio	0.49		0.31	0.32	0.56	
Uniform Delay, d1	5.2		2.3	1.1	26.2	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.1		0.5	0.0	17.3	
Delay (s)	5.3		2.8	1.1	43.4	
Level of Service	A		A	A	D	
Approach Delay (s)	5.3			1.3	43.4	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	3.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	54.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	646	381	2240	515	474	2075
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.91	1.00	1.00	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583	5187	1583	1770	5136
Flt Permitted	0.95	1.00	1.00	1.00	0.08	1.00
Satd. Flow (perm)	3433	1583	5187	1583	152	5136
Peak-hour factor, PHF	0.98	0.98	0.99	0.99	0.98	0.98
Adj. Flow (vph)	659	389	2263	520	484	2117
RTOR Reduction (vph)	0	296	0	249	0	0
Lane Group Flow (vph)	659	93	2263	271	484	2117
Heavy Vehicles (%)	2%	2%	0%	2%	2%	1%
Turn Type		Perm		Perm	pm+pt	
Protected Phases	4		6		5	2
Permitted Phases		4		6	2	
Actuated Green, G (s)	20.0	20.0	45.0	45.0	72.0	72.0
Effective Green, g (s)	20.0	20.0	45.0	45.0	72.0	72.0
Actuated g/C Ratio	0.20	0.20	0.45	0.45	0.72	0.72
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	687	317	2334	712	482	3698
v/s Ratio Prot	c0.19		0.44		c0.23	0.41
v/s Ratio Perm		0.06		0.17	c0.49	
v/c Ratio	0.96	0.29	0.97	0.38	1.00	0.57
Uniform Delay, d1	39.6	34.0	26.8	18.3	32.1	6.7
Progression Factor	1.00	1.00	0.22	0.00	0.97	0.88
Incremental Delay, d2	24.4	0.5	5.9	0.5	13.3	0.1
Delay (s)	64.0	34.5	11.8	0.6	44.4	5.9
Level of Service	E	C	B	A	D	A
Approach Delay (s)	53.0		9.7			13.1
Approach LOS	D		A			B

Intersection Summary			
HCM Average Control Delay	18.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	98.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	6	445	490	27	33	31
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.98	0.98	0.88	0.88
Hourly flow rate (vph)	6	464	500	28	38	35
Pedestrians		4	4			
Lane Width (ft)		12.0	12.0			
Walking Speed (ft/s)		4.0	4.0			
Percent Blockage		0	0			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	528				994	518
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	528				994	518
tC, single (s)	5.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	3.1				3.5	3.3
p0 queue free %	99				86	94
cM capacity (veh/h)	684				266	552

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	470	528	73
Volume Left	6	0	38
Volume Right	0	28	35
cSH	684	1700	355
Volume to Capacity	0.01	0.31	0.20
Queue Length 95th (ft)	1	0	19
Control Delay (s)	0.3	0.0	17.7
Lane LOS	A		C
Approach Delay (s)	0.3	0.0	17.7
Approach LOS			C

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	135	25	21	113	1	33	1	23	4	1	5
Peak Hour Factor	0.93	0.93	0.93	0.90	0.90	0.90	0.82	0.82	0.82	0.67	0.67	0.67
Hourly flow rate (vph)	1	145	27	23	126	1	40	1	28	6	1	7

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	173	150	70	15
Volume Left (vph)	1	23	40	6
Volume Right (vph)	27	1	28	7
Hadj (s)	0.01	0.11	-0.09	-0.22
Departure Headway (s)	4.3	4.4	4.6	4.5
Degree Utilization, x	0.21	0.18	0.09	0.02
Capacity (veh/h)	820	788	735	730
Control Delay (s)	8.4	8.4	8.0	7.6
Approach Delay (s)	8.4	8.4	8.0	7.6
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.3			
HCM Level of Service	A			
Intersection Capacity Utilization	31.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	113	1510	0	0	1425
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.88	0.97	0.92	0.92	0.95
Hourly flow rate (vph)	0	128	1557	0	0	1500
Pedestrians	1					2
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			111			
pX, platoon unblocked	0.84	0.84			0.84	
vC, conflicting volume	2058	522			1558	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1583	0			986	
tC, single (s)	6.8	7.0			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	100	86			100	
cM capacity (veh/h)	83	895			583	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	128	519	519	519	500	500	500
Volume Left	0	0	0	0	0	0	0
Volume Right	128	0	0	0	0	0	0
cSH	895	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.14	0.31	0.31	0.31	0.29	0.29	0.29
Queue Length 95th (ft)	13	0	0	0	0	0	0
Control Delay (s)	9.7	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A						
Approach Delay (s)	9.7	0.0			0.0		
Approach LOS	A						

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	18	473	7	124	520	24	5	0	51	22	0	16
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	19	498	7	131	547	25	6	0	57	24	0	18
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					450							
pX, platoon unblocked												
vC, conflicting volume	573			505			1092	1373	253	1152	1352	274
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	573			505			1092	1373	253	1152	1352	274
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			88			96	100	92	81	100	98
cM capacity (veh/h)	996			1056			147	124	747	126	128	724

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	19	332	173	131	274	274	25	62	42
Volume Left	19	0	0	131	0	0	0	6	24
Volume Right	0	0	7	0	0	0	25	57	18
cSH	996	1700	1700	1056	1700	1700	1700	548	193
Volume to Capacity	0.02	0.20	0.10	0.12	0.16	0.16	0.01	0.11	0.22
Queue Length 95th (ft)	1	0	0	11	0	0	0	10	20
Control Delay (s)	8.7	0.0	0.0	8.9	0.0	0.0	0.0	12.4	28.8
Lane LOS	A			A				B	D
Approach Delay (s)	0.3			1.7				12.4	28.8
Approach LOS								B	D

Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	38.8%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	440	11	131	406	10	52
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.97	0.97	0.92	0.92
Hourly flow rate (vph)	463	12	135	419	11	57
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				889		
pX, platoon unblocked						
vC, conflicting volume			475		1158	469
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			475		1158	469
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			88		94	90
cM capacity (veh/h)			1087		190	594

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	475	135	419	57
Volume Left	0	135	0	0
Volume Right	12	0	0	57
cSH	1700	1087	1700	594
Volume to Capacity	0.28	0.12	0.25	0.10
Queue Length 95th (ft)	0	11	0	8
Control Delay (s)	0.0	8.8	0.0	11.7
Lane LOS		A		B
Approach Delay (s)	0.0	2.1		Err
Approach LOS				F

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		

Movement	WBL2	WBL	NBL	NBR	NER	NER2
Lane Configurations						
Volume (veh/h)	87	313	8	55	338	10
Sign Control		Free	Stop		Free	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.92	0.92	0.95	0.95
Hourly flow rate (vph)	92	329	9	60	356	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None			None	
Median storage veh)						
Upstream signal (ft)		1258				
pX, platoon unblocked						
vC, conflicting volume	366		868	356		
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	366		868	356		
tC, single (s)	4.1		6.4	6.2		
tC, 2 stage (s)						
tF (s)	2.2		3.5	3.3		
p0 queue free %	92		97	91		
cM capacity (veh/h)	1192		298	688		

Direction, Lane #	WB 1	WB 2	NB 1	NE 1	NE 2
Volume Total	92	329	68	356	11
Volume Left	92	0	9	0	0
Volume Right	0	0	60	0	11
cSH	1192	1700	590	1700	1700
Volume to Capacity	0.08	0.19	0.12	0.21	0.01
Queue Length 95th (ft)	6	0	10	0	0
Control Delay (s)	8.3	0.0	11.9	0.0	0.0
Lane LOS	A		B		
Approach Delay (s)	1.8		11.9	0.0	
Approach LOS			B		

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	27.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBR	SWL	SWR
Lane Configurations						
Volume (veh/h)	325	6	6	11	15	305
Sign Control	Free		Stop		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.95	0.95	0.90	0.90	0.95	0.95
Hourly flow rate (vph)	342	6	7	12	16	321
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None				None	
Median storage veh)						
Upstream signal (ft)	434					
pX, platoon unblocked						
vC, conflicting volume			695	342	348	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			695	342	348	
tC, single (s)			6.4	6.2	4.1	
tC, 2 stage (s)						
tF (s)			3.5	3.3	2.2	
p0 queue free %			98	98	99	
cM capacity (veh/h)			403	700	1210	

Direction, Lane #	EB 1	EB 2	NB 1	SW 1	SW 2
Volume Total	342	6	19	16	321
Volume Left	0	0	7	16	0
Volume Right	0	6	12	0	0
cSH	1700	1700	556	1210	1700
Volume to Capacity	0.20	0.00	0.03	0.01	0.19
Queue Length 95th (ft)	0	0	3	1	0
Control Delay (s)	0.0	0.0	11.7	8.0	0.0
Lane LOS			B	A	
Approach Delay (s)	0.0		11.7	0.4	
Approach LOS			B		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	34.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	SER	SER2
Lane Configurations					
Volume (veh/h)	0	10	244	217	19
Sign Control	Stop		Free	Free	
Grade	0%		0%	0%	
Peak Hour Factor	0.92	0.80	0.92	0.90	0.90
Hourly flow rate (vph)	0	12	265	241	21
Pedestrians					
Lane Width (ft)					
Walking Speed (ft/s)					
Percent Blockage					
Right turn flare (veh)					
Median type			None	None	
Median storage veh)					
Upstream signal (ft)				346	
pX, platoon unblocked					
vC, conflicting volume	374	121			
vC1, stage 1 conf vol					
vC2, stage 2 conf vol					
vCu, unblocked vol	374	121			
tC, single (s)	6.8	6.9			
tC, 2 stage (s)					
tF (s)	3.5	3.3			
p0 queue free %	100	99			
cM capacity (veh/h)	600	908			

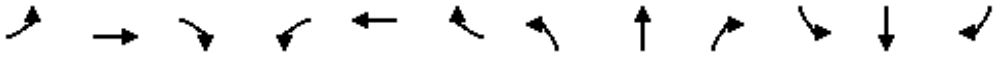
Direction, Lane #	EB 1	NB 1	NB 2	SE 1	SE 2	SE 3
Volume Total	12	133	133	121	121	21
Volume Left	0	0	0	0	0	0
Volume Right	12	0	0	0	0	21
cSH	908	1700	1700	1700	1700	1700
Volume to Capacity	0.01	0.08	0.08	0.07	0.07	0.01
Queue Length 95th (ft)	1	0	0	0	0	0
Control Delay (s)	9.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A					
Approach Delay (s)	9.0	0.0		0.0		
Approach LOS	A					

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	17.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	38	0	312	7	22	25	222	332	28	167	32
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.93	0.93	0.93	0.92	0.92	0.92
Hourly flow rate (vph)	0	42	0	339	8	24	27	239	357	30	182	35
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	461	909	108	465	570	119	216			596		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	461	909	108	465	570	119	216			596		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	84	100	16	98	97	98			97		
cM capacity (veh/h)	447	260	925	405	408	910	1351			977		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	42	347	24	106	159	357	30	121	95
Volume Left	0	339	0	27	0	0	30	0	0
Volume Right	0	0	24	0	0	357	0	0	35
cSH	260	405	910	1351	1700	1700	977	1700	1700
Volume to Capacity	0.16	0.86	0.03	0.02	0.09	0.21	0.03	0.07	0.06
Queue Length 95th (ft)	14	208	2	2	0	0	2	0	0
Control Delay (s)	21.5	48.5	9.1	2.1	0.0	0.0	8.8	0.0	0.0
Lane LOS	C	E	A	A			A		
Approach Delay (s)	21.5	45.9		0.4			1.1		
Approach LOS	C	E							

Intersection Summary				
Average Delay	14.4			
Intersection Capacity Utilization	46.8%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	154	16	32	113	37	13	0	31	30	0	9
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.88	0.88	0.88	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	13	171	18	36	128	42	16	0	39	38	0	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					515							
pX, platoon unblocked												
vC, conflicting volume	170			189			410	441	171	438	417	128
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	170			189			410	441	171	438	417	128
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			97	100	96	92	100	99
cM capacity (veh/h)	1407			1385			530	492	873	492	508	922

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2
Volume Total	13	171	18	36	128	42	16	39	38	11
Volume Left	13	0	0	36	0	0	16	0	38	0
Volume Right	0	0	18	0	0	42	0	39	0	11
cSH	1407	1700	1700	1385	1700	1700	530	873	492	922
Volume to Capacity	0.01	0.10	0.01	0.03	0.08	0.02	0.03	0.04	0.08	0.01
Queue Length 95th (ft)	1	0	0	2	0	0	2	3	6	1
Control Delay (s)	7.6	0.0	0.0	7.7	0.0	0.0	12.0	9.3	12.9	9.0
Lane LOS	A			A			B	A	B	A
Approach Delay (s)	0.5			1.3			10.1		12.0	
Approach LOS							B		B	

Intersection Summary				
Average Delay	3.0			
Intersection Capacity Utilization	24.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	1879	389	787	1853	0	0	0	0	815	173	509
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.81	1.00	0.97	0.91					0.91	0.86	0.91
Frpb, ped/bikes		1.00	0.98	1.00	1.00					1.00	1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	0.97	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		7695	1589	3467	5136					1643	3049	1432
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		7695	1589	3467	5136					1643	3049	1432
Peak-hour factor, PHF	0.92	0.99	0.99	0.99	0.99	0.92	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	0	1898	393	795	1872	0	0	0	0	867	184	541
RTOR Reduction (vph)	0	0	217	0	0	0	0	0	0	0	9	9
Lane Group Flow (vph)	0	1898	176	795	1872	0	0	0	0	433	788	353
Confl. Peds. (#/hr)	2		2							2		2
Heavy Vehicles (%)	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	1%	1%
Turn Type			Perm	Prot						Prot		Perm
Protected Phases		6		5	2					3	8	
Permitted Phases			6									8
Actuated Green, G (s)		32.0	32.0	29.0	65.0					37.0	37.0	37.0
Effective Green, g (s)		32.0	32.0	29.0	65.0					37.0	37.0	37.0
Actuated g/C Ratio		0.29	0.29	0.26	0.59					0.34	0.34	0.34
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2239	462	914	3035					553	1026	482
v/s Ratio Prot		c0.25		c0.23	0.36					c0.26	0.26	
v/s Ratio Perm			0.11									0.25
v/c Ratio		0.85	0.38	0.87	0.62					0.78	0.77	0.73
Uniform Delay, d1		36.7	31.1	38.7	14.5					32.9	32.7	32.1
Progression Factor		1.00	1.00	0.36	0.43					1.00	1.00	1.00
Incremental Delay, d2		4.2	2.4	6.1	0.6					7.1	3.5	5.7
Delay (s)		40.9	33.5	20.1	6.9					40.0	36.2	37.8
Level of Service		D	C	C	A					D	D	D
Approach Delay (s)		39.6			10.8			0.0			37.6	
Approach LOS		D			B			A			D	

Intersection Summary			
HCM Average Control Delay	27.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR	SWR2
Lane Configurations											
Volume (vph)	107	883	455	2223	0	0	2244	756	0	0	346
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Lane Util. Factor	1.00	0.88	0.97	0.91			0.81	0.88			1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85	1.00	1.00			1.00	0.85			0.86
Flt Protected	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (prot)	1805	2814	3502	5136			7619	2787			1644
Flt Permitted	0.95	1.00	0.95	1.00			1.00	1.00			1.00
Satd. Flow (perm)	1805	2814	3502	5136			7619	2787			1644
Peak-hour factor, PHF	0.97	0.97	0.99	0.99	0.92	0.92	0.99	0.99	0.92	0.92	0.96
Adj. Flow (vph)	110	910	460	2245	0	0	2267	764	0	0	360
RTOR Reduction (vph)	0	5	0	0	0	0	0	474	0	0	304
Lane Group Flow (vph)	110	905	460	2245	0	0	2267	290	0	0	56
Confl. Peds. (#/hr)	1	1	3		3						
Heavy Vehicles (%)	0%	1%	0%	1%	2%	2%	1%	2%	2%	2%	0%
Turn Type		Prot	Prot					Perm			Over
Protected Phases	4	4	1	6			2				1
Permitted Phases								2			
Actuated Green, G (s)	39.2	39.2	17.1	62.8			41.7	41.7			17.1
Effective Green, g (s)	39.2	39.2	17.1	62.8			41.7	41.7			17.1
Actuated g/C Ratio	0.36	0.36	0.16	0.57			0.38	0.38			0.16
Clearance Time (s)	4.0	4.0	4.0	4.0			4.0	4.0			4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	643	1003	544	2932			2888	1057			256
v/s Ratio Prot	0.06	c0.32	c0.13	c0.44			0.30				0.03
v/s Ratio Perm								0.10			
v/c Ratio	0.17	0.90	0.85	0.77			0.78	0.27			0.22
Uniform Delay, d1	24.3	33.6	45.2	18.0			30.2	23.7			40.6
Progression Factor	1.00	1.00	1.26	0.26			0.67	0.63			1.00
Incremental Delay, d2	0.1	11.2	6.6	1.1			0.9	0.3			0.4
Delay (s)	24.4	44.7	63.6	5.7			21.0	15.2			41.0
Level of Service	C	D	E	A			C	B			D
Approach Delay (s)	42.6			15.6			19.6		41.0		
Approach LOS	D			B			B		D		

Intersection Summary			
HCM Average Control Delay	22.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	488	22	280	68	20	101	112	2367	620	215	2474	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.88	1.00	0.91	
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1900	1531	1805	1900	1615	1805	5187	2778	1770	5131	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.08	1.00	1.00	0.07	1.00	
Satd. Flow (perm)	3433	1900	1531	1805	1900	1615	143	5187	2778	131	5131	
Peak-hour factor, PHF	0.96	0.96	0.96	0.95	0.95	0.95	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	508	23	292	72	21	106	113	2391	626	217	2499	15
RTOR Reduction (vph)	0	0	158	0	0	57	0	0	228	0	0	0
Lane Group Flow (vph)	508	23	134	72	21	49	113	2391	398	217	2514	0
Confl. Peds. (#/hr)	1		1				3		3			
Heavy Vehicles (%)	2%	0%	4%	0%	0%	0%	0%	0%	0%	2%	1%	0%
Turn Type	Split		Perm	Split		Perm	pm+pt		pm+ov	pm+pt		
Protected Phases	4	4		8	8		1	6	4	5	2	
Permitted Phases			4			8	6		6	2		
Actuated Green, G (s)	17.0	17.0	17.0	9.8	9.8	9.8	61.2	53.0	70.0	71.2	59.0	
Effective Green, g (s)	17.0	17.0	17.0	9.8	9.8	9.8	61.2	53.0	70.0	71.2	59.0	
Actuated g/C Ratio	0.15	0.15	0.15	0.09	0.09	0.09	0.56	0.48	0.64	0.65	0.54	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	531	294	237	161	169	144	203	2499	1869	296	2752	
v/s Ratio Prot	c0.15	0.01		c0.04	0.01		0.04	c0.46	0.03	c0.09	0.49	
v/s Ratio Perm			0.09			0.03	0.27		0.11	0.38		
v/c Ratio	0.96	0.08	0.56	0.45	0.12	0.34	0.56	0.96	0.21	0.73	0.91	
Uniform Delay, d1	46.1	39.8	43.1	47.5	46.1	47.1	21.5	27.4	8.4	31.4	23.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.07	0.83	0.11	1.39	0.39	
Incremental Delay, d2	28.2	0.1	3.1	2.0	0.3	1.4	1.9	6.9	0.0	7.0	4.7	
Delay (s)	74.3	39.9	46.1	49.5	46.5	48.4	25.0	29.5	0.9	50.7	13.8	
Level of Service	E	D	D	D	D	D	C	C	A	D	B	
Approach Delay (s)		63.4			48.6			23.6			16.7	
Approach LOS		E			D			C			B	

Intersection Summary			
HCM Average Control Delay	26.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	88.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	720	419	179	105	415	464	404	1219	600	230	1282	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		1.00	1.00	0.88	0.97	0.95	0.88	1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3467	3390		1787	1881	2814	3502	3574	2758	1787	3557	
Flt Permitted	0.95	1.00		0.41	1.00	1.00	0.95	1.00	1.00	0.10	1.00	
Satd. Flow (perm)	3467	3390		777	1881	2814	3502	3574	2758	188	3557	
Peak-hour factor, PHF	0.95	0.95	0.95	0.96	0.96	0.96	0.98	0.98	0.98	0.97	0.97	0.97
Adj. Flow (vph)	758	441	188	109	432	483	412	1244	612	237	1322	43
RTOR Reduction (vph)	0	43	0	0	0	8	0	0	55	0	2	0
Lane Group Flow (vph)	758	586	0	109	432	475	412	1244	557	237	1363	0
Confl. Peds. (#/hr)							3		3	2		2
Heavy Vehicles (%)	1%	2%	1%	1%	1%	1%	0%	1%	1%	1%	1%	0%
Turn Type	Prot			pm+pt		pm+ov	Prot		pm+ov	pm+pt		
Protected Phases	7	4		3	8	1	1	6	7	5	2	
Permitted Phases				8		8			6	2		
Actuated Green, G (s)	21.0	37.0		28.0	22.0	33.0	11.0	41.0	62.0	50.0	40.0	
Effective Green, g (s)	21.0	37.0		28.0	22.0	33.0	11.0	41.0	62.0	50.0	40.0	
Actuated g/C Ratio	0.19	0.34		0.25	0.20	0.30	0.10	0.37	0.56	0.45	0.36	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	662	1140		253	376	947	350	1332	1655	231	1293	
v/s Ratio Prot	c0.22	0.17		0.02	c0.23	0.05	c0.12	0.35	0.06	0.09	c0.38	
v/s Ratio Perm				0.09		0.12			0.14	0.37		
v/c Ratio	1.15	0.51		0.43	1.15	0.50	1.18	0.93	0.34	1.03	1.05	
Uniform Delay, d1	44.5	29.3		32.5	44.0	31.7	49.5	33.2	12.9	29.9	35.0	
Progression Factor	0.88	0.93		1.00	1.00	1.00	1.26	0.48	0.30	1.00	1.00	
Incremental Delay, d2	81.4	0.4		1.2	93.5	0.4	95.2	8.1	0.1	66.1	40.6	
Delay (s)	120.4	27.7		33.7	137.5	32.1	157.5	24.2	4.0	96.0	75.6	
Level of Service	F	C		C	F	C	F	C	A	F	E	
Approach Delay (s)		78.4			76.8			42.9			78.7	
Approach LOS		E			E			D			E	

Intersection Summary			
HCM Average Control Delay	65.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	104.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	223	290	255	974	903	216
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frpb, ped/bikes	1.00	0.99	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1787	1577	1770	3574	3574	1599
Flt Permitted	0.95	1.00	0.23	1.00	1.00	1.00
Satd. Flow (perm)	1787	1577	423	3574	3574	1599
Peak-hour factor, PHF	0.93	0.93	0.94	0.94	0.95	0.95
Adj. Flow (vph)	240	312	271	1036	951	227
RTOR Reduction (vph)	0	254	0	0	0	92
Lane Group Flow (vph)	240	58	271	1036	951	135
Confl. Peds. (#/hr)	1	1	1			
Heavy Vehicles (%)	1%	1%	2%	1%	1%	1%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	20.3	20.3	81.7	81.7	65.6	65.6
Effective Green, g (s)	20.3	20.3	81.7	81.7	65.6	65.6
Actuated g/C Ratio	0.18	0.18	0.74	0.74	0.60	0.60
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	330	291	462	2655	2131	954
v/s Ratio Prot	c0.13		c0.06	0.29	0.27	
v/s Ratio Perm		0.04	c0.37			0.08
v/c Ratio	0.73	0.20	0.59	0.39	0.45	0.14
Uniform Delay, d1	42.2	38.0	6.9	5.1	12.2	9.8
Progression Factor	0.91	1.27	1.00	1.00	0.53	0.98
Incremental Delay, d2	7.6	0.3	1.9	0.4	0.4	0.2
Delay (s)	46.2	48.7	8.8	5.6	6.9	9.8
Level of Service	D	D	A	A	A	A
Approach Delay (s)	47.6			6.2	7.4	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	14.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	134	318	91	179	380	131	165	884	163	166	817	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1797		1805	1881	1615	1718	3574	1546	1804	3610	1552
Flt Permitted	0.29	1.00		0.22	1.00	1.00	0.21	1.00	1.00	0.21	1.00	1.00
Satd. Flow (perm)	537	1797		422	1881	1615	381	3574	1546	400	3610	1552
Peak-hour factor, PHF	0.90	0.90	0.90	0.93	0.93	0.93	0.98	0.98	0.98	0.95	0.95	0.95
Adj. Flow (vph)	149	353	101	192	409	141	168	902	166	175	860	166
RTOR Reduction (vph)	0	17	0	0	0	99	0	0	114	0	0	114
Lane Group Flow (vph)	149	437	0	192	409	42	168	902	52	175	860	52
Confl. Peds. (#/hr)	2		2				7		7	5		5
Heavy Vehicles (%)	3%	1%	4%	0%	1%	0%	5%	1%	1%	0%	0%	1%
Turn Type	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)	20.4	17.2		22.0	18.0	18.0	23.0	19.0	19.0	23.0	19.0	19.0
Effective Green, g (s)	20.4	17.2		22.0	18.0	18.0	23.0	19.0	19.0	23.0	19.0	19.0
Actuated g/C Ratio	0.34	0.29		0.37	0.30	0.30	0.38	0.32	0.32	0.38	0.32	0.32
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	247	513		246	562	483	234	1128	488	246	1139	490
v/s Ratio Prot	0.03	c0.24		c0.05	0.22		c0.05	c0.25		0.05	0.24	
v/s Ratio Perm	0.17			0.23		0.03	0.23		0.03	0.22		0.03
v/c Ratio	0.60	0.85		0.78	0.73	0.09	0.72	0.80	0.11	0.71	0.76	0.11
Uniform Delay, d1	15.8	20.3		15.9	18.9	15.2	13.8	18.9	14.6	13.9	18.5	14.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.1	12.8		14.8	4.7	0.1	10.1	6.0	0.4	9.3	4.7	0.4
Delay (s)	19.9	33.1		30.7	23.6	15.3	23.9	24.8	15.0	23.2	23.2	15.0
Level of Service	B	C		C	C	B	C	C	B	C	C	B
Approach Delay (s)		29.9			23.8			23.4			22.1	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	24.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	60.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	255	263	257	258	236	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.56	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	1043	3539	3539	1583
Peak-hour factor, PHF	0.95	0.95	0.97	0.97	0.93	0.93
Adj. Flow (vph)	268	277	265	266	254	263
RTOR Reduction (vph)	0	221	0	0	0	109
Lane Group Flow (vph)	268	56	265	266	254	154
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	22.4	22.4	79.6	79.6	64.3	64.3
Effective Green, g (s)	22.4	22.4	79.6	79.6	64.3	64.3
Actuated g/C Ratio	0.20	0.20	0.72	0.72	0.58	0.58
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	360	322	829	2561	2069	925
v/s Ratio Prot	c0.15		c0.03	0.08	0.07	
v/s Ratio Perm		0.04	c0.20			0.10
v/c Ratio	0.74	0.18	0.32	0.10	0.12	0.17
Uniform Delay, d1	41.1	36.2	5.0	4.5	10.2	10.5
Progression Factor	1.00	1.00	0.28	0.25	1.00	1.00
Incremental Delay, d2	8.1	0.3	0.2	0.1	0.1	0.4
Delay (s)	49.2	36.4	1.6	1.2	10.3	10.9
Level of Service	D	D	A	A	B	B
Approach Delay (s)	42.7			1.4	10.6	
Approach LOS	D			A	B	

Intersection Summary			
HCM Average Control Delay	18.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

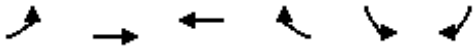
Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	1510	43	99	1326	17	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.91		1.00	0.91	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	1.00		1.00	1.00	1.00	
Flt Protected	1.00		0.95	1.00	0.95	
Satd. Flow (prot)	5157		1671	5187	1504	
Flt Permitted	1.00		0.11	1.00	0.95	
Satd. Flow (perm)	5157		196	5187	1504	
Peak-hour factor, PHF	0.97	0.97	0.95	0.95	0.83	0.92
Adj. Flow (vph)	1557	44	104	1396	20	0
RTOR Reduction (vph)	2	0	0	0	0	0
Lane Group Flow (vph)	1599	0	104	1396	20	0
Confl. Peds. (#/hr)		1			2	
Heavy Vehicles (%)	0%	4%	8%	0%	20%	2%
Turn Type			pm+pt			
Protected Phases	2		1	6	8	
Permitted Phases			6			
Actuated Green, G (s)	33.2		42.0	42.0	1.2	
Effective Green, g (s)	33.2		42.0	42.0	1.2	
Actuated g/C Ratio	0.65		0.82	0.82	0.02	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	3344		299	4255	35	
v/s Ratio Prot	c0.31		0.03	c0.27	c0.01	
v/s Ratio Perm			0.25			
v/c Ratio	0.48		0.35	0.33	0.57	
Uniform Delay, d1	4.6		2.1	1.1	24.7	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.1		0.7	0.0	20.6	
Delay (s)	4.7		2.8	1.2	45.3	
Level of Service	A		A	A	D	
Approach Delay (s)	4.7			1.3	45.3	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	3.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	51.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	646	381	2240	515	474	2075
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.91	0.88	0.97	0.91
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	3433	1583	5187	2787	3433	5136
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	3433	1583	5187	2787	3433	5136
Peak-hour factor, PHF	0.98	0.98	0.99	0.99	0.98	0.98
Adj. Flow (vph)	659	389	2263	520	484	2117
RTOR Reduction (vph)	0	1	0	220	0	0
Lane Group Flow (vph)	659	388	2263	300	484	2117
Heavy Vehicles (%)	2%	2%	0%	2%	2%	1%
Turn Type		pm+ov		Perm	Prot	
Protected Phases	4	5	6		5	2
Permitted Phases		4		6		
Actuated Green, G (s)	24.0	42.6	55.4	55.4	18.6	78.0
Effective Green, g (s)	24.0	42.6	55.4	55.4	18.6	78.0
Actuated g/C Ratio	0.22	0.39	0.50	0.50	0.17	0.71
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	749	671	2612	1404	580	3642
v/s Ratio Prot	c0.19	0.10	c0.44		c0.14	0.41
v/s Ratio Perm		0.15		0.11		
v/c Ratio	0.88	0.58	0.87	0.21	0.83	0.58
Uniform Delay, d1	41.6	26.6	24.0	15.2	44.2	7.9
Progression Factor	1.00	1.00	0.20	0.00	0.89	1.81
Incremental Delay, d2	11.5	1.2	1.7	0.1	3.2	0.2
Delay (s)	53.1	27.8	6.6	0.2	42.4	14.6
Level of Service	D	C	A	A	D	B
Approach Delay (s)	43.7		5.4			19.7
Approach LOS	D		A			B

Intersection Summary			
HCM Average Control Delay	17.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	6	445	490	27	33	31
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.96	0.96	0.98	0.98	0.88	0.88
Hourly flow rate (vph)	6	464	500	28	38	35
Pedestrians		4	4			
Lane Width (ft)		12.0	12.0			
Walking Speed (ft/s)		4.0	4.0			
Percent Blockage		0	0			
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	528				994	518
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	528				994	518
tC, single (s)	5.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	3.1				3.5	3.3
p0 queue free %	99				86	94
cM capacity (veh/h)	684				266	552

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	470	528	73
Volume Left	6	0	38
Volume Right	0	28	35
cSH	684	1700	355
Volume to Capacity	0.01	0.31	0.20
Queue Length 95th (ft)	1	0	19
Control Delay (s)	0.3	0.0	17.7
Lane LOS	A		C
Approach Delay (s)	0.3	0.0	17.7
Approach LOS			C

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	1	135	25	21	113	1	33	1	23	4	1	5
Peak Hour Factor	0.93	0.93	0.93	0.90	0.90	0.90	0.82	0.82	0.82	0.67	0.67	0.67
Hourly flow rate (vph)	1	145	27	23	126	1	40	1	28	6	1	7

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	173	150	70	15
Volume Left (vph)	1	23	40	6
Volume Right (vph)	27	1	28	7
Hadj (s)	0.01	0.11	-0.09	-0.22
Departure Headway (s)	4.3	4.4	4.6	4.5
Degree Utilization, x	0.21	0.18	0.09	0.02
Capacity (veh/h)	820	788	735	730
Control Delay (s)	8.4	8.4	8.0	7.6
Approach Delay (s)	8.4	8.4	8.0	7.6
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.3			
HCM Level of Service	A			
Intersection Capacity Utilization	31.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	113	1510	0	0	1425
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.88	0.97	0.92	0.92	0.95
Hourly flow rate (vph)	0	128	1557	0	0	1500
Pedestrians	1					2
Lane Width (ft)	12.0					12.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			111			
pX, platoon unblocked	0.84	0.84			0.84	
vC, conflicting volume	2058	522			1558	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1602	0			1009	
tC, single (s)	6.8	7.0			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	100	86			100	
cM capacity (veh/h)	81	901			575	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	128	519	519	519	500	500	500
Volume Left	0	0	0	0	0	0	0
Volume Right	128	0	0	0	0	0	0
cSH	901	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.14	0.31	0.31	0.31	0.29	0.29	0.29
Queue Length 95th (ft)	12	0	0	0	0	0	0
Control Delay (s)	9.7	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A						
Approach Delay (s)	9.7	0.0			0.0		
Approach LOS	A						

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		

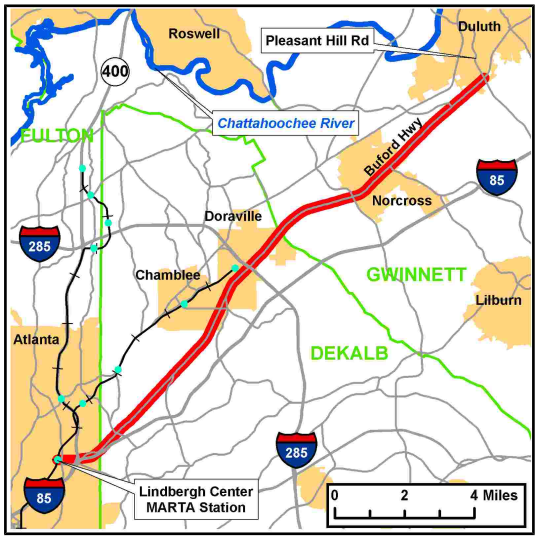
Appendix J
Programmed Infrastructure Improvements

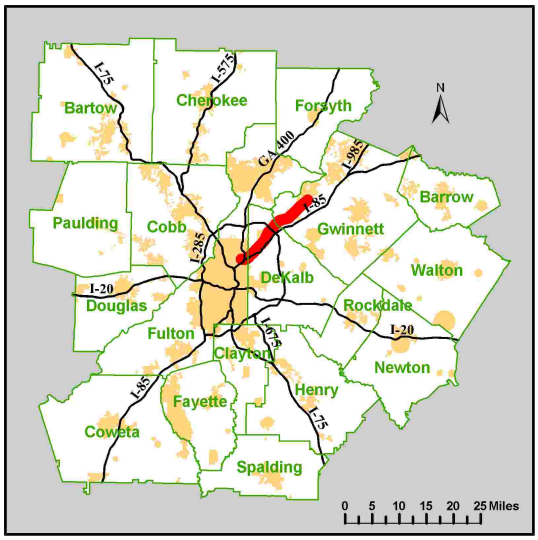
AR-910

Atlanta Region - Mobility2030 Transportation Plan

PROJECT FACT SHEET

Short Title	SR 13 (BUFORD HIGHWAY) ARTERIAL BUS RAPID TRANSIT (BRT) FROM PLEASANT HILL ROAD IN GWINNETT COUNTY TO MARTA LINDBERGH STATION IN CITY OF ATLANTA
GDOT Project No.	N/A
Federal ID No.	
Status	Programmed
Detailed Description and Justification	This project will provide for BRT service in the Buford Highway corridor. It will include transit priority at necessary signalized intersections and bus pull out lanes to enable faster running times for transit in this corridor.
Service Type	Arterial BRT
Sponsor	GRTA
Jurisdiction	Multi-County
Existing Thru Lane	N/A (applicable for road projects only)
Planned Thru Lane	N/A (applicable for road projects only)
Corridor Length	17 miles (not applicable for all project types)
Network Year	2030 (required if modeled for conformity)
Completion Date	2026
Analysis Level	In the Region's Air Quality Conformity Analysis





Phase Status & Funding Information for 06-11 TIP		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
PE	Local Jurisdiction/Municipality Funds	2008	$13,000,000	$0,000	$0,000	$0,000	$13,000,000
CST	New Starts (50/50)	LR 2021-2030	$25,500,000	$12,750,000	$0,000	$0,000	$12,750,000
				$12,750,000	$0,000	$0,000	$25,750,000

PE: Preliminary Engineering / Design / Study ROW: Right-of-way Acquistion CST: Construction / Implementation

? For additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100.

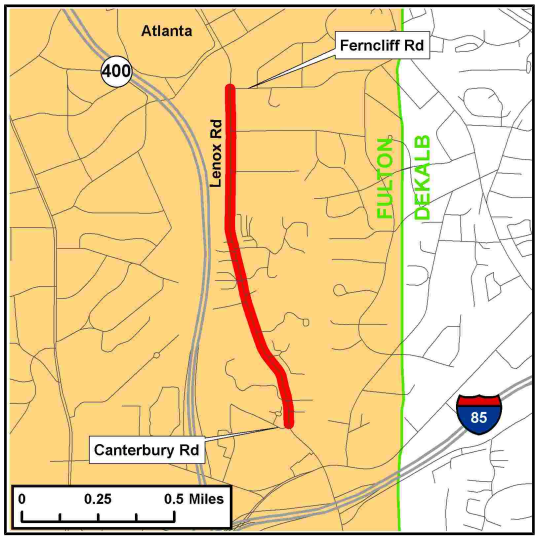
Report Generated: 6/12/2007

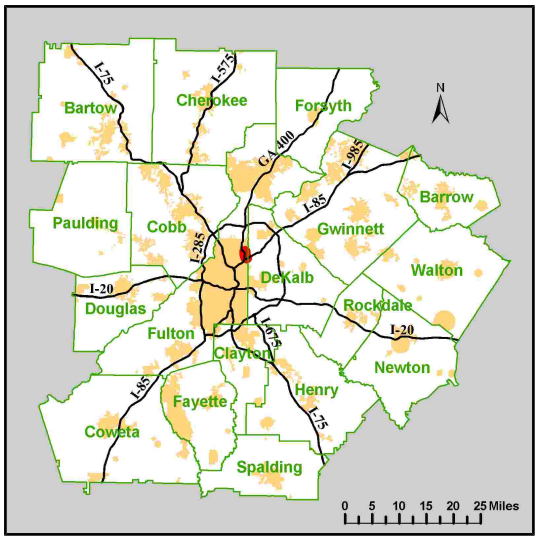
AT-049

Atlanta Region - Mobility2030 Transportation Plan

PROJECT FACT SHEET

Short Title	LENOX ROAD FROM FERNCLIFF ROAD TO CANTERBURY ROAD
GDOT Project No.	762330-
Federal ID No.	PRP-8531-73(121)
Status	Long Range
Detailed Description and Justification	The widening of Lenox Road from Ferncliff Road to Canterbury Road from two to four lanes. It is designed to relieve a bottleneck between the Lenox Mall area and I-85 North. It will also provide an alternate route to the congested SR 400 corridor.
Service Type	General Purpose Roadway Capacity
Sponsor	GDOT
Jurisdiction	City of Atlanta
Existing Thru Lane	2 (applicable for road projects only)
Planned Thru Lane	4 (applicable for road projects only)
Corridor Length	1.26 miles (not applicable for all project types)
Network Year	2015 (required if modeled for conformity)
Completion Date	2015
Analysis Level	In the Region's Air Quality Conformity Analysis





Phase Status & Funding Information for 06-11 TIP		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
PE	GA Department of Transportation Funds	2003	$0,000	$0,000	$0,000	$0,000	$0,000
ROW	GA Department of Transportation Funds	LR 2012-2020	$5,800,000	$0,000	$5,800,000	$0,000	$0,000
CST	GA Department of Transportation Funds	LR 2012-2020	$4,184,000	$0,000	$4,184,000	$0,000	$0,000
				$0,000	$9,984,000	$0,000	$0,000

PE: Preliminary Engineering / Design / Study ROW: Right-of-way Acquistion CST: Construction / Implementation

? For additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100.

ARC

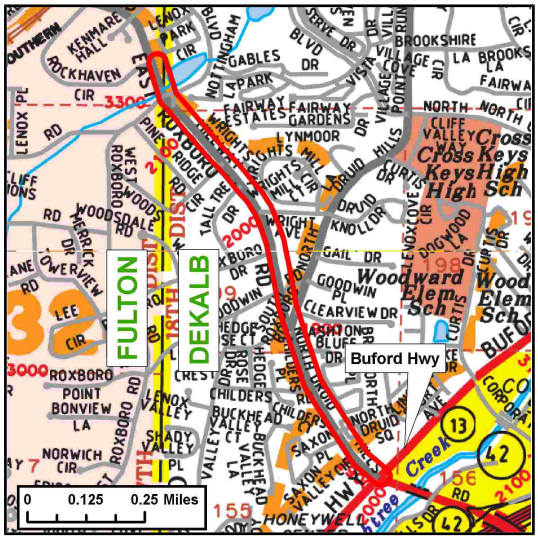
Report Generated: 6/12/2007

DK-076

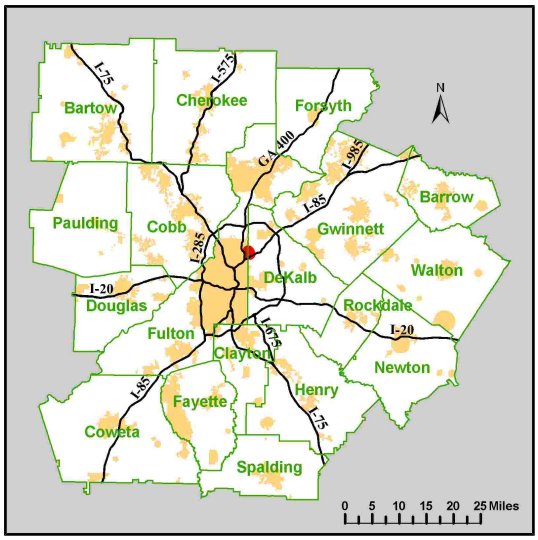
Atlanta Region - Mobility2030 Transportation Plan

PROJECT FACT SHEET

Short Title	EAST ROXBORO ROAD FROM SR 13 (BUFORD HIGHWAY) TO ROCKHAVEN CIRCLE
GDOT Project No.	0000737
Federal ID No.	MSL-0000-00(737)
Status	Long Range
Detailed Description and Justification	Widen roadway from 2 lanes to 4 lanes divided for .54 mile from West Roxboro Road to North Druid Hills Road. Improves roadway geometries and safety.
Service Type	General Purpose Roadway Capacity
Sponsor	GDOT
Jurisdiction	DeKalb County
Existing Thru Lane	2 (applicable for road projects only)
Planned Thru Lane	4 (applicable for road projects only)
Corridor Length	0.71 miles (not applicable for all project types)
Network Year	2020 (required if modeled for conformity)
Completion Date	2020
Analysis Level	In the Region's Air Quality Conformity Analysis



Copyright 2005 Aero Surveys of Georgia, Inc. Reproduced by permission of the copyright owner. Contact http://www.aeroatlas.com



Phase Status & Funding Information for 06-11 TIP		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
PE	FEDAID-2012-2030	AUTH	$0,000	$0,000	$0,000	$0,000	$0,000
ROW	Local Jurisdiction/Municipality Funds	LR 2012-2020	$2,000,000	$0,000	$0,000	$0,000	$2,000,000
CST	FEDAID-2012-2030	LR 2012-2020	$4,000,000	$3,200,000	$800,000	$0,000	$0,000
				$3,200,000	$800,000	$0,000	$2,000,000

PE: Preliminary Engineering / Design / Study ROW: Right-of-way Acquistion CST: Construction / Implementation

? For additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100.

ARC

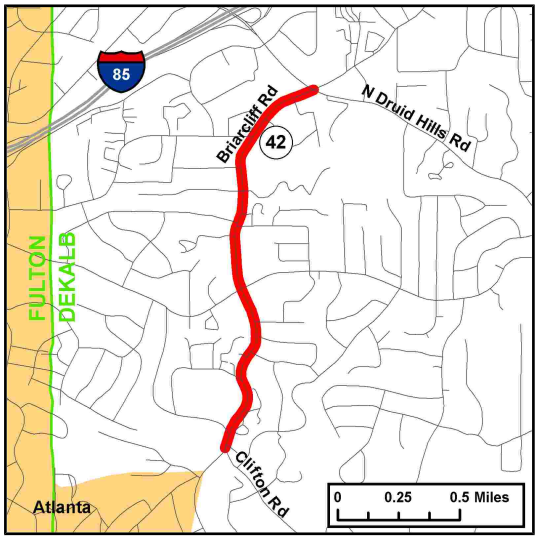
Report Generated: 6/12/2007

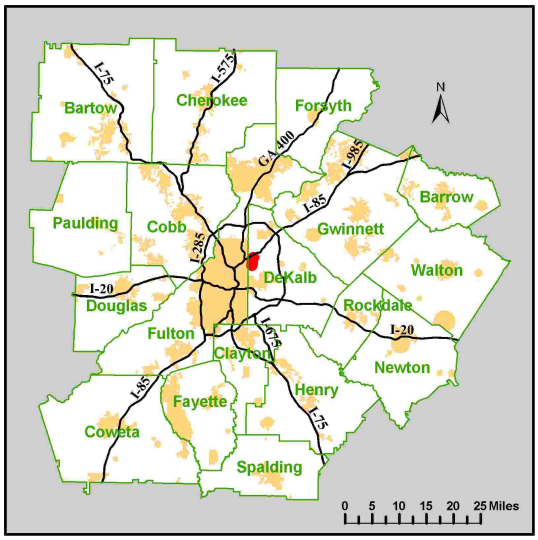
DK-269

Atlanta Region - Mobility2030 Transportation Plan

PROJECT FACT SHEET

Short Title	BRIARCLIFF ROAD (SR 42) CORRIDOR STUDY FROM CLIFTON ROAD TO NORTH DRUID HILLS ROAD
GDOT Project No.	N/A
Federal ID No.	
Status	Programmed
Detailed Description and Justification	Conduct a corridor study along Briarcliff Road from Clifton Road to North Druid Hills Road. Study will include traffic analysis, review of intersections and operations conditions along the corridor.
Service Type	Studies
Sponsor	DeKalb County
Jurisdiction	DeKalb County
Existing Thru Lane	N/A (applicable for road projects only)
Planned Thru Lane	N/A (applicable for road projects only)
Corridor Length	1.5 miles (not applicable for all project types)
Network Year	2010 (required if modeled for conformity)
Completion Date	2010
Analysis Level	Exempt from Air Quality Analysis (40 CFR 93)





Phase Status & Funding Information for 06-11 TIP		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
PE	Local Jurisdiction/Municipality Funds	2010	$250,000	$0,000	$0,000	$0,000	$250,000
				$0,000	$0,000	$0,000	$250,000

PE: Preliminary Engineering / Design / Study ROW: Right-of-way Acquistion CST: Construction / Implementation

? For additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100.

ARC

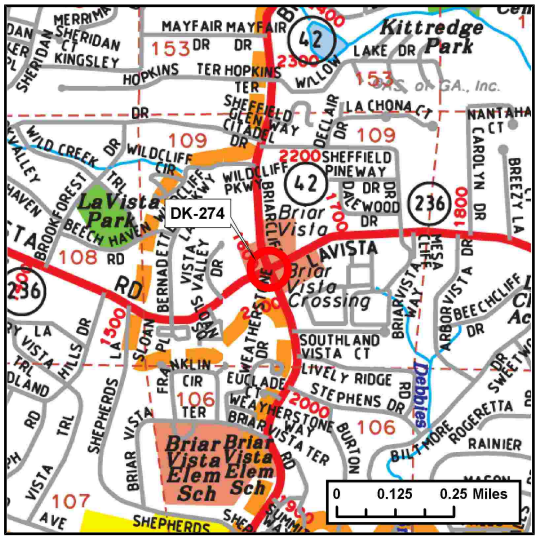
Report Generated: 6/12/2007

DK-274

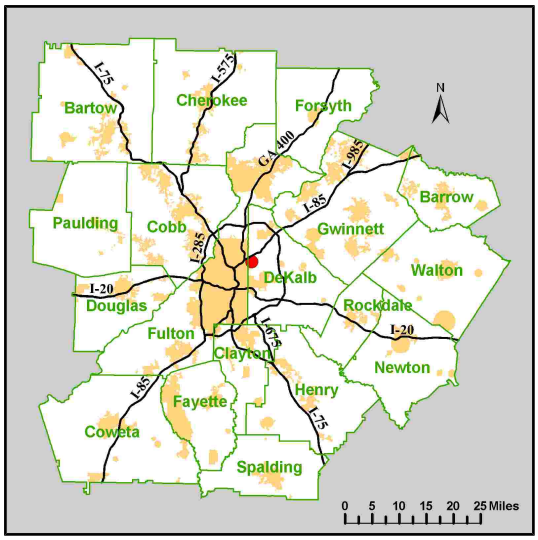
Atlanta Region - Mobility2030 Transportation Plan

PROJECT FACT SHEET

Short Title	SR 236 (LAVISTA ROAD) AT SR 42 (BRIARCLIFF ROAD)
GDOT Project No.	753290-
Federal ID No.	STP-7532-00(900)
Status	Programmed
Detailed Description and Justification	Roadway operation upgrades. Intersection improvements at LaVista and Briarcliff Roads will include signal, intersection improvements, turn lanes, crosswalks.
Service Type	Roadway Operational Upgrades
Sponsor	GDOT
Jurisdiction	DeKalb County
Existing Thru Lane	N/A (applicable for road projects only)
Planned Thru Lane	N/A (applicable for road projects only)
Corridor Length	N/A miles (not applicable for all project types)
Network Year	2015 (required if modeled for conformity)
Completion Date	2012
Analysis Level	Exempt from Air Quality Analysis (40 CFR 93)



Copyright 2005 Aero Surveys of Georgia, Inc. Reproduced by permission of the copyright owner. Contact http://www.aeroatlas.com



Phase Status & Funding Information for 06-11 TIP		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
PE	STP - Statewide Flexible (GDOT)	2006	$0,000	$0,000	$0,000	$0,000	$0,000
ROW	Local Jurisdiction/Municipality Funds	2008	$1,250,000	$0,000	$0,000	$0,000	$1,250,000
CST	STP - Statewide Flexible (GDOT)	2010	$1,800,000	$1,440,000	$0,000	$0,000	$360,000
				$1,440,000	$0,000	$0,000	$1,610,000

PE: Preliminary Engineering / Design / Study ROW: Right-of-way Acquistion CST: Construction / Implementation

? For additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100.

ARC

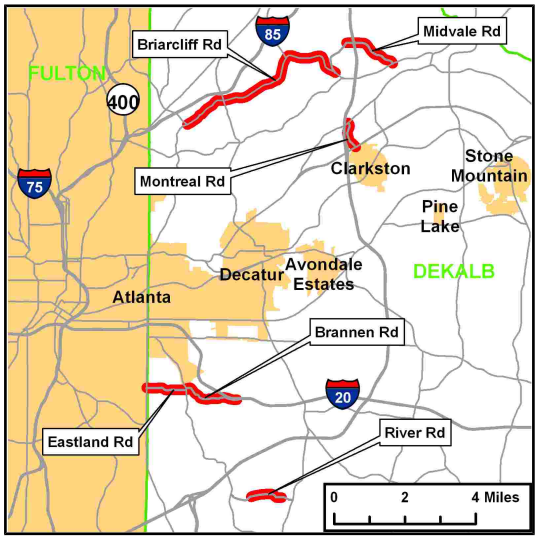
Report Generated: 6/12/2007

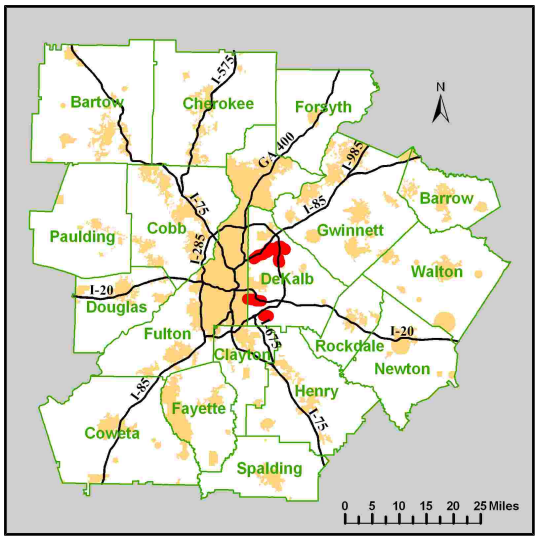
DK-320C

Atlanta Region - Mobility2030 Transportation Plan

PROJECT FACT SHEET

Short Title	SIDEWALKS ALONG EIGHTEEN (18) CORRIDORS PROGRAM: PHASE III - INCLUDES BRANNEN, EASTLAND, MIDVALE, MONTREAL, BOULDERCREST, AND RIVER ROADS [SEE ALSO DK-320A1, A3. AND B]
GDOT Project No.	0006886
Federal ID No.	CSSTP-0006-00(886)
Status	Programmed
Detailed Description and Justification	Project provides sidewalks to a number of facilities including Brannen Road from Fayetteville Road to Flat Shoals Road (1.52 miles); Eastland Road from Moreland Avenue to Bouldercrest Road (1.12 miles); Midvale Road from Henderson Mill Road to LaVista Road (1.53 miles); Montreal Road from Stone Mountain Freeway to Lawrenceville Highway (.74 mile); North Decatur Road from Memorial Drive to Lullwater Road (5.81 miles); and, River Road from Santa Leta Drive to River Lake Shore Road (.87 mile); Briarcliff Road from Henderson Mill Road to North Druid Hills Road (5.45 miles).
Service Type	Pedestrian Facility
Sponsor	DeKalb County
Jurisdiction	DeKalb County
Existing Thru Lane	N/A (applicable for road projects only)
Planned Thru Lane	N/A (applicable for road projects only)
Corridor Length	11.59 miles (not applicable for all project types)
Network Year	2015 (required if modeled for conformity)
Completion Date	2013
Analysis Level	Exempt from Air Quality Analysis (40 CFR 93)





Phase Status & Funding Information for 06-11 TIP		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
PE	Local Jurisdiction/Municipality Funds	2006	$250,000	$0,000	$0,000	$0,000	$250,000
ROW	Local Jurisdiction/Municipality Funds	2008	$500,000	$0,000	$0,000	$0,000	$500,000
CST	Local Jurisdiction/Municipality Funds	2011	$3,610,000	$0,000	$0,000	$0,000	$3,610,000
				$0,000	$0,000	$0,000	$4,360,000

PE: Preliminary Engineering / Design / Study ROW: Right-of-way Acquistion CST: Construction / Implementation

? For additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100.

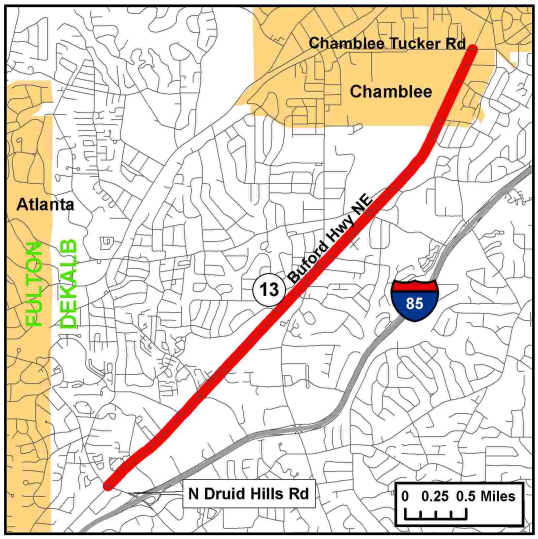
Report Generated: 6/12/2007

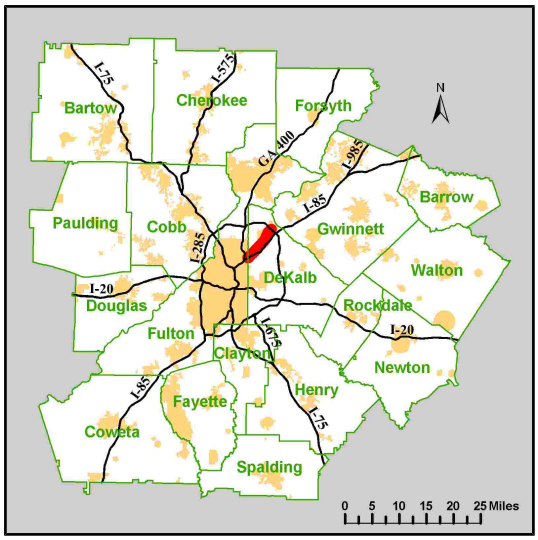
DK-324C

Atlanta Region - Mobility2030 Transportation Plan

PROJECT FACT SHEET

Short Title	SR 13 (BUFORD HIGHWAY) FROM SR 42 (NORTH DRUID HILLS ROAD) TO CHAMBLEE TUCKER ROAD [SEE ALSO OTHER DK-324 SERIES LINE ITEMS]
GDOT Project No.	0002902
Federal ID No.	STP-0002-00(902)
Status	Programmed
Detailed Description and Justification	This project, along with DK 324B-E. Specifically, this project will improve the streetscape along Buford Highway/SR 13 with improved (or repaired) sidewalks, pedestrian-oriented lighting and refuge islands at high pedestrian crossing areas.
Service Type	Pedestrian Facility
Sponsor	DeKalb County
Jurisdiction	DeKalb County
Existing Thru Lane	N/A (applicable for road projects only)
Planned Thru Lane	N/A (applicable for road projects only)
Corridor Length	4.7 miles (not applicable for all project types)
Network Year	2010 (required if modeled for conformity)
Completion Date	2010
Analysis Level	Exempt from Air Quality Analysis (40 CFR 93)





Phase Status & Funding Information for 06-11 TIP		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
PE	High Priority Projects from TEA-21	2007	$175,000	$140,000	$0,000	$0,000	$35,000
ROW	High Priority Projects from TEA-21	2007	$525,000	$420,000	$0,000	$0,000	$105,000
CST	High Priority Projects from TEA-21	2008	$3,550,000	$2,840,000	$710,000	$0,000	$0,000
				$3,400,000	$710,000	$0,000	$140,000

PE: Preliminary Engineering / Design / Study ROW: Right-of-way Acquistion CST: Construction / Implementation

? For additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100.

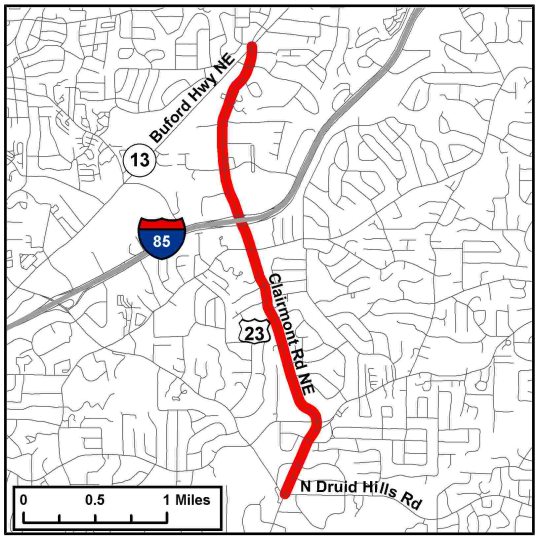
Report Generated: 6/12/2007

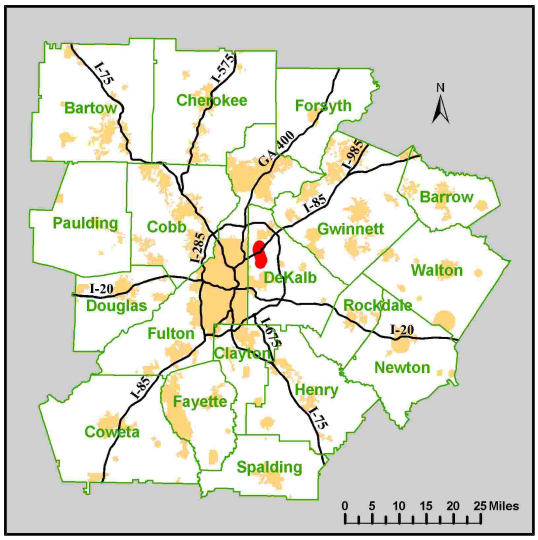
DK-AR-BP055

Atlanta Region - Mobility2030 Transportation Plan

PROJECT FACT SHEET

Short Title	US 23 (CLAIRMONT ROAD) FROM NORTH DRUID HILLS ROAD TO SR 13 (BUFORD HIGHWAY)
GDOT Project No.	0002903
Federal ID No.	STP-0002-00(903)
Status	Programmed
Detailed Description and Justification	Addition of 4' sidewalks along both sides of the road from North Druid Hills Road to Buford Highway/SR 13. Crosswalks will be included as appropriate.
Service Type	Pedestrian Facility
Sponsor	DeKalb County
Jurisdiction	DeKalb County
Existing Thru Lane	N/A (applicable for road projects only)
Planned Thru Lane	N/A (applicable for road projects only)
Corridor Length	3.3 miles (not applicable for all project types)
Network Year	2010 (required if modeled for conformity)
Completion Date	2010
Analysis Level	Exempt from Air Quality Analysis (40 CFR 93)





Phase Status & Funding Information for 06-11 TIP		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
PE	STP - Statewide Flexible (GDOT)	2006	$80,000	$64,000	$0,000	$0,000	$16,000
ROW	STP - Statewide Flexible (GDOT)	2007	$150,000	$120,000	$30,000	$0,000	$0,000
CST	STP - Statewide Flexible (GDOT)	2008	$800,000	$640,000	$0,000	$0,000	$160,000
				$824,000	$30,000	$0,000	$176,000

PE: Preliminary Engineering / Design / Study ROW: Right-of-way Acquistion CST: Construction / Implementation

? For additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100.

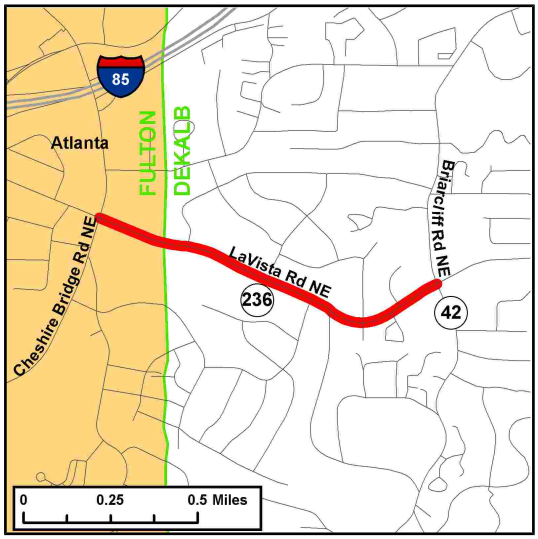
Report Generated: 6/12/2007

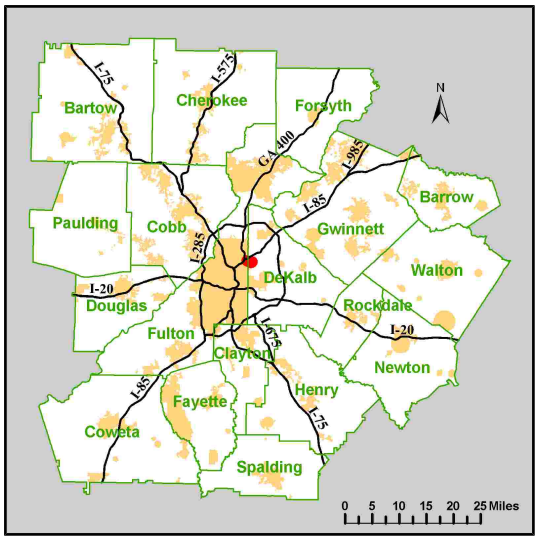
DK-AR-BP057

Atlanta Region - Mobility2030 Transportation Plan

PROJECT FACT SHEET

Short Title	SR 236 (LAVISTA ROAD) FROM CHESHIRE BRIDGE ROAD TO SR 42 (BRIARCLIFF ROAD)
GDOT Project No.	0002904
Federal ID No.	STP-0002-00(904)
Status	Programmed
Detailed Description and Justification	Addition of 4' sidewalks along both sides of the road from Cheshire Bridge Road to SR 42/Briarcliff Road. Crosswalks will be included as appropriate.
Service Type	Pedestrian Facility
Sponsor	GDOT
Jurisdiction	DeKalb County
Existing Thru Lane	N/A (applicable for road projects only)
Planned Thru Lane	N/A (applicable for road projects only)
Corridor Length	1.8 miles (not applicable for all project types)
Network Year	2015 (required if modeled for conformity)
Completion Date	2011
Analysis Level	Exempt from Air Quality Analysis (40 CFR 93)





Phase Status & Funding Information for 06-11 TIP		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
PE	STP - Statewide Flexible (GDOT)	2007	$0,000	$0,000	$0,000	$0,000	$0,000
ROW	STP - Statewide Flexible (GDOT)	2008	$60,000	$48,000	$12,000	$0,000	$0,000
CST	STP - Statewide Flexible (GDOT)	2009	$200,000	$160,000	$40,000	$0,000	$0,000
				$208,000	$52,000	$0,000	$0,000

PE: Preliminary Engineering / Design / Study ROW: Right-of-way Acquistion CST: Construction / Implementation

? For additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100.

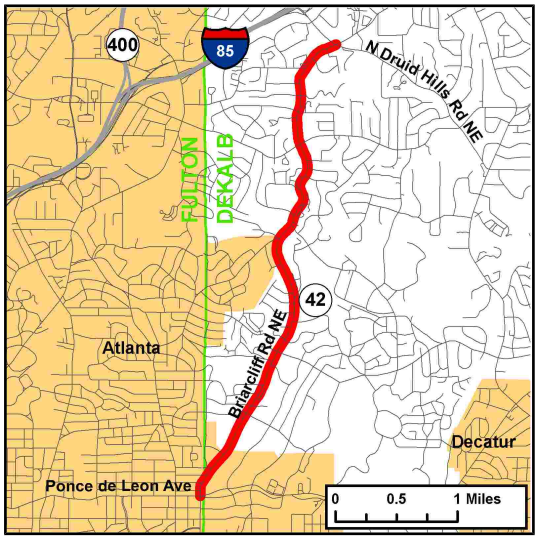
Report Generated: 6/12/2007

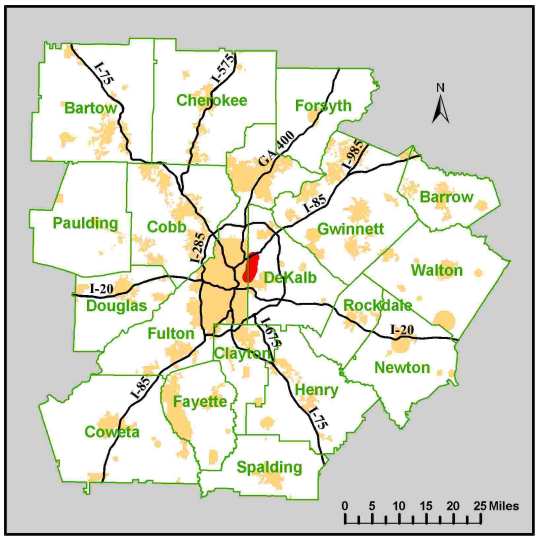
DK-AR-BP059

Atlanta Region - Mobility2030 Transportation Plan

PROJECT FACT SHEET

Short Title	SR 42 (BRIARCLIFF ROAD) FROM US 29/78/278 (PONCE DE LEON AVENUE) TO NORTH DRUID HILLS ROAD
GDOT Project No.	0002407
Federal ID No.	STP-0002-00(407)
Status	Programmed
Detailed Description and Justification	Addition of 4' sidewalks along both sides of the road from US 29/78/278 Ponce de Leon Avenue to North Druid Hills Road. Crosswalks will be included as appropriate.
Service Type	Pedestrian Facility
Sponsor	DeKalb County
Jurisdiction	DeKalb County
Existing Thru Lane	N/A (applicable for road projects only)
Planned Thru Lane	N/A (applicable for road projects only)
Corridor Length	4.4 miles (not applicable for all project types)
Network Year	2010 (required if modeled for conformity)
Completion Date	2009
Analysis Level	Exempt from Air Quality Analysis (40 CFR 93)





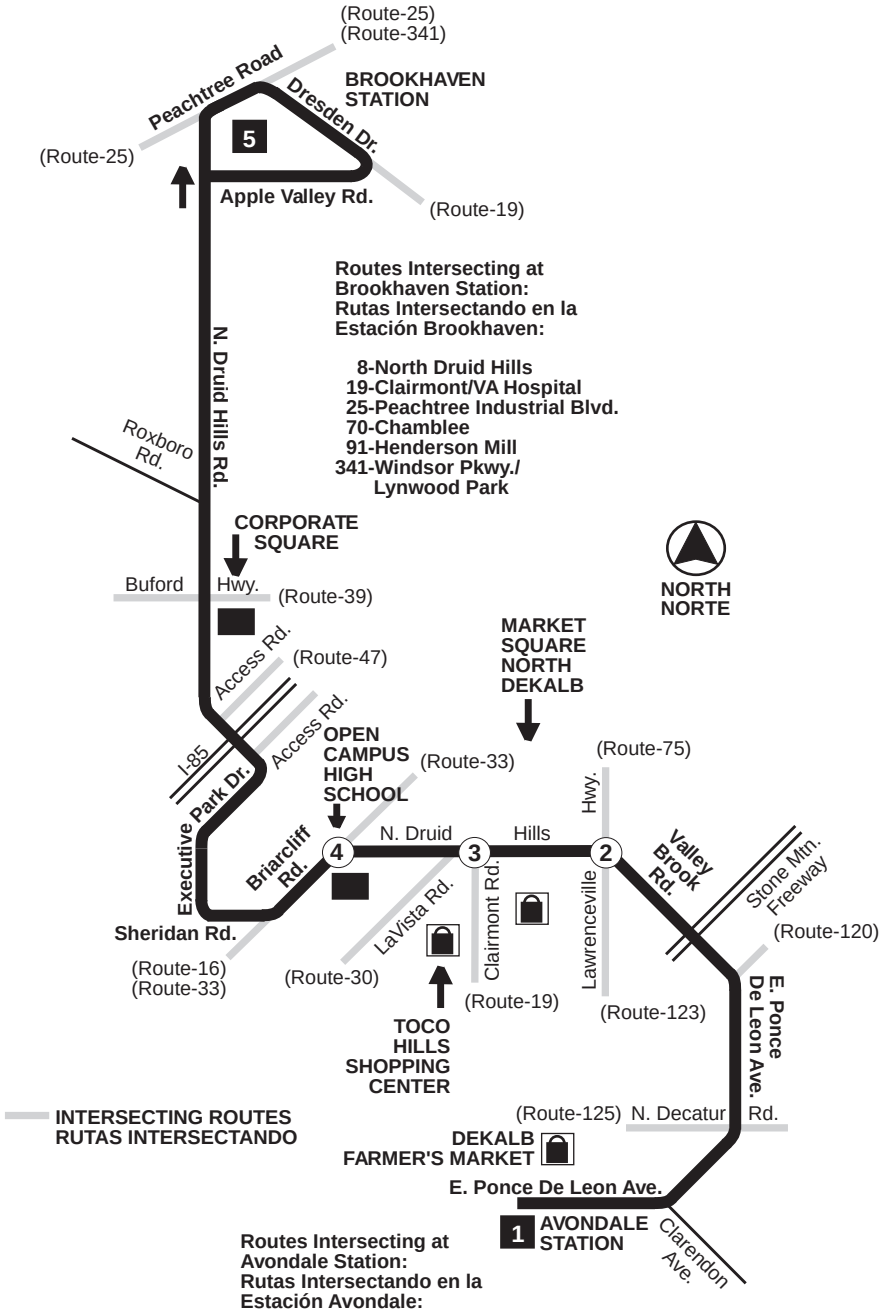
Phase Status & Funding Information for 06-11 TIP		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
PE	STP - Statewide Flexible (GDOT)	2006	$99,000	$79,200	$0,000	$0,000	$19,800
CST	STP - Statewide Flexible (GDOT)	2008	$990,000	$792,000	$0,000	$0,000	$198,000
				$871,200	$0,000	$0,000	$217,800

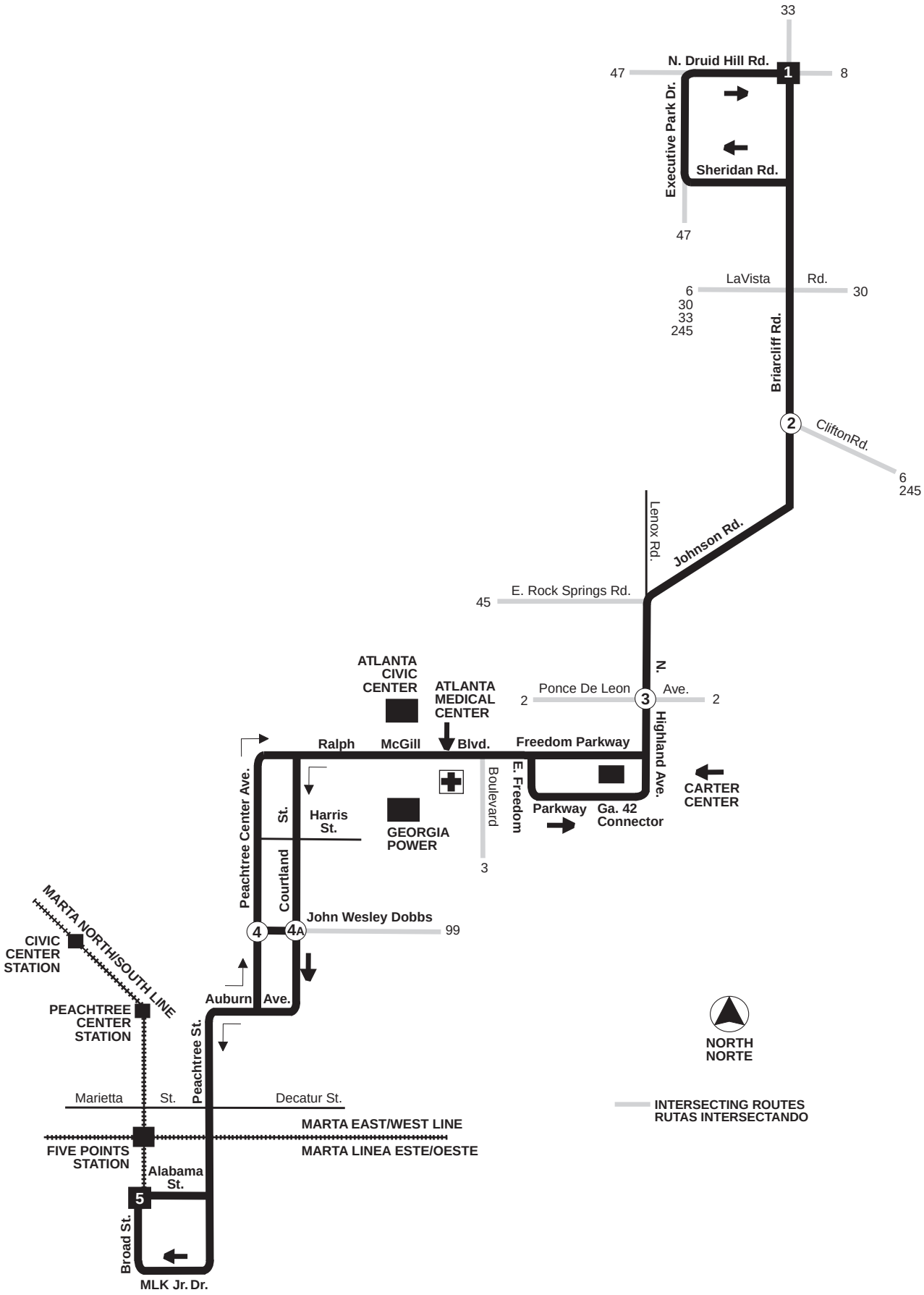
PE: Preliminary Engineering / Design / Study ROW: Right-of-way Acquistion CST: Construction / Implementation

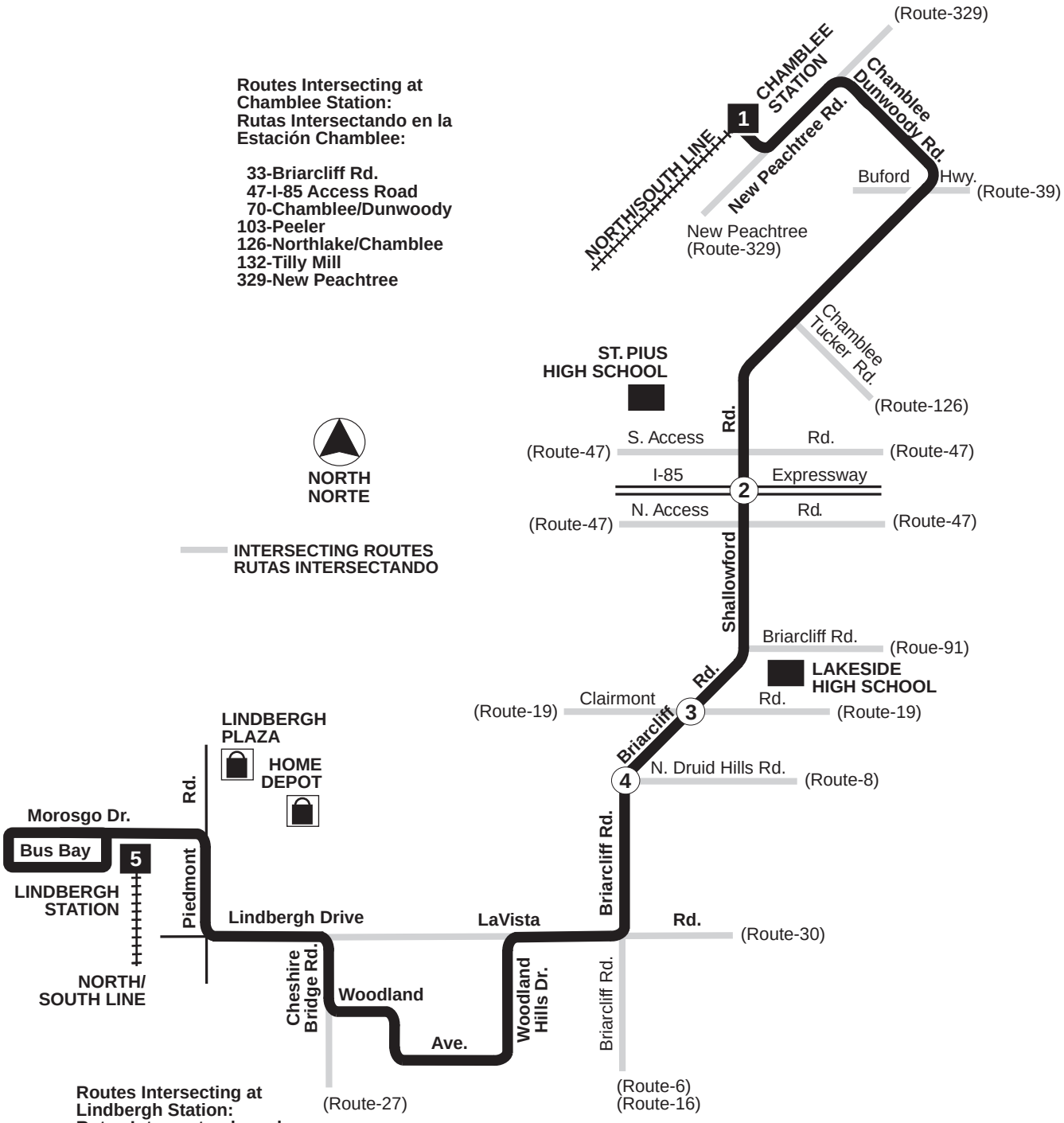
? For additional information about this project, please visit the Atlanta Regional Commission at www.atlantaregional.com or call (404) 463-3100.

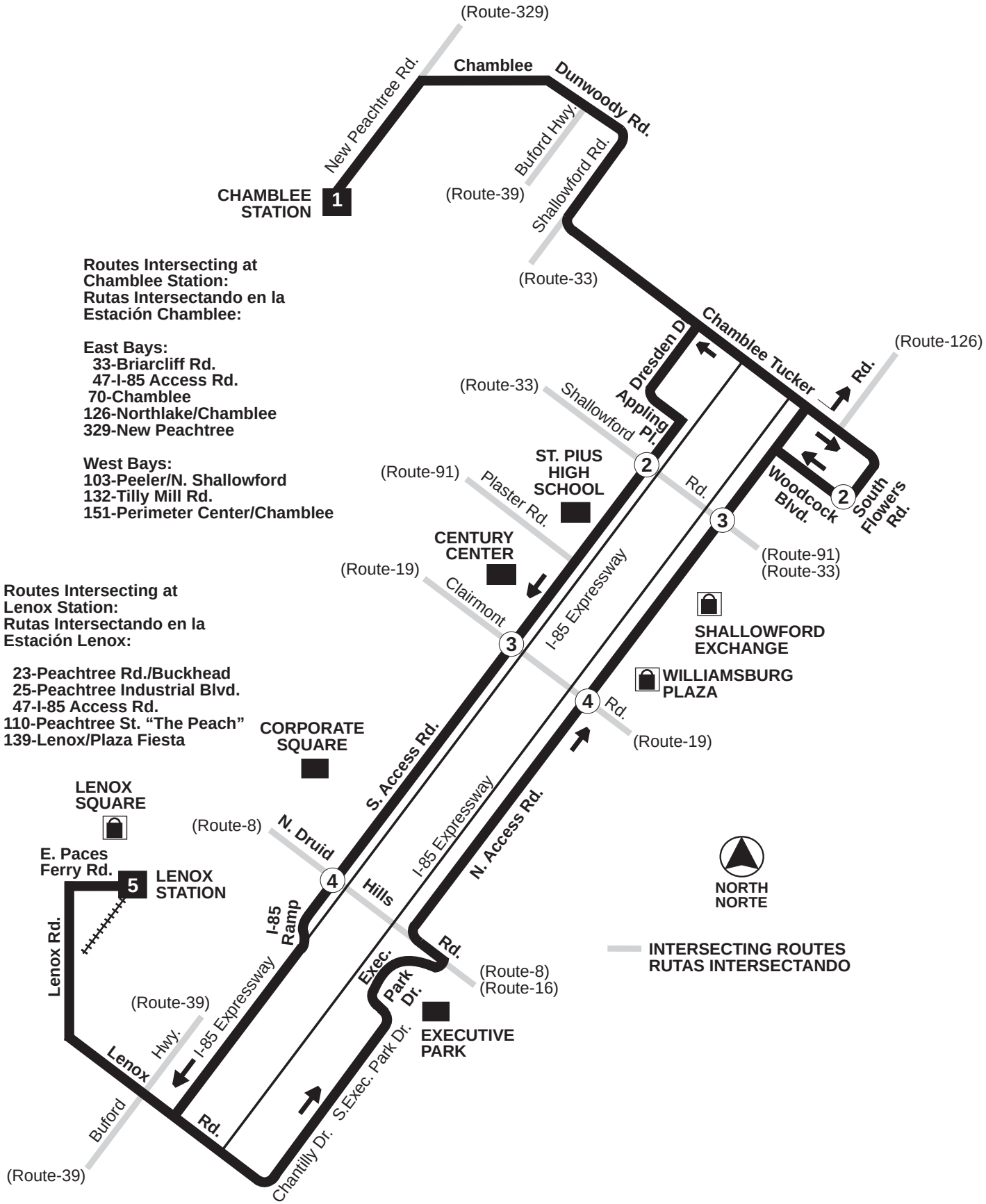
Report Generated: 6/12/2007

Appendix K
Area Bus Routes


(Route-25)
(Route-341)
Peachtree Road
Dresden Dr.
BROOKHAVEN STATION
5
(Route-25)
Apple Valley Rd.
(Route-19)
Routes Intersecting at Brookhaven Station:
Rutas Intersectando en la Estación Brookhaven:
8-North Druid Hills
19-Clairmont/VA Hospital
25-Peachtree Industrial Blvd.
70-Chamblee
91-Henderson Mill
341-Windsor Pkwy./ Lynwood Park
N. Druid Hills Rd.
Roxboro Rd.
CORPORATE SQUARE
NORTH NORTE
Buford Hwy.
(Route-39)
MARKET SQUARE NORTH DEKALB
Access Rd.
(Route-47)
Access Rd.
I-85
OPEN CAMPUS HIGH SCHOOL
(Route-33)
(Route-75)
Hwy.
Executive Park Dr.
Briarcliff Rd.
4
N. Druid
3
Hills
2
Valley Brook Rd.
Stone Mtn. Freeway
(Route-120)
Sheridan Rd.
(Route-16)
(Route-33)
(Route-30)
LaVista Rd.
Clairmont Rd.
Lawrenceville
(Route-19)
(Route-123)
E. Ponce De Leon Ave.
TOCO HILLS SHOPPING CENTER
INTERSECTING ROUTES
RUTAS INTERSECTANDO
(Route-125)
N. Decatur
Rd.
DEKALB FARMER'S MARKET
E. Ponce De Leon Ave.
1
AVONDALE STATION
Clarendon Ave.
Routes Intersecting at Avondale Station:
Rutas Intersectando en la Estación Avondale:
2-Ponce De Leon
8-North Druid Hills
36-North Decatur
75-Tucker
114-Columbia Drive
119-Avondale/N. Hairston Road
120-Stone Mountain
122-Georgia Perimeter College
125-Northlake/Avondale


33
N. Druid Hill Rd.
47
1
8
Executive Park Dr.
Sheridan Rd.
47
LaVista
Rd.
6
30
33
245
30
Briarcliff Rd.
2
CliftonRd.
6
245
Lenox Rd.
Johnson Rd.
E. Rock Springs Rd.
45
ATLANTA CIVIC CENTER
ATLANTA MEDICAL CENTER
N.
Ponce De Leon
Ave.
2
3
2
Highland Ave.
Ralph
McGill
Blvd.
Freedom Parkway
CARTER CENTER
Peachtree Center Ave.
St.
Harris St.
GEORGIA POWER
Boulevard
E. Freedom
Parkway
Ga. 42 Connector
3
Courtland
MARTA NORTH/SOUTH LINE
John Wesley Dobbs
4
4A
99
CIVIC CENTER STATION
Auburn
Ave.
PEACHTREE CENTER STATION
Peachtree St.
NORTH
NORTE
Marietta
St.
Decatur St.
INTERSECTING ROUTES
RUTAS INTERSECTANDO
MARTA EAST/WEST LINE
MARTA LINEA ESTE/OESTE
FIVE POINTS STATION
Alabama St.
5
Broad St.
MLK Jr. Dr.


Routes Intersecting at Chamblee Station:
Rutas Intersectando en la Estación Chamblee:
33-Briarcliff Rd.
47-I-85 Access Road
70-Chamblee/Dunwoody
103-Peeler
126-Northlake/Chamblee
132-Tilly Mill
329-New Peachtree
(Route-329)
CHAMBLEE STATION
1
NORTH/SOUTH LINE
New Peachtree Rd.
Chamblee Dunwoody Rd.
Buford Hwy.
(Route-39)
New Peachtree
(Route-329)
Chamblee Tucker Rd.
(Route-126)
ST. PIUS HIGH SCHOOL
NORTH
NORTE
INTERSECTING ROUTES
RUTAS INTERSECTANDO
S. Access Rd.
(Route-47)
(Route-47)
I-85 Expressway
2
N. Access Rd.
(Route-47)
(Route-47)
Shallowford Rd.
Briarcliff Rd.
(Roue-91)
LAKESIDE HIGH SCHOOL
Clairmont Rd.
(Route-19)
(Route-19)
3
Briarcliff Rd.
N. Druid Hills Rd.
(Route-8)
4
LINDBERGH PLAZA
HOME DEPOT
Morosgo Dr.
Bus Bay
5
LINDBERGH STATION
Piedmont Rd.
Lindbergh Drive
LaVista Rd.
(Route-30)
Briarcliff Rd.
NORTH/ SOUTH LINE
Cheshire Bridge Rd.
Woodland Ave.
Woodland Hills Dr.
Briarcliff Rd.
(Route-27)
(Route-6)
(Route-16)
Routes Intersecting at Lindbergh Station:
Rutas Intersectando en la Estación Lindbergh:
5-Piedmont Rd./Sandy Springs
6-Emory
27-Monroe Dr./Cheshire Bridge Rd.
30-LaVista Rd.
33-Briarcliff Rd.
38-Chastain Park
39-Buford Highway
44-West Wesley
245-Kensington/Emory Blue Flyer


(Route-329)
New Peachtree Rd.
Chamblee
Dunwoody Rd.
Buford Hwy.
Shallowford Rd.
(Route-39)
CHAMBLEE STATION
1
(Route-33)
Routes Intersecting at Chamblee Station:
Rutas Intersectando en la Estación Chamblee:
East Bays:
33-Briarcliff Rd.
47-I-85 Access Rd.
70-Chamblee
126-Northlake/Chamblee
329-New Peachtree
West Bays:
103-Peeler/N. Shallowford
132-Tilly Mill Rd.
151-Perimeter Center/Chamblee
Dresden Dr.
Chamblee Tucker Rd.
(Route-126)
(Route-33)
Shallowford Rd.
Appling Pl.
2
ST. PIUS HIGH SCHOOL
(Route-91)
Plaster Rd.
Woodcock Blvd.
South Flowers Rd.
3
(Route-91)
(Route-33)
CENTURY CENTER
(Route-19)
Clairmont Rd.
I-85 Expressway
SHALLOWFORD EXCHANGE
WILLIAMSBURG PLAZA
4
(Route-19)
Routes Intersecting at Lenox Station:
Rutas Intersectando en la Estación Lenox:
23-Peachtree Rd./Buckhead
25-Peachtree Industrial Blvd.
47-I-85 Access Rd.
110-Peachtree St. "The Peach"
139-Lenox/Plaza Fiesta
CORPORATE SQUARE
S. Access Rd.
LENOX SQUARE
(Route-8)
N. Druid Hills Rd.
I-85 Expressway
N. Access Rd.
E. Paces Ferry Rd.
5
LENOX STATION
NORTH
NORTE
I-85 Ramp
Lenox Rd.
Exec. Park Dr.
(Route-8)
(Route-16)
INTERSECTING ROUTES
RUTAS INTERSECTANDO
(Route-39)
Lenox Rd.
I-85 Expressway
EXECUTIVE PARK
Buford Hwy.
Chantilly Dr.
S.Exec. Park Dr.
(Route-39)

Appendix L
Parallel Flow Intersection ITE Article

The Parallel Flow Intersection: A New Two-Phase Signal Alternative

THE CONTINUOUS FLOW INTERSECTION HAS RECEIVED INCREASING INTEREST AS AN EFFECTIVE AT-GRADE CAPACITY SOLUTION TO CONGESTION. THE PRIMARY GOALS OF THIS AND OTHER HIGH-CAPACITY DESIGNS ARE TO REDUCE SIGNAL PHASES, CYCLE LENGTH AND CONFLICT POINTS. A TWO-PHASE INTERSECTION DESIGN CALLED A PARALLEL FLOW INTERSECTION, OR PARAFLOW, IS ANOTHER ALTERNATIVE FOR IMPROVING PERFORMANCE.

BY GREGORY F. PARSONS, P.E.

INTRODUCTION

Many intersections are congested in burgeoning metropolitan areas, and the problem is worsening as motorists demand ever-greater vehicle mobility. Rather than throw up their hands in the face of limited funds and increasingly stymieing regulations, transportation professionals have been daring to curb congestion and the deteriorating performance of roadway networks in more inventive ways.

This feature introduces a signalized two-phase intersection design patented by the author (U.S. Patent No. 7,135,989). The parallel flow intersection, or paraflow, is another solution for improving roadway junction capacity. For the purposes of this writing, a high-capacity intersection is defined as an intersection providing a satisfactory level of service (LOS) for each conflicting high-demand approach. Thus, a four-leg conventional intersection with high-demand conflicting movements would require four separate phases per signal cycle.

Achieving high capacity at an intersection is accomplished by reducing phases, cycle length and conflict points. More traditional high-capacity designs, such as the median crossover U-turn (or "Michigan left") and jughandle, have been used successfully where space is available, but size and cost limit their widespread application.

Transportation professionals continue to be challenged to safely increase the capacity of existing urban arterial intersections within confined spaces and at an acceptable cost. The paraflow is presented as a possible solution to satisfy these objectives at many more intersection locations than have been previously considered.

The paraflow is similar to the continuous flow intersection (CFI) in that left turns cross over opposing travel lanes during the cross-street through movement phase.[1] This process of concurrent left-turn and through movements permits the larger volume through traffic to proceed with no lost time due to protected left-turn phases. Unlike the CFI, however, the paraflow accomplishes this operation with bypass turn lanes parallel to the cross-street center lanes, resulting in a smaller intersection with different characteristics.

DESCRIPTION

Figure 1 illustrates the general layout of a four-leg, two-phase paraflow intersection. The paraflow shares the basic geometry of a conventional intersection with the addition of a turn bypass roadway along the cross street that then intersect to form a bypass junction. The bypass roadway removes left-turn conflicts from the main junction, allowing the signal to operate with two phases for each repeating cycle.

Center left-turn lanes are provided between the main and bypass junctions in the same location as in a conventional intersection. The left-turn lane storage requirements for length and number of lanes are determined by analyzing traffic flow and physical site constraints. A channelizing island is constructed at the end of the center left-turn lanes to provide positive guidance to drivers turning onto the bypass roadway. This feature is necessary to prevent drivers from inadvertently turning into the main junction.

The bypass roadway is located generally adjacent and parallel to the cross street with a length somewhat greater than the center left-turn lane storage need. Separation between the bypass roadway and cross street is necessary to avoid driver discomfort caused by having opposing traffic on both sides and the sensation of traveling the wrong way. A minimum separation of 1.8 meters (6 feet) should be provided with a yellow-painted raised median.

Reboundable posts or bollards should be installed on the divider to create more obvious separation. Where space is available, wider separations applying grass or

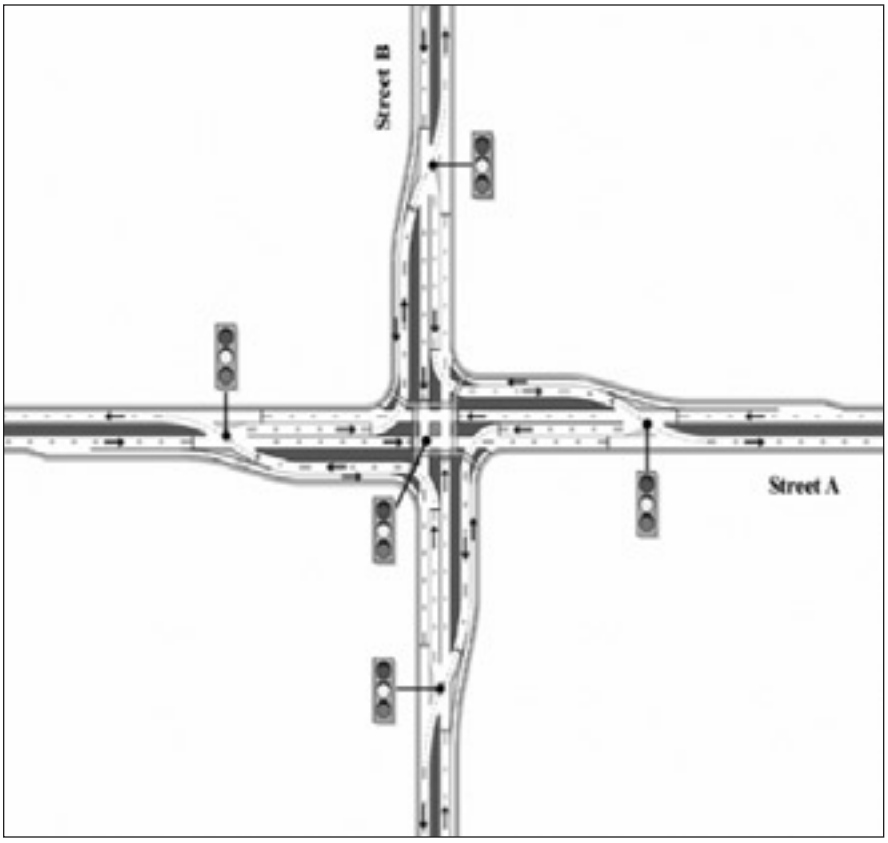


Figure 1. Layout of a four-leg, two-phase paraflow intersection.

landscaping can provide even better bypass junction geometry and can be more visually pleasing. A paved shoulder between the bypass left-turn lanes and raised divider also can be considered to offer even greater separation and a space for emergency stopping. The bypass roadway will add a minimum of 9.2 meters (30 feet) to the roadway cross-sectional width on the approach side and, with dual turn lanes and desirable lateral separation from the main roadway, 15.9 meters (52 feet) would be necessary.

OPERATION

The paraflow signal cycle basically consists of two phases; however, the main junction signals must be coordinated with the bypass junction signals based on traffic volume distribution and distance between junctions. Although bypass junction signal operation could result in multiple phases, the main junction signal will have only two phases per cycle.

Through traffic delay is reduced substantially compared to conventional intersections because additional green time is provided by operating through and left-turn phases concurrently. However, unlike at a CFI, where left turns are intended to stop only once, left-turning vehicles at a paraflow are stopped multiple times, resulting in more total left-turn delay at a paraflow than at a CFI.

Figure 2 shows the general signal phasing for a four-leg, two-phase paraflow intersection. In the first phase, the driver passes through the approach bypass junction and proceeds into the center left-turn lane, then is stopped by the main junction left-turn signal.

In the second phase, the left-turning driver turns onto the bypass roadway and continues to the departure bypass junction. Right-turning drivers pass through the approach bypass junction by traveling onto the bypass roadway and then merging onto the departure roadway. Through movements travel on a straight route in the same manner as a conventional intersection, passing through the three coordinated signalized junctions.

PERFORMANCE COMPARISON

Capacity analyses performed by the author suggest that the paraflow is very efficient compared with other intersection

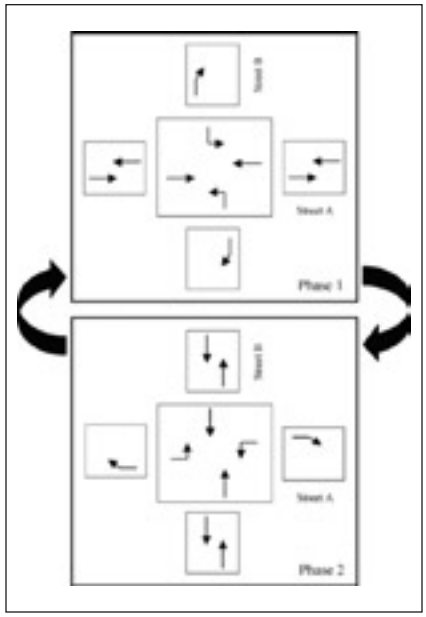


Figure 2. Signal phasing diagram for a four-leg, two-phase paraflow intersection.

types. This feature presents the results of one such analysis expressed in terms of LOS and average vehicle delay for an intersection with a total approach volume of 6,375 vehicles per hour (vph) and 30-percent left-turn volume. The intersection analyzed had four approaches with two through lanes on each approach and 55-percent directional volume distribution on the major road.

The intersection types chosen for this comparison were: paraflow; CFI; three-lane modern roundabout and conventional intersection. The paraflow and CFI were modeled in the microsimulation program VISSIM (Version 4.0; PTV America Inc.), the modern roundabout using RODEL (Version 1.0; RODEL Software Ltd.) and the conventional intersection with Synchro (Version 6.0; Trafficware, Ltd.). Given that the different software results are not directly comparable, the trial results can be used to give only a general indication of relative performance.

The results of the comparison shown in Table 1 illustrate the potential performance gain of two-phase signals. Given the traffic volume inputs of the trial, the paraflow and CFI were at LOS C. On the other hand, the modern roundabout and conventional intersections produced LOS F. Both the paraflow and the CFI showed similar results at 80 percent and 75 percent less delay than the conventional and modern roundabout intersections, respectively.

Table 1. Intersection LOS and delay comparison.

	Intersection total		West approach		East approach		North approach		South approach	
	LOS	Average delay(s)	LOS	Average delay(s)	LOS	Average delay(s)	LOS	Average delay(s)	LOS	Average delay(s)
Two-phase paraflow[a]	C	32	C	30	C	27	C	35	D	36
Two-phase CFI[b]	C	34	D	36	C	26	C	33	D	37
Three-lane roundabout[c]	F	119	F	293	A	7	A	5	B	11
Conventional signal[d]	F	163	F	275	F	81	F	96	F	96

Notes:

[a] For each approach, two through lanes, two 91.5-meter (300-foot) center left-turn lanes, two 91.5-meter (300-foot) left-turn bypass lanes and one right-turn bypass lane. Analyzed using VISSIM v4.0 software.

[b] For each approach, two through lanes, two 91.5-meters (300-foot) displaced center left-turn lanes, two 91.5-meter (300-foot) left-turn bypass lanes and one right-turn bypass lane. Analyzed using VISSIM v4.0 software.

[c] For each approach, two through lanes, 91.5-meter (300-foot) flare length and three entry lanes. Three-lane circulatory roadway with 70-meter (230-foot) inscribed circular diameter. Analyzed using RODEL v1.0 at 50-percent confidence level.

[d] For each approach, one through lane, one shared through/right-turn lane, two 91.5-meter (300-foot) center left-turn lanes and optimized actuated-uncoordinated. Analyzed using Synchro v6.0 software.

Volume inputs								
			Left turn		Through		Right turn	
	% truck	Approach volume (vph)	%	vph	%	vph	%	vph
Major road (west)	3	2,500	30	750	60	1,500	10	250
Major road (east)	3	1,375	30	413	60	825	10	137
Minor road (north)	3	1,250	30	375	60	750	10	125
Minor road (south)	3	1,250	30	375	60	750	10	125
Total		6,375						

SAFETY

Safety at intersections is generally a function of vehicle speed and the number and severity of conflict points. A conventional intersection has 32 conflict points, of which 16 are the most severe crossing type. Crashes at conventional intersections often are at high speeds and, when combined with crossing maneuvers, result in a higher probability of fatality or serious injury.

On the other hand, the modern roundabout is indisputably the safest intersection, with very low travel speeds and only eight conflict points (less severe merge and diverge types). By comparison, the paraflow has 28 conflict points, of which 12 are the crossing type (see Figure 3). In addition to reduced crossing conflict points, all turn movements at the paraflow are protected and removed from the main junction.

PROPERTY ACCESS

The paraflow intersection does limit access to corner properties compared to a conventional intersection. Potential solutions are to allow left turns from the bypass roadway and/or left turns at the bypass junction onto the bypass roadway. In combination, these modifications would permit full access at driveways located on the bypass roadway. However, the presence of driveways on the bypass roadway or anywhere within the intersection limits increases the risk of stopped vehicle incidents that could, in turn, cause intersection movements to become blocked.

PEDESTRIAN CONSIDERATIONS

The paraflow offers protected pedestrian crossings at the main junction, with the crossing made in three separate signal phases: cross the near bypass roadway; cross the main roadway; and cross the far bypass roadway. At the main junction, channelizing traffic islands offer pedestrians refuge for safer crossing; at bypass junctions, the crossing will vary depending on the junction treatment. The combination of fewer lanes to cross between waypoints, one-way traffic at each crossing and no permitted left turns should make for a safer crossing at a paraflow than a conventional intersection, but at the expense of much more pedestrian travel time.

Given relatively long duration phases, separate pedestrian phases at a paraflow should not be necessary, unlike conventional intersections where all lanes on a leg must be crossed in a single phase, often requiring a separate activated pedestrian phase. A paraflow needs additional sig-

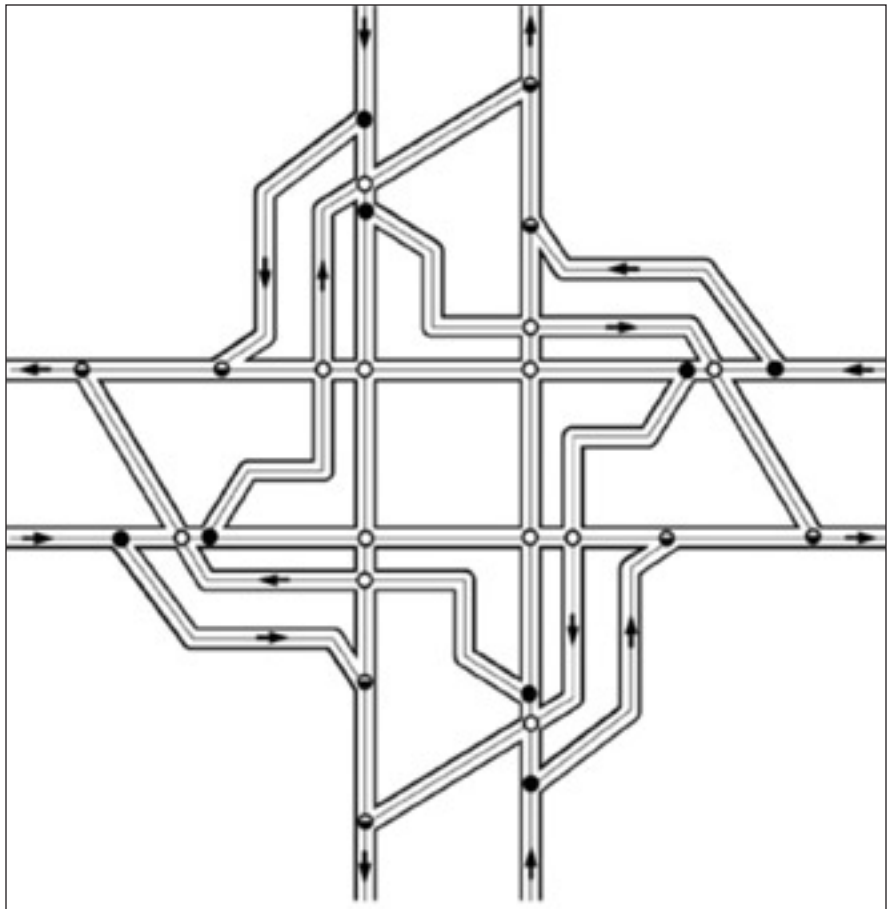
nal heads; thus assuming a four-leg conventional intersection requires four pairs of pedestrian signal heads, the paraflow would need eight total pairs.

CONVERTING INTERSECTIONS

Converting an existing conventional intersection to a paraflow can be straightforward if no additional lanes are being added to the existing roadway and space is available for the bypass roadways. As Figure 4 illustrates, longer duration work (such as new pavement construction) beyond the existing pavement limits (shown shaded in Figure 4) is performed on the outsides of the intersection without interrupting traffic operations or requiring detours. Less time-consuming work (such as adding loop detectors, channelization and pavement markings) could be performed with minor traffic disruption.

DESIGN ADAPTABILITY

Paraflows can take multiple forms and prove adaptable to various site and traffic conditions. Although the main junction is primarily limited to the at-grade signalized layout, the bypass junctions can receive a variety of treatments. The basic forms of paraflow intersections are four-leg, two-phase; four-leg, three-phase; and three-leg (T-type), two-phase. The major street bypass junction can take three forms: fully signalized, merge on the left (no signal in departing direction), or grade-separated. For minor-street bypass junctions, more options are available, including modern roundabout or stop-controlled treatments.



LEGEND	Four-leg, two-phase Paraflow	Conventional four-leg signalized Intersection
● Diverging	8	8
○ Crossing	12	16
◒ Merging	8	8
Total	28	32

Figure 3. Conflict diagram for a four-leg, two-phase paraflow intersection.

POTENTIAL RISK FACTORS

Without the benefit of a paraflow in operation to evaluate real-world performance, not all foreseeable problems possibly can be identified at this time; however, a few concerns are noted for consideration.

The bypass roadway is generally expected to be near-parallel with the cross street, forming a junction resulting in an undesirable intersection angle. Two problems emerge with this geometry: poor stopping sight distance (SSD) and wrong-way turn potential.

Short SSD is a concern with the driver stopped on the bypass roadway looking over the right shoulder to confirm that vehicles have stopped on the cross street departure lanes before entering the junction intersection. The bypass junction geometry can be adjusted to mitigate this problem by increasing the angle of intersection of the bypass roadway with the cross street. This is best accomplished by providing more lateral separation between the bypass and cross street roadways. Another method is to create a jughandle-like intersection by curving the bypass roadway away from the cross street, then forming the intersection.

Wrong-way movement potential is related to the bypass junction geometry as well, in that the high skew angle intersection creates a greater potential for driver confusion, leading to travel in the wrong direction of the cross street. Increasing the angle of intersection between the bypass roadway and the cross street in combination with clear markings and signage would reduce this risk.

Another risk factor is the loss of electrical power to the signal. Given the number of signalized movements and internally-conflicting routes within the intersection, signal malfunction could present a serious problem. Electrical backup means (generator or battery-powered light-emitting diode heads) would be necessary to protect against this situation.

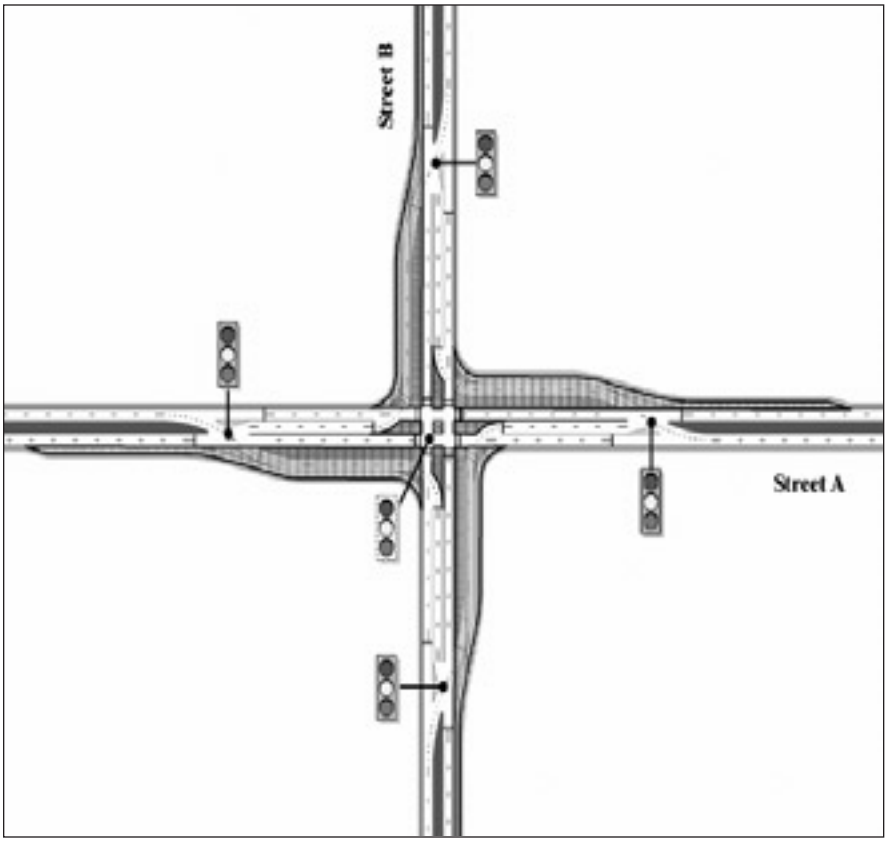


Figure 4. New pavement (shown as shaded areas) and signals necessary to convert the existing intersection to a paraflow intersection.

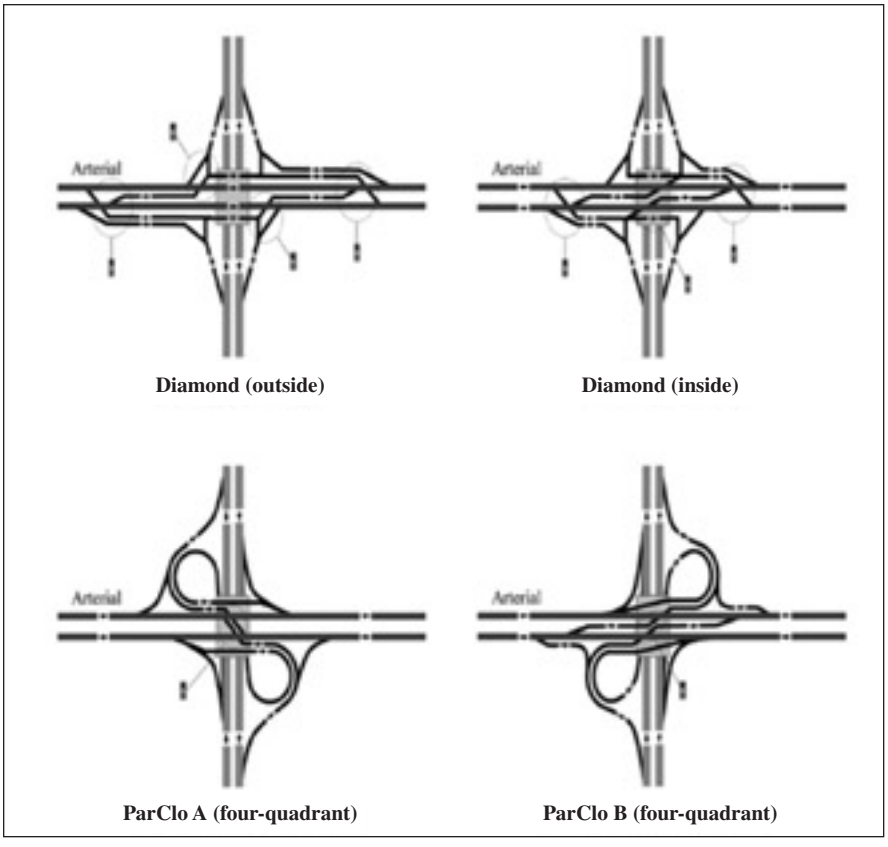


Figure 5. Paraflow freeway interchange examples.

Blocking within the intersection is an important concern, and measures would be necessary to reduce the effect of a crash or breakdown. Providing shoulders or other pullover space would help minimize the duration of interruption, and "no blocking" pavement markings combined with signage can be applied at critical crossing points.

A final risk factor is the improper turn where a driver might miss the turn opportunity and make an incorrect turn. With a CFI, this risk can occur for a left turn due to the center-turn lane displacement. Improper right turns are a greater risk with the paraflow, although the right-turn lane is not displaced as far as the CFI center-turn lanes. Effective signage and other wayfinding devices should minimize this risk for both intersection types.

PARAFLOW INTERCHANGE

The paraflow can be constructed as a freeway interchange either in diamond or partial cloverleaf (ParClo) forms (see Figure 5). The paraflow diamond interchange types are either inside or outside variants. The diamond interchange types retain the basic paraflow geometric design, in which the left turns from the freeway ramps connect to bypass roadways that are generally parallel and adjacent to the arterial.

The inside paraflow diamond places the opposing center left-turn lanes end to end at the bridge such that the arterial left turns travel directly onto the freeway entrance ramps, resulting in three two-phase junctions. The outside type separates the arterial center left-turn lanes such that left-turning vehicles turn onto the bypass roadways and then proceed onto the freeway ramps, also resulting in three two-phase junctions.

The use of a particular diamond variant is dependent on the site, with the outside type needing more arterial length but with lower structure cost than the inside type. For instance, the outside paraflow diamond could prove beneficial for converting existing conventional spread diamond freeway-over interchanges by modifying bridge end-spans to place the bypass roadways.

A paraflow ParClo can be a ParClo-A (two- or four-quadrant), ParClo-B (two- or four-quadrant), or single-loop ParClo. The ParClo-A and ParClo-B four-quadrant types can be configured such that the center left-turn lanes of the cross street are brought to

a single signal at the bridge; a conventional ParClo requires two signalized ramp intersections on the cross street. The two quadrant and single-loop paraflow ParClo can be configured to form normal T-type paraflow intersections for two-phase operation where three-phase signals normally are necessary.

CONCLUSION

The parallel flow intersection has the potential to assist transportation agencies in reducing congestion at some of today's high demand intersections with less impact and at lower cost than conventional and other unconventional intersection designs. The layout expands a standard signalized intersection with the addition of turn bypass roadways parallel to the cross street.

This design appears to be intuitive and safe to drive, reduces property impacts and is flexible in application compared to other unconventional intersection alternatives. An important consideration for agencies desiring to improve capacity at existing intersections is the ease of converting to a paraflow without complicated construction phasing or temporary detours. The paraflow can be adapted in a variety of ways to fit site requirements with four- and three-leg intersection types, a variety of bypass junction treatments and freeway interchange types. The paraflow should be regarded as another option for agencies to expand the application of two-phase signals to even more intersections than previously considered. ■

References

1. Goldblatt, R.F. Mier and J. Friedman. "Continuous Flow Intersections." *ITE Journal*, Vol. 64, No. 7 (July 1994): 35–42.



GREGORY F. PARSONS, *P.E., is principal of Quadrant Engineering LLC, a paraflow consulting practice. He is the inventor and patent holder (U.S. Patent No. 7,135,989) of the paraflow intersection. He also is a senior transportation engineer with TranSystems Corporation and has more than 20 years of experience in the planning and design of urban and rural streets and freeways.*

PITTSBURGH
ITE 2007 Annual Meeting and Exhibit

Thank You

ITE would like to thank the following exhibitors for another successful show:

3M Traffic Control Materials Div.
ACS Government Solutions Inc.
Actelis Networks
Airpax Dimensions Inc.
All Traffic Solutions
Alpha Technologies
ATSSA American Traffic Safety Services Assn.
Caliper Corp.
Campbell Co.
Carmanah Technologies Inc.
Citilabs
Clary Corp.
Component Products
Control Specialists Co.
Daktronics Inc.
Decker Supply Co. Inc.
Degussa/CYRO Industries
Diablo Controls
Dialight Corp.
E-Views Safety Systems
Eberle Design Inc.
Econolite
EIS Inc.
Emerson Network Power Surge Protection
Encom Wireless Data Solutions Inc.
Excellence Opto. Inc.
FHWA, ACS-Lite
FHWA, National Highway Institute
FHWA, Office of Safety
FHWA, Office of Operations
FHWA, Travel Model Improvement Program
International Fiberlok
Fiberoptic Display Systems
Filtrona Extrusion
Flint Trading Inc.
GDI
GE Lumination
H.W. Lochner Inc.
IMSA International Municipal Signal Association
INRO
Intelight Inc.
International Road Dynamics Inc.
ITEM Ltd.
Iteris
Jamar Technologies Inc.
JSF Technologies
Kimley-Horn and Associates
Lasercraft Inc.
Leotek
LightGuard Systems Inc.
Marker One
McCain
McTrans Center/University of Florida
MetroCount USA Inc.
Midwestern Software Solutions
Milbank Manufacturing Co.
Miovision Technologies Inc.
MS Sedco Inc.
Myers Power Products
National Sign & Signal Co. Inc.
Naztec Inc.
Off the Wall Products LLC
Optelecom-NKF
PBS&J
Pelco Products Inc.
Polara Engineering Inc.
PTV America Inc.
Quixote Corp.
QWICK KURB® Inc.
Reno A&E
Road Kare International
RuggedCom
Sensys Networks
SIAS Ltd.
Siemens ITS
Skyline Products Inc.
Solar Signals
Southern Manufacturing
Spot Devices Inc.
Strong Concepts
Swarco Traffic Management Inc.
Sypris Test and Measurement
Tassimco Technologies
TES Information Technology
TOMAR Electronics Inc.
Traffic and Parking Control Co. Inc.
Traffic Logix
Traffic Safety Corp.
Trafficware
TransCore
Transoft Solutions Inc.
Trastar Inc.
Trinity Industries
Union Metal Corp.
US Dept. of Transportation-ITS Program
Valmont Industries Inc.
Wapiti Micro Systems Inc.
Wavetronix LLC
Wilbur Smith Associates Inc.