TRAFFIC IMPACT STUDY
FOR
FOXHALL VILLAGE DEVELOPMENT
Development of Regional Impact # 1841
FULTON COUNTY, GEORGIA

Prepared for:

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August 20, 2008
A&R Project No: 08-035

EXECUTIVE SUMMARY

The purpose of this study is to determine the traffic impact that will result from the Foxhall Village development proposed on both sides of Cochran Mill Road, to the southeast and southwest of the intersection of Cochran Mill Road and Wilkerson Road, in Fulton County, Georgia. The development is proposed to consist of approximately 180,000 s.f. of retail space, 420,000 s.f. of office space, 1,668 single family detached housing units, 959 multifamily units, 2,053 single family attached units and an elementary school with 1,000 students. For the purposes of this DRI traffic study, the project has been analyzed in two phases. The interim phase for the year 2015 will include 49% of full build-out of the retail and office space, 430 single family detached housing units, 631 multifamily units, 255 single family attached units and an elementary school with 1,000 students. Full build-out for the development is projected for 2028. The traffic analysis evaluated the following scenarios: existing conditions, the year 2015 without additional traffic generated by the site, the year 2028 without additional traffic generated by the site, the year 2015 with the traffic generated by the site and the year 2028 with the traffic generated by the development.

From the existing condition analysis, it was found that one of the intersections within the study area is currently not operating at the LOS standard of D. Analysis of the Base Year 2015 revealed that two of the study intersections being analyzed will not meet the required LOS standard. Analysis of the Base Year 2028 revealed that three of the study intersections being analyzed will not meet the required LOS standard.

The Future 2015 and 2028 traffic including the site-generated traffic was then evaluated using existing lane geometry. Eight study network intersections will not meet the required LOS standard after the interim build out of the development is completed in 2015. Fifteen study network intersections will not meet the required LOS standard after full build-out of the development is completed in 2028. Improvements were recommended to restore these intersections back to the LOS standard. Additionally, recommendations to allow the site access points to operate satisfactorily were identified. Details can be found in the site access analysis section of this report.

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1. PROJECT DESCRIPTION

The purpose of this study is to determine the traffic impact that will result from the Foxhall Village development proposed on both sides of Cochran Mill Road to the southeast and southwest of the intersection of Cochran Mill Road and Wilkerson Road in Fulton County, Georgia. The development is proposed to consist of approximately 180,000 s.f. of retail space, 420,000 s.f. of office space, 1,668 single family detached housing units, 959 multifamily units, 2,053 single family attached units and an elementary school with 1,000 students. The site proposes five full access driveways on Cochran Mill Road, one full access driveway on Wilkerson Mill Road, three full access driveways on Philips Road, two full access driveways on Atlanta Newnan Road and eight full access driveways on Rico Tatum Road. The northern most full access driveway along Cochran Mill Road will align with the Rico Tatum Road. A location map for the site is shown in Figure 1.

1.1 Site Plan

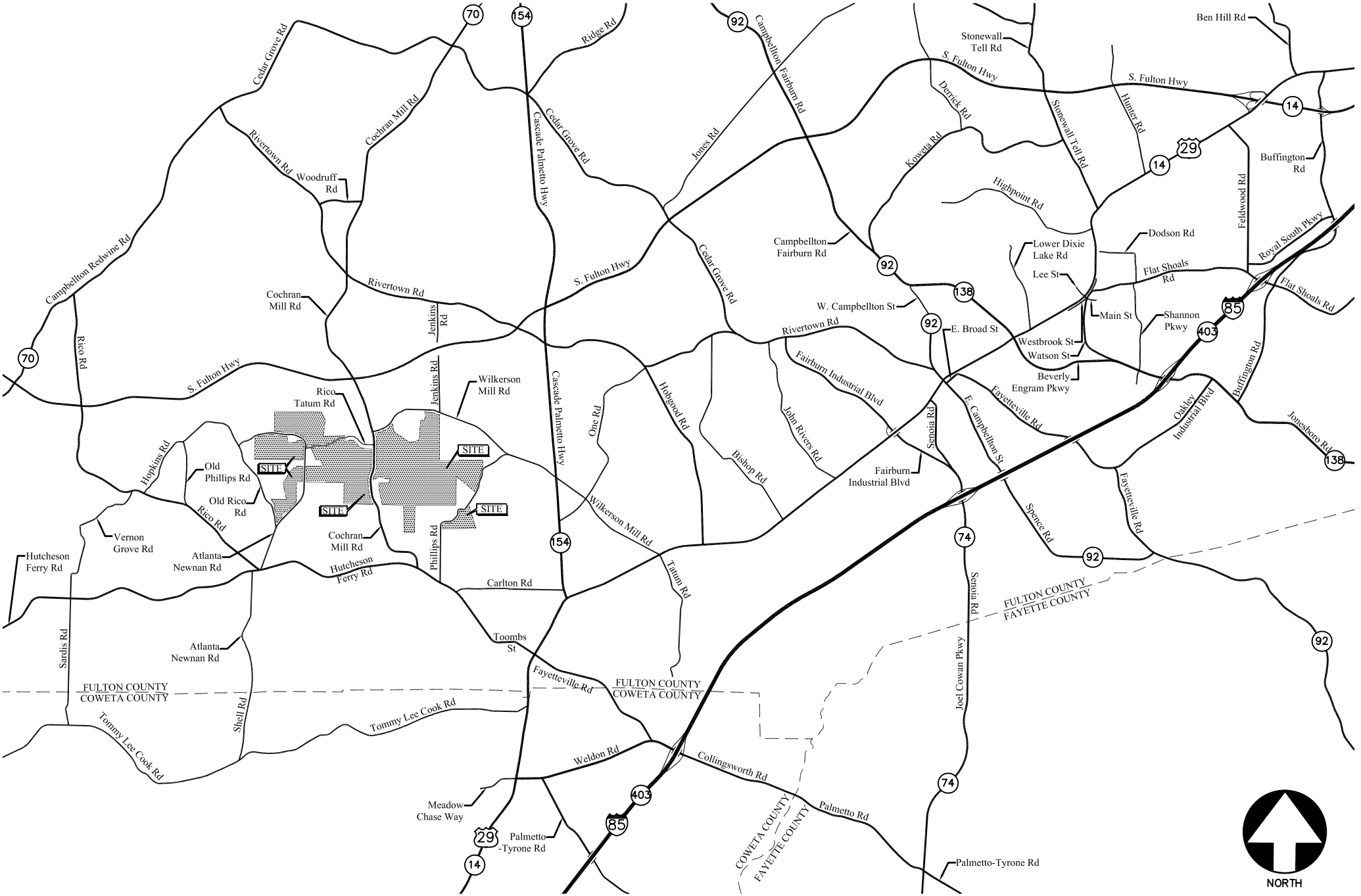
A site plan for this project is shown in Figure 2. A larger size drawing and a digital copy of the site plan are also provided with this report.

1.2 Consistency with Adopted Comprehensive County Plan

Existing zoning for the site is agricultural (A1). The proposed zoning for the site is commercial (GC) and medium density residential (MDR). The proposed zoning is consistent with the Fulton County future land use plan.

1.3 Project Phasing

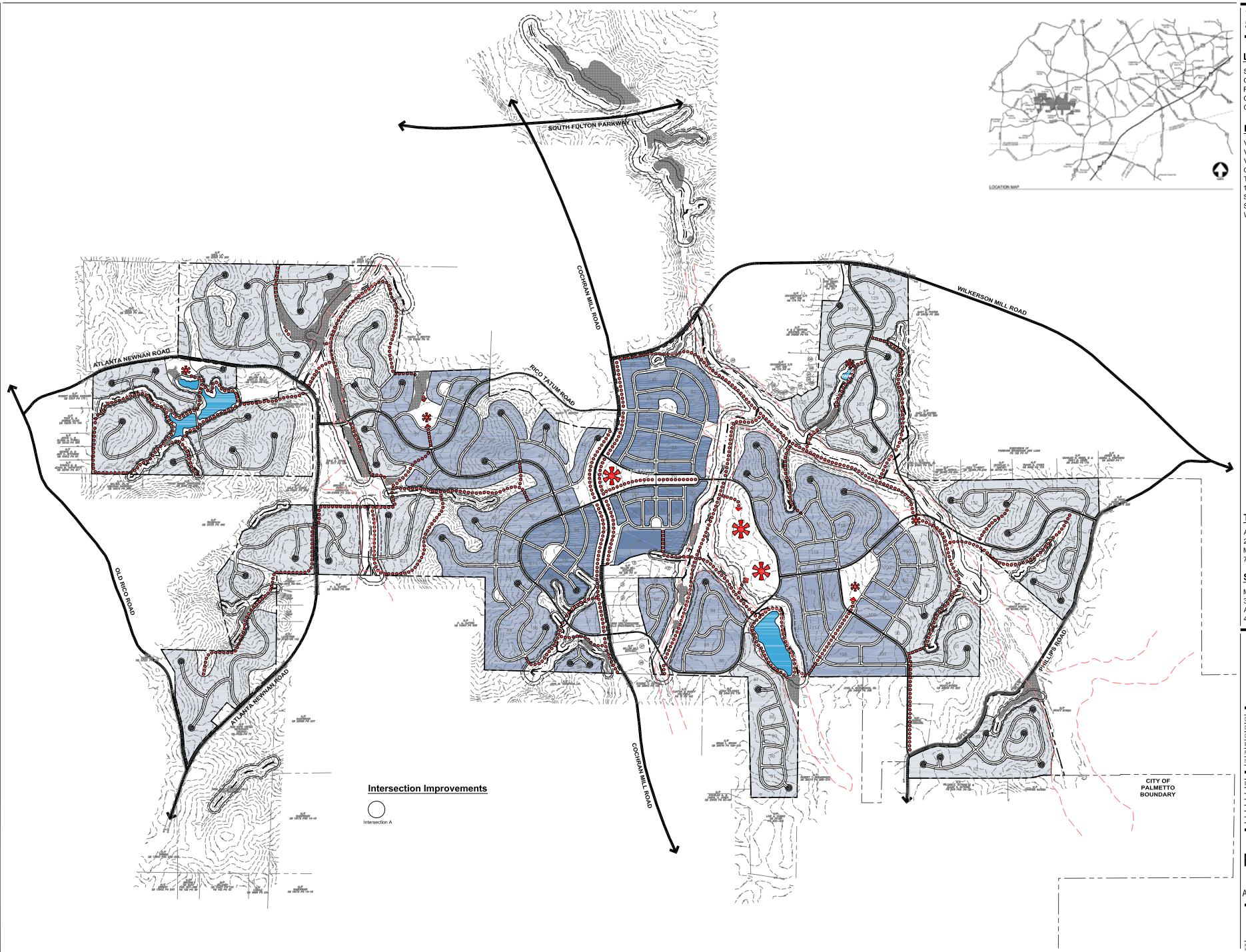
The project's impact has been evaluated in two phases. The interim phase for the year 2015 will include 49% of full build-out for the retail and office space, 430 single family detached housing units, 631 multifamily units, 255 single family attached units and an elementary school with 1,000 students. Full build-out for the development is projected for 2028. This study has evaluated traffic operations in the vicinity of the site for existing conditions year 2008, the year 2015 without additional traffic generated by the site, the year 2028 without additional traffic generated by the site, the year 2015 with the traffic generated by the site and the year 2028 with the traffic generated by the development.



LOCATION MAP

FIGURE 1

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Merrill Trust
COMMUNITIES & RESORTS, LLC

LAND USE SUMMARY

Site Acreage	1322.67 Acres
Gross Density	3.40 units/acre
Residential Units	4,500 Units
Commercial Space	600,000 sq. ft.
Open Space	390 Acres

LAND USE LEGEND

- Village Core
- Village General
- Village Edge
- Open Space
- Trails
- 100 Year Floodplain
- Stream Buffer
- Stream Impervious Zone
- Wetlands

Traffic Engineer:

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770-690-9255

Submitted By:

Merrill Trust Communities & Resorts, LLC
3340 Peachtree Road, Suite 2200
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404-495-9577

N

0 250 500 1000 1500

SCALE: 1"=500'

DATE:	August 5, 2008
DESIGNED BY:	mcg
DRAWN BY:	mcg
REVIEWED BY:	
PROJECT:	
ISSUE:	

REVISIONS

MERRILL TRUST
FOXHALL VILLAGE
PALMETTO, GA
A Planned Neighborhood Development

SITE PLAN 1

path: Y:\LIVE DATA\ARCHITECTURE\Planning\Engineering\01_Design\Sketch 500sqft\
file name: Sketch Site Plan.dwg | plot date: August 05, 2008 | plotted by: mcgilla

2. TRIP GENERATION

Trip generation estimates for the project were based on the rates and equations published in the 7th edition of the Institute of Transportation Engineers (ITE) Trip Generation report. The ITE Trip Generation report contains traffic volume count data collected at similar facilities nationwide. The development is proposed to consist of approximately 180,000 s.f. of retail space, 420,000 s.f. of office space, 1,668 single family detached housing units, 959 multifamily units and 2,053 single family attached units. The interim phase for the year 2015 will include 49% of full build-out retail and office space, 430 single family detached housing units, 631 multifamily units and 255 single family attached units. In addition, both the phases consist of an elementary school with 1,000 students. Trip generation calculations for the Foxhall Village development are shown in Tables 1 and 2 for the interim phase and full build-out respectively.

TABLE 1
TRIP GENERATION – INTERIM PHASE

Land Use	Total Size	A.M. Peak Hour			P.M. Peak Hour			Sat Peak Hour			24-Hour
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	2-way
820 - Shopping Center	88,200 s.f.	88	57	145	276	300	576	415	383	798	6,259
710 – General Office	205,800 s.f.	294	40	334	53	256	309	36	30	66	2,326
210 – Single Family Detached Housing	430 units	78	232	310	251	147	398	213	181	394	3,979
220-Multi Family	631 units	63	250	313	237	128	365	139	139	278	3,943
230-Single Family Attached	255 units	19	90	109	87	43	130	63	54	117	1,422
520 – Elementary School	1,000 students	208	171	379	12	14	26*	n/a	n/a	n/a	1,290
Total		**750**	**840**	**1,590**	**916**	**888**	**1,804**	**866**	**787**	**1,653**	**19,219**

*P.M. peak hour of adjacent street traffic for the elementary school has been calculated by assuming that 10% of the total PM peak hour generator is the PM peak hour of adjacent street traffic.

TABLE 2
TRIP GENERATION – FULL BUILD-OUT

Land Use	Total Size	A.M. Peak Hour			P.M. Peak Hour			Sat Peak Hour			24-Hour
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	2-way
820 - Shopping Center	180,000 s.f.	136	87	223	443	480	923	659	609	1,268	9,951
710 – General Office	420,000 s.f.	520	71	591	93	456	549	64	54	118	4,028
210 – Single Family Detached Housing	1,668 units	294	883	1,177	850	499	1,349	807	688	1,495	13,847
220-Multi Family	959 units	95	379	474	354	191	545	206	206	412	5,914
230-Single Family Attached	2,053 units	98	481	579	480	236	716	345	293	638	8,375
520 – Elementary School	1,000 students	208	171	379	12	14	26*	n/a	n/a	n/a	1,290
Total		**1,351**	**2,072**	**3,423**	**2,232**	**1,876**	**4,108**	**2,081**	**1,850**	**3,931**	**43,405**

*P.M. peak hour of adjacent street traffic for the elementary school has been calculated by assuming that 10% of the total PM peak hour generator is the PM peak hour of adjacent street traffic.

2.1 Net Trip Ends

Due to the nature of the development, mixed-use and pass-by reductions have been applied to the development. Trip Generation with the applied reductions is shown in the Tables 3 and 4 for the interim phase and full build-out respectively.

TABLE 3
TRIP GENERATION WITH REDUCTIONS – INTERIM PHASE

Land Use	A.M. Peak Hour			P.M. Peak Hour			Sat Peak Hour			24-Hour
	Enter	**Exit**	**Total**	**Enter**	**Exit**	**Total**	**Enter**	**Exit**	**Total**	**2-way**
820-Shopping Center	88	57	145	276	300	576	415	383	798	6,259
- Mixed-Use Reduction	*-2*	*-4*	*-6*	*-30*	*-45*	*-75*	*-27*	*-38*	*-65*	*-845*
*- Pass-By Reduction 0% (40%){10%}**	*0*	*0*	*0*	*-98*	*-102*	*-200*	*-39*	*-35*	*-74*	*-2,000***
710-General Office	294	40	334	53	256	309	36	30	66	2,326
- Mixed-Use Reduction	*-1*	*-1*	*-2*	*-9*	*-11*	*-20*	-11	-6	-17	*-242*
210-Single Family Detached Housing	78	232	310	251	147	398	213	181	394	3,979
- Mixed-Use Reduction	*-2*	*-1*	*-3*	*-18*	*-11*	*-29*	-14	-10	-24	*-276*
220-Multi Family	63	250	313	237	128	365	139	139	278	3,943
- Mixed-Use Reduction	*-2*	*-1*	*-3*	*-17*	*-10*	*-27*	*-9*	*-8*	*-17*	*-274*
230-Single Family Attached	19	90	109	87	43	130	63	54	117	1,422
- Mixed-Use Reduction	*0*	*0*	*0*	*-6*	*-3*	*-9*	-4	-3	-7	*-99*
520 – Elementary School	208	171	379	12	14	26	n/a	n/a	n/a	1,290
Totals without reduction	**750**	**840**	**1,590**	**916**	**888**	**1,804**	**866**	**787**	**1,653**	**19,219**
Totals with reduction	**743**	**833**	**1,576**	**738**	**706**	**1,444**	**762**	**687**	**1,449**	**15,483**

* AM Pass-By % (PM Pass-By %) {Saturday Pass-By %}

** 24 hour pass-by reductions have been calculated by assuming that the total PM peak hour trip reduction is 10% of the total daily pass-by reduction.

Table 4
Trip Generation with Reductions – Full Build-out

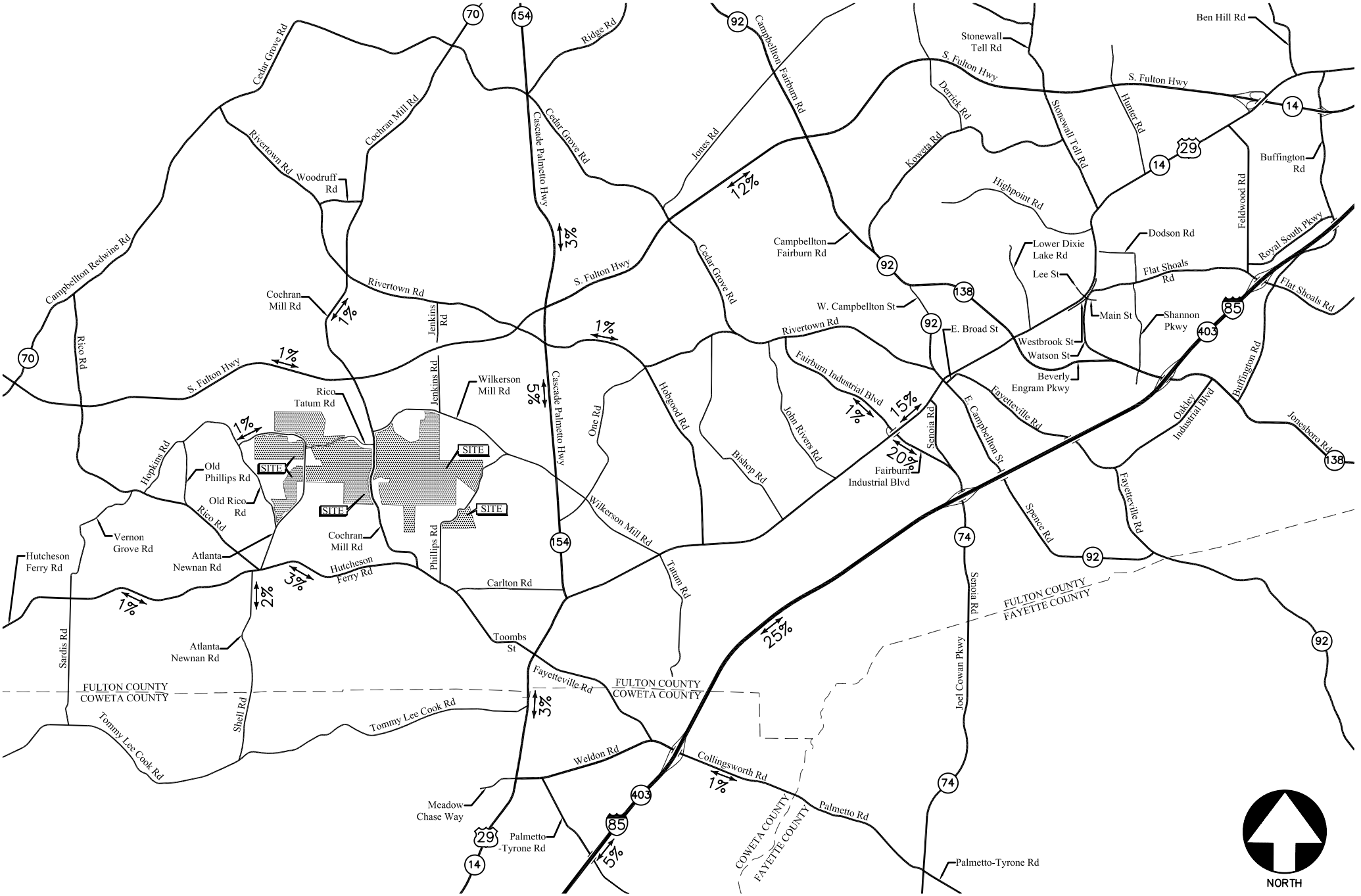
Land Use	A.M. Peak Hour			P.M. Peak Hour			Sat Peak Hour			24-Hour
	Enter	**Exit**	**Total**	**Enter**	**Exit**	**Total**	**Enter**	**Exit**	**Total**	**2-way**
820-Shopping Center	136	87	223	443	480	923	659	609	1,268	9,951
- Mixed-Use Reduction	*-3*	*-7*	*-10*	*-49*	*-72*	*-121*	-44	-61	-105	*-1,343*
- Pass-By Reduction										
*0% (33%){10%}**	*0*	*0*	*0*	*-130*	*-135*	*-265*	-62	-55	-117	*-2,650***
710-General Office	520	71	591	93	456	549	64	54	118	4,028
- Mixed-Use Reduction	*-1*	*-2*	*-3*	*-14*	*-18*	*-32*	-18	-11	-29	*-389*
210-Single Family Detached Housing	294	883	1,177	850	499	1,349	807	688	1,495	13,847
- Mixed-Use Reduction	*-4*	*-1*	*-5*	*-34*	*-21*	*-55*	-25	-19	-44	*-510*
220-Multi Family	95	379	474	354	191	545	206	206	412	5,914
- Mixed-Use Reduction	*-1*	*0*	*-1*	*-14*	*-8*	*-22*	*-6*	*-6*	*-12*	*-218*
230-Single Family Attached	98	481	579	480	236	716	345	293	638	8,375
- Mixed-Use Reduction	*-1*	*-1*	*-2*	*-19*	*-10*	*-29*	*-11*	*-8*	*-19*	*-308*
520 – Elementary School	208	171	379	12	14	26	n/a	n/a	n/a	1,290
Totals without reduction	**1,351**	**2,072**	**3,423**	**2,232**	**1,876**	**4,108**	**2,081**	**1,850**	**3,931**	**43,405**
Totals with reduction	**1,341**	**2,061**	**3,402**	**1,972**	**1,612**	**3,584**	**1,915**	**1,690**	**3,605**	**37,987**

* AM Pass-By % (PM Pass-By %) {Saturday Pass-By %}

** 24 hour pass-by reductions have been calculated by assuming the total PM peak hour trip reduction is 10% of the total daily pass-by reduction.

3. Trip Distribution & Assignment

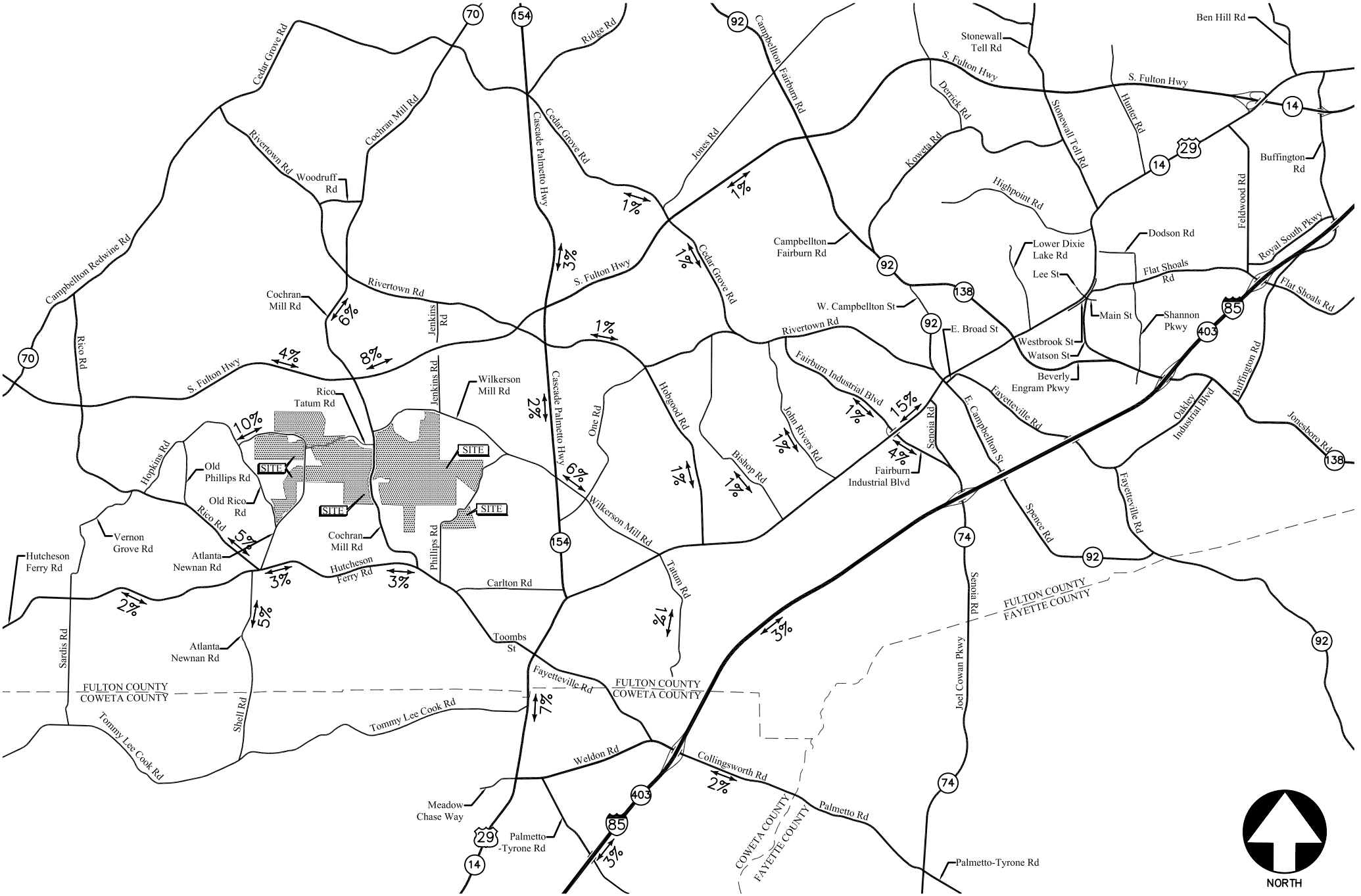
The trip distribution is the percentage of the traffic generated by the site that travels to and from the site on each segment of the surrounding roadway network. Separate trip distributions were developed for the retail site traffic, residential site traffic and for the office site traffic. The residential trip distribution, shown in Figure 3, was estimated based on major employment centers. The retail trip distribution, shown in Figure 4, was estimated based on the residential concentrations and the locations of major roadways and highways that will serve the development. The office distribution, shown in Figure 5, was estimated based on the residential concentrations; however, the office distribution is regionally based, while the retail distribution is locally based. The site-generated volumes were then distributed to the surrounding roadway network based on the driver's destination, and the most easily accessible route.



TRIP DISTRIBUTION - RESIDENTIAL

FIGURE 3

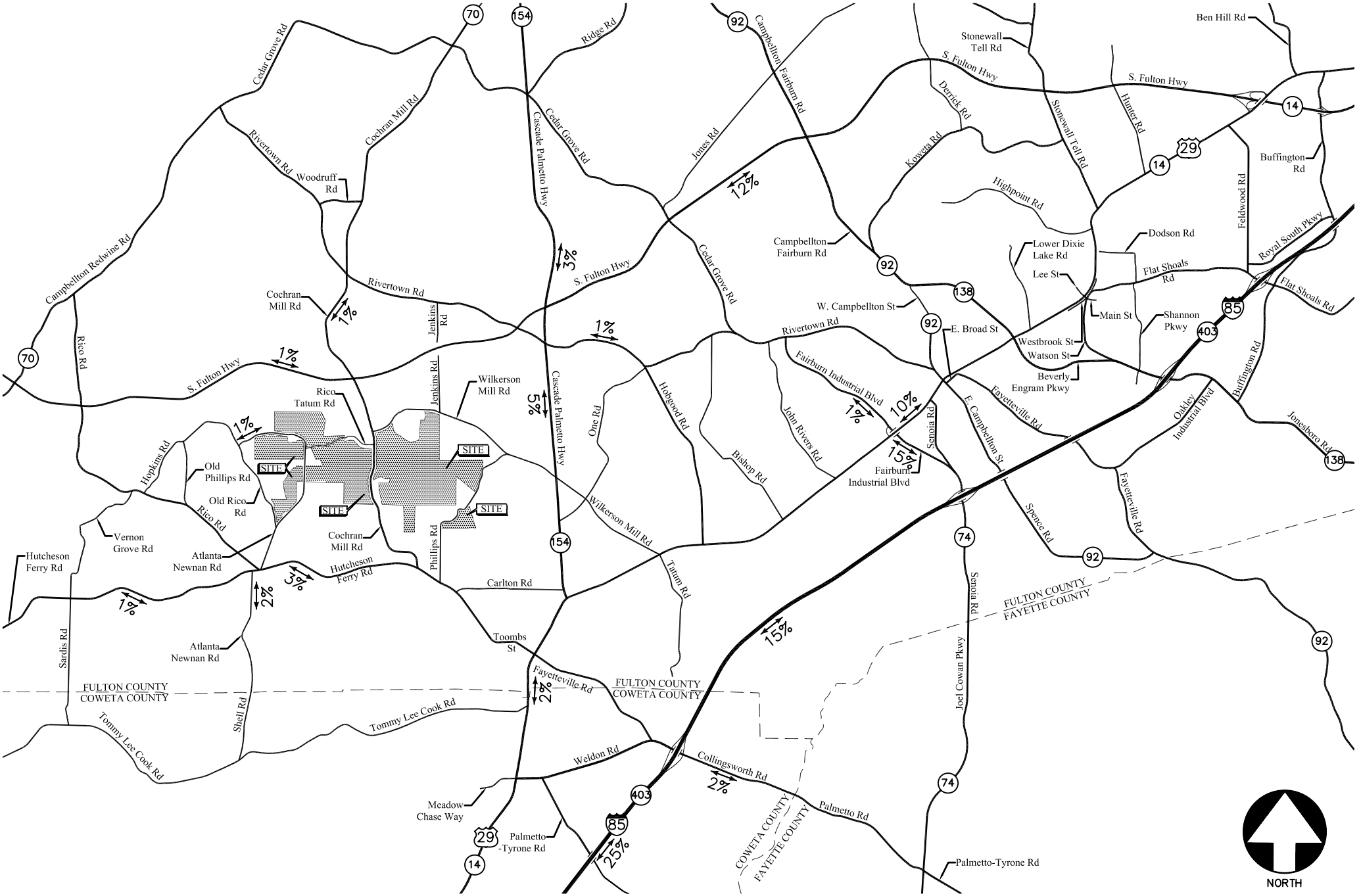
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TRIP DISTRIBUTION - RETAIL

FIGURE 4

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TRIP DISTRIBUTION - OFFICE

FIGURE 5

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4. STUDY NETWORK DETERMINATION

The study network was determined by evaluating the amount of traffic that the proposed development will add to each roadway segment in the area. According to GRTA requirements, a roadway segment carries a "significant" amount of traffic if the project contributes 7% or more trips to the two-way daily service volumes of a roadway at the appropriate level of service standard. Upon agreement with GRTA, a level of service standard of "D" was used for determining the study area network.

The traffic generated by the proposed project was then assigned to the area roadways using the trip distribution to determine the site-generated traffic on each roadway segment. The boundaries of the study network extend to the most distant intersections where at least 7% of the service volumes on the segment are attributed to project traffic. As per the agreement with GRTA, A&R Engineering has reduced the number of intersections to 22 including the intersections located to the east of SR 92, north of I-85 and south of South Fulton Highway. Figure 6 shows the intersections agreed to be included in the study area network. These intersections are listed below.

1) US 29 (SR 14) / US 29 - Fairburn Industrial Boulevard Connector Ramp
2) Fairburn Industrial Boulevard / US 29 - Fairburn Industrial Boulevard Connector Ramp
3) Collingsworth Road / I-85 Northbound Ramp
4) Collingsworth Road / I-85 Southbound Ramp
5) Collingsworth Road (Fayetteville Road) / Weldon Road
6) US 29 (SR 14) / Toombs Street
7) US 29 (SR 14) / SR 154 (Cascade Palmetto Highway)
8) US 29 (SR 14) / Wilkerson Mill Road / Tatum Road
9) Wilkerson Mill Road / SR 154 (Cascade Palmetto Highway)
10) Wilkerson Mill Road / Phillips Road
11) Wilkerson Mill Road / Jenkins Road
12) Wilkerson Mill Road / Cochran Mill Road
13) South Fulton Highway / Cochran Mill Road
14) South Fulton Highway / Rivertown Road
15) South Fulton Highway / SR 154 (Cascade Palmetto Highway)
16) South Fulton Highway / Cedar Grove Road
17) Hutcheson Ferry Road / Phillips Road
18) Hutcheson Ferry Road / Cochran Mill Road
19) Hutcheson Ferry Road / Atlanta Newnan Road
20) Hutcheson Ferry Road / Rico Road
21) Cochran Mill Road / Rico Tatum Road / Retail & Office Site Driveway 1
22) Atlanta Newnan Road / Rico Tatum Road

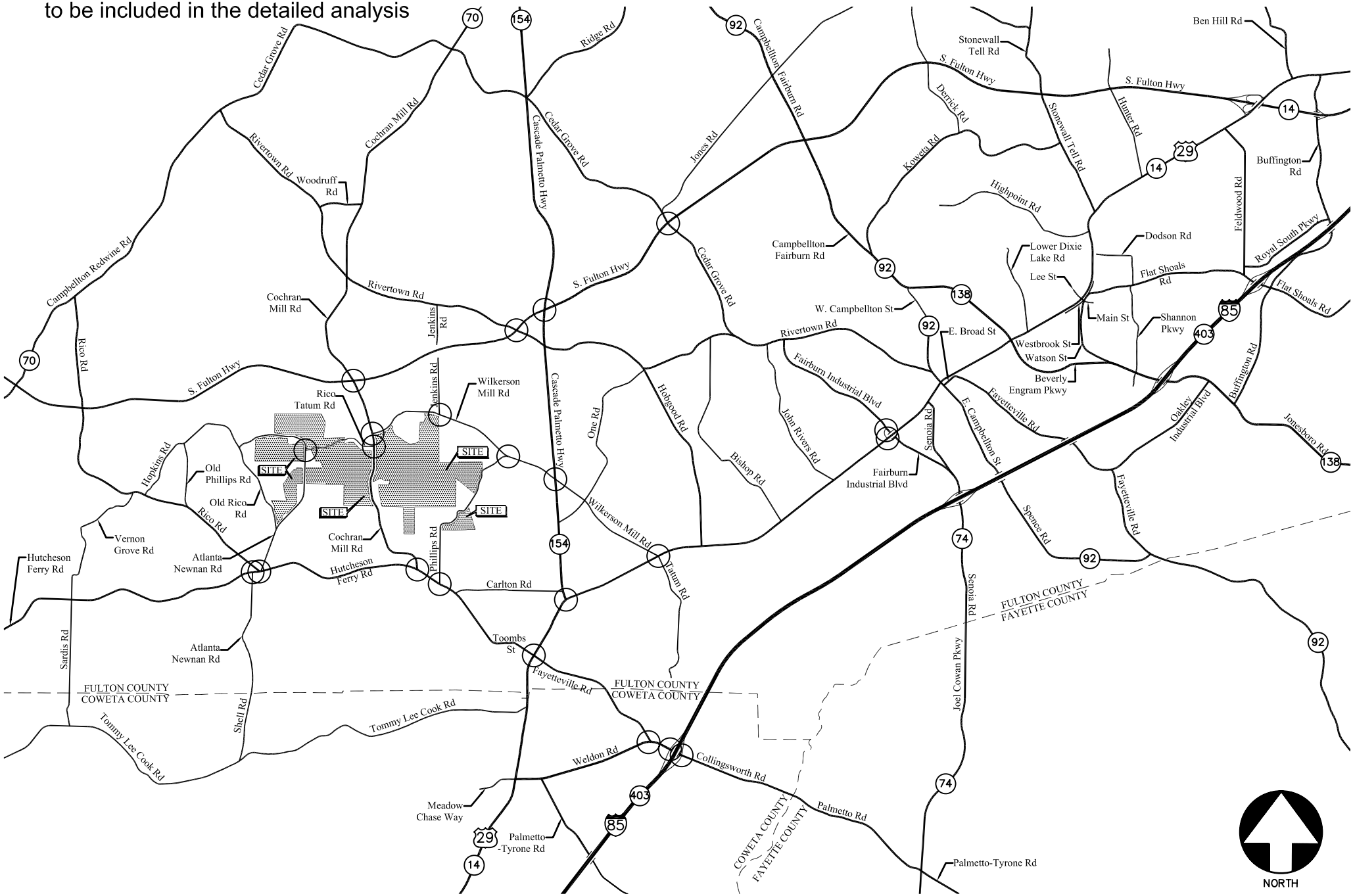
As agreed upon with GRTA, the number of intersections to be studied for the Saturday peak hour will be limited to the following 8 intersections and are shown in Figure 7:

1) Wilkerson Mill Road / Phillips Road
2) Wilkerson Mill Road / Jenkins Road
3) Wilkerson Mill Road / Cochran Mill Road
4) South Fulton Highway / Cochran Mill Road
5) Hutcheson Ferry Road / Phillips Road
6) Hutcheson Ferry Road / Cochran Mill Road
7) Cochran Mill Road / Rico Tatum Road / Retail & Office Site Driveway 1
8) Atlanta Newnan Road / Rico Tatum Road

Other intersections within this corridor, such as unsignalized side streets, right-in / right-out driveways, or private driveways, were viewed as insignificant and have not been included in the study network. In addition to the above intersections, four full access driveways on Cochran Mill Road, one full access driveway on Wilkerson Mill Road, three full access driveways on Philips Road, two full access driveways on Atlanta Newnan Road and eight full access driveways on Rico Tatum Road have been included in the analysis during the A.M., P.M. and Saturday peak hours as agreed upon in the methodology meeting.

LEGEND

◯ - Intersections identified by the 7% rule to be included in the detailed analysis



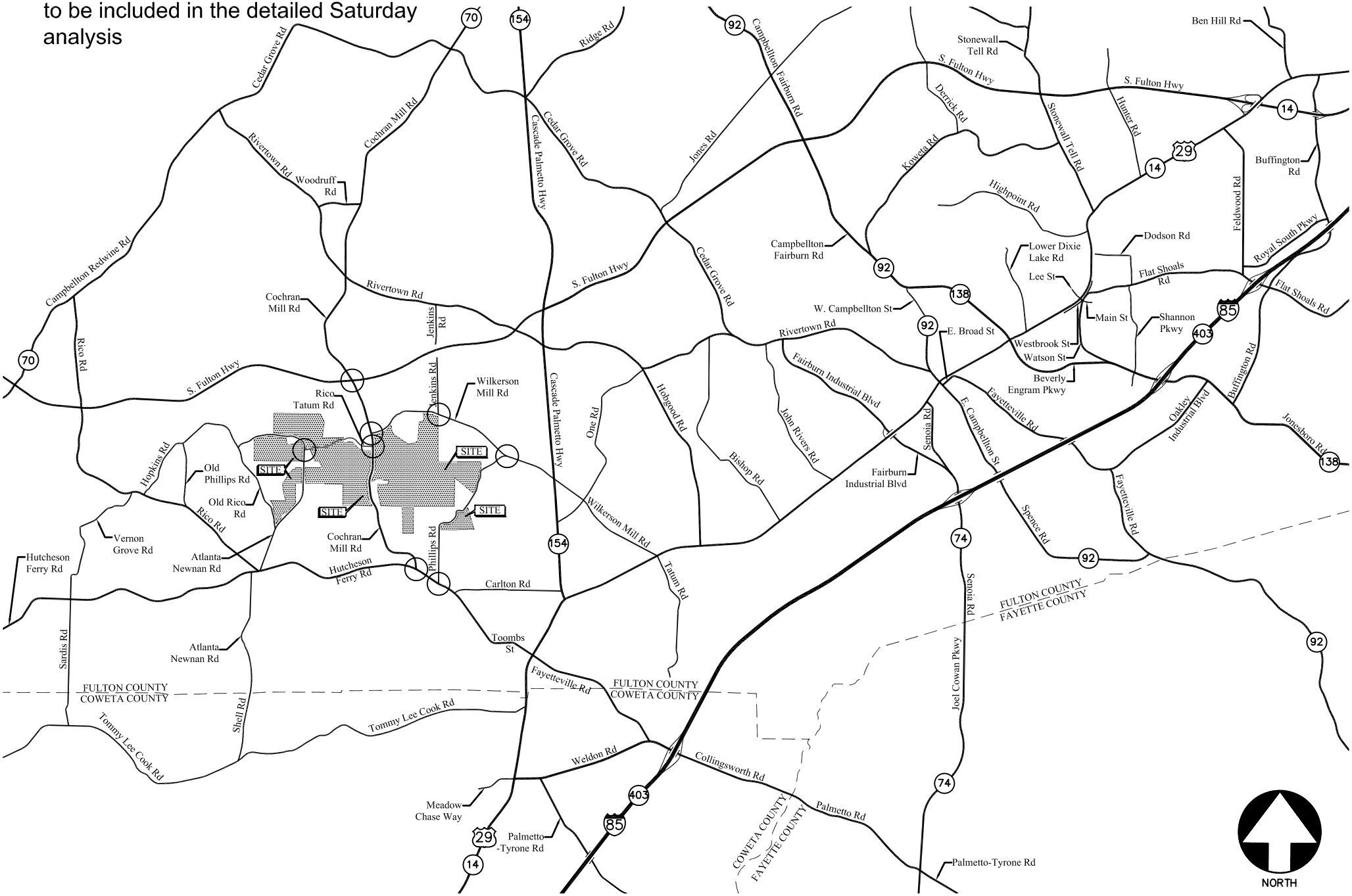
STUDY NETWORK - AM & PM

FIGURE 6

A&R Engineering Inc.

LEGEND

◯ - Intersections identified by the 7% rule to be included in the detailed Saturday analysis



STUDY NETWORK - SATURDAY

FIGURE 7

A&R Engineering Inc.

5. PLANNED & PROGRAMMED IMPROVEMENTS

The following improvements have been identified in the Atlanta Regional Commission's Transportation Improvement Program (TIP) and Regional Transportation Plan (RTP). These improvements are within the vicinity of the proposed development. Additional improvements for Fulton County have been identified, but they are not relevant to this project. Details of the planned programs can be found in the Appendix.

- GDOT Project ID 730753
  - Includes construction of a two-lane, rural, partially limited access highway at new location as a part of South Fulton Highway.

- FS-050: US 29 (Main Street) from south of Palmetto city limits to SR 154
  - Includes the creation of a one-way pair comprised of two two-lane roadways from south of Palmetto city limits to SR 154 (Cascade Palmetto Highway).

- FS-209: Multi-use Trail Phase I from Cochran Mill Park to Philips Road
  - Includes design of a bicycle / pedestrian trail from Cochran Mill Park to Philips Road.

- FS-AR-183: I-85 south at SR 138 (Jonesboro Road)
  - Includes addition of turn lanes at the ends of the exit ramps and widening the SR 138 Bridge to include turn lanes.

6. EXISTING CONDITIONS

An inventory was performed of the roadways in the area surrounding the site. The following is a brief description of each of these facilities.

6.1 Description of Transportation Facilities in Study Network

US 29 (SR 14)

US 29 (SR 14) is a multi lane undivided roadway.

SR 154 (Cascade Palmetto Highway)

SR 154 (Cascade Palmetto Highway) is a two-lane undivided roadway with a speed limit of 55 mph.

South Fulton Highway

South Fulton Highway is a multi lane undivided roadway with a posted speed limit of 55 mph. It runs between SR 14 and Rivertown Road.

Cochran Mill Road

Cochran Mill Road is a two-lane undivided roadway with a posted speed limit of 45 mph. It runs between SR 154 (Cascade Palmetto Highway) and Hutcheson Ferry Road.

Wilkerson Mill Road

Wilkerson Mill Road is a two-lane undivided roadway with a posted speed limit of 45 mph. It runs between US 29 (SR 14) and Cochran Mill Road.

Phillips Road

Phillips Road is a two-lane undivided roadway with a speed limit of 15 mph. It runs between Wilkerson Mill Road and Hutcheson Ferry Road.

Cedar Grove Road

Cedar Grove Road is a two-lane undivided roadway with a speed limit of 45 mph. It runs between River Lake Drive and Rivertown Road.

Atlanta Newnan Road

Atlanta Newnan Road is a two-lane undivided roadway with a speed limit of 45 mph. It runs between Rico Tatum Road and Hutcheson Ferry Road.

Hutcheson Ferry Road

Hutcheson Ferry Road is a two-lane undivided roadway with a speed limit of 45 mph. It runs between Toombs Street and Jones Mill Road.

Rico Road

Rico Road is a two-lane undivided roadway with a speed limit of 45 mph. It runs between SR 70 (Campbellton Redwine Road) and Hutcheson Ferry Road.

Rico Tatum Road

Rico Tatum Road is a two-lane undivided roadway with a speed limit of 25 mph. It runs between Cochran Mill Road and Old Rico Road.

Fairburn Industrial Boulevard

Fairburn Industrial Boulevard is a two-lane undivided roadway (in the vicinity of the site) with a speed limit of 45 mph. It runs between Senoia Road and Virlyn B Smith Road.

Toombs Street

Toombs Street is a two-lane undivided roadway with a speed limit of 30 mph. It runs between US 29 (SR 14) and Hutcheson Ferry Road.

Collingsworth Road

Collingsworth Road is a two-lane undivided roadway with a speed limit of 45 mph. It runs between SR 154 (Fayetteville Road) and Palmetto Road.

Weldon Road

Weldon Road is a two-lane undivided roadway with a speed limit of 45 mph. It runs between Collingsworth Road and US 29 (SR 14).

Rivertown Road

Rivertown Road is a two-lane undivided roadway with a speed limit of 30 mph. It extends between SR 70 (Campbellton Redwine Road) and SR 92 (W. Campbellton Street).

6.2 Analysis Summary

Existing traffic counts were performed at the intersections listed in Section 4 - Study Area Network. In addition to traffic counts, intersection geometry data was also obtained. Turning movement counts were collected during the agreed upon hours of 7:00 AM – 9:00 AM and 4:00 PM – 6:00 PM on weekdays and 3:00 PM – 5:00 PM on Saturdays. The four consecutive 15-minute interval volumes that summed to produce the highest volume at each intersection during each two-hour period were then determined. These volumes make up the A.M., P.M. and Saturday peak hour traffic volumes for the intersections counted. The existing traffic volumes are shown in Figures 8, 9, and 10 and the existing intersections traffic control and lane geometry for the study area network is shown in Figures 11 and 12.

The site-generated volumes shown in Tables 3 and 4 were distributed to the surrounding roadway network in accordance with the trip distributions. The site-generated volumes for the study intersections are shown in Figures 13, 14 and 15 for the interim phase and in Figures 16, 17 and 18 for full build-out. Existing traffic operations were analyzed at all existing intersections in accordance with HCM methodology using Synchro software. The results of the analysis are shown in Table 5.

Table 5

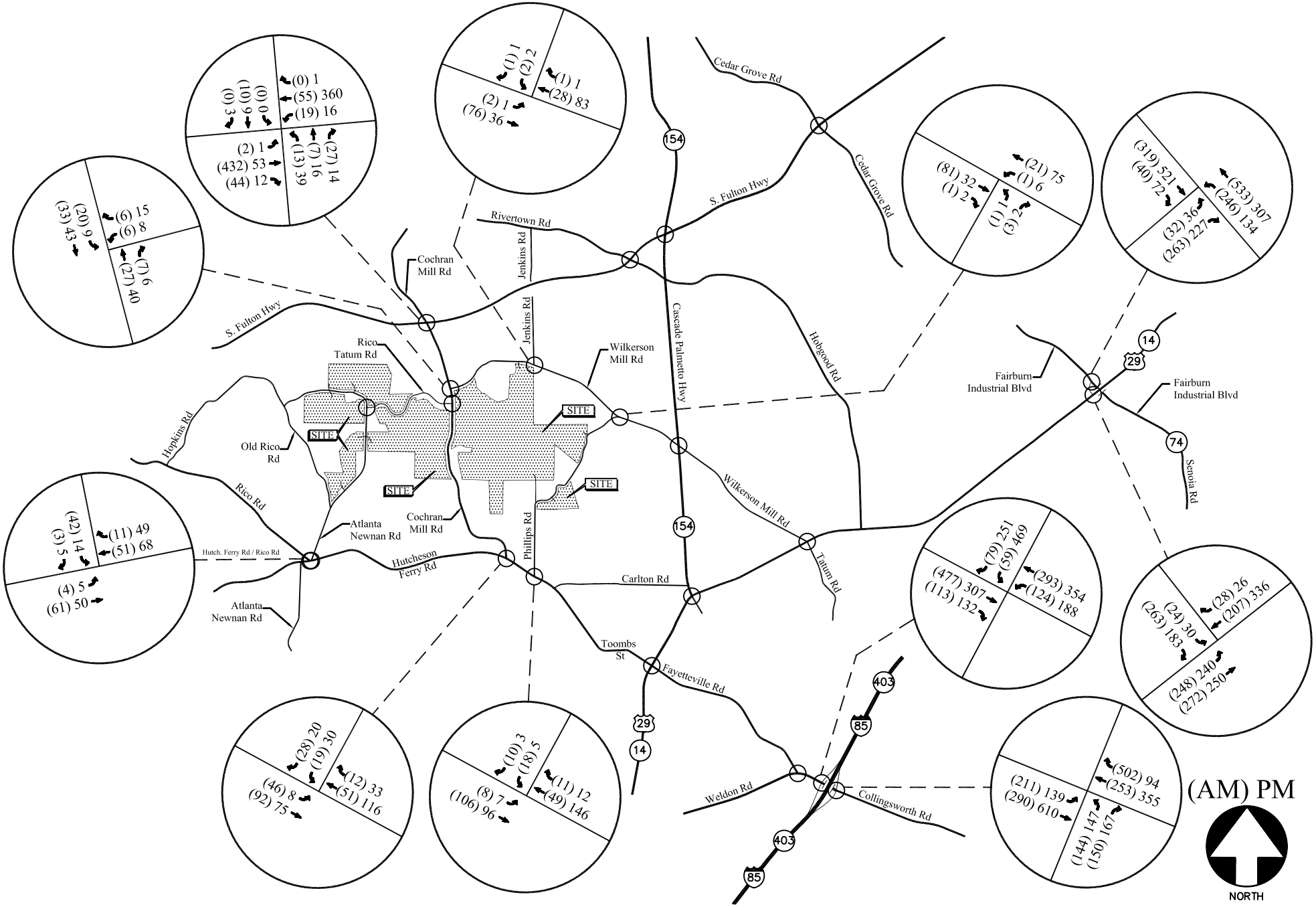
Existing Intersection Operations

Intersection	AM/PM/ Sat LOS Standard	Traffic Control	A.M. Peak Hour		P.M. Peak Hour		Sat Peak Hour	
			LOS (Delay)	v/c*	LOS (Delay)	v/c*	LOS (Delay)	v/c*
Collingsworth Rd / I-85 NB Ramps	D/D	Signalized	A (6.9)	0.39	A (8.1)	0.33	NA	NA
Collingsworth Road / I-85 SB Ramps	D/D	Signalized	A (9.2)	0.33	B (15.6)	0.39	NA	NA
US 29 / Toombs St / Fayetteville Rd	D/D	Signalized	B (13.6)	0.30	B (11.8)	0.48	NA	NA
US 29 / SR 154 / Ramah Baptist Church Drwy	D/D	Signalized	B (16.4)	0.38	B (14.9)	0.43	NA	NA
S. Fulton Hwy / SR 154	D/D	Signalized	C (27.8)	0.42	C (34.1)	0.31	NA	NA
S. Fulton Hwy / Cedar Grove Rd	D/D	Signalized	C (25.3)	0.38	C (22.4)	0.35	NA	NA
Fairburn Industrial Blvd / US 29 – Fairburn Industrial Blvd Connector Ramps -Westbound Left -Northbound Approach	 D/D D/D	Stop Controlled on US 29 - Fairburn Industrial Blvd Connector Ramps	 A (9.0) C (19.6)	 - -	 A (9.6) C (22.3)	 - -	NA	NA
US 29 / US 29 – Fairburn Industrial Blvd Connector Ramps -Eastbound Approach -Northbound Left	 D/D D/D	Stop Controlled on US 29 - Fairburn Industrial Blvd Connector Ramps	 B (12.0) A (8.4)	 - -	 B (13.5) A (8.8)	 - -	NA	NA
Collingsworth Rd / Weldon Rd -Eastbound Left -Southbound Approach	 D/D E/E	Stop Controlled on Collingsworth Rd	 A (1.1) E (35.5)	 - -	 A (0.6) E (38.9)	 - -	NA	NA

US 29 / Wilkerson Mill Rd / Tatum Rd		Stop Controlled on Wilkerson Mill Rd / Tatum Rd						
-Eastbound Left	D/D		A (8.2)	-	A (8.5)	-		
-Westbound Left	D/D		A (8.4)	-	A (8.2)	-	NA	NA
-Northbound Approach	D/D		B (13.7)	-	B (14.9)	-		
-Southbound Approach	D/D		C (18.2)	-	C (19.1)	-		
SR 154 / Wilkerson Mill Rd		Stop Controlled on Wilkerson Mill Rd						
-Eastbound Approach	D/D		B (13.5)	-	C (16.4)	-		
-Westbound Approach	D/D		B (12.3)	-	C (15.4)	-	NA	NA
-Northbound Left	D/D		A (0.8)	-	A (1.4)	-		
-Southbound Left	D/D		A (0.9)	-	A (0.7)	-		
Wilkerson Mill Rd / Phillips Rd		Stop Controlled on Phillips Rd						
-Westbound Left	D/D/D		A (0.9)	-	A (1.0)	-	A (0.6)	-
-Northbound Approach	D/D/D		A (9.0)	-	A (8.9)	-	A (8.8)	-
Wilkerson Mill Rd / Jenkins Rd		Stop Controlled on Jenkins Rd						
-Eastbound Left	D/D/D		A (0.3)	-	A (0.6)	-	A (0.7)	-
-Southbound Approach	D/D/D		A (8.9)	-	A (9.0)	-	A (8.8)	-
Cochran Mill Rd / Wilkerson Mill Rd		Stop Controlled on Wilkerson Mill Rd						
-Westbound Approach	D/D/D		A (9.0)	-	A (8.9)	-	A (9.0)	-
-Southbound Left	D/D/D		A (3.4)	-	A (1.5)	-	A (1.3)	-
S. Fulton Hwy / Cochran Mill Rd								
-Eastbound Left	D/D/D	Stop Controlled on Cochran Mill Rd	A (0.1)	-	A (0.5)	-	A (0.4)	-
-Westbound Left	D/D/D		A (4.0)	-	A (0.8)	-	A (1.3)	-
-Northbound Approach	D/D/D		B (14.2)	-	B (14.9)	-	A (10.0)	-
-Southbound Approach	D/D/D		C (16.0)	-	B (13.0)	-	B (10.1)	-
S. Fulton Hwy / Rivertown Rd		Stop Controlled on Rivertown Rd						
-Eastbound Left	D/D		A (0.0)	-	A (0.0)	-		
-Westbound Left	D/D		A (0.0)	-	A (7.3)	-	NA	NA
-Northbound Approach	D/D		B (11.1)	-	B (13.6)	-		
-Southbound Approach	D/D		B (11.3)	-	B (11.8)	-		
Hutcheson Ferry Rd / Phillips Rd		Stop Controlled on Phillips Rd						
-Eastbound Left	D/D/D		A (0.7)	-	A (0.8)	-	A (0.3)	-
-Southbound Approach	D/D/D		A (9.5)	-	B (10.1)	-	A (9.3)	-
Hutcheson Ferry Rd / Cochran Mill Rd		Stop Controlled on Cochran Mill Rd						
-Eastbound Left	D/D/D		A (2.7)	-	A (1.0)	-	A (2.2)	-
-Southbound Approach	D/D/D		A (9.6)	-	B (10.2)	-	A (9.6)	-
Hutcheson Ferry Rd / Atlanta Newnan Rd		Stop Controlled on Atlanta Newnan Rd						
-Eastbound Left	D/D		A (0.3)	-	A (0.7)	-	NA	NA
-Southbound Approach	D/D		A (9.4)	-	A (9.6)	-		
Hutcheson Ferry Rd / Rico Rd		Stop Controlled on Rico Rd						
-Eastbound Left	D/D		A (0.8)	-	A (0.9)	-	NA	NA
-Southbound Approach	D/D		A (9.7)	-	A (9.4)	-		
Atlanta Newnan Rd / Rico Tatum Rd		Stop Controlled on Rico Tatum Rd						
-Westbound Approach	D/D/D		A (8.5)	-	A (8.5)	-	A (8.5)	-
-Southbound Left	D/D/D		A (3.6)	-	A (3.6)	-	A (3.6)	-
Cochran Mill Rd / Rico Tatum Rd		Stop Controlled on Rico Tatum Rd						
-Eastbound Approach	D/D/D		A (8.8)	-	A (8.6)	-	A (8.5)	-
-Northbound Left	D/D/D		A (0.7)	-	A (0.5)	-	A (0.0)	-

*v/c ratio is not reported for unsignalized intersections.

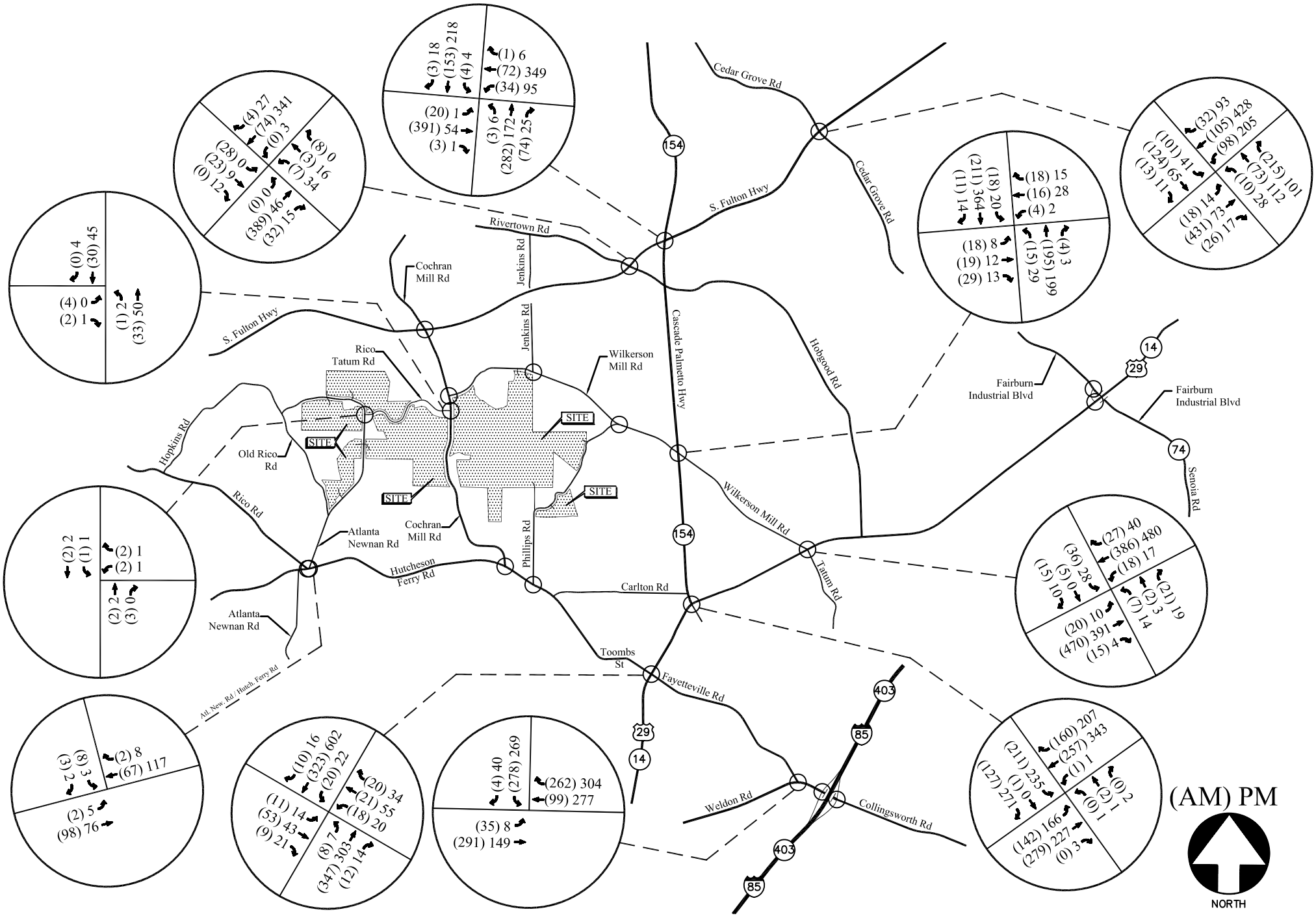
As shown in Table 5, one of the study intersections is not operating at the LOS standard.



EXISTING WEEKDAY PEAK-HOUR VOLUMES 1 of 2

FIGURE 8

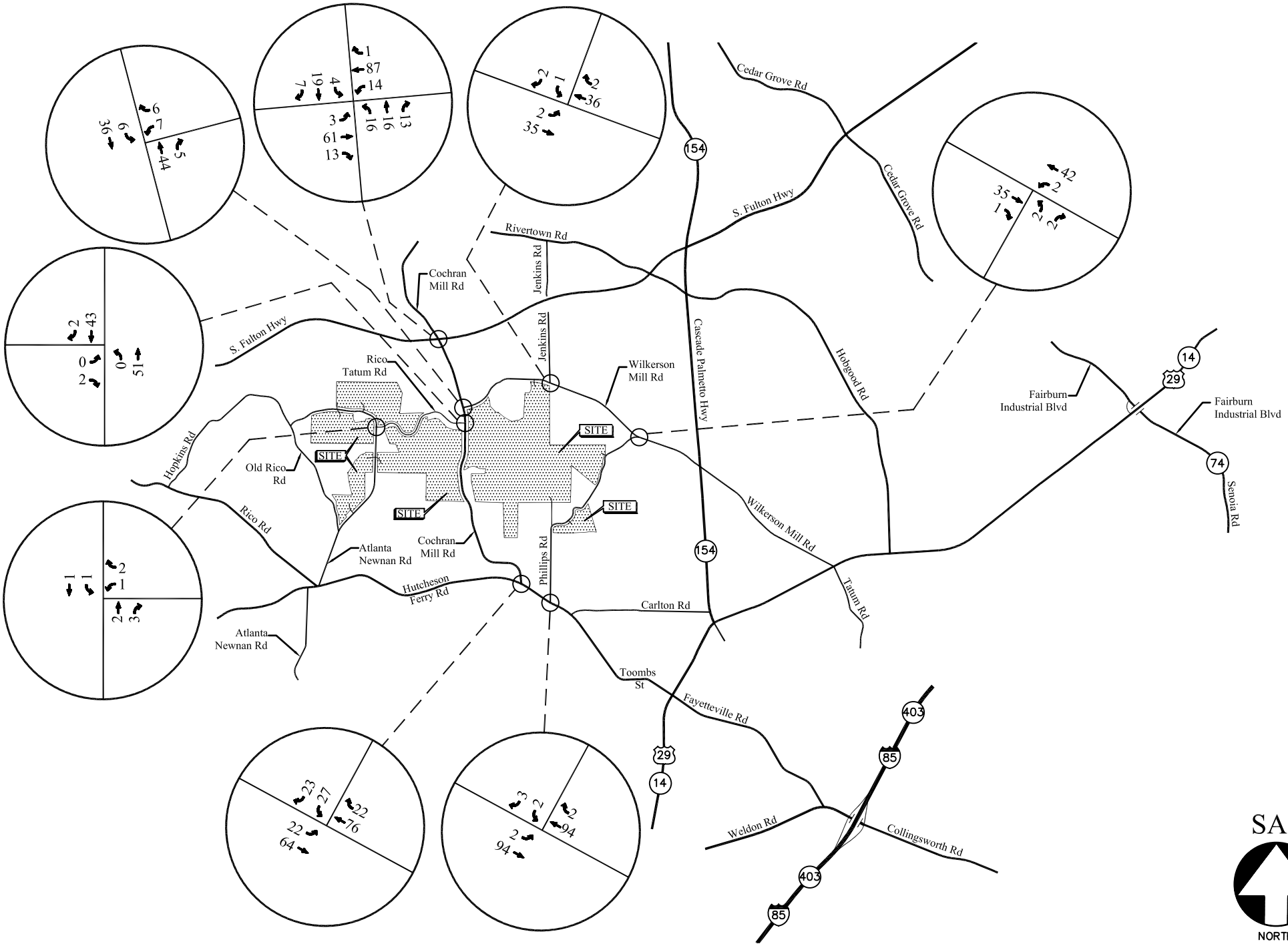
A&R Engineering Inc.



EXISTING WEEKDAY PEAK-HOUR VOLUMES 2 of 2

FIGURE 9

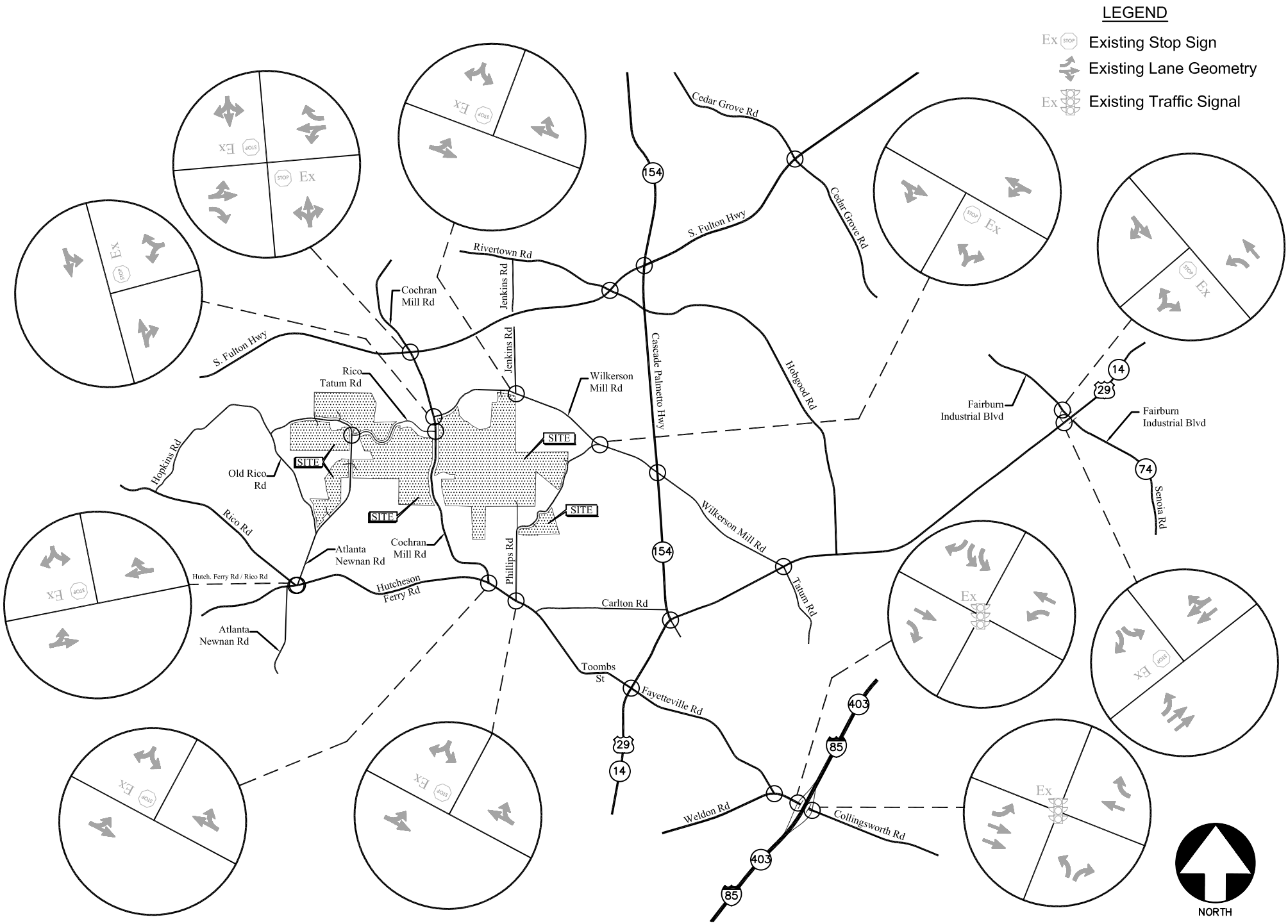
A&R Engineering Inc.



EXISTING SATURDAY PEAK-HOUR VOLUMES

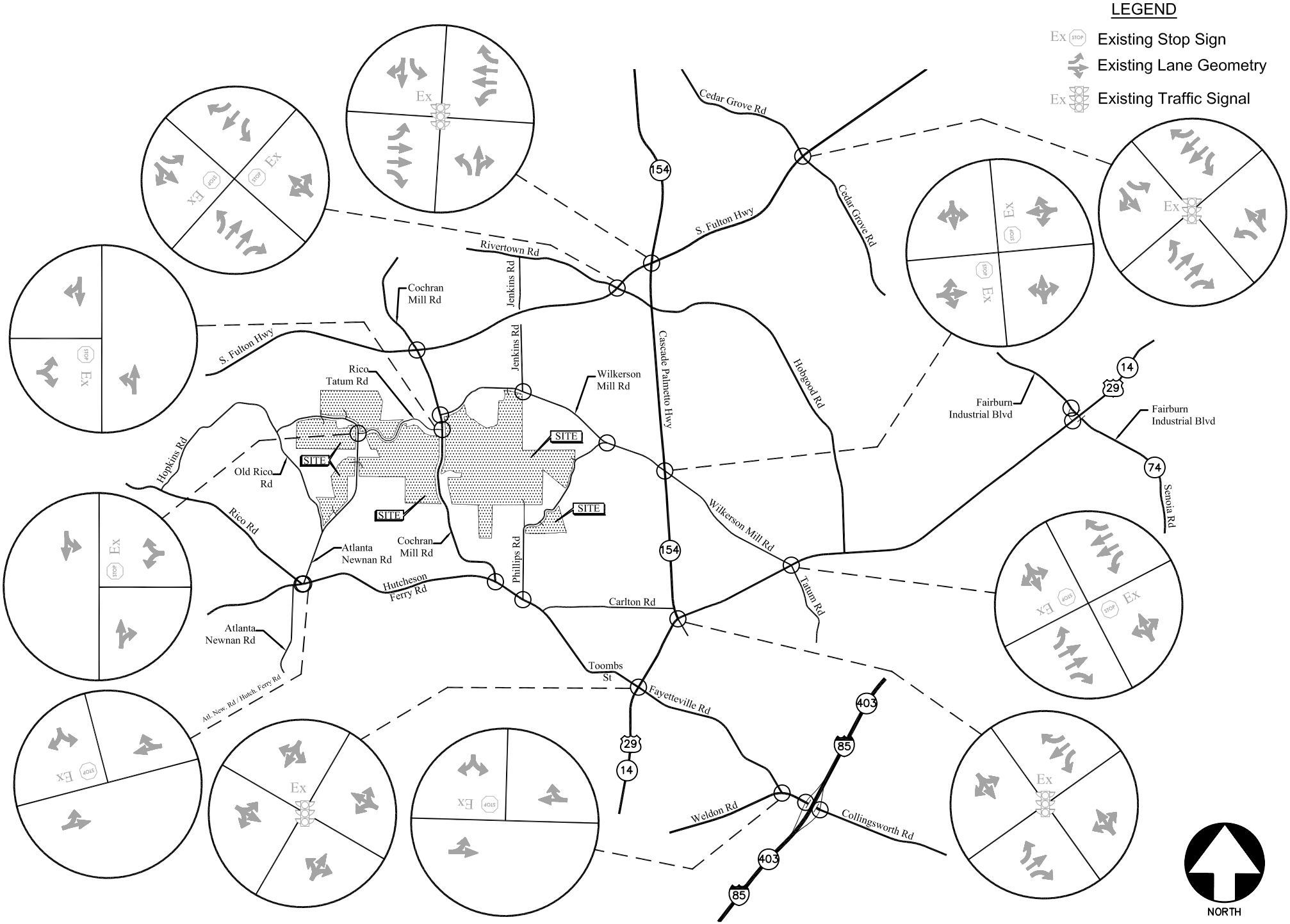
FIGURE 10

A&R Engineering Inc.



EXISTING TRAFFIC CONTROL AND LANE GEOMETRY 1 of 2

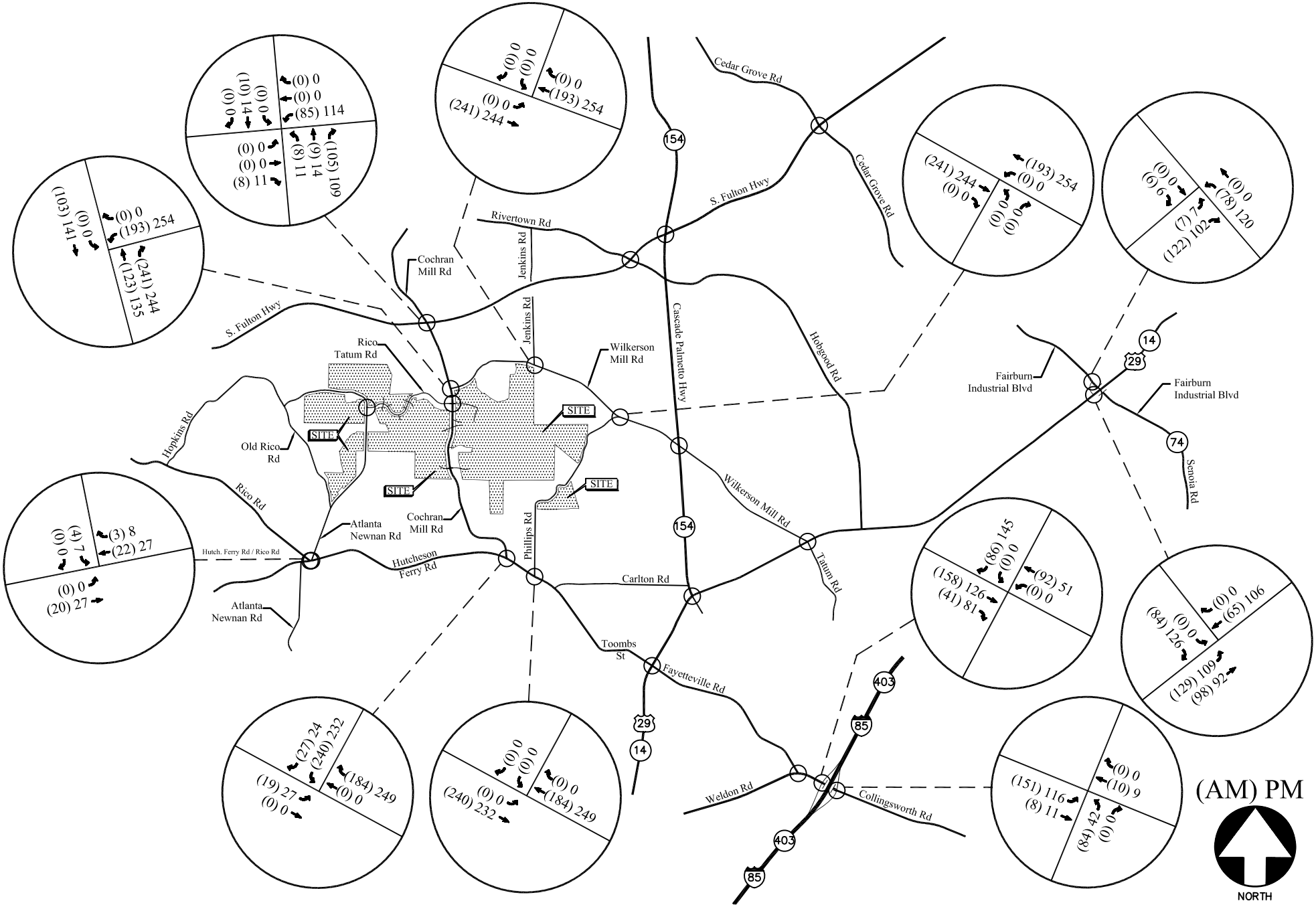
FIGURE 11



EXISTING TRAFFIC CONTROL AND LANE GEOMETRY 2 of 2

FIGURE 12

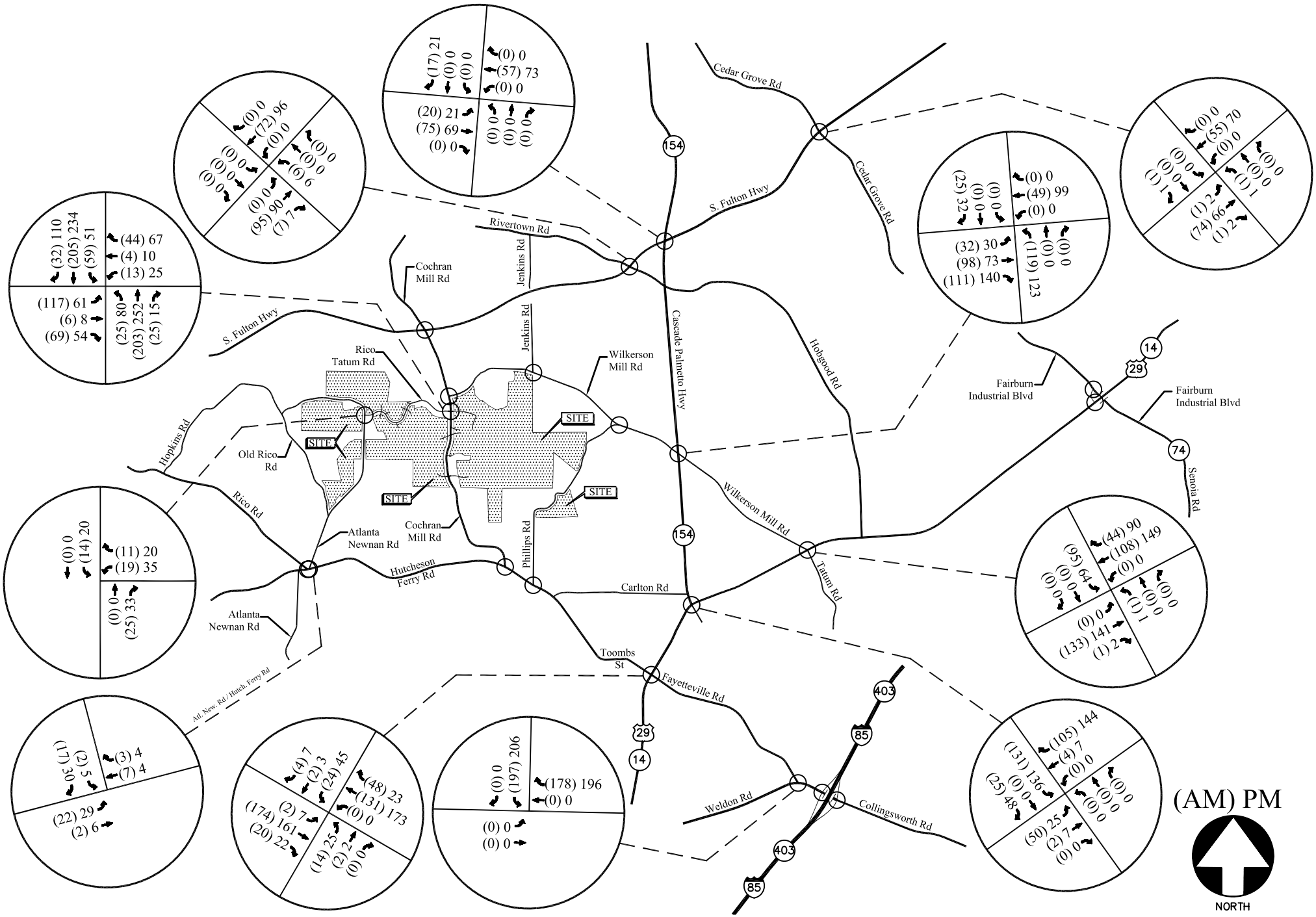
A&R Engineering Inc.



SITE-GENERATED 2015 WEEKDAY PEAK-HOUR VOLUMES 1 of 2

FIGURE 13

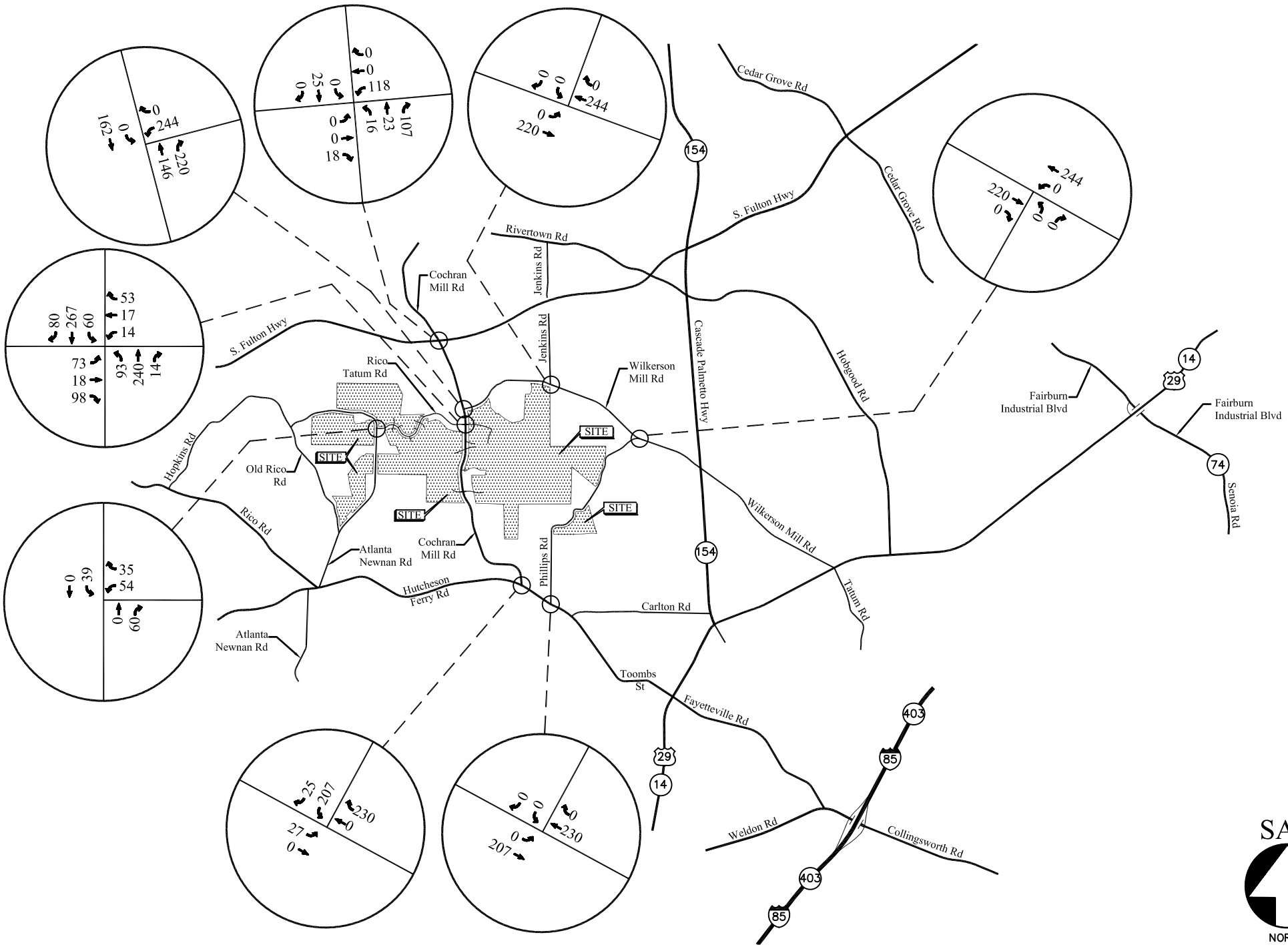
A&R Engineering Inc.



SITE-GENERATED 2015 WEEKDAY PEAK-HOUR VOLUMES 2 of 2

FIGURE 14

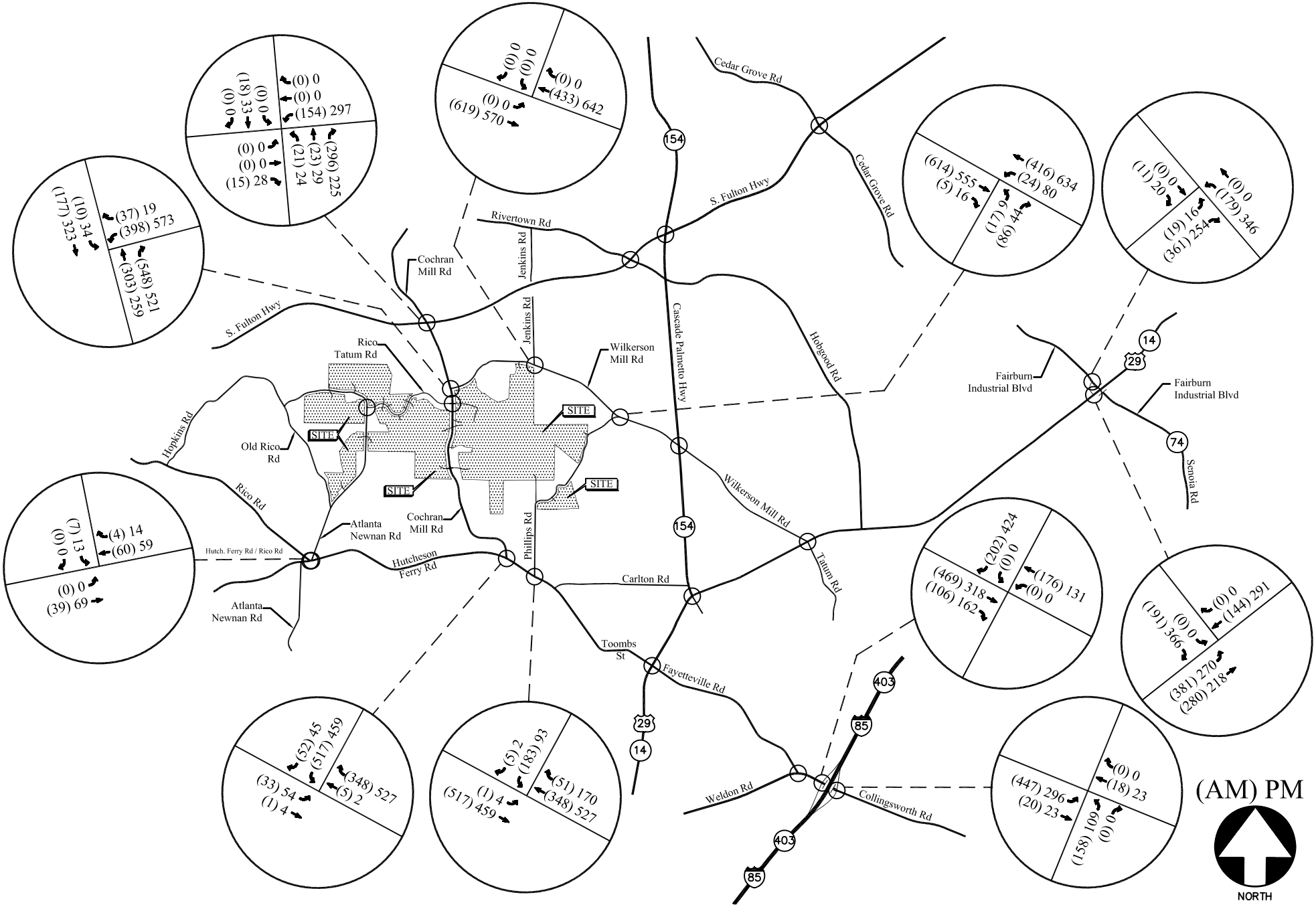
A&R Engineering Inc.



SITE-GENERATED 2015 SATURDAY PEAK-HOUR VOLUMES

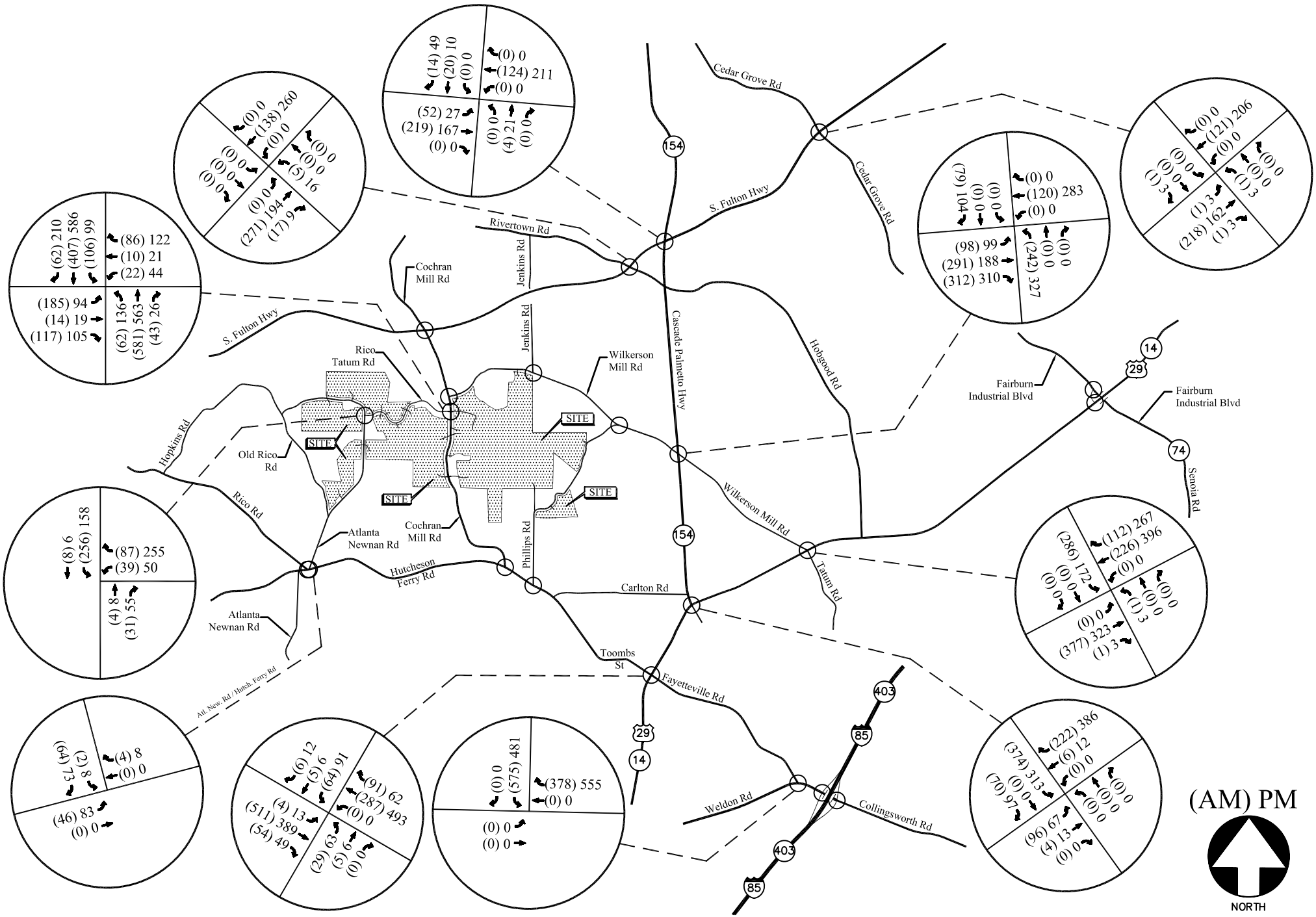
FIGURE 15

A&R Engineering Inc.



SITE-GENERATED 2028 WEEKDAY PEAK-HOUR VOLUMES 1 of 2

FIGURE 16



SITE-GENERATED 2028 WEEKDAY PEAK-HOUR VOLUMES 2 of 2

FIGURE 17



SITE-GENERATED 2028 SATURDAY PEAK-HOUR VOLUMES

FIGURE 18

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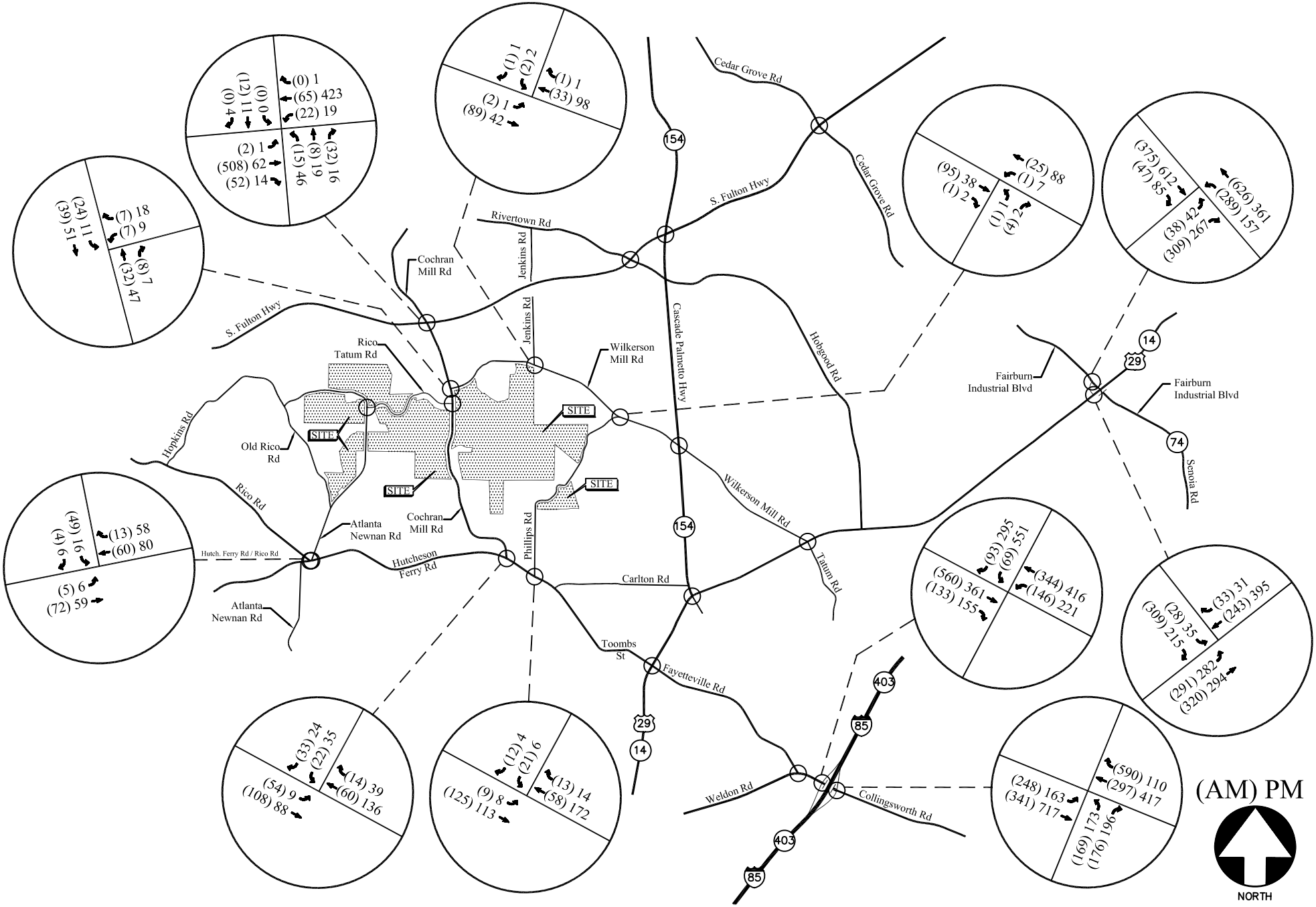
7.1 Interim Phase (Year 2015)

In order to evaluate future traffic operations in this area, a projection was made of future base year traffic volumes. It was agreed upon with GRTA to use a growth factor of 2.5% per year up to 2015. This growth factor was applied to the existing traffic volumes on the roadways to estimate the future year 2015 traffic volumes prior to the addition of the site-generated volumes. The future year (base) traffic volumes for 2015 at all the study intersections are shown in Figures 19, 20 and 21.

A traffic operation analysis for the following Base Scenario was performed:

- Base Year 2015 (Interim Phase) traffic with existing lane geometry.
- Base Year 2015 (Interim Phase) traffic with recommended improvements to bring all intersections to LOS standard.

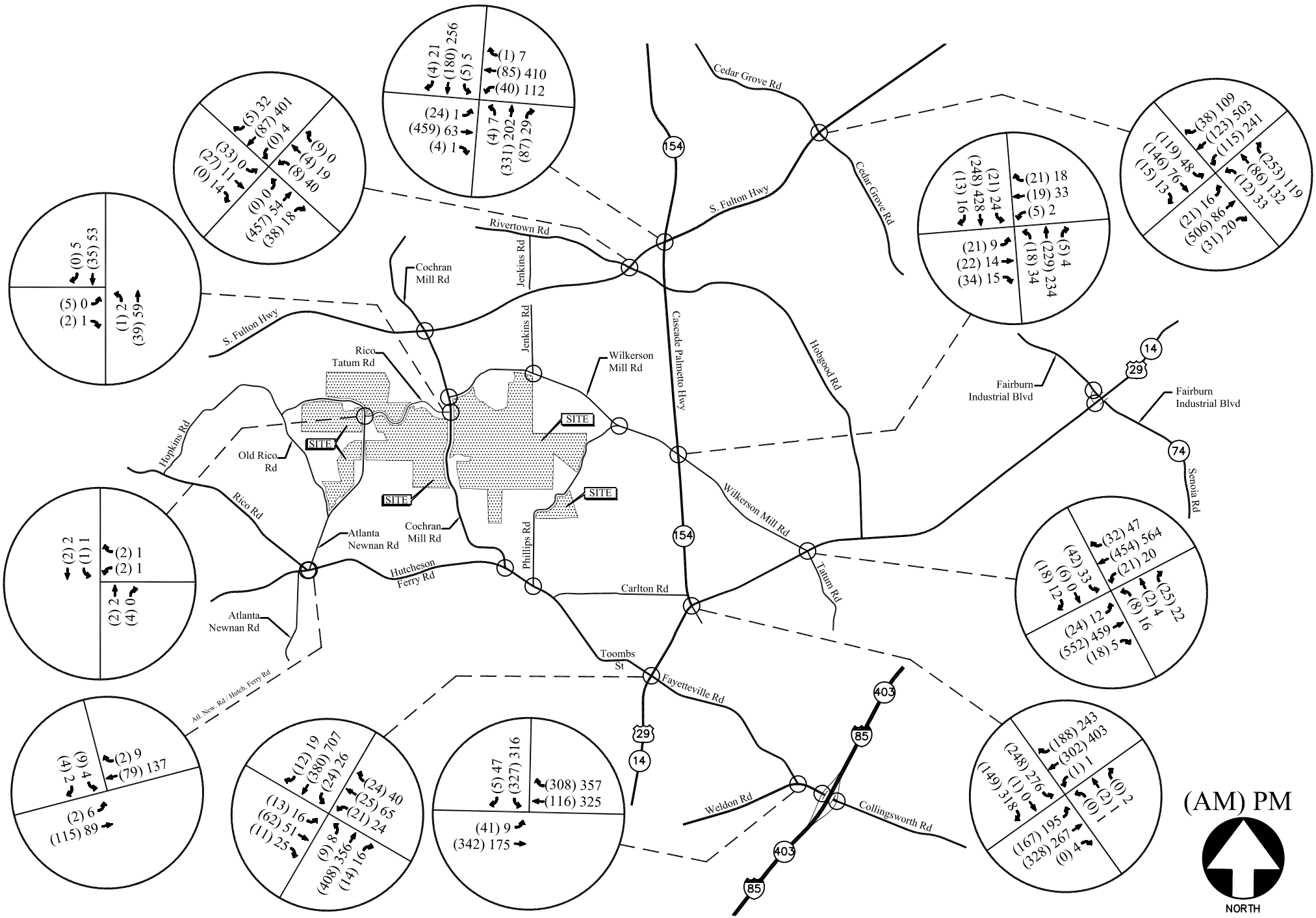
Results of the analyses for the above scenarios are shown in Tables 6 and 7. Recommendations to bring the intersections back to the LOS standard are discussed after Table 6.



BASE 2015 WEEKDAY PEAK-HOUR VOLUMES 1 of 2

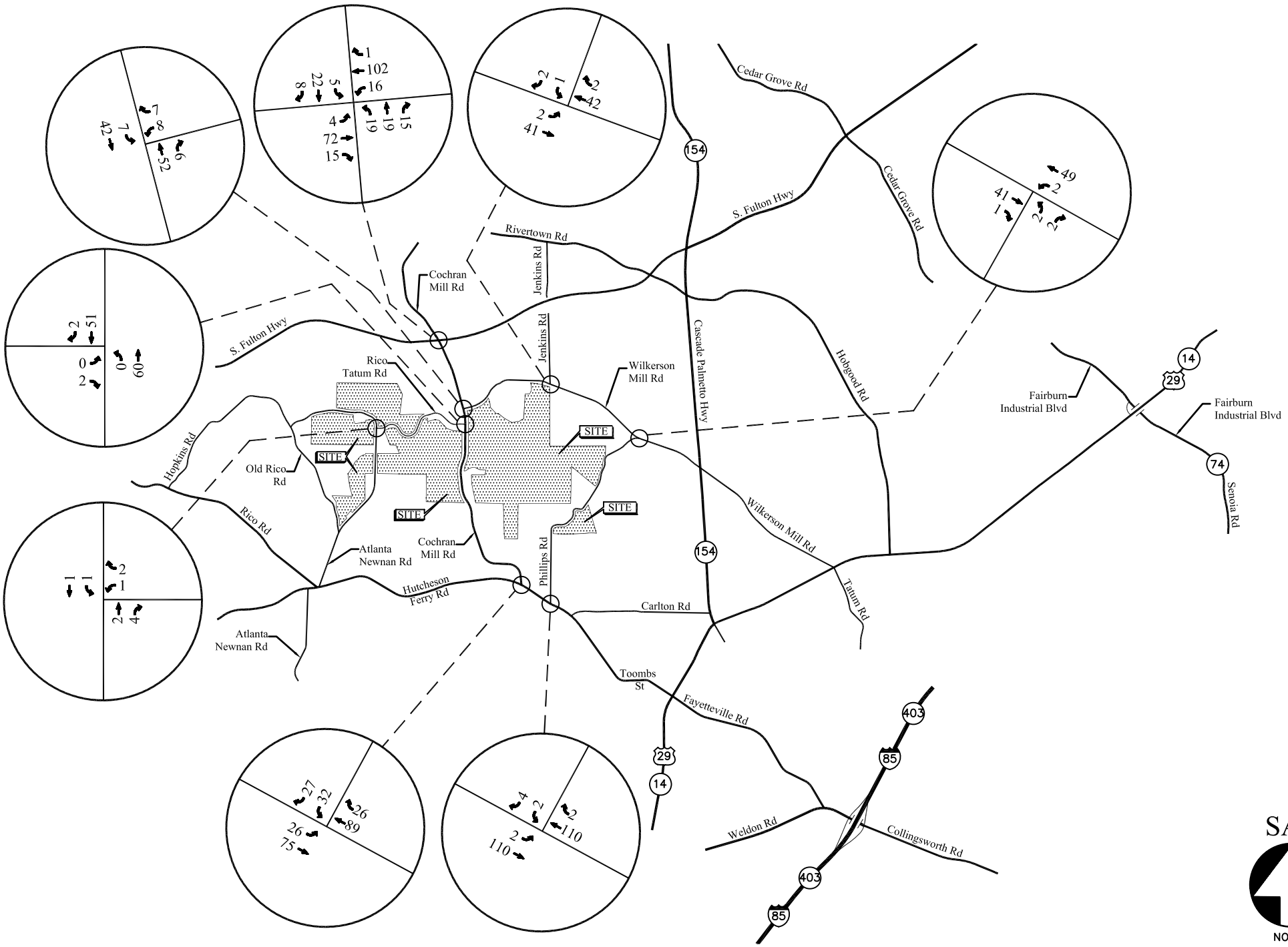
FIGURE 19

A&R Engineering Inc.



BASE 2015 WEEKDAY PEAK-HOUR VOLUMES 2 of 2

FIGURE 20



BASE 2015 SATURDAY PEAK-HOUR VOLUMES

FIGURE 21

A&R Engineering Inc.

Table 6

Base 2015 Intersection Operations (Interim Phase)

Intersection	AM/PM/ Sat LOS Standard	Traffic Control	A.M. Peak Hour		P.M. Peak Hour		Sat Peak Hour	
			LOS (Delay)	v/c*	LOS (Delay)	v/c*	LOS (Delay)	v/c*
Collingsworth Rd / I-85 NB Ramps	D/D	Signalized	A (7.2)	0.45	A (8.5)	0.39	NA	NA
Collingsworth Road / I-85 SB Ramps	D/D	Signalized	A (9.4)	0.40	B (16.7)	0.48	NA	NA
US 29 / Toombs St / Fayetteville Rd	D/D	Signalized	B (12.5)	0.35	B (12.3)	0.57	NA	NA
US 29 / SR 154 / Ramah Baptist Church Drwy	D/D	Signalized	B (19.3)	0.45	B (17.5)	0.52	NA	NA
S. Fulton Hwy / SR 154	D/D	Signalized	C (28.0)	0.50	C (34.2)	0.36	NA	NA
S. Fulton Hwy / Cedar Grove Rd	D/D	Signalized	C (25.4)	0.47	C (23.5)	0.41	NA	NA
Fairburn Industrial Blvd / US 29 - Fairburn Industrial Blvd Connector Ramp -Westbound Left -Northbound Approach	 D/D D/D	Stop Controlled on US 29 - Fairburn Industrial Blvd Connector Ramps	 A (9.6) D (32.4)	 - -	 B (10.3) E (35.8)	 - -	NA	NA
US 29 / US 29 - Fairburn Industrial Blvd Connector Ramp -Eastbound Approach -Northbound Left	 D/D D/D	Stop Controlled on US 29 - Fairburn Industrial Blvd Connector Ramps	 B (13.6) A (8.7)	 - -	 C (16.5) A (9.3)	 - -	NA	NA
Collingsworth Rd / Weldon Rd -Eastbound Left -Southbound Approach	 D/D E/E	Stop Controlled on Collingsworth Rd	 A (1.2) F (93.3)	 - -	 A (0.6) F (107.8)	 - -	NA	NA
US 29 / Wilkerson Mill Rd / Tatum Rd -Eastbound Left -Westbound Left -Northbound Approach -Southbound Approach	 D/D D/D D/D D/D	Stop Controlled on Wilkerson Mill Rd / Tatum Rd	 A (8.5) A (8.7) C (15.5) C (23.4)	 - - - -	 A (8.8) A (8.4) C (17.9) C (25.0)	 - - - -	NA	NA
SR 154 / Wilkerson Mill Rd -Eastbound Approach -Westbound Approach -Northbound Left -Southbound Left	 D/D D/D D/D D/D	Stop Controlled on Wilkerson Mill Rd	 C (15.4) B (13.6) A (0.8) A (0.9)	 - - - -	 C (20.0) C (18.1) A (1.5) A (0.8)	 - - - -	NA	NA
Wilkerson Mill Rd / Phillips Rd -Westbound Left -Northbound Approach	 D/D/D D/D/D	Stop Controlled on Phillips Rd	 A (0.8) A (9.1)	 - -	 A (1.0) A (9.0)	 - -	A (0.5) A (8.8)	- -
Wilkerson Mill Rd / Jenkins Rd -Eastbound Left -Southbound Approach	 D/D/D D/D/D	Stop Controlled on Jenkins Rd	 A (0.3) A (9.0)	 - -	 A (0.6) A (9.1)	 - -	A (0.6) A (8.8)	- -
Cochran Mill Rd / Wilkerson Mill Rd -Westbound Approach -Southbound Left	 D/D/D D/D/D	Stop Controlled on Wilkerson Mill Rd	 A (9.1) A (3.4)	 - -	 A (9.0) A (1.6)	 - -	A (9.1) A (1.3)	- -

S. Fulton Hwy / Cochran Mill Rd								
-Eastbound Left	D/D/D	Stop Controlled	A (0.1)	-	A (0.4)	-	A (0.5)	-
-Westbound Left	D/D/D	on Cochran Mill	A (4.1)	-	A (0.8)	-	A (1.3)	-
-Northbound Approach	D/D/D	Rd	C (16.2)	-	C (17.8)	-	B (10.3)	-
-Southbound Approach	D/D/D		C (18.2)	-	B (14.2)	-	B (10.4)	-
S. Fulton Hwy / Rivertown Rd								
-Eastbound Left	D/D	Stop Controlled	A (0.0)	-	A (0.0)	-		
-Westbound Left	D/D	on Rivertown Rd	A (0.0)	-	A (7.4)	-	NA	NA
-Northbound Approach	D/D		B (11.8)	-	C (15.4)	-		
-Southbound Approach	D/D		B (11.9)	-	B (12.6)	-		
Hutcheson Ferry Rd / Phillips Rd		Stop Controlled						
-Eastbound Left	D/D/D	on Phillips Rd	A (0.7)	-	A (0.8)	-	A (0.3)	-
-Southbound Approach	D/D/D		A (9.7)	-	B (10.4)	-	A (9.4)	-
Hutcheson Ferry Rd / Cochran Mill Rd		Stop Controlled						
-Eastbound Left	D/D/D	on Cochran Mill	A (2.7)	-	A (1.0)	-	A (2.2)	-
-Southbound Approach	D/D/D	Rd	A (9.8)	-	B (10.6)	-	A (9.9)	-
Hutcheson Ferry Rd / Atlanta Newnan Rd		Stop Controlled						
-Eastbound Left	D/D	on Atlanta	A (0.2)	-	A (0.7)	-	NA	NA
-Southbound Approach	D/D	Newnan Rd	A (9.6)	-	A (9.9)	-		
Hutcheson Ferry Rd / Rico Rd		Stop Controlled						
-Eastbound Left	D/D	on Rico Rd	A (0.9)	-	A (1.0)	-	NA	NA
-Southbound Approach	D/D		A (9.9)	-	A (9.6)	-		
Atlanta Newnan Rd / Rico Tatum Rd		Stop Controlled						
-Westbound Approach	D/D/D	on Rico Tatum	A (8.5)	-	A (8.5)	-	A (8.5)	-
-Southbound Left	D/D/D	Rd	A (3.6)	-	A (3.6)	-	A (3.6)	-
Cochran Mill Rd / Rico Tatum Rd		Stop Controlled						
-Eastbound Approach	D/D/D	on Rico Tatum	A (8.9)	-	A (8.6)	-	A (8.6)	-
-Northbound Left	D/D/D	Rd	A (0.6)	-	A (0.4)	-	A (0.0)	-

*v/c ratio is not reported for unsignalized intersections.

Analysis of the future year (Base 2015) traffic volumes indicates that two of the study intersections will not operate within the LOS standard. The following improvements were identified for those intersections that did not comply with the LOS standard.

- Fairburn Industrial Boulevard / US 29 – Fairburn Industrial Boulevard Connector Ramps
  - The northbound approach to the intersection will operate at LOS E during the PM peak hour. It is not uncommon for side streets to experience delays during the peak hours. No improvements can be recommended at the intersection to improve the LOS except installation of a traffic signal. However, the intersection does not have the necessary volumes to warrant a traffic signal. Therefore, no improvements are recommended for this intersection.

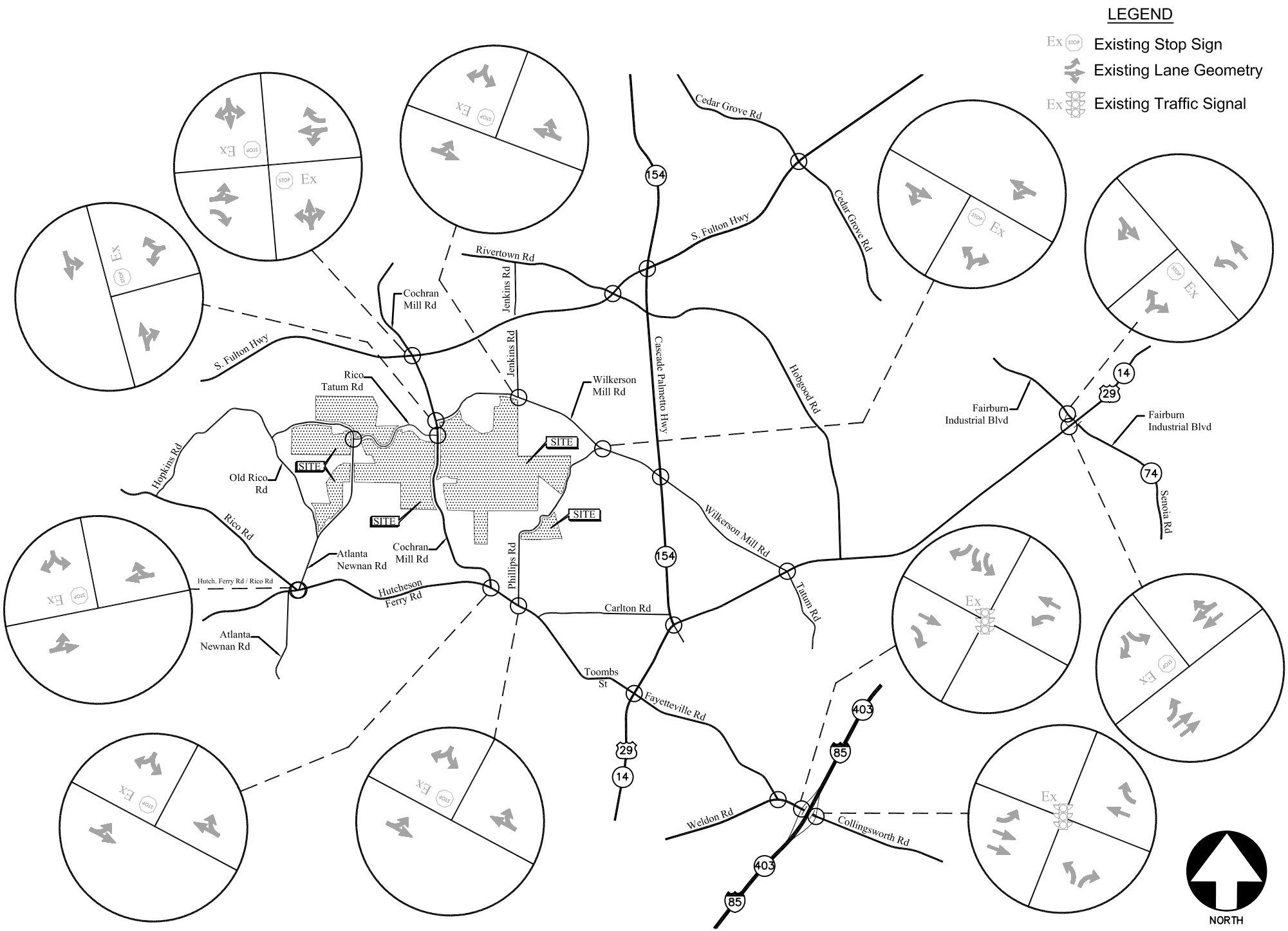
- Collingsworth Road / Weldon Road
  - Add dedicated westbound and southbound right turn lanes on Collingsworth Road.

The LOS at the above intersections in the year 2015, with just background traffic, after the above improvements are implemented is shown in Table 7. The recommended base intersections traffic control and lane geometry are shown in Figures 22 and 23.

Table 7

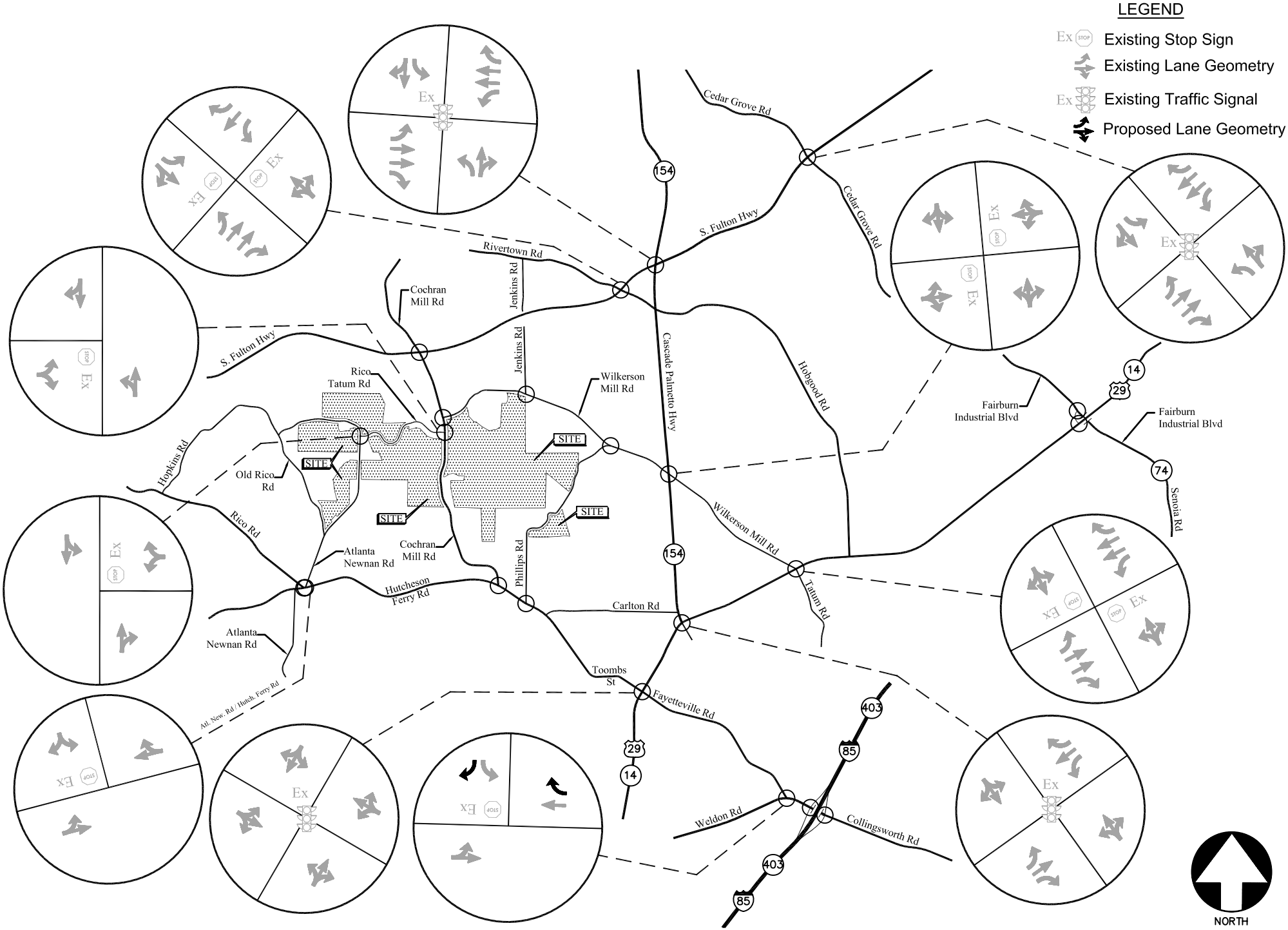
Base 2015 Intersection Operations (Interim Phase) – With Improvements

Intersection	AM/PM/ Sat LOS Standard	Traffic Control	A.M. Peak Hour		P.M. Peak Hour		Sat Peak Hour	
			LOS	Delay	LOS	Delay	LOS	Delay
Fairburn Industrial Blvd / US 29 - Fairburn Industrial Blvd Connector Ramp		Stop Controlled on US 29 - Fairburn Industrial Blvd Connector Ramps						
-Westbound Left	D/D		A	9.6	B	10.3	NA	NA
-Northbound Approach	D/D		D	32.4	E	35.8		
Collingsworth Rd / Weldon Rd		Stop Controlled on Collingsworth Rd						
-Eastbound Left	D/D		A	1.2	A	0.6	NA	NA
-Southbound Approach	E/E		E	39.9	D	27.8		



BASE 2015 TRAFFIC CONTROL AND LANE GEOMETRY 1 of 2

FIGURE 22



BASE 2015 TRAFFIC CONTROL AND LANE GEOMETRY 2 of 2

FIGURE 23

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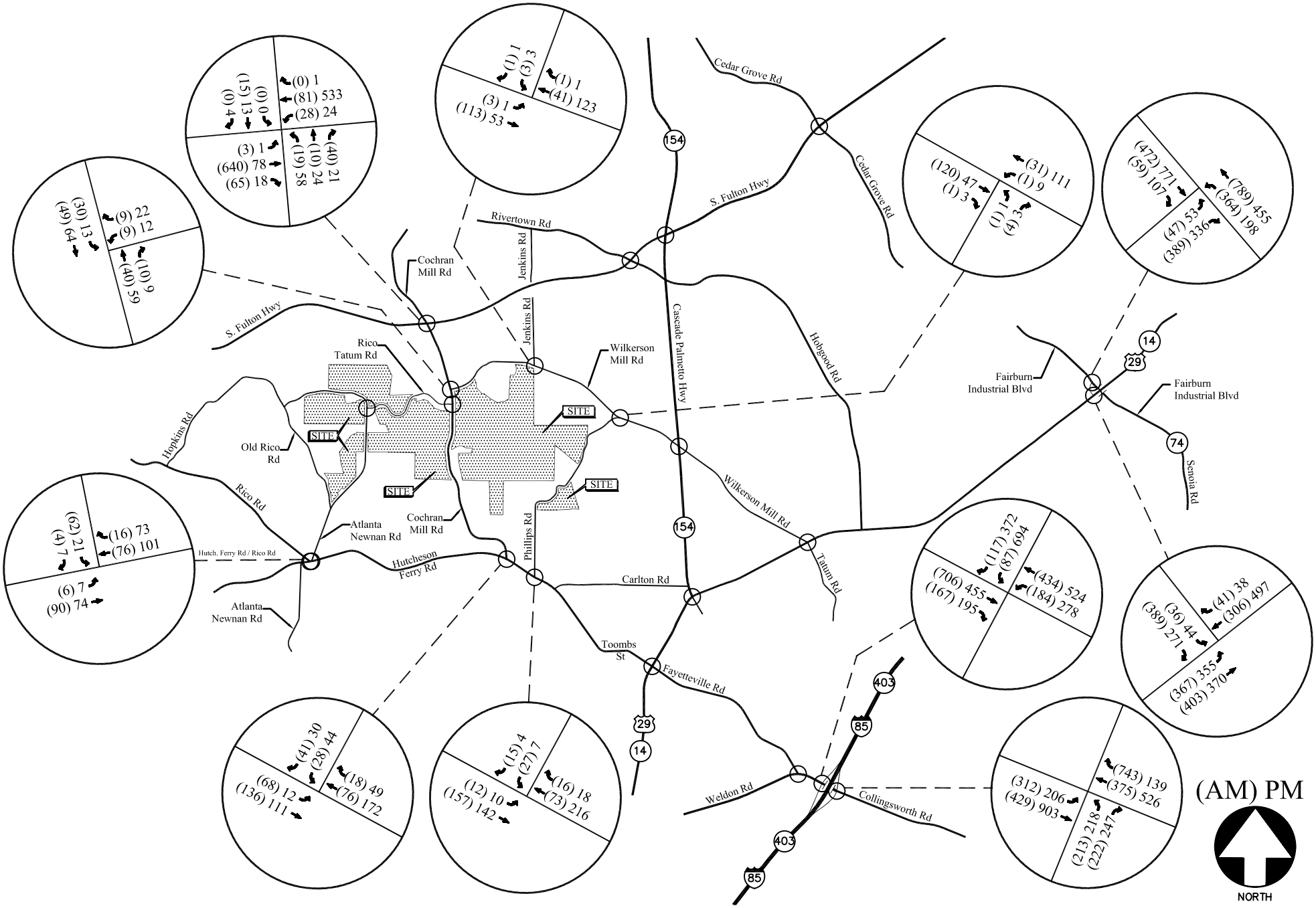
7.2 Full Build-out (Year 2028)

In order to evaluate future traffic operations in this area, a projection was made of future base year traffic volumes. It was agreed upon with GRTA to use a growth factor of 2.5% per year up to 2015, and a 2% annual growth factor will be used for the years between 2015 and 2028. This growth factor was applied to the existing traffic volumes on the roadways to estimate the future year 2028 traffic volumes prior to the addition of the site-generated volumes. The future year (base) traffic volumes for 2028 at all the study intersections are shown in Figures 24, 25 and 26.

A traffic operation analysis for the following Base Scenario was performed:

- Base Year 2028 (Full Build-out) traffic with existing lane geometry.
- Base Year 2028 (Full Build-out) traffic with recommended improvements to bring all intersections to LOS standard.

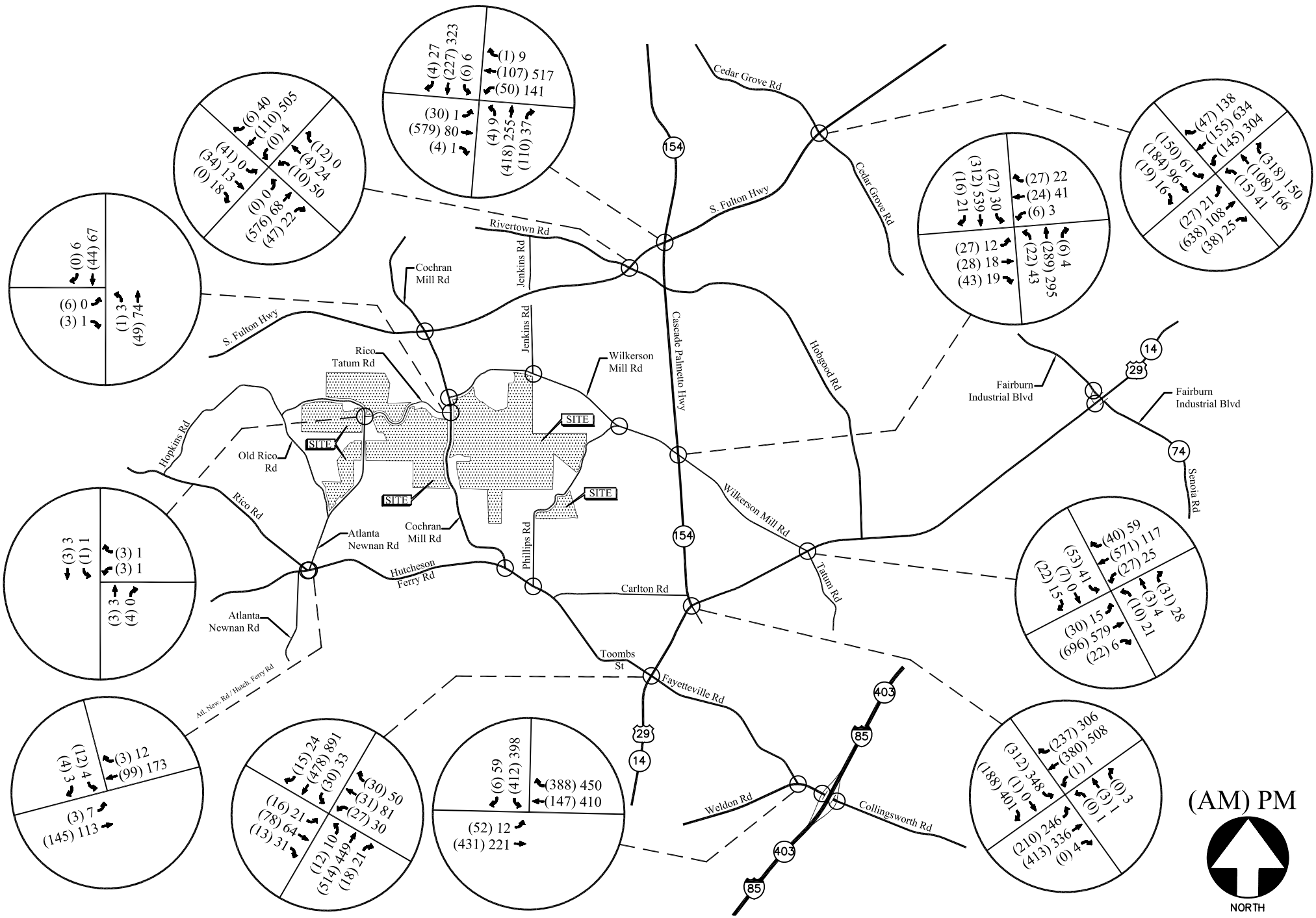
Results of the analyses for the above scenarios are shown in Tables 8 and 9. Recommendations to bring the intersections back to the LOS standard are discussed after Table 8.



BASE 2028 WEEKDAY PEAK-HOUR VOLUMES 1 of 2

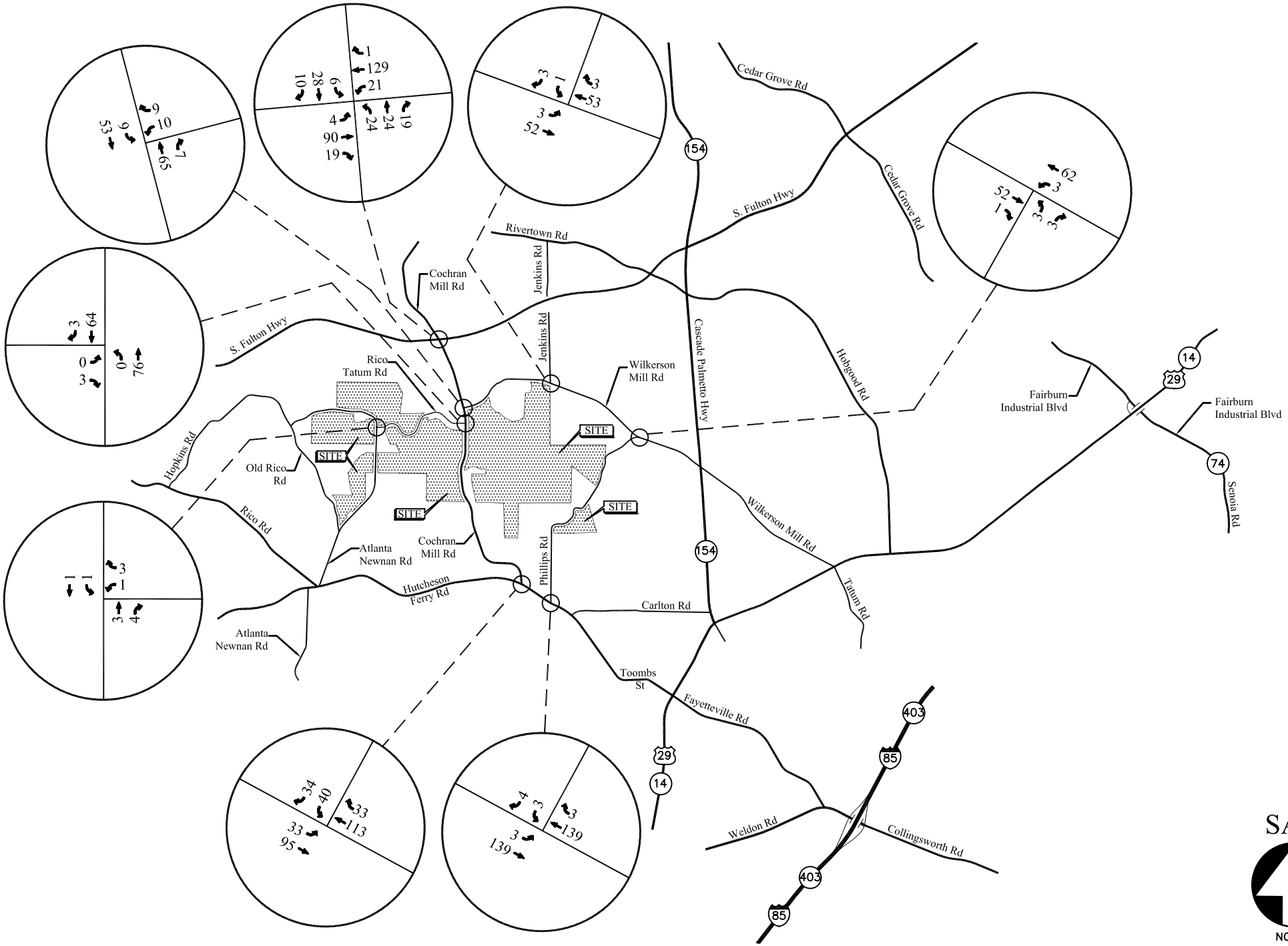
FIGURE 24

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BASE 2028 WEEKDAY PEAK-HOUR VOLUMES 2 of 2

FIGURE 25



SAT

NORTH

BASE 2028 SATURDAY PEAK-HOUR VOLUMES

FIGURE 26

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Table 8

Base 2028 Intersection Operations (Full Build-out)

Intersection	AM/PM/ Sat LOS Standard	Traffic Control	A.M. Peak Hour		P.M. Peak Hour		Sat Peak Hour	
			LOS (Delay)	v/c*	LOS (Delay)	v/c*	LOS (Delay)	v/c*
Collingsworth Rd / I-85 NB Ramps	D/D	Signalized	A (8.5)	0.55	A (9.4)	0.50	NA	NA
Collingsworth Road / I-85 SB Ramps	D/D	Signalized	B (11.4)	0.52	C (21.6)	0.64	NA	NA
US 29 / Toombs St / Fayetteville Rd	D/D	Signalized	B (15.2)	0.46	B (14.3)	0.73	NA	NA
US 29 / SR 154 / Ramah Baptist Church Drwy	D/D	Signalized	C (22.3)	0.58	C (21.1)	0.66	NA	NA
S. Fulton Hwy / SR 154	D/D	Signalized	C (29.3)	0.63	C (34.1)	0.45	NA	NA
S. Fulton Hwy / Cedar Grove Rd	D/D	Signalized	C (26.4)	0.62	C (25.3)	0.52	NA	NA
Fairburn Industrial Blvd / US 29 - Fairburn Industrial Blvd Connector Ramp		Stop Controlled on US 29 - Fairburn Industrial Blvd Connector Ramps					NA	NA
-Westbound Left	D/D		B (11.1)	-	B (12.3)	-		
-Northbound Approach	D/D		F (666.8)	-	F (151.4)	-		
US 29 / US 29 – Fairburn Industrial Blvd Connector Ramp		Stop Controlled on US 29 - Fairburn Industrial Blvd Connector Ramps					NA	NA
-Eastbound Approach	D/D		C (19.7)	-	D (32.9)	-		
-Northbound Left	D/D		A (9.4)	-	B (10.5)	-		
Collingsworth Rd / Weldon Rd		Stop Controlled on Collingsworth Rd					NA	NA
-Eastbound Left	D/D		A (1.3)	-	A (0.7)	-		
-Southbound Approach	E/E		F (386.2)	-	F (413.6)	-		
US 29 / Wilkerson Mill Rd / Tatum Rd		Stop Controlled on Wilkerson Mill Rd / Tatum Rd					NA	NA
-Eastbound Left	D/D		A (8.9)	-	A (9.4)	-		
-Westbound Left	D/D		A (9.3)	-	A (8.9)	-		
-Northbound Approach	D/D		C (21.9)	-	D (26.0)	-		
-Southbound Approach	D/D		E (46.8)	-	E (47.8)	-		
SR 154 / Wilkerson Mill Rd		Stop Controlled on Wilkerson Mill Rd					NA	NA
-Eastbound Approach	D/D		C (21.2)	-	D (33.1)	-		
-Westbound Approach	D/D		C (16.6)	-	D (27.0)	-		
-Northbound Left	D/D		A (0.9)	-	A (1.7)	-		
-Southbound Left	D/D		A (1.0)	-	A (0.9)	-		
Wilkerson Mill Rd / Phillips Rd		Stop Controlled on Phillips Rd						
-Westbound Left	D/D/D		A (0.7)	-	A (1.1)	-	A (0.6)	-
-Northbound Approach	D/D/D		A (9.3)	-	A (9.1)	-	A (9.0)	-
Wilkerson Mill Rd / Jenkins Rd		Stop Controlled on Jenkins Rd						
-Eastbound Left	D/D/D		A (0.3)	-	A (0.5)	-	A (0.7)	-
-Southbound Approach	D/D/D		A (9.2)	-	A (9.4)	-	A (8.9)	-
Cochran Mill Rd / Wilkerson Mill Rd		Stop Controlled on Wilkerson Mill Rd						
-Westbound Approach	D/D/D		A (9.3)	-	A (9.2)	-	A (9.2)	-
-Southbound Left	D/D/D		A (3.5)	-	A (1.5)	-	A (1.3)	-

S. Fulton Hwy / Cochran Mill Rd -Eastbound Left -Westbound Left -Northbound Approach -Southbound Approach	 D/D/D D/D/D D/D/D D/D/D	Stop Controlled on Cochran Mill Rd	 A (0.1) A (4.7) C (22.4) C (23.8)	 - - - -	 A (0.4) A (1.0) D (26.8) C (17.1)	 - - - -	 A (0.4) A (1.4) B (11.0) B (11.1)	 - - - -
S. Fulton Hwy / Rivertown Rd -Eastbound Left -Westbound Left -Northbound Approach -Southbound Approach	 D/D D/D D/D D/D	Stop Controlled on Rivertown Rd	 A (0.0) A (0.0) B (13.1) B (13.2)	 - - - -	 A (0.0) A (7.4) C (20.1) B (14.1)	 - - - -	NA	NA
Hutcheson Ferry Rd / Phillips Rd -Eastbound Left -Southbound Approach	 D/D/D D/D/D	Stop Controlled on Phillips Rd	 A (0.8) B (10.2)	 - -	 A (0.9) B (11.2)	 - -	 A (0.3) A (9.9)	 - -
Hutcheson Ferry Rd / Cochran Mill Rd -Eastbound Left -Southbound Approach	 D/D/D D/D/D	Stop Controlled on Cochran Mill Rd	 A (2.8) B (10.4)	 - -	 A (1.0) B (11.5)	 - -	 A (2.3) B (10.5)	 - -
Hutcheson Ferry Rd / Atlanta Newnan Rd -Eastbound Left -Southbound Approach	 D/D D/D	Stop Controlled on Atlanta Newnan Rd	 A (0.3) B (10.0)	 - -	 A (0.7) B (10.3)	 - -	NA	NA
Hutcheson Ferry Rd / Rico Rd -Eastbound Left -Southbound Approach	 D/D D/D	Stop Controlled on Rico Rd	 A (0.9) B (10.5)	 - -	 A (0.9) A (9.9)	 - -	NA	NA
Atlanta Newnan Rd / Rico Tatum Rd -Westbound Approach -Southbound Left	 D/D/D D/D/D	Stop Controlled on Rico Tatum Rd	 A (8.5) A (2.9)	 - -	 A (8.5) A (2.9)	 - -	 A (8.5) A (3.6)	 - -
Cochran Mill Rd / Rico Tatum Rd -Eastbound Approach -Northbound Left	 D/D/D D/D/D	Stop Controlled on Rico Tatum Rd	 A (9.0) A (0.5)	 - -	 A (8.7) A (0.5)	 - -	 A (8.7) A (0.0)	 - -

*v/c ratio is not reported for unsignalized intersections.

Analysis of the future year (Base 2028) traffic volumes indicates that three of the study intersections will not operate within the LOS standard. The following improvements were identified for those intersections that did not comply with the LOS standard.

- Fairburn Industrial Boulevard / US 29 – Fairburn Industrial Boulevard Connector Ramps
  - Add a dedicated eastbound right turn lane on Fairburn Industrial Boulevard.
  - The intersection will operate at a LOS F during both the AM and PM peak hours for the northbound approach (US 29 – Fairburn Industrial Boulevard Connector Ramps). Signal warrants were evaluated for the peak hours to determine if the peak hour warrant will be met at this intersection for the base conditions. The traffic conditions will not warrant at least the peak hour signal warrant required for installation of a traffic signal for the Base 2028 volumes. Therefore, a traffic signal is not recommended at this intersection for the Base 2028 condition. No additional improvements can be recommended to improve the LOS.

- Collingsworth Road / Weldon Road
  - Install a traffic signal.

- US 29 / Wilkerson Mill Road / Tatum Road
  - The southbound approach to the intersection will operate at LOS E during both the AM and PM peak hours. It is not uncommon for side streets to experience delays during the peak hours. No improvements can be recommended at this intersection to improve the LOS except the installation of a traffic signal.; however, the intersection does not have necessary volumes to warrant a traffic signal. Therefore, no improvements are recommended for this intersection.

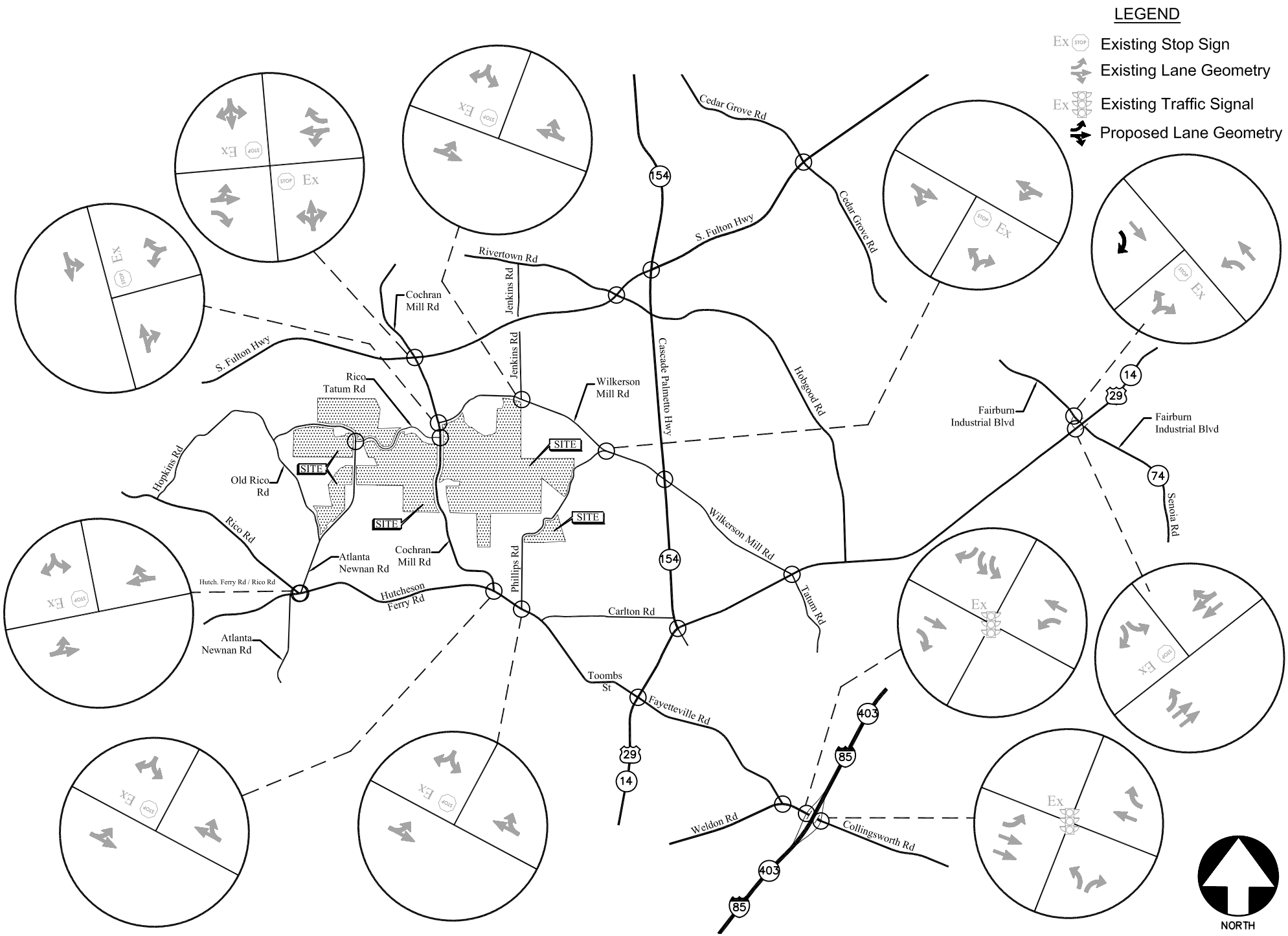
The LOS at the above intersections in the year 2028, with just background traffic, after the above improvements are implemented is shown in Table 9. The recommended base intersections traffic control and lane geometry are shown in Figures 27 and 28.

Table 9

Base 2028 Intersection Operations (Full Build-out) – With Improvements

Intersection	AM/PM/ Sat LOS Standard	Traffic Control	A.M. Peak Hour		P.M. Peak Hour		Sat Peak Hour	
			LOS (Delay)	v/c*	LOS (Delay)	v/c*	LOS (Delay)	v/c*
Fairburn Industrial Blvd / US 29-Fairburn Industrial Blvd Connector Ramps		Stop Controlled on US 29 - Fairburn Industrial Blvd Connector Ramps					NA	NA
-Westbound Left	D/D		B (11.1)	-	B (12.3)	-		
-Northbound Approach	D/D		F (599.5)	-	F (116.7)	-		
Collingsworth Rd / Weldon Rd	D/D	Signalized	C (20.2)	0.61	B (18.0)	0.53	NA	NA
US 29 / Wilkerson Mill Rd / Tatum Rd		Stop Controlled on Wilkerson Mill Rd / Tatum Rd					NA	NA
-Eastbound Left	D/D		A (8.9)	-	A (9.4)	-		
-Westbound Left	D/D		A (9.3)	-	A (8.9)	-		
-Northbound Approach	D/D		C (21.9)	-	D (26.0)	-		
-Southbound Approach	D/D		E (46.8)	-	E (47.8)	-		

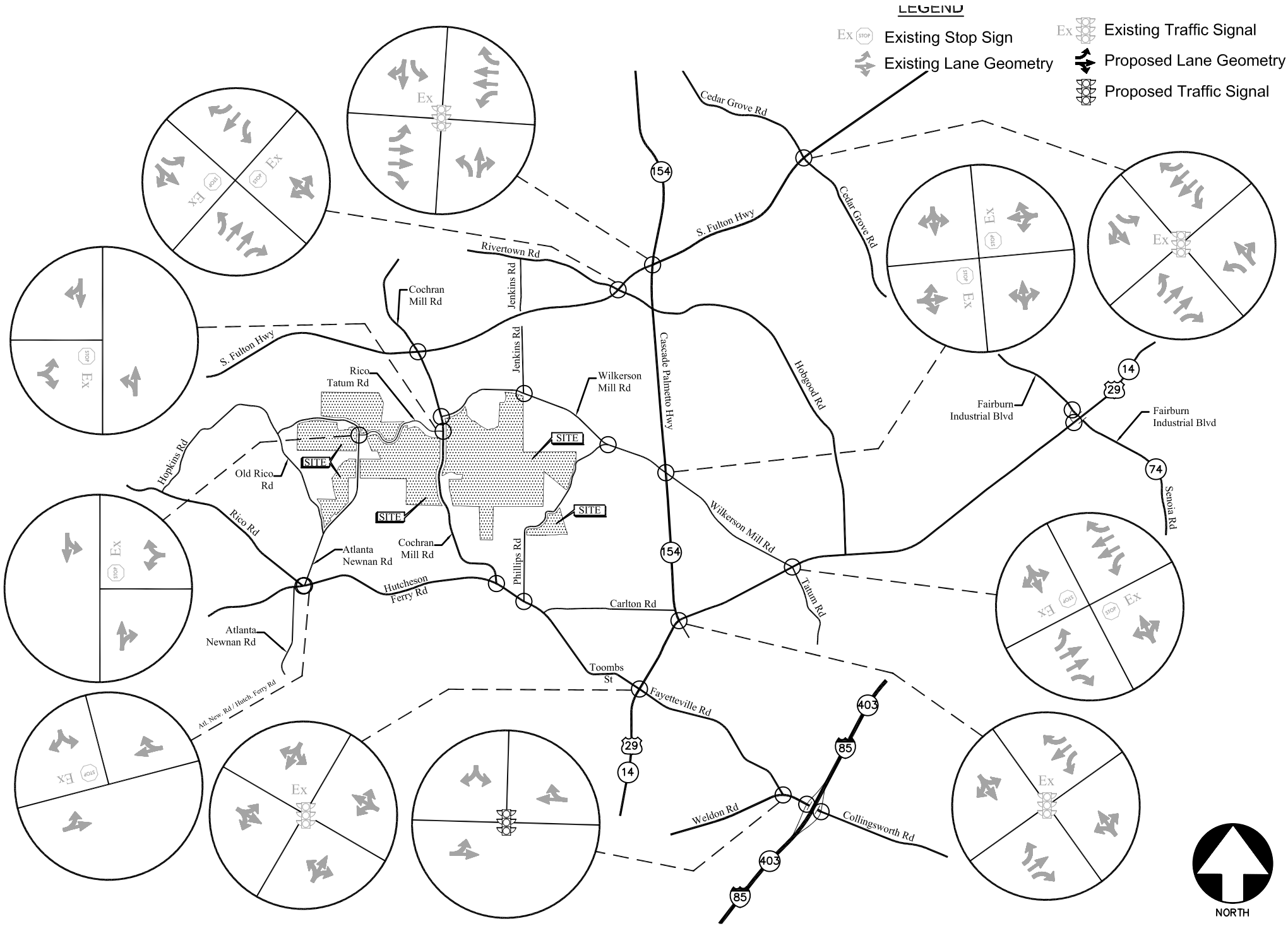
*v/c ratio is not reported for unsignalized intersections.



BASE 2028 TRAFFIC CONTROL AND LANE GEOMETRY 1 of 2

FIGURE 27

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BASE 2028 TRAFFIC CONTROL AND LANE GEOMETRY 2 of 2

FIGURE 28

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8. FUTURE YEAR TOTAL TRAFFIC

The traffic volumes that will be generated by the proposed development (both interim phase and full build-out) were added to the future base year 2015 (interim phase) and future base year 2028 (full build-out) traffic volumes respectively in order to determine the traffic volumes that will be on the roadway during the respective phases. The future traffic volumes, including the site-generated volumes, for the study intersections are shown in Figures 29, 30, and 31 for the year 2015 (interim phase) and in Figures 34, 35 and 36 for the year 2028 (full build-out).

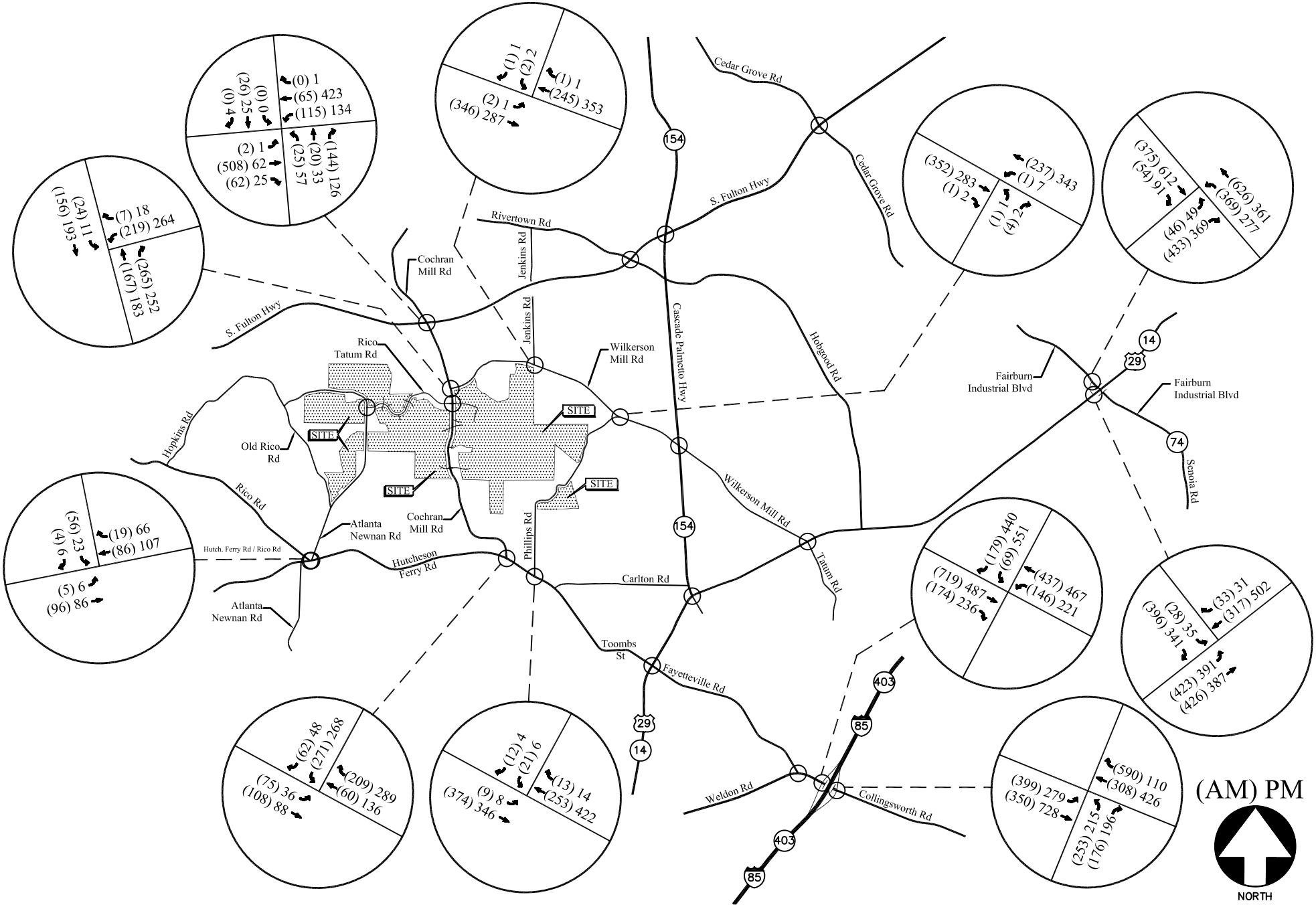
9. FACILITY NEEDS ANALYSIS

9.1 Intersection Analysis (Interim Phase)

The total traffic volumes for the year 2015 were used to analyze the study network intersections. Traffic operations analyses for the following scenarios were performed:

- Future Year 2015 (Interim Phase) Traffic Volumes including site generated traffic with existing lane geometry.
- Future Year 2015 (Interim phase) Traffic Volumes including site generated traffic and the recommended improvements to bring all intersections to LOS standard.

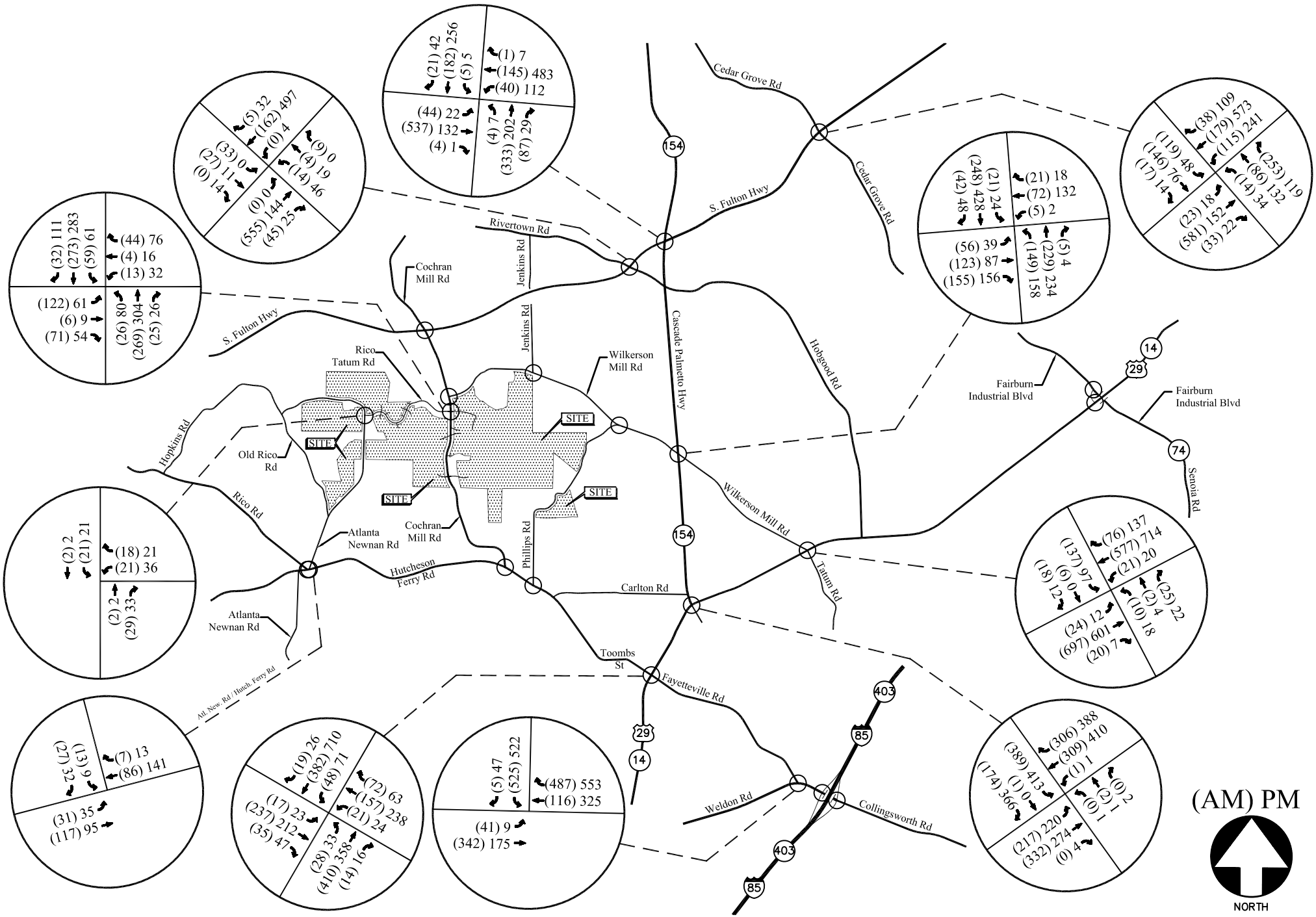
The results of the analysis for the above scenarios are shown in Tables 10 and 11. Recommendations to bring the intersections to the LOS standard are discussed after each appropriate section.



FUTURE 2015 WEEKDAY PEAK-HOUR VOLUMES 1 of 2

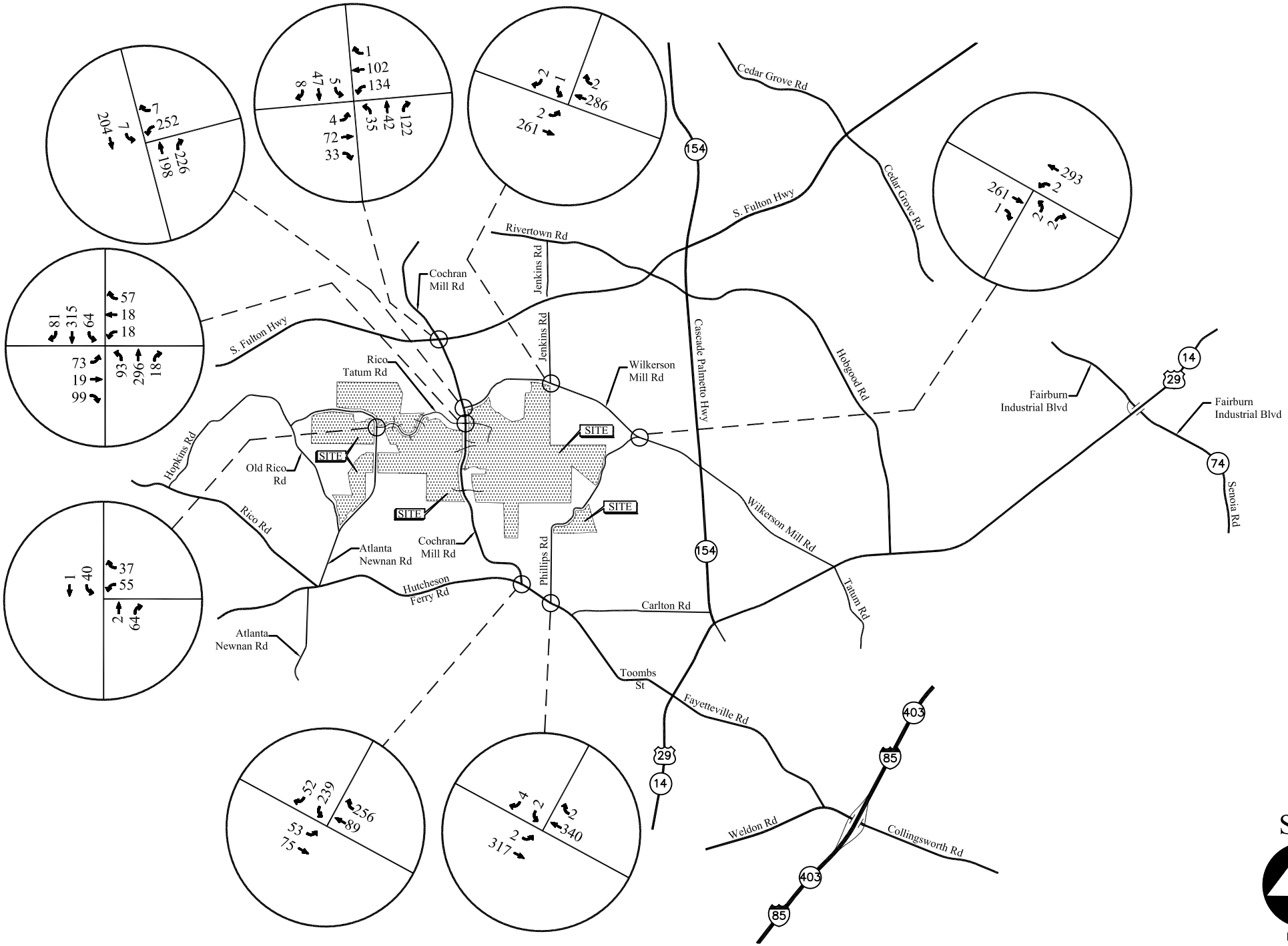
FIGURE 29

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FUTURE 2015 WEEKDAY PEAK-HOUR VOLUMES 2 of 2

FIGURE 30



SAT

NORTH

FUTURE 2015 SATURDAY PEAK-HOUR VOLUMES

FIGURE 31

A&R Engineering Inc.

Table 10

Future 2015 Intersection Operations (Interim Phase)

Intersection	AM/PM/ Sat LOS Standard	Traffic Control	A.M. Peak Hour		P.M. Peak Hour		Sat Peak Hour	
			LOS (Delay)	v/c*	LOS (Delay)	v/c *	LOS (Delay)	v/c*
Collingsworth Rd / I-85 NB Ramps	D/D	Signalized	B (10.6)	0.62	B (10.7)	0.49	NA	NA
Collingsworth Road / I-85 SB Ramps	D/D	Signalized	A (10.0)	0.49	B (16.3)	0.54	NA	NA
US 29 / Toombs St / Fayetteville Road	D/D	Signalized	C (23.7)	0.58	C (31.2)	0.80	NA	NA
US 29 / SR 154 / Ramah Baptist Church Drwy	D/D	Signalized	C (24.4)	0.60	C (23.0)	0.64	NA	NA
S. Fulton Hwy / SR 154	D/D	Signalized	C (27.1)	0.53	C (32.2)	0.40	NA	NA
S. Fulton Hwy / Cedar Grove Rd	D/D	Signalized	C (22.8)	0.50	C (23.2)	0.42	NA	NA
Fairburn Industrial Blvd / US 29 - Fairburn Industrial Blvd Connector Ramp -Westbound Left -Northbound Approach	 D/D D/D	Stop Controlled on US 29 - Fairburn Industrial Blvd Connector Ramps	 B (10.3) F (194.3)	 - -	 B (11.7) F (90.2)	 - -	NA	NA
US 29 / US 29 -Fairburn Industrial Blvd Connector Ramp -Eastbound Approach -Northbound Left	 D/D D/D	Stop Controlled on US 29 - Fairburn Industrial Blvd Connector Ramps	 C (20.8) A (9.8)	 - -	 D (30.1) B (10.9)	 - -	NA	NA
Collingsworth Rd / Weldon Rd -Eastbound Left -Southbound Approach	 D/D E/E	Stop Controlled on Collingsworth Rd	 A (1.2) F (442.2)	 - -	 A (0.6) F (492.4)	 - -	NA	NA
US 29 / Wilkerson Mill Rd / Tatum Rd -Eastbound Left -Westbound Left -Northbound Approach -Southbound Approach	 D/D D/D D/D D/D	Stop Controlled on Wilkerson Mill Rd / Tatum Rd	 A (8.9) A (9.2) C (21.3) F (197.1)	 - - - -	 A (9.4) A (8.9) D (25.4) F (156.9)	 - - - -	NA	NA
SR 154 / Wilkerson Mill Rd -Eastbound Approach -Westbound Approach -Northbound Left -Southbound Left	 D/D D/D D/D D/D	Stop Controlled on Wilkerson Mill Rd	 F (438.4) F (94.2) A (4.5) A (0.9)	 - - - -	 F (999) F (228.1) A (4.9) A (0.8)	 - - - -	NA	NA
Wilkerson Mill Rd / Phillips Rd -Westbound Left -Northbound Approach	 D/D/D D/D/D	Stop Controlled on Phillips Rd	 A (0.1) B (12.5)	 - -	 A (0.4) B (12.9)	 - -	 A (0.1) B (11.6)	 - -
Wilkerson Mill Rd / Jenkins Rd -Eastbound Left -Southbound Approach	 D/D/D D/D/D	Stop Controlled on Jenkins Rd	 A (0.1) B (12.3)	 - -	 A (0.1) B (12.7)	 - -	 A (0.1) B (11.6)	 - -
Cochran Mill Rd / Wilkerson Mill Rd -Westbound Approach -Southbound Left	 D/D/D D/D/D	Stop Controlled on Wilkerson Mill Rd	 E (41.4) A (1.9)	 - -	 F (58.8) A (0.7)	 - -	 F (86.0) A (0.4)	 - -

S. Fulton Hwy / Cochran Mill Rd								
-Eastbound Left	D/D/D	Stop Controlled	A (0.1)	-	A (0.4)	-	A (0.5)	-
-Westbound Left	D/D/D	on Cochran Mill	A (9.1)	-	A (4.4)	-	A (5.2)	-
-Northbound Approach	D/D/D	Rd	F (305.7)	-	F (170.9)	-	B (13.0)	-
-Southbound Approach	D/D/D		F (71.2)	-	D (32.2)	-	C (16.3)	-
S. Fulton Hwy / Rivertown Rd								
-Eastbound Left	D/D	Stop Controlled	A (0.0)	-	A (0.0)	-		
-Westbound Left	D/D	on Rivertown Rd	A (0.0)	-	A (7.6)	-	NA	NA
-Northbound Approach	D/D		B (13.6)	-	C (19.0)	-		
-Southbound Approach	D/D		B (13.0)	-	B (14.0)	-		
Hutcheson Ferry Rd / Phillips Rd								
-Eastbound Left	D/D/D	Stop Controlled	A (0.4)	-	A (0.4)	-	A (0.1)	-
-Southbound Approach	D/D/D	on Phillips Rd	B (13.8)	-	C (15.8)	-	B (12.3)	-
Hutcheson Ferry Rd / Cochran Mill Rd		Stop Controlled						
-Eastbound Left	D/D/D	on Cochran Mill	A (3.8)	-	A (3.3)	-	A (3.9)	-
-Southbound Approach	D/D/D	Rd	E (39.0)	-	F (54.9)	-	C (21.3)	-
Hutcheson Ferry Rd / Atlanta Newnan Rd		Stop Controlled						
-Eastbound Left	D/D	on Atlanta	A (2.6)	-	A (2.9)	-	NA	NA
-Southbound Approach	D/D	Newnan Rd	A (9.9)	-	B (10.2)	-		
Hutcheson Ferry Rd / Rico Rd								
-Eastbound Left	D/D	Stop Controlled	A (0.7)	-	A (0.7)	-	NA	NA
-Southbound Approach	D/D	on Rico Rd	B (10.5)	-	B (10.1)	-		
Atlanta Newnan Rd / Rico Tatum Rd		Stop Controlled						
-Westbound Approach	D/D/D	on Rico Tatum	A (9.6)	-	A (10.0)	-	C (15.5)	-
-Southbound Left	D/D/D	Rd	A (7.1)	-	A (7.1)	-	A (7.5)	-
Cochran Mill Rd / Rico Tatum Rd / Retail & Office Drwy 1								
-Eastbound Approach	D/D/D	Stop Controlled	F (454.1)	-	F (999)	-	F (999)	-
-Westbound Approach	D/D/D	on Rico Tatum	C (20.7)	-	F (120.5)	-	F (389.5)	-
-Northbound Left	D/D/D	Rd / Retail &	A (2.7)	-	A (4.0)	-	A (7.5)	-
-Southbound Left	D/D/D	Office Drwy 1	A (1.5)	-	A (1.5)	-	A (1.6)	-

*v/c ratio is not reported for unsignalized intersections.

The results of the future 2015 conditions analysis indicate that eight of the study intersections will not operate within the LOS standard. The following improvements were identified for those intersections that did not comply with the LOS standard for the future year 2015 traffic:

- Fairburn Industrial Boulevard / US 29 – Fairburn Industrial Boulevard Connector Ramp
  - Install a traffic signal
  - Provide permissive + protected phasing for westbound left turn movement on Fairburn Industrial Boulevard.

- Collingsworth Road / Weldon Road
  - Install a traffic signal

- US 29 / Wilkerson Mill Road / Tatum Road
  - Install a traffic signal.

- SR 154 / Wilkerson Mill Road
  - Install a traffic signal

- Cochran Mill Road / Wilkerson Mill Road
  - Install a traffic signal

- S. Fulton Highway/ Cochran Mill Road
  - Install a traffic signal
  - Restripe the westbound approach to include dedicated left turn and shared through / right turn lanes, which will not require any additional pavements.

- Hutcheson Ferry Road / Cochran Mill Road
  - Add a dedicated westbound right turn lane on Hutcheson Ferry Road.

- Cochran Mill Road / Rico Tatum Road / Retail & Office Driveway 1
  - Will be discussed in section 9.4 Site Access Analysis section of the report.

The LOS for the above intersections in the year 2015 with the addition of site-generated traffic after the implementation of the above improvements is shown in Table 11.

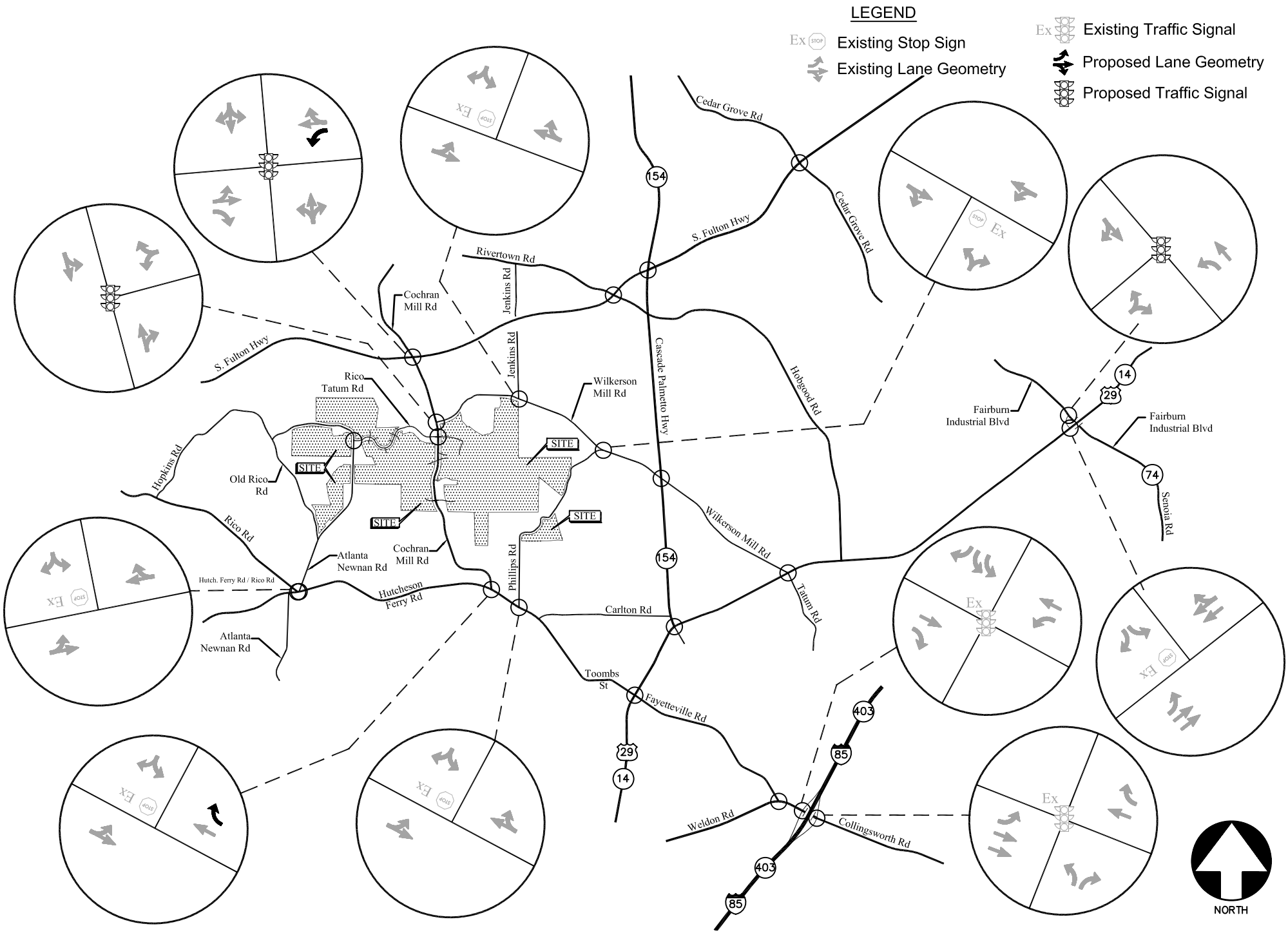
TABLE 11

FUTURE 2015 INTERSECTION OPERATIONS (INTERIM PHASE) – WITH IMPROVEMENTS

Intersection	AM/PM/ Sat LOS Standard	Traffic Control	A.M. Peak Hour		P.M. Peak Hour		Sat Peak Hour	
			LOS (Delay)	v/c*	LOS (Delay)	v/c*	LOS (Delay)	v/c*
Fairburn Industrial Blvd / US 29 - Fairburn Industrial Blvd Connector Ramp	D/D	Signalized	A (4.0)	0.51	A (6.6)	0.56	NA	NA
Collingsworth Rd / Weldon Rd	D/D	Signalized	C (23.0)	0.70	D (44.3)	0.98	NA	NA
US 29 / Wilkerson Mill Rd / Tatum Rd	D/D	Signalized	B (10.1)	0.36	A (8.3)	0.33	NA	NA
SR 154 / Wilkerson Mill Rd	D/D	Signalized	C (22.8)	0.67	C (26.8)	0.73	NA	NA
Cochran Mill Rd / Wilkerson Mill Rd	D/D/D	Signalized	B (17.7)	0.59	C (24.3)	0.58	C (26.4)	0.62
S. Fulton Hwy / Cochran Mill Rd	D/D/D	Signalized	B (14.4)	0.54	B (17.7)	0.40	C (26.1)	0.23
Cochran Mill Rd / Rico Tatum Rd / Retail & Office Drwy 1	D/D/D	Signalized	C (25.4)	0.56	C (26.5)	0.68	C (28.5)	0.98
Hutcheson Ferry Rd / Cochran Mill Rd -Eastbound Left -Southbound Approach	D/D/D D/D/D	Stop Controlled on Cochran Mill Rd	A (3.8) C (21.1)	- -	A (3.3) D (25.4)	- -	A (3.9) C (15.8)	- -

*v/c ratio is not reported for unsignalized intersections.

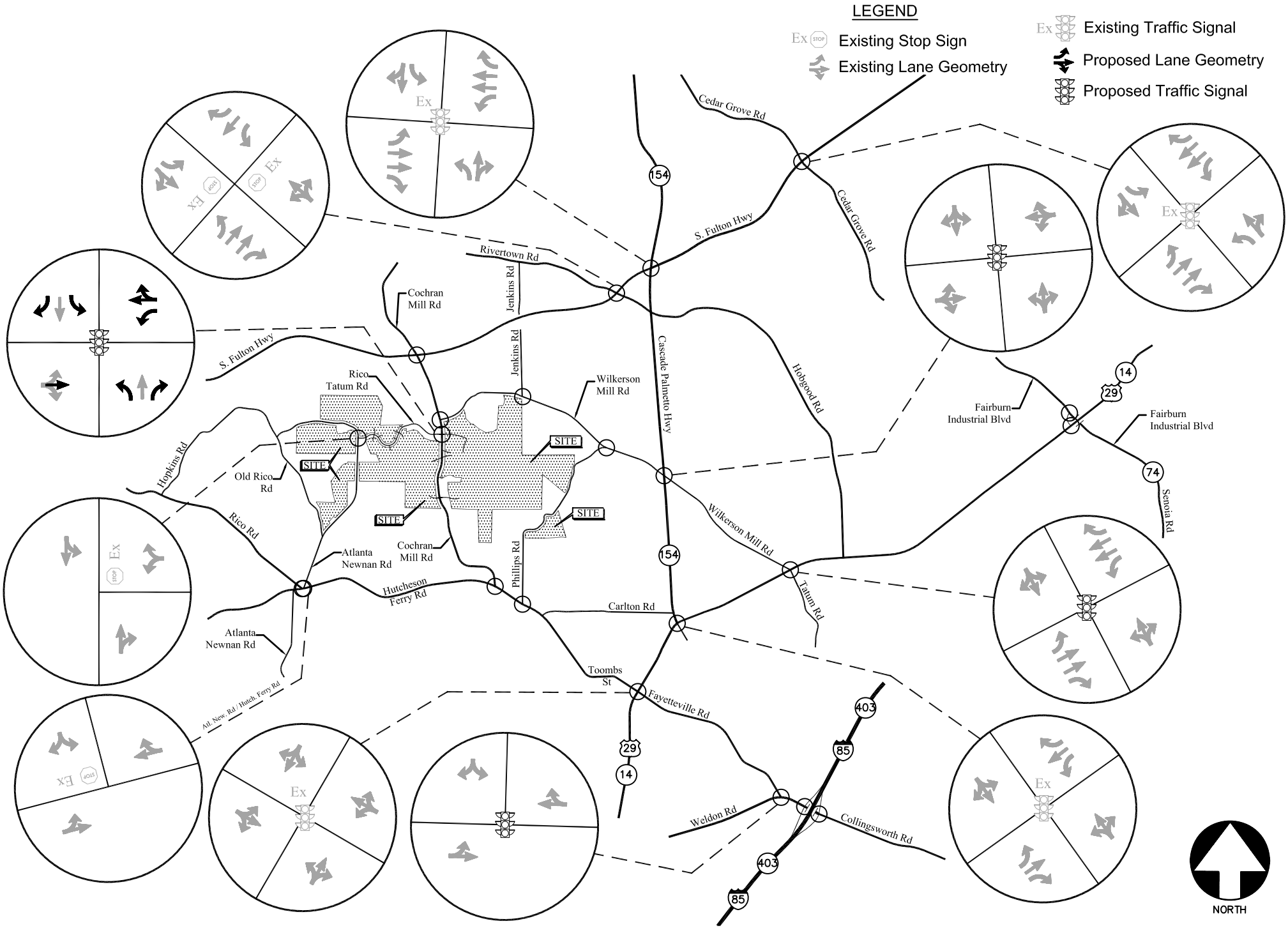
The future 2015 intersection traffic control and lane geometry for the study area network needed to bring all intersections to the LOS standard is shown in Figures 32 and 33.



FUTURE 2015 TRAFFIC CONTROL AND LANE GEOMETRY 1 of 2

FIGURE 32

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FUTURE 2015 TRAFFIC CONTROL AND LANE GEOMETRY 2 of 2

FIGURE 33

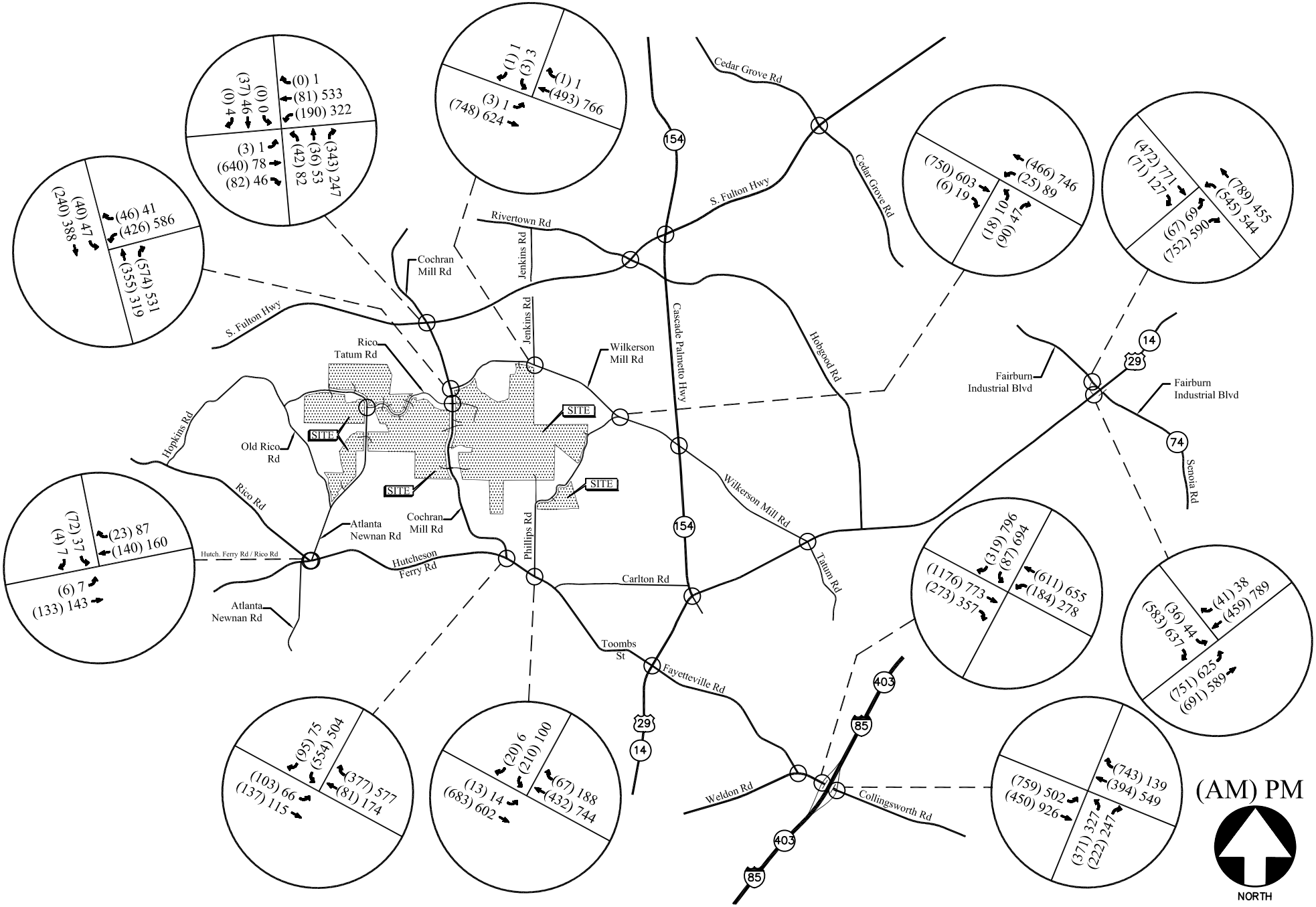
A&R Engineering Inc.

9.2 Intersection Analysis (Full Build-out)

The future year total traffic volumes were used to analyze the study network intersections. Traffic operations analyses for the following scenarios were performed:

- Future Year 2028 (Full Build-out) Traffic Volumes including site generated traffic with existing lane geometry.
- Future Year 2028 (Full Build-out) Traffic Volumes including site generated traffic and the recommended improvements to bring all intersections to LOS standard.

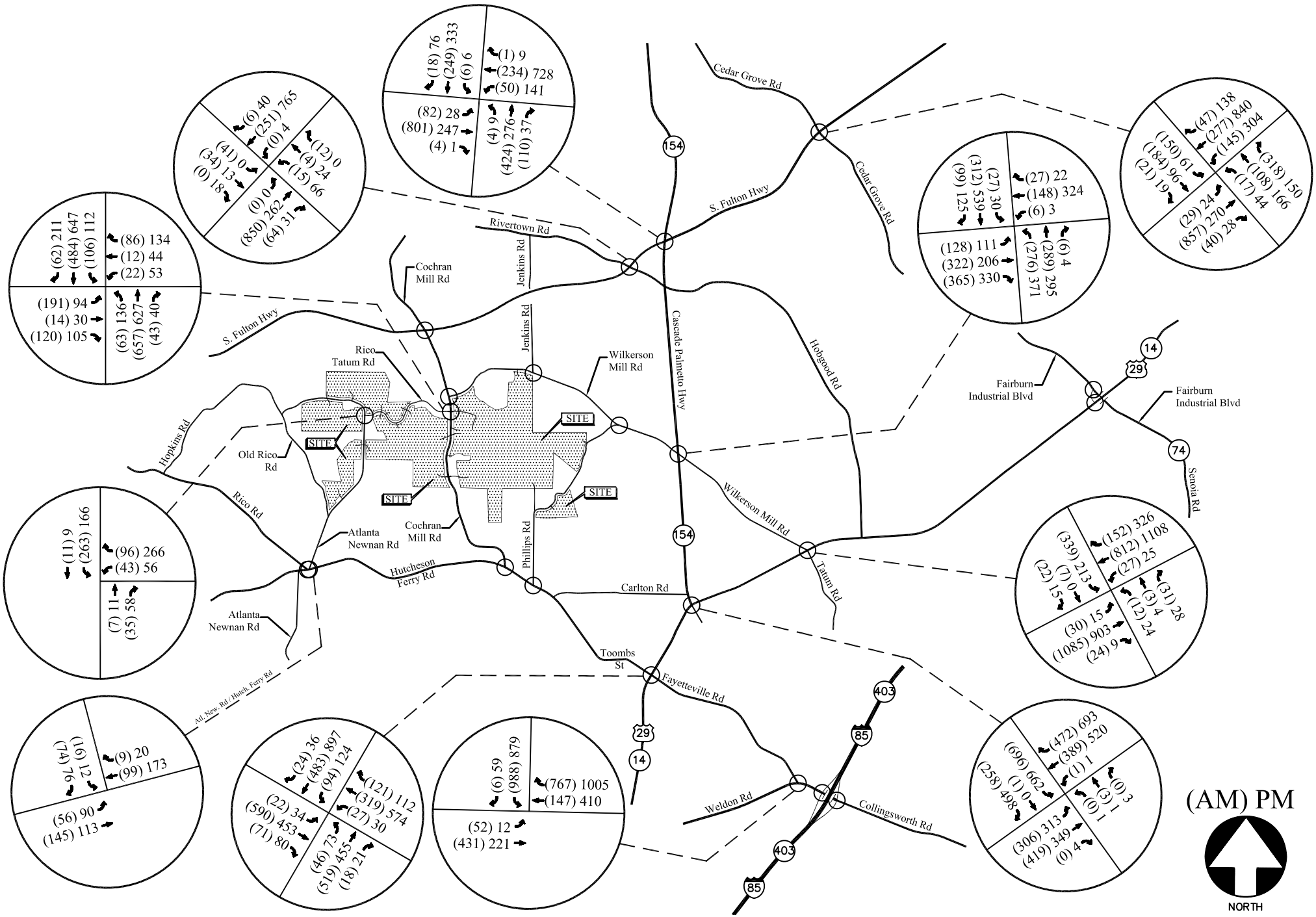
The results of the analysis for the above scenarios are shown in Tables 12 and 13. Recommendations to bring the intersections to the LOS standard are discussed after each appropriate section.



FUTURE 2028 WEEKDAY PEAK-HOUR VOLUMES 1 of 2

FIGURE 34

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FUTURE 2028 WEEKDAY PEAK-HOUR VOLUMES 2 of 2

FIGURE 35

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FUTURE 2028 SATURDAY PEAK-HOUR VOLUMES

FIGURE 36

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Table 12

Future 2028 Intersection Operations (Full Build-out)

Intersection	AM/PM/ Sat LOS Standard	Traffic Control	A.M. Peak Hour		P.M. Peak Hour		Sat Peak Hour	
			LOS (Delay)	v/c*	LOS (Delay)	v/c*	LOS (Delay)	v/c*
Collingsworth Rd / I-85 NB Ramps	D/D	Signalized	C (33.4)	0.98	C (21.7)	0.84	NA	NA
Collingsworth Road / I-85 SB Ramps	D/D	Signalized	C (24.7)	0.82	C (29.6)	0.89	NA	NA
US 29 / Toombs St / Fayetteville Rd	D/D	Signalized	E (78.7)	1.17	F (163.2)	1.35	NA	NA
US 29 / SR 154 / Ramah Baptist Church Drwy	D/D	Signalized	E (60.7)	1.05	E (55.5)	1.06	NA	NA
S. Fulton Hwy / SR 154	D/D	Signalized	C (29.4)	0.70	C (30.0)	0.58	NA	NA
S. Fulton Hwy / Cedar Grove Rd	D/D	Signalized	C (24.4)	0.71	C (22.7)	0.55	NA	NA
Fairburn Industrial Blvd / US 29 – Fairburn Industrial Blvd Connector Ramp		Stop Controlled on US 29 - Fairburn Industrial Blvd Connector Ramps					NA	NA
-Westbound Left	D/D		B (14.4)	-	D (33.5)	-		
-Northbound Approach	D/D		F (9999)	-	F (999)	-		
US 29 / / US 29 – Fairburn Industrial Blvd Connector Ramp		Stop Controlled on US 29 - Fairburn Industrial Blvd Connector Ramps					NA	NA
-Eastbound Approach	D/D		F (763.7)	-	F (830.1)	-		
-Northbound Left	D/D		C (18.7)	-	D (30.4)	-		
Collingsworth Rd / Weldon Rd		Stop Controlled on Collingsworth Rd					NA	NA
-Eastbound Left	D/D		A (1.3)	-	A (0.7)	-		
-Southbound Approach	E/E		F (999)	-	F (999)	-		
US 29 / Wilkerson Mill Rd / Tatum Rd		Stop Controlled on Wilkerson Mill Rd / Tatum Rd					NA	NA
-Eastbound Left	D/D		A (9.9)	-	B (11.4)	-		
-Westbound Left	D/D		B (11.2)	-	B (10.3)	-		
-Northbound Approach	D/D		F (79.8)	-	F (157.5)	-		
-Southbound Approach	D/D		F (999)	-	F (999)	-		
SR 154 / Wilkerson Mill Rd		Stop Controlled on Wilkerson Mill Rd					NA	NA
-Eastbound Approach	D/D		F (999)	-	F (999)	-		
-Westbound Approach	D/D		F (999)	-	F (999)	-		
-Northbound Left	D/D		A (6.5)	-	A (9.5)	-		
-Southbound Left	D/D		A (1.0)	-	A (0.9)	-		
Wilkerson Mill Rd / Phillips Rd		Stop Controlled on Phillips Rd						
-Westbound Left	D/D/D		A (3.4)	-	A (5.9)	-	A (3.8)	-
-Northbound Approach	D/D/D		F (196.2)	-	F (157.0)	-	E (41.1)	-
Wilkerson Mill Rd / Jenkins Rd		Stop Controlled on Jenkins Rd						
-Eastbound Left	D/D/D		A (0.2)	-	A (0.1)	-	A (0.2)	-
-Southbound Approach	D/D/D		D (26.5)	-	D (29.8)	-	C (20.9)	-
Cochran Mill Rd / Wilkerson Mill Rd		Stop Controlled on Wilkerson Mill Rd						
-Westbound Approach	D/D/D		F (999)	-	F (999)	-	F (999)	-
-Southbound Left	D/D/D		A (4.5)	-	A (2.7)	-	A (2.5)	-

S. Fulton Hwy / Cochran Mill Rd								
-Eastbound Left	D/D/D	Stop Controlled on Cochran Mill Rd	A (0.1)	-	A (0.4)	-	A (0.4)	-
-Westbound Left	D/D/D		C (15.4)	-	A (8.9)	-	A (6.9)	-
-Northbound Approach	D/D/D		F (999)	-	F (999)	-	F (434.2)	-
-Southbound Approach	D/D/D		F (1270.9)	-	F (1213.5)	-	F (95.3)	-
S. Fulton Hwy / Rivertown Rd								
-Eastbound Left	D/D	Stop Controlled on Rivertown Rd	A (0.0)	-	A (0.0)	-	NA	NA
-Westbound Left	D/D		A (0.0)	-	A (7.9)	-		
-Northbound Approach	D/D		C (18.6)	-	F (57.4)	-		
-Southbound Approach	D/D		C (17.1)	-	C (19.9)	-		
Hutcheson Ferry Rd / Phillips Rd								
-Eastbound Left	D/D/D	Stop Controlled on Phillips Rd	A (0.5)	-	A (1.2)	-	A (0.5)	-
-Southbound Approach	D/D/D		F (482.5)	-	F (516.7)	-	F (529.9)	-
Hutcheson Ferry Rd / Cochran Mill Rd								
-Eastbound Left	D/D/D	Stop Controlled on Cochran Mill Rd	A (5.0)	-	A (5.3)	-	A (5.4)	-
-Southbound Approach	D/D/D		F (694.8)	-	F (909.1)	-	F (425.4)	-
Hutcheson Ferry Rd / Atlanta Newnan Rd		Stop Controlled on Atlanta Newnan Rd					NA	NA
-Eastbound Left	D/D		A (3.4)	-	A (4.7)	-		
-Southbound Approach	D/D		B (10.4)	-	B (11.9)	-		
Hutcheson Ferry Rd / Rico Rd								
-Eastbound Left	D/D	Stop Controlled on Rico Rd	A (0.6)	-	A (0.6)	-	NA	NA
-Southbound Approach	D/D		B (11.9)	-	B (11.4)	-		
Atlanta Newnan Rd / Rico Tatum Rd								
-Westbound Approach	D/D/D	Stop Controlled on Rico Tatum Rd	F (999)	-	F (417.1)	-	F (999)	-
-Southbound Left	D/D/D		B (12.1)	-	A (9.2)	-	B (11.3)	-
Cochran Mill Rd / Rico Tatum Rd / Retail & Office Drwy 1								
-Eastbound Approach	D/D/D	Stop Controlled on Rico Tatum Rd / Retail & Office Drwy 1	F (999)	-	F (999)	-	F (999)	-
-Westbound Approach	D/D/D		F (999)	-	F (999)	-	F (999)	-
-Northbound Left	D/D/D		A (8.2)	-	B (14.4)	-	F (66.6)	-
-Southbound Left	D/D/D		A (3.9)	-	A (5.3)	-	A (4.9)	-

*v/c ratio is not reported for unsignalized intersections.

The results of the future 2028 conditions analysis indicate that fifteen of the study intersections will not operate within the LOS standard. The following lists the improvements needed to restore that intersections back to the LOS standard for the future year 2028 traffic:

- US 29 / Toombs Street / Fayetteville Road
  - Add an additional southbound through lane on US 29. This improvement is a planned program by ARC that is scheduled to be completed in 2020.
  - Add dedicated northbound and southbound left turn lanes on US 29.

- US 29 / SR 154 / Ramah Baptist Church Driveway
  - Add dedicated southbound dual left turn lanes with protected only phasing on SR 154.

- Fairburn Industrial Boulevard / US 29 – Fairburn Industrial Boulevard Connector Ramp
  - Install a traffic signal
  - Provide permissive + protected phasing for westbound left turn movements on Fairburn Industrial Boulevard

- US 29 / US 29 – Fairburn Industrial Boulevard Connector Ramp
  - Install a traffic signal
  - Provide permissive + protected phasing for northbound left turn movements on US 29.
  - Provide permissive + overlap phasing for eastbound right turn movements on US 29 – Fairburn Industrial Boulevard Connector Ramp.

- Collingsworth Road / Weldon Road
  - Install a traffic signal
  - Add a dedicated westbound right turn lane with permissive + overlap phasing on Collingsworth Road.

- US 29 / Wilkerson Mill Road / Tatum Road
  - Install a traffic signal

- SR 154 / Wilkerson Mill Road
  - Install a traffic signal.
  - Add dedicated eastbound left and right turn lanes on Wilkerson Mill Road.
  - Provide permissive + protected phasing for eastbound left turn movement on Wilkerson Mill Road.
  - Add a dedicated northbound left turn lane with permissive + protected phasing on SR 154.
  - Add a dedicated southbound left turn lane on SR 154.

- Wilkerson Mill Road / Phillips Road
  - Add a dedicated northbound right turn lane on Phillips Road. The northbound approach to the intersection will operate at LOS F during the AM and PM peak hours after the recommended improvements are completed. It is not uncommon for side streets to experience delays during the peak hours. No improvements can be recommended at the intersection to improve the LOS except the installation of a traffic signal; however, the intersection will not have the necessary volumes to warrant a traffic signal. Therefore, no additional improvements are recommended for this intersection.

- Cochran Mill Road / Wilkerson Mill Road
    - Install a traffic signal
    - Add a dedicated northbound right turn lane on Cochran Mill Road.
    - Add a dedicated westbound left turn lane on Wilkerson Mill Road.

- S. Fulton Highway / Cochran Mill Road
    - Install a traffic signal
    - Add a dedicated northbound right turn lane with permissive + overlap phasing on Cochran Mill Road.
    - Restripe the existing westbound approach to include a dedicated left and a shared through / right turn lane.
    - Provide permissive + protected phasing for the westbound left turn movements on Wilkerson Mill Road.

- S. Fulton Highway / Rivertown Road
    - The intersection will operate at LOS F during the PM peak hour for the northbound approach. It is not uncommon for side streets to experience delays during the peak hours. No improvements can be recommended at the intersection to improve the LOS except the installation of a traffic signal; however, the intersection will not have the necessary volumes to warrant a traffic signal. Therefore, no improvements are recommended for this intersection.

- Hutcheson Ferry Road / Phillips Road
    - Install a traffic signal.

- Hutcheson Ferry Road / Cochran Mill Road
    - Install a traffic signal
    - Add a dedicated westbound right turn lane on Hutcheson Ferry Road.

- Atlanta Newnan Road / Rico Tatum Road
    - Install a traffic signal
    - Add a dedicated westbound left turn lane on Rico Tatum Road.

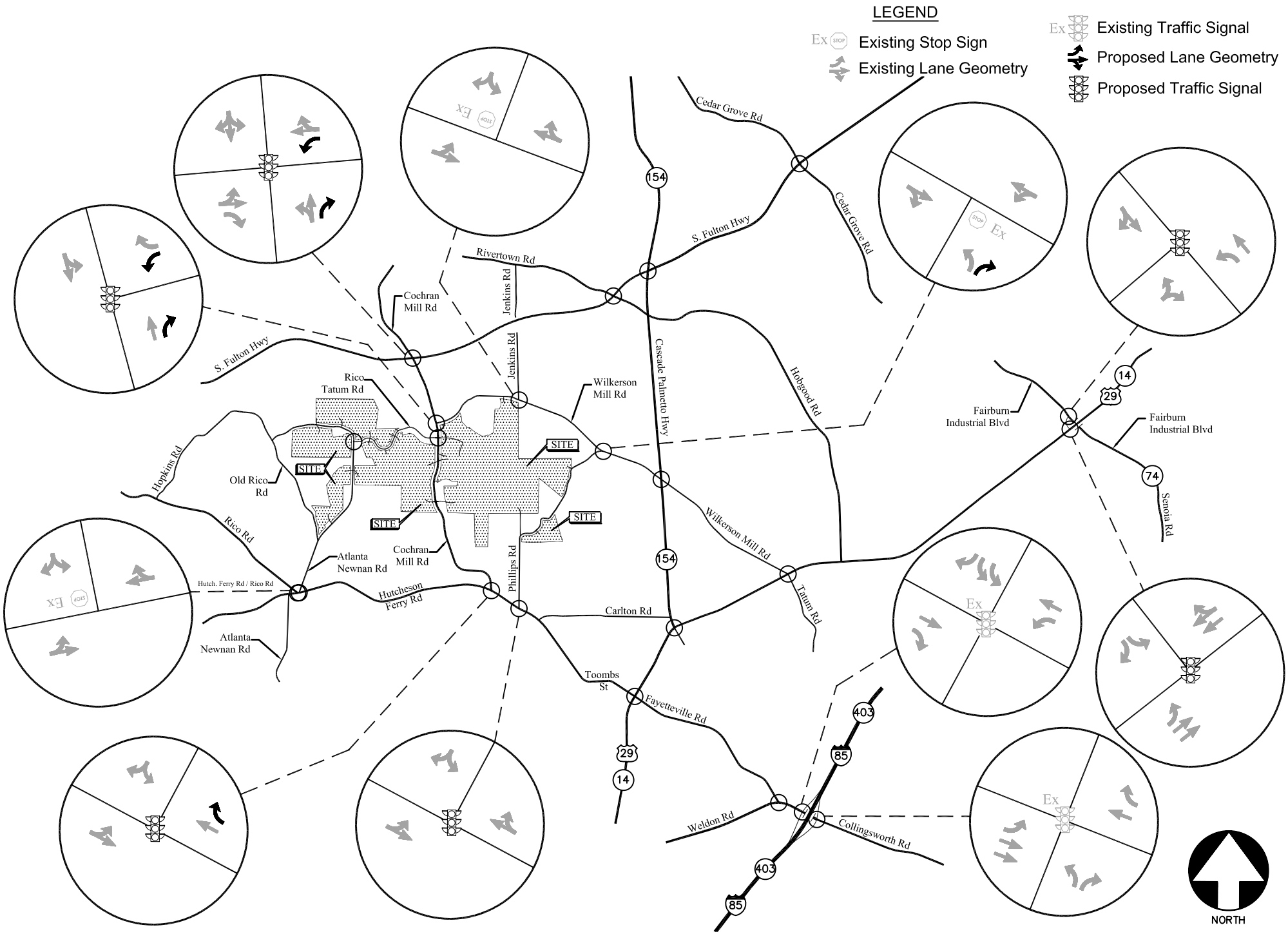
- Cochran Mill Road / Rico Tatum Road / Retail & Office Driveway 1
    - Will be discussed in section 9.4 Site Access Analysis section of the report.

The LOS for the above intersections in the year 2028, with the addition of site-generated traffic, after the implementation of above the improvement is shown in Table 13.

TABLE 13 FUTURE 2028 INTERSECTION OPERATIONS (FULL BUILD-OUT) – WITH IMPROVEMENTS								
Intersection	AM/PM/ Sat LOS Standard	Traffic Control	A.M. Peak Hour		P.M. Peak Hour		Sat Peak Hour	
			LOS (Delay)	v/c*	LOS (Delay)	v/c*	LOS (Delay)	v/c*
US 29 / Toombs St / Fayetteville Rd	D/D	Signalized	D (41.9)	1.20	D (36.3)	0.92	NA	NA
US 29 / SR 154 / Ramah Baptist Church Drwy	D/D	Signalized	C (32.5)	0.63	D (36.6)	0.70	NA	NA
Fairburn Industrial Blvd / US 29 – Fairburn Industrial Blvd Connector Ramp	D/D	Signalized	B (11.4)	0.71	D (42.5)	1.00	NA	NA
US 29 / US 29 – Fairburn Industrial Blvd Connector Ramp	D/D	Signalized	B (11.5)	0.69	B (17.2)	0.72	NA	NA
Collingsworth Rd / Weldon Rd	D/D	Signalized	C (26.7)	0.99	C (22.0)	0.89	NA	NA
US 29 / Wilkerson Mill Rd / Tatum Rd	D/D	Signalized	B (13.7)	0.68	A (9.7)	0.57	NA	NA
SR 154 / Wilkerson Mill Rd	D/D	Signalized	D (42.8)	0.75	D (50.3)	0.93	NA	NA
Wilkerson Mill Rd / Phillips Rd -Westbound Left -Northbound Approach	 D/D/D D/D/D	Stop Controlled on Phillips Rd	 A (3.4) F (68.5)	 - -	 A (5.9) F (69.9)	 - -	 A (3.8) D (26.4)	 - -
Cochran Mill Rd / Wilkerson Mill Rd	D/D/D	Signalized	C (22.6)	0.74	D (35.6)	0.92	D (44.3)	0.97
S. Fulton Hwy / Cochran Mill Rd	D/D/D	Signalized	C (32.7)	0.83	C (32.0)	0.71	B (13.8)	0.46
S. Fulton Hwy / Rivertown Rd -Eastbound Left -Westbound Left -Northbound Approach -Southbound Approach	 D/D D/D D/D D/D	Stop Controlled on Rivertown Rd	 A (0.0) A (0.0) C (18.6) C (17.1)	 - - - -	 A (0.0) A (7.9) F (57.4) C (19.9)	 - - - -	NA	NA
Hutcheson Ferry Rd / Phillips Rd	D/D/D	Signalized	B (16.4)	0.65	B (10.8)	0.82	B (14.8)	0.74
Hutcheson Ferry Rd / Cochran Mill Rd	D/D/D	Signalized	C (30.5)	0.70	C (31.3)	0.71	C (29.3)	0.59
Atlanta Newnan Rd / Rico Tatum Rd	D/D/D	Signalized	D (38.2)	0.95	C (26.7)	0.66	D (51.1)	1.01
Cochran Mill Rd / Rico Tatum Rd / Retail & Office Drwy 1	D/D/D	Signalized	C (31.8)	0.85	C (30.8)	0.83	B (15.7)	0.57

*v/c ratio is not reported for unsignalized intersections.

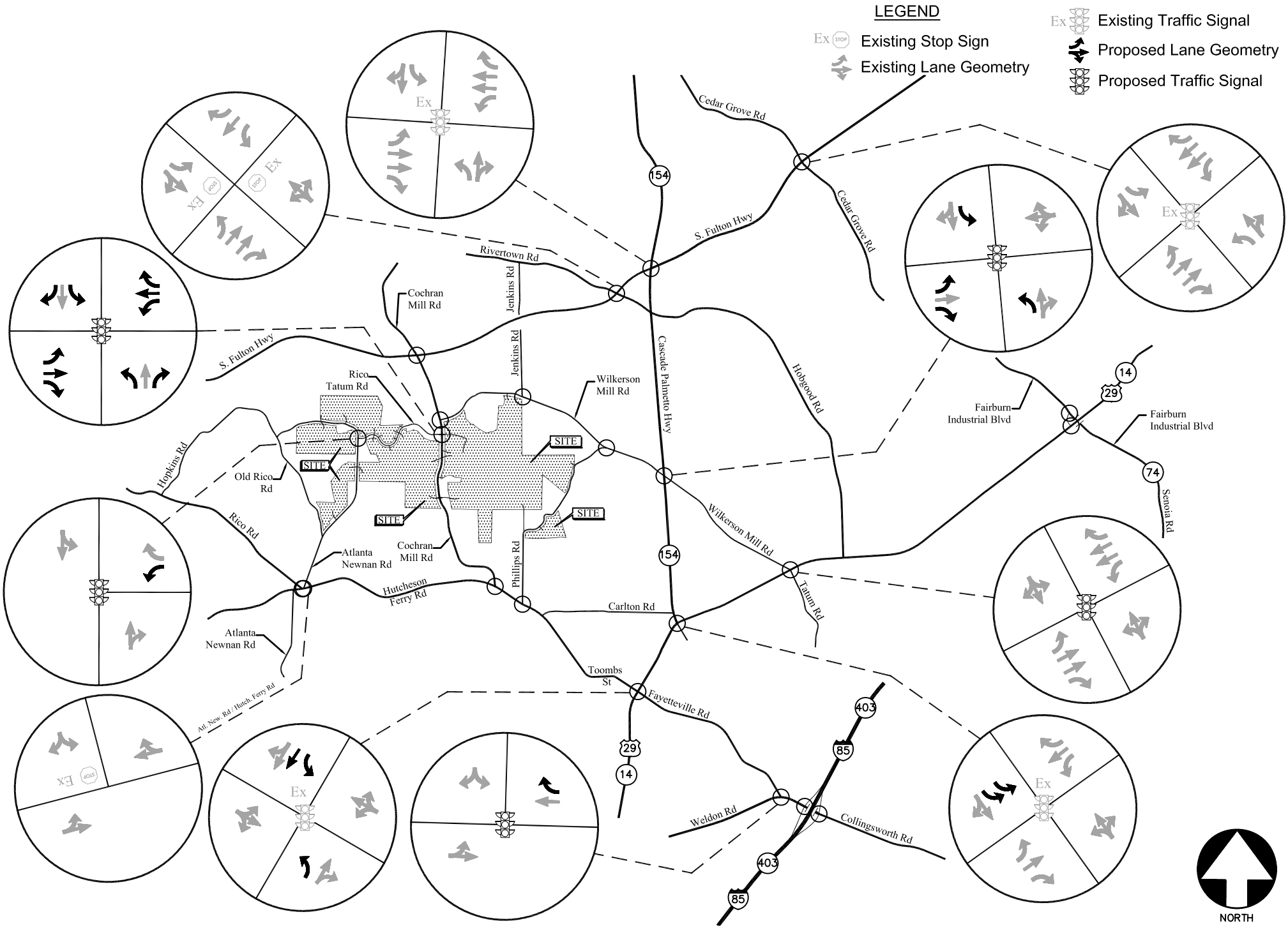
The future 2028 intersection traffic control and lane geometry for the study area network needed to bring all intersections to the LOS standard is shown in Figures 37 and 38.



FUTURE 2028 TRAFFIC CONTROL AND LANE GEOMETRY 1 of 2

FIGURE 37

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FUTURE 2028 TRAFFIC CONTROL AND LANE GEOMETRY 2 of 2

FIGURE 38

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9.3 Intersection Analysis – Additional (Full Build-out)

An additional analysis has been completed by considering that the retail and office space proposed within the development will serve a higher percentage of residents within the development than projected by ITE. The projects used in developing the ITE mixed-use reduction rates are significantly smaller than the Foxhall Village project. Therefore, a higher mixed-use reduction rate was utilized for the purposes of this additional analysis. For the purposes of this analysis, 20% mixed-use reduction for the retail trips and 10% mixed-use reduction for the office trips were applied. The residential trip reductions have been calculated by summing the retail and office reductions. The trip generation is shown in Table 14 below.

TABLE 14
TRIP GENERATION WITH REDUCTIONS – ADDITIONAL ANALYSIS – FULL BUILD-OUT

Land Use	A.M. Peak Hour			P.M. Peak Hour			Sat Peak Hour			24-Hour
	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total	2-way
820-Shopping Center	136	87	223	443	480	923	659	609	1,268	9,951
- Mixed-Use Reduction	*-27*	*-17*	*-44*	*-89*	*-96*	*-185*	-132	-122	-254	*-1,990*
*- Pass-By Reduction 0% (33%){10%}**	*0*	*0*	*0*	*-117*	*-127*	*-244*	-53	-49	-102	*-2440***
710-General Office	520	71	591	93	456	549	64	54	118	4,028
- Mixed-Use Reduction	*-52*	*-7*	*-59*	*-9*	*-46*	*-55*	-6	-5	-11	*-403*
210-Single Family Detached Housing	294	883	1,177	850	499	1,349	807	688	1,495	13,847
- Mixed-Use Reduction	*-48*	*-12*	*-60*	*-49*	*-77*	*-126*	-82	-74	-156	*-1,178*
220-Multi Family	95	379	474	354	191	545	206	206	412	5,914
- Mixed-Use Reduction	*-15*	*-5*	*-20*	*-21*	*-29*	*-50*	*-21*	*-22*	*-43*	*-503*
230-Single Family Attached	98	481	579	480	236	716	345	293	638	8,375
- Mixed-Use Reduction	*-16*	*-7*	*-23*	*-28*	*-36*	*-64*	*-35*	*-31*	*-66*	*-712*
520 – Elementary School	208	171	379	12	14	26	n/a	n/a	n/a	1,290
Totals without reduction	**1,351**	**2,072**	**3,423**	**2,232**	**1,876**	**4,108**	**2,081**	**1,850**	**3,931**	**43,405**
Totals with reduction	**1,193**	**2,024**	**3,217**	**1,919**	**1,465**	**3,384**	**1,752**	**1,547**	**3,299**	**36,179**

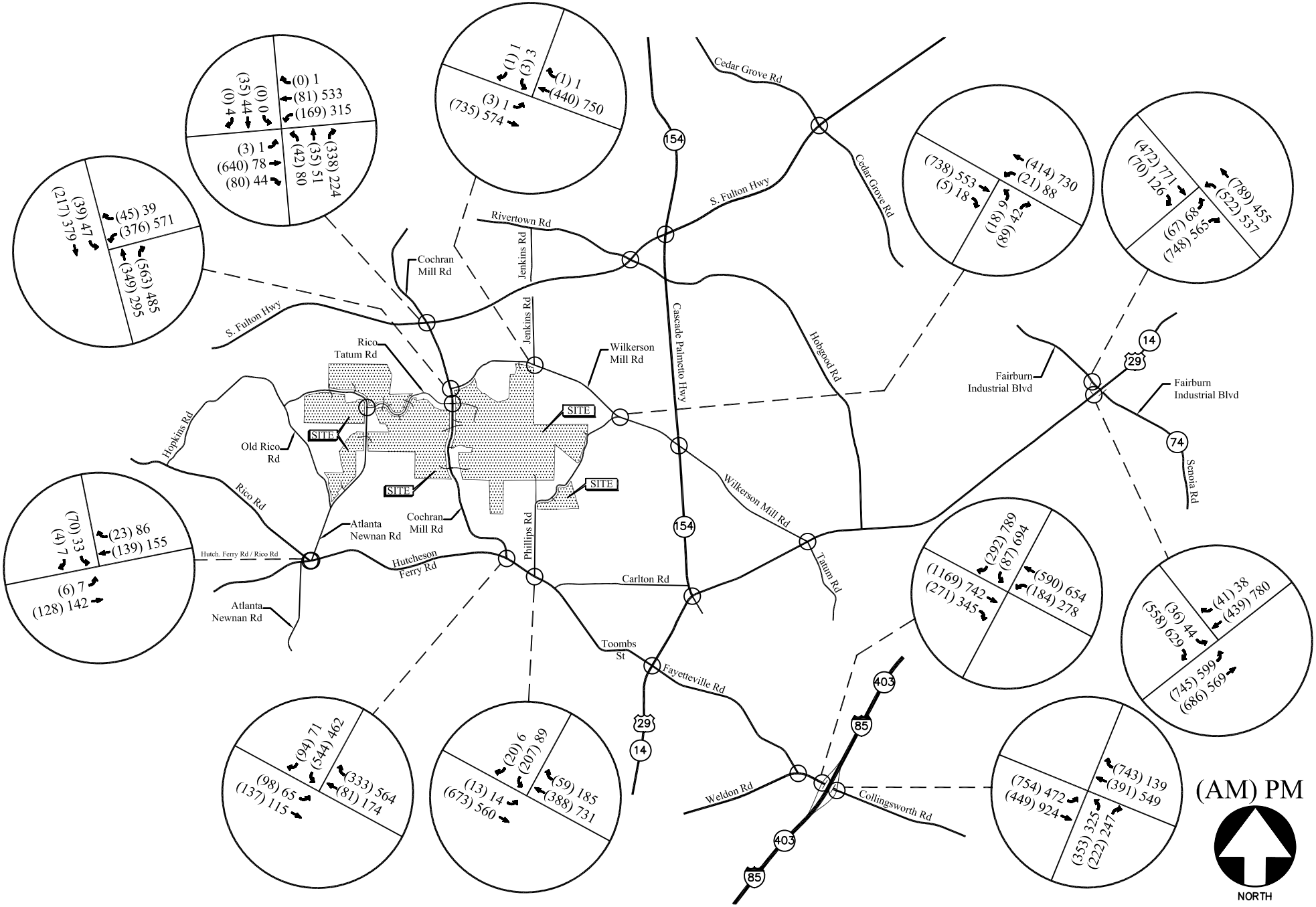
* AM Pass-By % (PM Pass-By %) {Saturday Pass-By %}

** 24 hour pass-by reductions have been calculated by assuming the total PM peak hour trip reduction is 10% of the total daily pass-by reduction.

Trip generation with the applied reductions has been assigned to the study network area based on the trip distribution given in Section 3. The traffic volumes that will be generated by the proposed development (full build-out) were added to the future base year 2028 (full build-out) traffic volumes in order to determine the traffic volumes that will be on the roadway. The future traffic volumes for the additional analysis, including the site-generated volumes, for the study intersections are shown in Figures 39, 40, and 41 for the year 2028 Additional (full build-out). The future year total traffic volumes for the additional analysis were used to analyze the study network intersections. Traffic operations analyses for the following scenarios were performed:

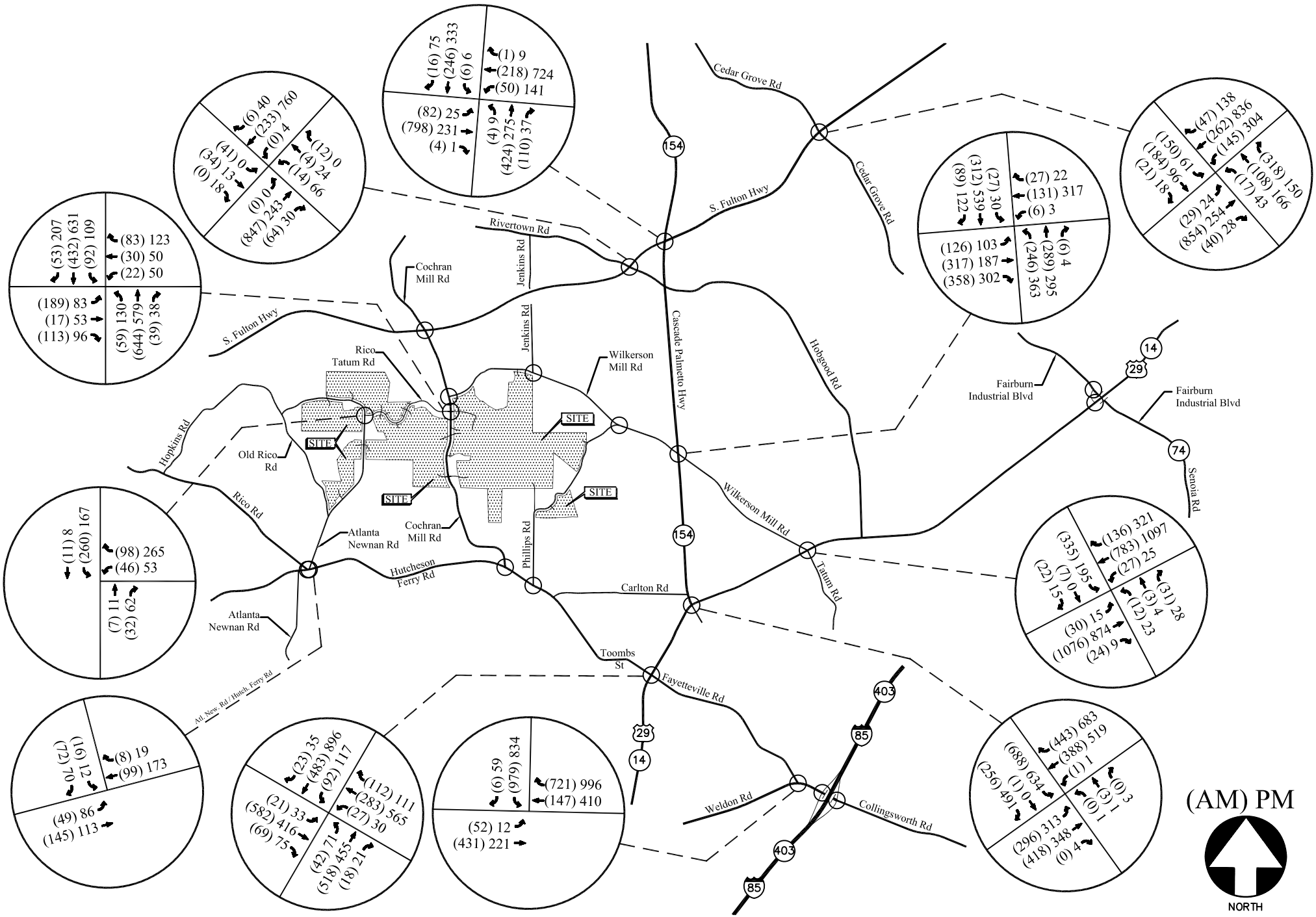
- Future Year 2028 – Additional (Full Build-out) Traffic Volumes including site generated traffic with existing lane geometry.
- Future Year 2028 – Additional (Full Build-out) Traffic Volumes including site generated traffic and the recommended improvements to bring all intersections to LOS standard.

The results of the analysis for the above scenarios are shown in Tables 15 and 16. Recommendations to bring the intersections to the LOS standard are discussed after each appropriate section.



FUTURE 2028 WEEKDAY PEAK-HOUR VOLUMES 1 of 2 - ADDITIONAL ANALYSIS (HIGHER MIXED-USE RATE) FIGURE 39

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FUTURE 2028 WEEKDAY PEAK-HOUR VOLUMES 2 of 2 - ADDITIONAL ANALYSIS (HIGHER MIXED-USE RATE) FIGURE 40



FUTURE 2028 SATURDAY PEAK-HOUR VOLUMES - ADDITIONAL ANALYSIS (HIGHER MIXED-USE RATE)

FIGURE 41

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Table 15

Future 2028 Intersection Operations – Additional (Full Build-out)

Intersection	AM/PM/ Sat LOS Standard	Traffic Control	A.M. Peak Hour		P.M. Peak Hour		Sat Peak Hour	
			LOS (Delay)	v/c*	LOS (Delay)	v/c*	LOS (Delay)	v/c*
Collingsworth Rd / I-85 NB Ramps	D/D	Signalized	C (31.2)	0.97	B (19.6)	0.82	NA	NA
Collingsworth Road / I-85 SB Ramps	D/D	Signalized	C (24.7)	0.82	C (27.7)	0.86	NA	NA
US 29 / Toombs St / Fayetteville Rd	D/D	Signalized	E (72.5)	1.15	F (146.7)	1.31	NA	NA
US 29 / SR 154 / Ramah Baptist Church Drwy	D/D	Signalized	E (58.5)	1.02	D (53.6)	1.01	NA	NA
S. Fulton Hwy / SR 154	D/D	Signalized	C (29.4)	0.70	C (30.4)	0.57	NA	NA
S. Fulton Hwy / Cedar Grove Rd	D/D	Signalized	C (24.3)	0.71	C (22.8)	0.54	NA	NA
Fairburn Industrial Blvd / US 29 – Fairburn Industrial Blvd Connector Ramp		Stop Controlled on US 29 - Fairburn Industrial Blvd Connector Ramps					NA	NA
-Westbound Left	D/D		B (13.8)	-	D (32.1)	-		
-Northbound Approach	D/D		F (999)	-	F (999)	-		
US 29 / / US 29 – Fairburn Industrial Blvd Connector Ramp		Stop Controlled on US 29 - Fairburn Industrial Blvd Connector Ramps					NA	NA
-Eastbound Approach	D/D		F (791.0)	-	F (830.4)	-		
-Northbound Left	D/D		C (17.5)	-	D (26.2)	-		
Collingsworth Rd / Weldon Rd		Stop Controlled on Collingsworth Rd					NA	NA
-Eastbound Left	D/D		A (1.3)	-	A (0.7)	-		
-Southbound Approach	E/E		F (999)	-	F (999)	-		
US 29 / Wilkerson Mill Rd / Tatum Rd		Stop Controlled on Wilkerson Mill Rd / Tatum Rd					NA	NA
-Eastbound Left	D/D		A (9.8)	-	B (11.4)	-		
-Westbound Left	D/D		B (11.1)	-	B (10.1)	-		
-Northbound Approach	D/D		F (73.1)	-	F (124.7)	-		
-Southbound Approach	D/D		F (999)	-	F (999)	-		
SR 154 / Wilkerson Mill Rd		Stop Controlled on Wilkerson Mill Rd					NA	NA
-Eastbound Approach	D/D		F (999)	-	F (999)	-		
-Westbound Approach	D/D		F (999)	-	F (999)	-		
-Northbound Left	D/D		A (6.1)	-	A (9.3)	-		
-Southbound Left	D/D		A (1.0)	-	A (0.9)	-		
Wilkerson Mill Rd / Phillips Rd		Stop Controlled on Phillips Rd						
-Westbound Left	D/D/D		A (2.8)	-	A (5.3)	-	A (3.3)	-
-Northbound Approach	D/D/D		F (133.3)	-	F (91.6)	-	D (30.2)	-
Wilkerson Mill Rd / Jenkins Rd		Stop Controlled on Jenkins Rd						
-Eastbound Left	D/D/D		A (0.2)	-	A (0.1)	-	A (0.2)	-
-Southbound Approach	D/D/D		C (24.1)	-	D (27.4)	-	C (19.1)	-
Cochran Mill Rd / Wilkerson Mill Rd		Stop Controlled on Wilkerson Mill Rd						
-Westbound Approach	D/D/D		F (999)	-	F (9999)	-	F (999)	-
-Southbound Left	D/D/D		A (4.4)	-	A (2.5)	-	A (2.2)	-

S. Fulton Hwy / Cochran Mill Rd -Eastbound Left -Westbound Left -Northbound Approach -Southbound Approach	 D/D/D D/D/D D/D/D D/D/D	Stop Controlled on Cochran Mill Rd	 A (0.1) B (13.4) F (999) F (711.0)	 - - - -	 A (0.4) A (8.7) F (999) F (1057.1)	 - - - -	 A (0.4) A (6.7) F (229.2) F (59.5)	 - - - -
S. Fulton Hwy / Rivertown Rd -Eastbound Left -Westbound Left -Northbound Approach -Southbound Approach	 D/D D/D D/D D/D	Stop Controlled on Rivertown Rd	 A (0.0) A (0.0) C (18.2) C (16.9)	 - - - -	 A (0.0) A (7.9) F (55.7) C (19.7)	 - - - -	NA	NA
Hutcheson Ferry Rd / Phillips Rd -Eastbound Left -Southbound Approach	 D/D/D D/D/D	Stop Controlled on Phillips Rd	 A (0.5) F (386.6)	 - -	 A (1.1) F (360.4)	 - -	 A (0.4) F (349.4)	 - -
Hutcheson Ferry Rd / Cochran Mill Rd -Eastbound Left -Southbound Approach	 D/D/D D/D/D	Stop Controlled on Cochran Mill Rd	 A (4.6) F (592.1)	 - -	 A (5.2) F (779.5)	 - -	 A (5.1) F (321.5)	 - -
Hutcheson Ferry Rd / Atlanta Newnan Rd -Eastbound Left -Southbound Approach	 D/D D/D	Stop Controlled on Atlanta Newnan Rd	 A (3.1) B (10.3)	 - -	 A (4.6) B (11.8)	 - -	NA	NA
Hutcheson Ferry Rd / Rico Rd -Eastbound Left -Southbound Approach	 D/D D/D	Stop Controlled on Rico Rd	 A (0.7) B (11.8)	 - -	 A (0.6) B (11.2)	 - -	NA	NA
Atlanta Newnan Rd / Rico Tatum Rd -Westbound Approach -Southbound Left	 D/D/D D/D/D	Stop Controlled on Rico Tatum Rd	 F (999) B (11.9)	 - -	 F (397.2) A (9.3)	 - -	 F (999) B (11.1)	 - -
Cochran Mill Rd / Rico Tatum Rd / Retail & Office Drwy 1 -Eastbound Approach -Westbound Approach -Northbound Left -Southbound Left	D/D/D D/D/D D/D/D D/D/D	Stop Controlled on Rico Tatum Rd / Retail & Office Drwy 1	 F (999) F (999) A (6.7) A (3.2)	 - - - -	 F (999) F (999) B (12.5) A (4.7)	 - - - -	 F (999) F (999) D (32.6) A (3.8)	 - - - -

*v/c ratio is not reported for unsignalized intersections.

The results of the future 2028 conditions additional analysis indicate that fifteen of the study intersections will not operate within the LOS standard. The following lists the improvements needed to restore the intersections back to the LOS standard for the future year 2028 traffic. The improvements identified with strikethrough text are not necessary in the additional analysis completed assuming higher mixed-use reduction rate; however, they are necessary in the analysis assuming the ITE mixed-use reduction rates. The improvements that will be necessary only in the additional analysis are identified in bold text.

- US 29 / Toombs Street / Fayetteville Road
  - Add an additional southbound through lane on US 29. This improvement is a planned program by ARC that is scheduled to be completed in 2020.
  - Add dedicated northbound and ~~southbound~~ left turn lane~~s~~ on US 29.

- US 29 / SR 154 / Ramah Baptist Church Driveway
  - Add a dedicated southbound ~~dual~~ left turn lane~~s~~ with ~~protected only~~ **permissive + protected** phasing on SR 154.

- Fairburn Industrial Boulevard / US 29 – Fairburn Industrial Boulevard Connector Ramp
  - Install a traffic signal
  - Provide permissive + protected phasing for westbound left turn movements on Fairburn Industrial Boulevard

- US 29 / US 29 – Fairburn Industrial Boulevard Connector Ramp
  - Install a traffic signal
  - Provide permissive + protected phasing for northbound left turn movements on US 29.
  - ~~Provide permissive + overlap phasing for eastbound right turn movements on US 29 – Fairburn Industrial Boulevard Connector Ramp.~~

- Collingsworth Road / Weldon Road
  - Install a traffic signal
  - Add a dedicated westbound right turn lane with permissive + overlap phasing on Collingsworth Road.

- US 29 / Wilkerson Mill Road / Tatum Road
  - Install a traffic signal

- SR 154 / Wilkerson Mill Road
  - Install a traffic signal.
  - Add dedicated eastbound left and right turn lanes on Wilkerson Mill Road.
  - Provide permissive + protected phasing for eastbound left turn movement on Wilkerson Mill Road.
  - Add a dedicated northbound left turn lane with permissive + protected phasing phasing on SR 154.
  - Add a dedicated southbound left turn lane on SR 154.

- Wilkerson Mill Road / Phillips Road
  - Add a dedicated northbound right turn lane on Phillips Road. The northbound approach to the intersection will operate at LOS F during the AM and PM peak hours after the recommended improvements are completed. It is not uncommon for side streets to experience delays during the peak hours. No improvements can

be recommended at the intersection to improve the LOS except the installation of a traffic signal; however, the intersection will not have the necessary volumes to warrant a traffic signal. Therefore, no additional improvements are recommended for this intersection.

- Cochran Mill Road / Wilkerson Mill Road
  - Install a traffic signal
  - Add a dedicated northbound right turn lane on Cochran Mill Road.
  - ~~Add a dedicated westbound left turn lane on Wilkerson Mill Road.~~

- S. Fulton Highway / Cochran Mill Road
  - Install a traffic signal
  - ~~Add a dedicated northbound right turn lane with permissive + overlap phasing on Cochran Mill Road.~~
  - Restripe the existing westbound approach to include a dedicated left and a shared through / right turn lane.
  - Provide permissive + protected phasing for the westbound left turn movements on Wilkerson Mill Road.

- S. Fulton Highway / Rivertown Road
  - The intersection will operate at LOS F during the PM peak hour for the northbound approach. It is not uncommon for side streets to experience delays during the peak hours. No improvements can be recommended at the intersection to improve the LOS except the installation of a traffic signal; however, the intersection will not have the necessary volumes to warrant a traffic signal. Therefore, no improvements are recommended for this intersection.

- Hutcheson Ferry Road / Phillips Road
  - Install a traffic signal.

- Hutcheson Ferry Road / Cochran Mill Road
  - Install a traffic signal
  - Add a dedicated westbound right turn lane on Hutcheson Ferry Road.

- Atlanta Newnan Road / Rico Tatum Road
  - Install a traffic signal
  - Add a dedicated westbound left turn lane on Rico Tatum Road.

- Cochran Mill Road / Rico Tatum Road / Retail & Office Driveway 1
  - Signalize the intersection
  - Add dedicated eastbound left and ~~right~~ turn lane~~s~~ on Rico Tatum Road.
  - Provide separate left, through, and right turn lanes for the Retail & Office Driveway 1westbound approach for traffic exiting the development.
  - Add dedicated northbound left turn lane with permissive + protected phasing and a right turn lane on Cochran Mill Road.
  - Add dedicated southbound left turn lane with permissive + protected phasing and a right turn lane on Cochran Mill Road.

The LOS for the above intersections in the year 2028, with the addition of site-generated traffic, after the implementation of above the improvement is shown in Table 16.

TABLE 16

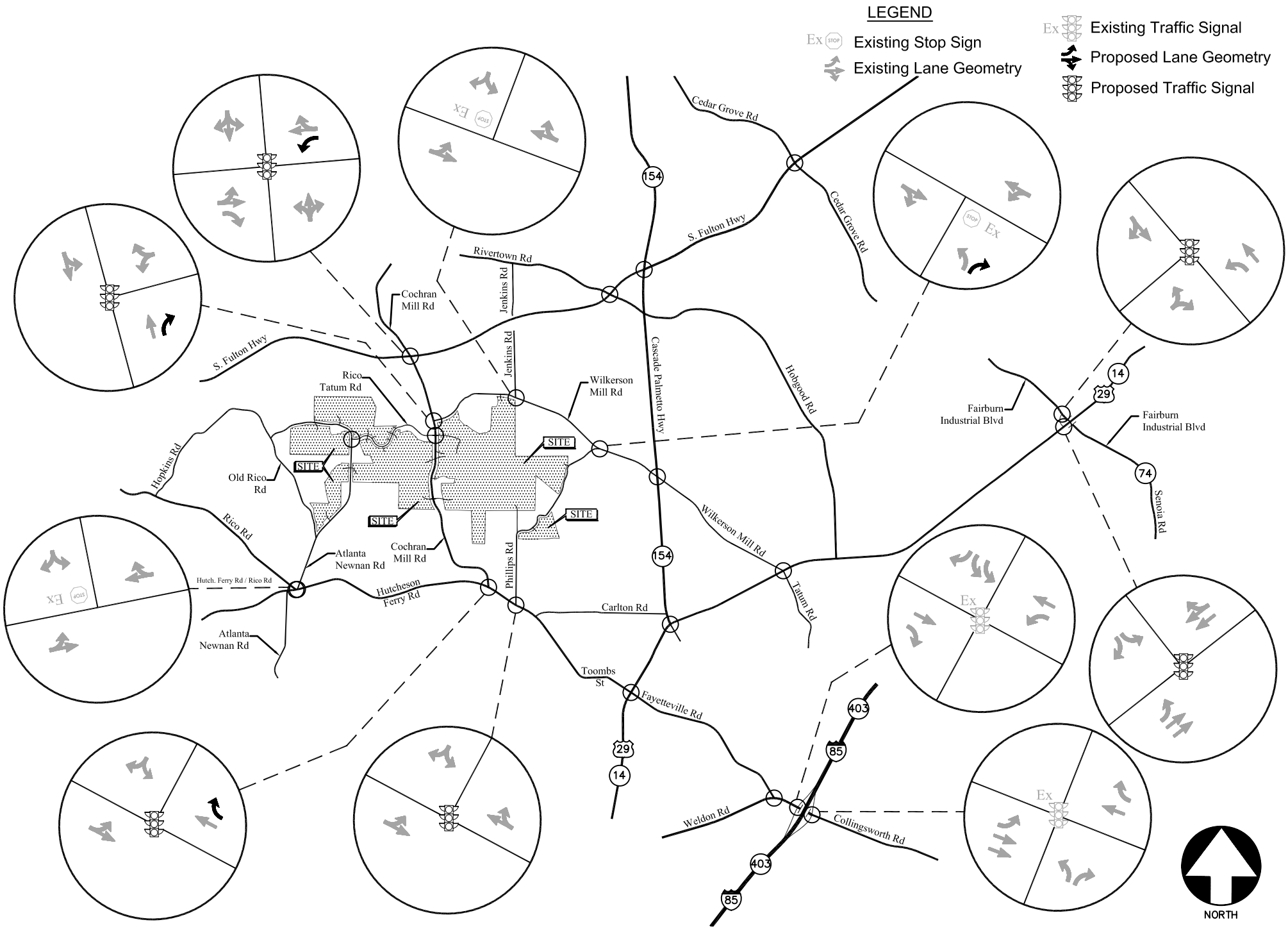
FUTURE 2028 INTERSECTION OPERATIONS - ADDITIONAL (FULL BUILD-OUT) – WITH IMPROVEMENTS

Intersection	AM/PM/ Sat LOS Standard	Traffic Control	A.M. Peak Hour		P.M. Peak Hour		Sat Peak Hour	
			LOS (Delay)	v/c*	LOS (Delay)	v/c*	LOS (Delay)	v/c*
US 29 / Toombs St / Fayetteville Rd	D/D	Signalized	C (33.7)	0.96	D (47.9)	1.01	NA	NA
US 29 / SR 154 / Ramah Baptist Church Drwy	D/D	Signalized	D (53.8)	0.89	D (44.6)	0.95	NA	NA
Fairburn Industrial Blvd / US 29 – Fairburn Industrial Blvd Connector Ramp	D/D	Signalized	B (11.1)	0.68	D (42.2)	1.02	NA	NA
US 29 / US 29 – Fairburn Industrial Blvd Connector Ramp	D/D	Signalized	C (22.5)	0.74	D (46.8)	0.74	NA	NA
Collingsworth Rd / Weldon Rd	D/D	Signalized	C (29.1)	0.99	C (20.1)	0.87	NA	NA
US 29 / Wilkerson Mill Rd / Tatum Rd	D/D	Signalized	B (13.6)	0.68	A (9.5)	0.55	NA	NA
SR 154 / Wilkerson Mill Rd	D/D	Signalized	D (38.7)	0.70	D (40.9)	0.93	NA	NA
Wilkerson Mill Rd / Phillips Rd -Westbound Left -Northbound Approach	 D/D/D D/D/D	Stop Controlled on Phillips Rd	 A (2.8) F (50.1)	 - -	 A (5.3) F (51.3)	 - -	 A (3.3) C (22.3)	 - -
Cochran Mill Rd / Wilkerson Mill Rd	D/D/D	Signalized	C (25.0)	0.73	D (39.5)	0.91	D (41.0)	0.89
S. Fulton Hwy / Cochran Mill Rd	D/D/D	Signalized	D (35.6)	0.84	B (10.1)	0.68	B (15.2)	0.42
S. Fulton Hwy / Rivertown Rd -Eastbound Left -Westbound Left -Northbound Approach -Southbound Approach	 D/D D/D D/D D/D	Stop Controlled on Rivertown Rd	 A (0.0) A (0.0) C (18.2) C (16.9)	 - - - -	 A (0.0) A (7.9) F (55.7) C (19.7)	 - - - -	NA	NA
Hutcheson Ferry Rd / Phillips Rd	D/D/D	Signalized	B (15.7)	0.64	A (9.5)	0.79	B (13.3)	0.69
Hutcheson Ferry Rd / Cochran Mill Rd	D/D/D	Signalized	C (26.1)	0.68	C (26.7)	0.66	B (22.2)	0.56

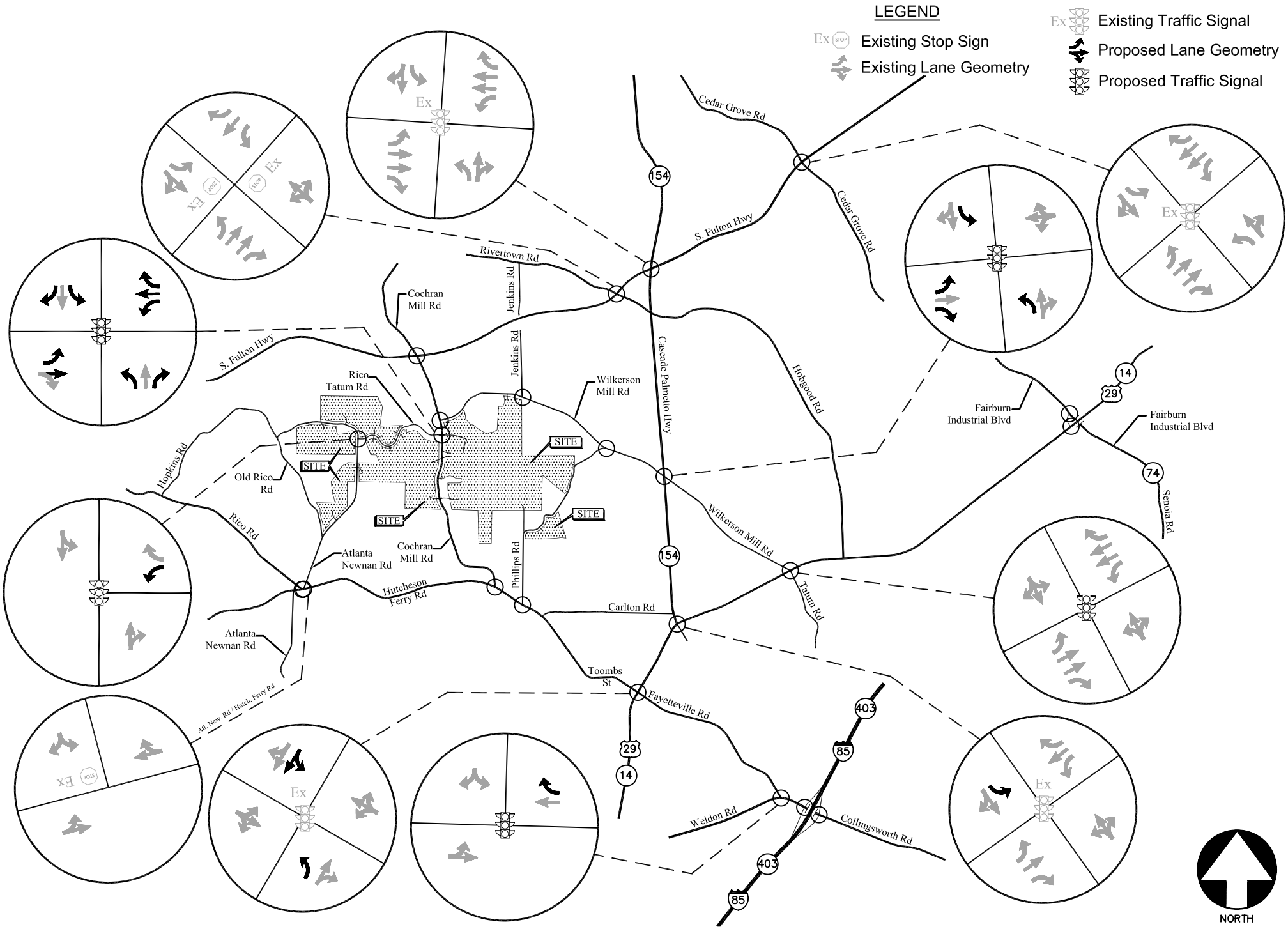
Atlanta Newnan Rd / Rico Tatum Rd	D/D/D	Signalized	D (36.0)	0.94	C (26.5)	0.66	D (48.2)	0.99
Cochran Mill Rd / Rico Tatum Rd / Retail & Office Drwy 1	D/D/D	Signalized	C (31.2)	0.84	C (29.5)	0.78	B (19.4)	0.51

*v/c ratio is not reported for unsignalized intersections.

The future 2028 intersection traffic control and lane geometry – Additional Analysis (Higher Mixed-Use Rate) for the study area network needed to bring all intersections to the LOS standard is shown in Figures 42 and 43.



FUTURE 2028 TRAFFIC CONTROL AND LANE GEOMETRY 1 of 2 -ADDITIONAL ANALYSIS (HIGHER MIXED-USE RATE) FIGURE 42



FUTURE 2028 TRAFFIC CONTROL AND LANE GEOMETRY 2 of 2 -ADDITIONAL ANALYSIS (HIGHER MIXED-USE RATE) FIGURE 43

9.5 Site Access Analysis (Interim Phase)

The site proposes five full access driveways along Cochran Mill Road and six full access driveways along Rico Tatum Road for the development that will be completed by the year 2015. The future 2015 traffic volumes at the site driveways are shown in Figures 44 and 45. The recommended traffic control and lane geometry for these driveways is presented in the following sections.

The site access analysis was performed for the Future Year 2015 traffic volumes with the recommended lane geometry. Results of the analysis are shown in Table 17. The recommended traffic control and lane geometry for the proposed intersections is discussed in the following pages.

TABLE 17

FUTURE 2015 SITE DRIVEWAY OPERATIONS

Intersection	AM/PM/ Sat LOS Standard	Traffic Control	A.M. Peak Hour		P.M. Peak Hour		Sat Peak Hour	
			LOS (Delay)	v/c*	LOS (Delay)	v/c*	LOS (Delay)	v/c*
Cochran Mill Rd / Rico Tatum Rd / Retail & Office Drwy 1	D/D/D	Signalized	C (26.2)	0.48	C (26.1)	0.56	C (28.5)	0.98
Cochran Mill Rd / Retail & Office Drwy 2		Stop Controlled on Retail & Office Drwy 2						
-Westbound Approach	D/D/D		B (12.4)	-	B (14.3)	-	B (14.2)	-
-Southbound Left	D/D/D		A (8.2)	-	A (8.3)	-	A (8.4)	-
Cochran Mill Rd / Retail & Office Drwy 3		Stop Controlled on Retail & Office Drwy 3						
-Eastbound Approach	D/D/D		C (16.6)	-	C (17.0)	-	C (17.7)	-
-Westbound Approach	D/D/D		C (15.4)	-	C (16.0)	-	C (15.1)	-
-Northbound Left	D/D/D		A (7.7)	-	A (7.9)	-	A (7.9)	-
-Southbound Left	D/D/D		A (8.1)	-	A (8.1)	-	A (8.2)	-
Cochran Mill Rd / Residential Drwy 1								
-Eastbound Approach	D/D/D	Stop Controlled on Residential Drwy 1	B (12.4)	-	B (13.3)	-	B (12.5)	-
-Westbound Approach	D/D/D		C (13.7)	-	B (14.7)	-	B (14.0)	-
-Northbound Left	D/D/D		A (7.8)	-	A (8.0)	-	A (7.9)	-
-Southbound Left	D/D/D		A (7.8)	-	A (8.0)	-	A (7.9)	-
Rico Tatum Rd / Residential Drwy 9								
-Eastbound Left	D/D/D	Stop Controlled on Residential Drwy 9	A (0.2)	-	A (0.3)	-	A (0.2)	-
-Westbound Left	D/D/D		A (1.4)	-	A (2.7)	-	A (1.6)	-
-Northbound Approach	D/D/D		A (8.7)	-	A (8.7)	-	A (9.0)	-
-Southbound Approach	D/D/D		A (9.5)	-	A (9.8)	-	B (10.5)	-
Rico Tatum Rd / Residential Drwy 10		Stop Controlled on Residential Drwy 10						
-Eastbound Left	D/D/D		A (0.0)	-	A (0.1)	-	A (0.1)	-
-Southbound Approach	D/D/D		A (9.3)	-	A (9.4)	-	A (9.9)	-
Rico Tatum Rd / Residential Drwy 11		Stop Controlled on Residential Drwy 11						
-Westbound Left	D/D/D		A (1.3)	-	A (1.8)	-	A (1.3)	-
-Northbound Approach	D/D/D		A (9.1)	-	A (8.8)	-	A (9.2)	-

Rico Tatum Rd / Residential Drwy 12								
-Eastbound Left	D/D/D	Stop Controlled	A (0.0)	-	A (0.1)	-	A (0.1)	-
-Westbound Left	D/D/D	on Residential	A (1.2)	-	A (1.5)	-	A (1.1)	-
-Northbound Approach	D/D/D	Drwy 12	A (9.3)	-	A (9.0)	-	A (9.3)	-
-Southbound Approach	D/D/D		B (10.5)	-	B (11.0)	-	B (11.7)	-
Rico Tatum Rd / Residential Drwy 13		Stop Controlled						
-Eastbound Left	D/D/D	on Residential	A (0.0)	-	A (0.1)	-	A (0.1)	-
-Southbound Approach	D/D/D	Drwy 13	A (9.5)	-	A (9.8)	-	B (10.3)	-
Rico Tatum Rd / Residential Drwy 14		Stop Controlled						
-Eastbound Left	D/D/D	on Residential	A (0.0)	-	A (0.1)	-	A (0.0)	-
-Southbound Approach	D/D/D	Drwy 14	B (9.9)	-	B (10.4)	-	B (10.9)	-
Cochran Mill Rd / Retail & Office Drwy 4		Stop Controlled on Retail & Office Drwy 4						
-Westbound Approach	D/D/D		B (12.4)	-	B (12.2)	-	B (11.8)	-
-Southbound Left	D/D/D		A (8.3)	-	A (8.0)	-	A (8.1)	-

*v/c ratio is not calculated for unsignalized intersections.

The following lists the recommended lane geometry for the site driveways.

- Cochran Mill Road / Rico Tatum Road / Retail & Office Driveway 1
  - Signalize the intersection.
  - Add dedicated northbound left and right turn lanes on Cochran Mill Road.
  - Add dedicated southbound left and right turn lanes on Cochran Mill Road.
  - Provide separate left turn lane and shared through/right turn lanes for the Retail & Office Driveway 1 westbound approach for traffic exiting the development.

- Cochran Mill Road / Retail & Office Driveway 2
  - It is recommended that the intersection have a stop controlled side street (Retail & Office Driveway 2), with Cochran Mill Road remaining free flow.
  - Add dedicated northbound right and southbound left turn lanes on Cochran Mill Road.
  - Provide separate left turn and right turn lanes for the Retail & Office Driveway 2 westbound approach for traffic exiting the development.

- Cochran Mill Road / Retail & Office Driveway 3
  - It is recommended that the intersection have stop controlled side streets (Retail & Office Driveway 3), with Cochran Mill Road remaining free flow.
  - Add dedicated northbound left and right turn lanes on Cochran Mill Road.
  - Add dedicated southbound left and right turn lanes on Cochran Mill Road.
  - Provide a shared left/through/right turn lane for the Retail & Office Driveway 3 eastbound approach for traffic exiting the development.
  - Provide separate right turn and shared left/through lanes for the Retail & Office Driveway 3 westbound approach for traffic exiting the development.

- Cochran Mill Road / Retail & Office Driveway 4
  - It is recommended that the intersection have a stop controlled side street (Retail & Office Driveway 4), with Cochran Mill Road remaining free flow.
  - Add dedicated northbound right and southbound left turn lanes on Cochran Mill Road.
  - Provide separate left and right turn lanes for the Retail & Office Driveway 4 westbound approach for traffic exiting the development.

- Cochran Mill Road / Residential Driveway 1
  - It is recommended that the intersection have stop controlled side streets (Residential Driveway 1), with Cochran Mill Road remaining free flow.
  - Add dedicated northbound left and right turn lanes on Cochran Mill Road.
  - Add dedicated southbound left and right turn lanes on Cochran Mill Road.
  - Provide shared left / through / right turn lanes for the Residential Driveway 1 eastbound and westbound approaches for traffic exiting the development.

- Rico Tatum Road / Residential Driveways 10, 13 & 14
  - It is recommended that the intersections have stop controlled side streets (Residential Driveways 10, 13 & 14), with Rico Tatum Road remaining free flow.
  - Provide shared left / right turn lanes for the Residential Driveways 10, 13 & 14 southbound approaches for traffic exiting the development.
  - Add dedicated westbound right turn lanes on Rico Tatum Road.

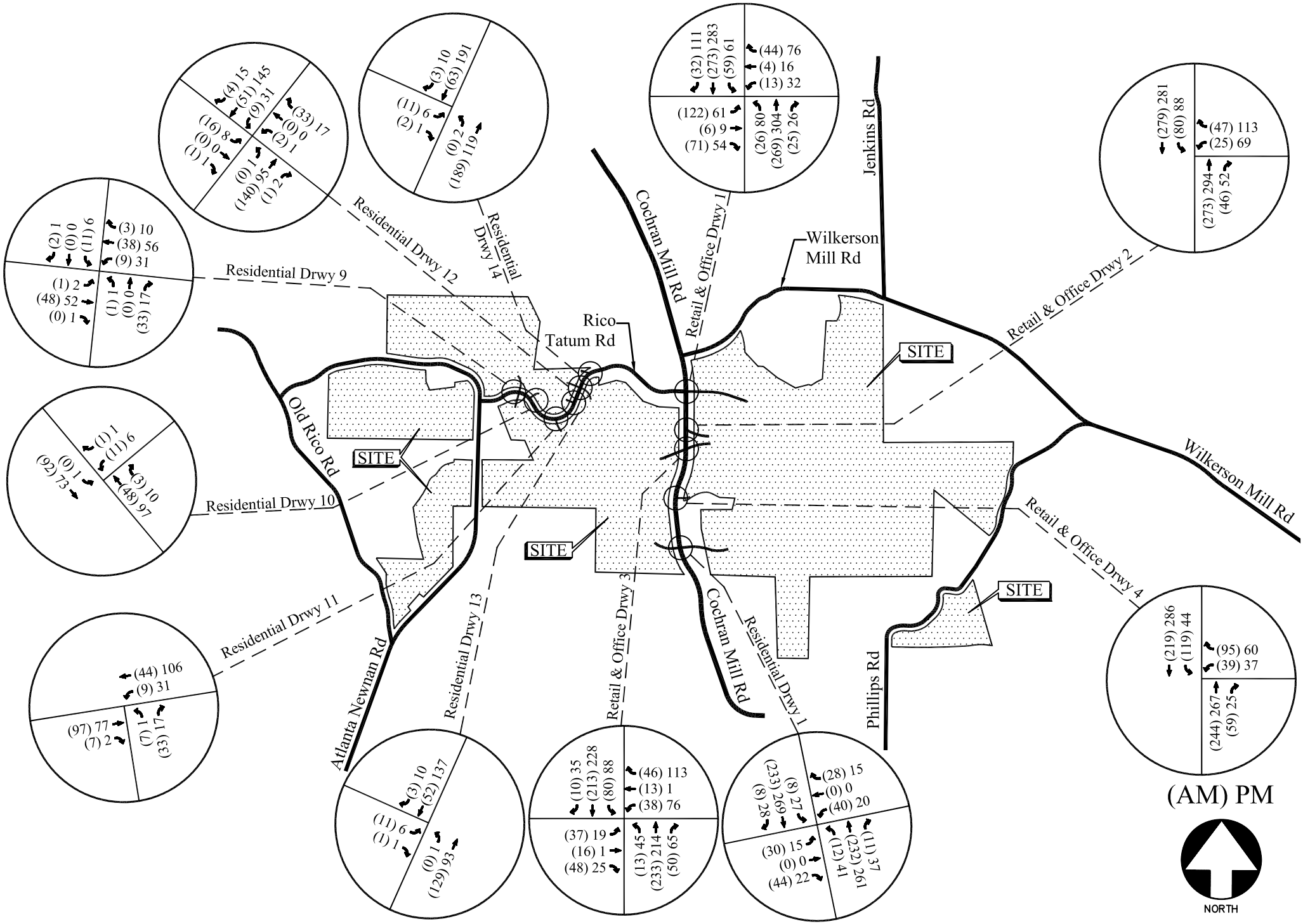
- Rico Tatum Road / Residential Driveway 11
  - It is recommended that the intersection have a stop controlled side street (Residential Driveway 11), with Rico Tatum Road remaining free flow.
  - Provide a shared left / right turn lane for the Residential Driveway 11 northbound approach for traffic exiting the development.
  - Add a dedicated eastbound right turn lane on Rico Tatum Road.

- Rico Tatum Road / Residential Driveways 9 & 12
  - It is recommended that the intersections have stop controlled side streets (Residential Driveways 9 & 12), with Rico Tatum Road remaining free flow.
  - Provide shared left / through / right turn lanes for the Residential Driveways 9 & 12 northbound and southbound approaches for traffic exiting the development.
  - Add dedicated eastbound and westbound right turn lanes on Rico Tatum Road.

Left turn lane warrants were also analyzed for the residential site driveway intersections based

on AASHTO criteria given in Exhibit 9-75. The left turn, advancing and opposing volumes at each residential site driveway intersections for the AM, PM and Saturday peak hours are shown in Appendix.

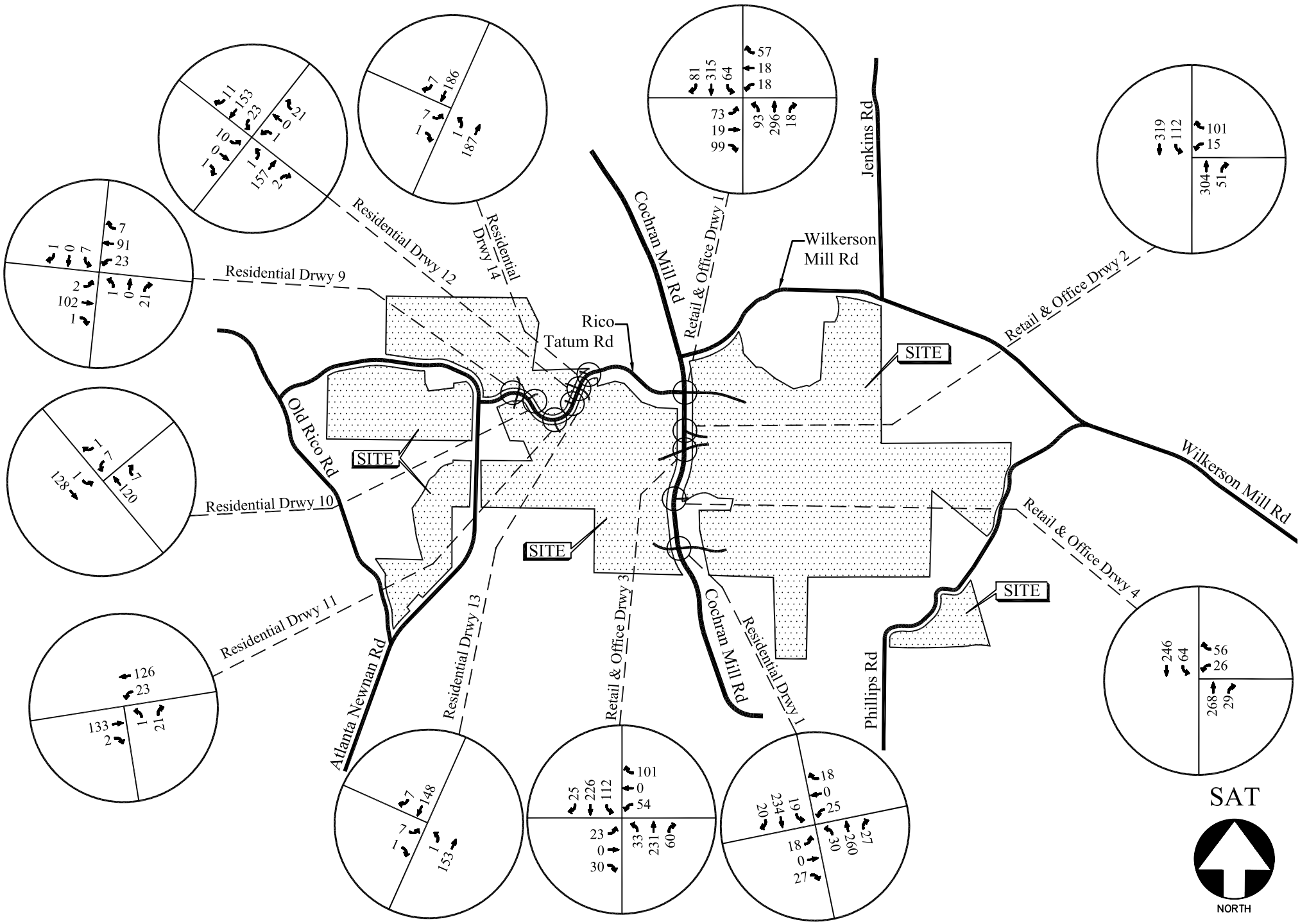
The recommended traffic control and lane geometry for the site driveways for the year 2015 are shown in Figure 46.



FUTURE 2015 SITE ACCESS WEEKDAY PEAK HOUR VOLUMES

FIGURE 44

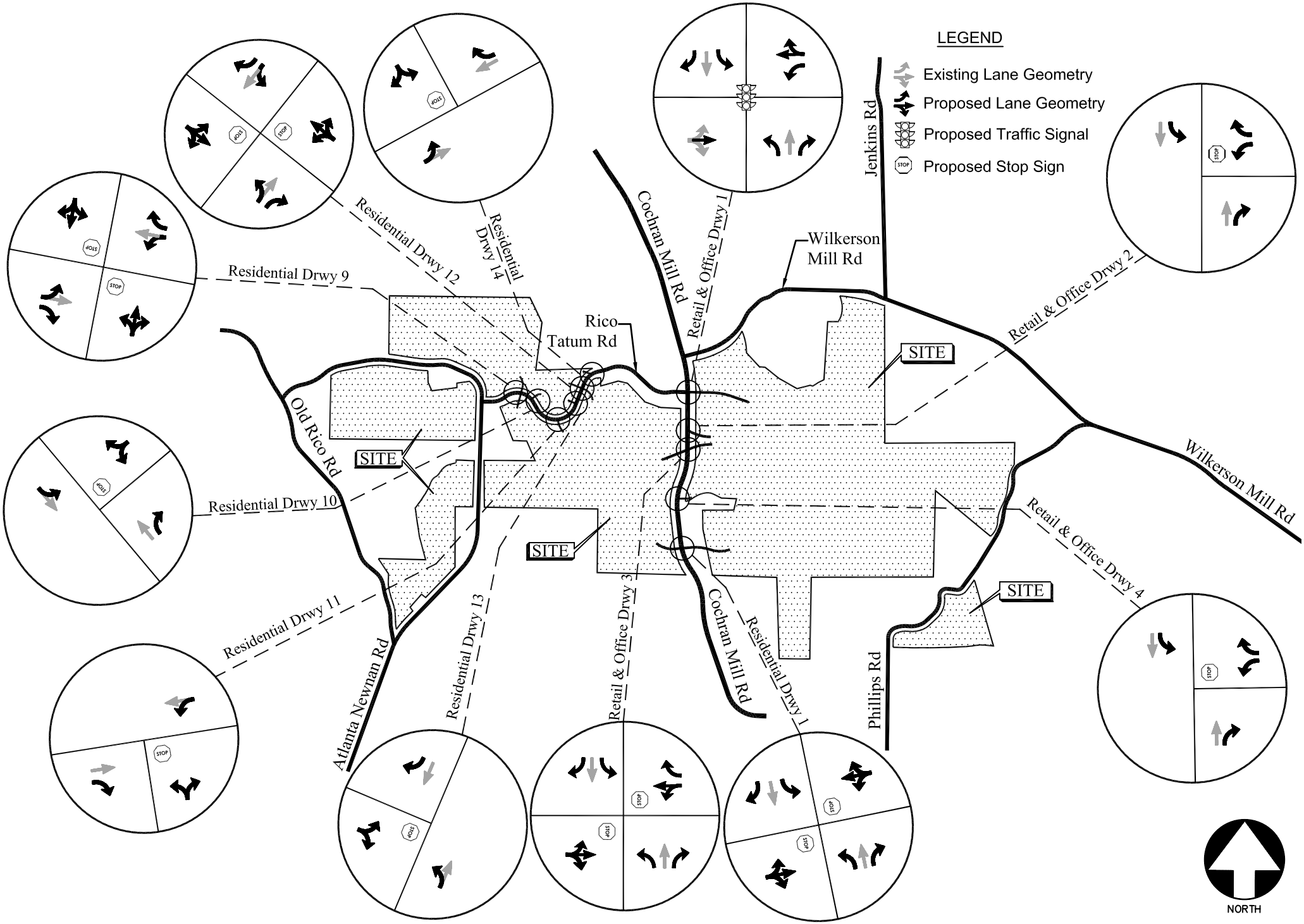
A&R Engineering Inc.



FUTURE 2015 SITE ACCESS SATURDAY PEAK HOUR VOLUMES

FIGURE 45

A&R Engineering Inc.



FUTURE 2015 SITE ACCESS TRAFFIC CONTROL AND LANE GEOMETRY

FIGURE 46

9.6 Site Access Analysis (Full Build-out)

The site proposes five full access driveways on Cochran Mill Road, one full access driveway on Wilkerson Mill Road, three full access driveways on Philips Road, two full access driveways on Atlanta Newnan Road and eight full access driveways on Rico Tatum Road for the entire development that will be completed by the year 2028. The future 2028 traffic volumes at the site driveways are shown in Figures 47, 48, 49 and 50. The recommended traffic control and lane geometry at these driveways are presented in the following sections.

The site access analysis was performed for the Future Year 2028 traffic volumes with recommended lane geometry. Results of the analysis are shown in Table 18. The recommended traffic control and lane geometry for the proposed intersections is discussed on the following pages.

TABLE 18

FUTURE 2028 SITE DRIVEWAY OPERATIONS

Intersection	AM/PM/ Sat LOS Standard	Traffic Control	A.M. Peak Hour		P.M. Peak Hour		Sat Peak Hour	
			LOS (Delay)	v/c*	LOS (Delay)	v/c*	LOS (Delay)	v/c*
Cochran Mill Rd / Rico Tatum Rd / Retail & Office Drwy 1	D/D/D	Signalized	C (31.8)	0.85	C (30.8)	0.83	B (15.7)	0.57
Cochran Mill Rd / Retail & Office Drwy 2	D/D/D	Signalized	A (7.4)	0.47	B (13.9)	0.49	B (10.4)	0.49
Cochran Mill Rd / Retail & Office Drwy 3	D/D/D	Signalized	C (24.0)	0.48	B (18.1)	0.37	B (18.5)	0.43
Cochran Mill Rd / Retail & Office Drwy 4		Stop Controlled on Retail & Office Drwy 4						
-Westbound Approach	D/D/D		C (20.7)	-	C (24.8)	-	C (20.1)	-
-Southbound Left	D/D/D		A (9.1)	-	A (8.9)	-	A (9.1)	-
Cochran Mill Rd / Residential Drwy 1		Stop Controlled on Residential Drwy 1						
-Eastbound Approach	D/D/D		D (28.7)	-	D (32.7)	-	D (31.0)	-
-Westbound Approach	D/D/D		E (43.9)	-	F (51.8)	-	E (49.3)	-
-Northbound Left	D/D/D		A (8.5)	-	A (9.1)	-	A (8.8)	-
-Southbound Left	D/D/D		A (8.3)	-	A (8.8)	-	A (8.7)	-
Wilkerson Mill Rd / Residential Drwy 2		Stop Controlled on Residential Drwy 2						
-Westbound Left	D/D/D		A (9.3)	-	A (9.2)	-	A (9.0)	-
-Northbound Approach	D/D/D		C (18.5)	-	C (19.1)	-	C (17.4)	-
Phillips Rd / Residential Drwy 3		Stop Controlled on Residential Drwy 3						
-Eastbound Approach	D/D/D		A (9.1)	-	A (9.1)	-	A (9.1)	-
-Northbound Left	D/D/D		A (1.1)	-	A (4.1)	-	A (3.1)	-
Rico Tatum Rd / Residential Drwy 4		Stop Controlled on Residential Drwy 4						
-Eastbound Left	D/D/D		A (0.0)	-	A (0.2)	-	A (0.0)	-
-Westbound Left	D/D/D		A (4.0)	-	A (5.9)	-	A (5.0)	-
-Northbound Approach	D/D/D		A (9.1)	-	A (8.9)	-	A (9.1)	-
-Southbound Approach	D/D/D		B (12.4)	-	B (13.9)	-	B (14.6)	-

Rico Tatum Rd / Residential Drwy 5		Stop Controlled						
-Eastbound Left	D/D/D	on Residential	A (0.0)	-	A (0.1)	-	A (0.0)	-
-Southbound Approach	D/D/D	Drwy 5	B (11.0)	-	B (11.3)	-	B (11.8)	-
Atlanta Newnan Rd / Residential Drwy 6								
-Eastbound Approach	D/D/D	Stop Controlled	B (10.4)	-	B (10.3)	-	B (10.9)	-
-Westbound Approach	D/D/D	on Residential	B (9.9)	-	B (10.7)	-	B(11.0)	-
-Northbound Left	D/D/D	Drwy 6	A (0.0)	-	A (0.1)	-	A (0.1)	-
-Southbound Left	D/D/D		A (0.0)	-	A (0.1)	-	A (0.1)	-
Atlanta Newnan Rd / Residential Drwy 7		Stop Controlled						
-Eastbound Approach	D/D/D	on Residential	A (9.6)	-	A (9.7)	-	B (10.2)	-
-Northbound Left	D/D/D	Drwy 7	A (0.0)	-	A (0.1)	-	A (0.1)	-
Phillips Rd / Residential Drwy 8		Stop Controlled						
-Eastbound Left	D/D/D	on Residential	A (4.8)	-	A (5.5)	-	A (5.3)	-
-Southbound Approach	D/D/D	Drwy 8	A (9.3)	-	A (8.9)	-	A (9.0)	-
Rico Tatum Rd / Residential Drwy 9								
-Eastbound Left	D/D/D	Stop Controlled	A (0.0)	-	A (0.0)	-	A (0.0)	-
-Westbound Left	D/D/D	on Residential	A (0.2)	-	A (0.3)	-	A (0.3)	-
-Northbound Approach	D/D/D	Drwy 9	B (10.7)	-	B (10.8)	-	B (11.3)	-
-Southbound Approach	D/D/D		B (12.6)	-	B (14.3)	-	C (15.7)	-
Rico Tatum Rd / Residential Drwy 10		Stop Controlled						
-Eastbound Left	D/D/D	on Residential	A (0.0)	-	A (0.0)	-	A (0.0)	-
-Southbound Approach	D/D/D	Drwy 10	B (11.9)	-	B (13.3)	-	B (14.4)	-
Rico Tatum Rd / Residential Drwy 11		Stop Controlled						
-Westbound Left	D/D/D	on Residential	A (0.2)	-	A (0.3)	-	A (0.3)	-
-Northbound Approach	D/D/D	Drwy 11	B (10.9)	-	B (13.1)	-	B (13.7)	-
Rico Tatum Rd / Residential Drwy 12								
-Eastbound Left	D/D/D	Stop Controlled	A (0.0)	-	A (0.0)	-	A (0.0)	-
-Westbound Left	D/D/D	on Residential	A (0.2)	-	A (0.3)	-	A (0.3)	-
-Northbound Approach	D/D/D	Drwy 12	B (10.3)	-	B (10.3)	-	B (11.3)	-
-Southbound Approach	D/D/D		B (12.3)	-	B (14.5)	-	C (15.8)	-
Rico Tatum Rd / Residential Drwy 13		Stop Controlled						
-Eastbound Left	D/D/D	on Residential	A (0.0)	-	A (0.0)	-	A (0.0)	-
-Southbound Approach	D/D/D	Drwy 13	B (11.2)	-	B (12.7)	-	B (13.7)	-
Rico Tatum Rd / Residential Drwy 14		Stop Controlled						
-Eastbound Left	D/D/D	on Residential	A (0.0)	-	A (0.0)	-	A (0.0)	-
-Southbound Approach	D/D/D	Drwy 14	B (11.7)	-	B (13.4)	-	B (14.4)	-
Phillips Rd / Residential Drwy 15		Stop Controlled						
-Westbound Left	D/D/D	on Residential	A (1.0)	-	A (2.1)	-	A (2.3)	-
-Northbound Approach	D/D/D	Drwy 15	A (8.9)	-	A (8.9)	-	A (8.9)	-

*v/c ratio is not calculated for unsignalized intersections.

The following lists the recommended lane geometry for the site driveways.

- Cochran Mill Road / Rico Tatum Road / Retail & Office Driveway 1
  - Signalize the intersection
  - Add dedicated eastbound left and right turn lanes on Rico Tatum Road.
  - Provide separate left, through, and right turn lanes for the Retail & Office

Driveway 1 westbound approach for traffic exiting the development.
    - Add dedicated northbound left turn lane with permissive + protected phasing and a right turn lane on Cochran Mill Road.
    - Add dedicated southbound left turn lane with permissive + protected phasing and a right turn lane on Cochran Mill Road.

- Cochran Mill Road / Retail & Office Driveway 2
    - Signalize the intersection
    - Provide separate left and right turn lanes for the Retail & Office Driveway 2 westbound approach for traffic exiting the development.
    - Add a dedicated northbound right turn lane on Cochran Mill Road.
    - Add a dedicated southbound left turn lane with permissive + protected phasing on Cochran Mill Road.

- Cochran Mill Road / Retail & Office Driveway 3
    - Signalize the intersection.
    - Provide separate left, through and right turn lanes for the Retail & Office Driveway 3 eastbound and westbound approaches for traffic exiting the development.
    - Add dedicated northbound and southbound left turn and right turn lanes on Cochran Mill Road.
    - Provide permissive + protected phasing to the northbound and southbound left turn movements on Cochran Mill Road.

- Cochran Mill Road / Retail & Office Driveway 4
    - It is recommended that the intersection have a stop controlled side street (Retail & Office Driveway 4), with Cochran Mill Road remaining free flow.
    - Provide separate left and right turn lanes for the Retail & Office Driveway 4 westbound approach for traffic exiting the development.
    - Add a dedicated northbound right turn lane on Cochran Mill Road.
    - Add a dedicated southbound left turn lane on Cochran Mill Road.

- Cochran Mill Road / Residential Driveway 1
    - It is recommended that the intersection have stop controlled side streets (Residential Driveway 1), with Cochran Mill Road remaining free flow.
    - Add dedicated northbound and southbound left and right turn lanes on Cochran Mill Road. Northbound and southbound left turn lanes will be necessary on Cochran Mill Road per AASHTO left turn lane criteria.
    - Provide shared left / through / right turn lane for the Residential Driveway 1 eastbound and westbound approaches for traffic exiting the development.
    - The intersection will operate at LOS E or F for the westbound approach in the

AM, PM and Saturday peak hour after these improvements are implemented. It is not uncommon for side streets to experience delays during the peak hours. No improvements can be recommended at this intersection to improve the LOS except the installation of a traffic signal; however, the intersection will not have necessary volumes to warrant a traffic signal. The traffic volumes should be monitored in the future for possible traffic signal installation.

- Wilkerson Mill Road / Residential Driveway 2
  - It is recommended that the intersection have stop controlled side street (Residential Driveway 2), with Wilkerson Mill Road remaining free flow.
  - Provide separate left and right turn lanes for the Residential Driveway 2 northbound approach for traffic exiting the development.
  - Add dedicated eastbound right and westbound left turn lanes on Wilkerson Mill Road. Westbound left turn lane will be necessary per AASHTO left turn lane criteria.

- Phillips Road / Residential Driveway 3
  - It is recommended that the intersection have a stop controlled side street (Residential Driveway 3), with Phillips Road remaining free flow.
  - Add a dedicated southbound right turn lane on Philips Road.
  - Provide shared left / right turn lane for the Residential Driveway 3 eastbound approach for traffic exiting the development.

- Rico Tatum Road / Residential Driveways 4, 9 & 12
  - It is recommended that the intersections have stop controlled side streets (Residential Driveways 4, 9 & 12), with Rico Tatum Road remaining free flow.
  - Provide shared left / through / right turn lanes for the Residential Driveways 4, 9 & 12 northbound and southbound approaches for traffic exiting the development.
  - Add dedicated eastbound and westbound right turn lanes on Rico Tatum Road.

- Rico Tatum Road / Residential Driveways 5 , 10, 13 & 14
  - It is recommended that the intersections have stop controlled side streets (Residential Driveways 5, 10, 13 & 14), with Rico Tatum Road remaining free flow.
  - Provide shared left / right turn lanes for the Residential Driveways 5, 10, 13 & 14 southbound approaches for traffic exiting the development.
  - Add dedicated westbound right turn lanes on Rico Tatum Road.

- Atlanta Newnan Road / Residential Driveway 6
  - It is recommended that the intersection have stop controlled side streets (Residential Driveway 6), with Atlanta Newnan Road remaining free flow.

- Add dedicated northbound and southbound right turn lanes on Atlanta Newnan Road.
- Provide a shared left / through / right turn lane for the Residential Driveway 6 eastbound and westbound approaches for traffic exiting the development.

- Atlanta Newnan Road / Residential Driveway 7
  - It is recommended that the intersection have a stop controlled side street (Residential Driveway 7), with Atlanta Newnan Road remaining free flow.
  - Add a dedicated southbound right turn lane on Atlanta Newnan Road.
  - Provide a shared left / right turn lane for the Residential Driveway 7 eastbound approach for traffic exiting the development.

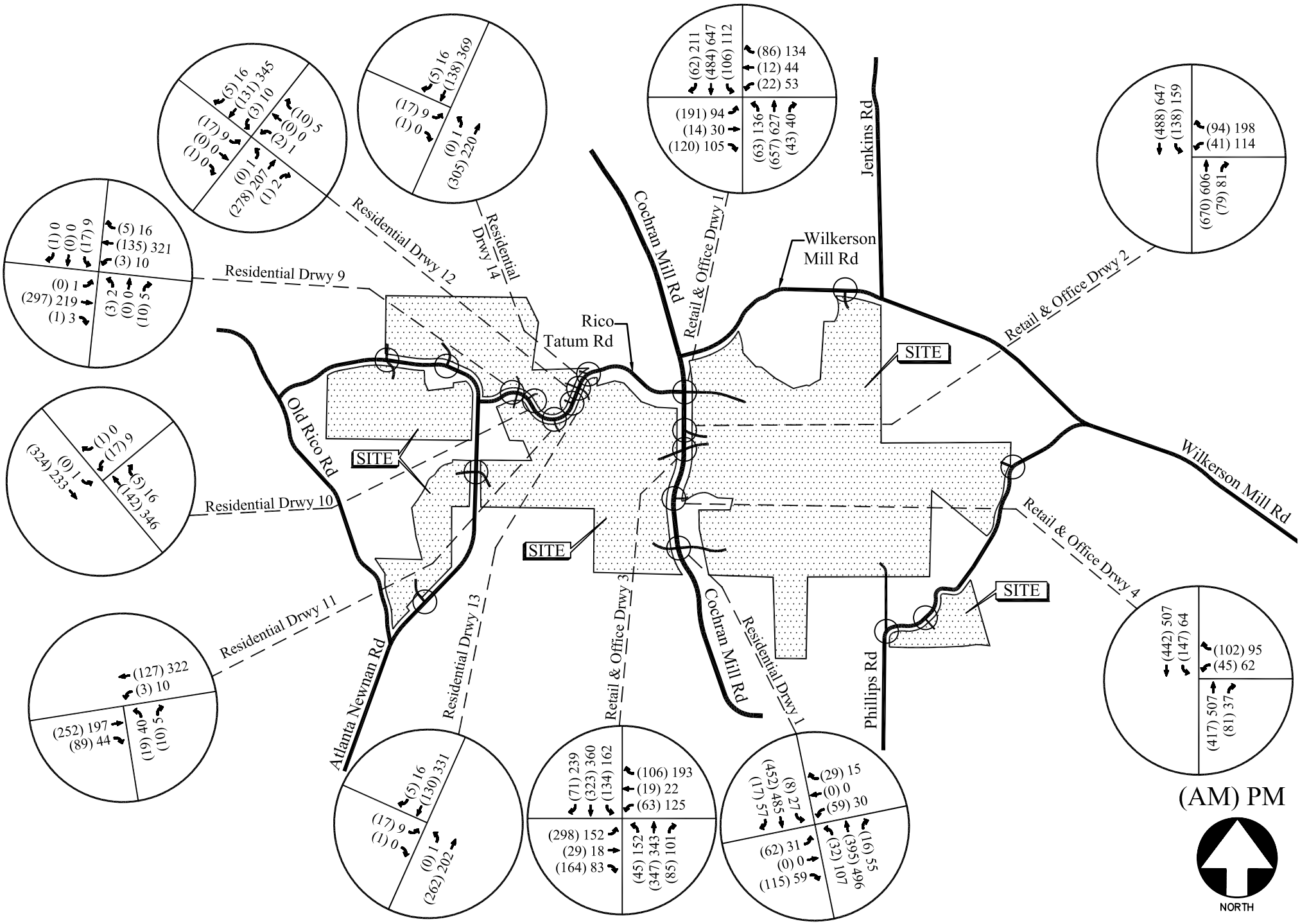
- Phillips Road / Residential Driveway 8
  - It is recommended that the intersection have a stop controlled side street (Residential Driveway 8), with Phillips Road remaining free flow.
  - Provide a shared left / right turn lane for the Residential Driveway 8 southbound approach for traffic exiting the development.
  - Add a dedicated westbound right turn lane on Philips Road.

- Rico Tatum Road / Residential Driveway 11
  - It is recommended that the intersection have a stop controlled side street (Residential Driveway 11), with Rico Tatum Road remaining free flow.
  - Add a dedicated eastbound right turn lane on Rico Tatum Road.
  - Provide a shared left / right turn lane for the Residential Driveway 11 northbound approach for traffic exiting the development.

- Phillips Road / Residential Driveway 15
  - It is recommended that the intersection have a stop controlled side street (Residential Driveway 15), with Phillips Road remaining free flow.
  - Provide shared left / right turn lane for the Residential Driveway 15 northbound approach for traffic exiting the development.
  - Add a dedicated eastbound right turn lane on Philips Road.

Left turn lane warrants were also analyzed for the residential site driveway intersections based on AASHTO criteria given in Exhibit 9-75. The left turn, advancing and opposing volumes at each residential site driveway intersections for the AM, PM and Saturday peak hours are shown in Appendix.

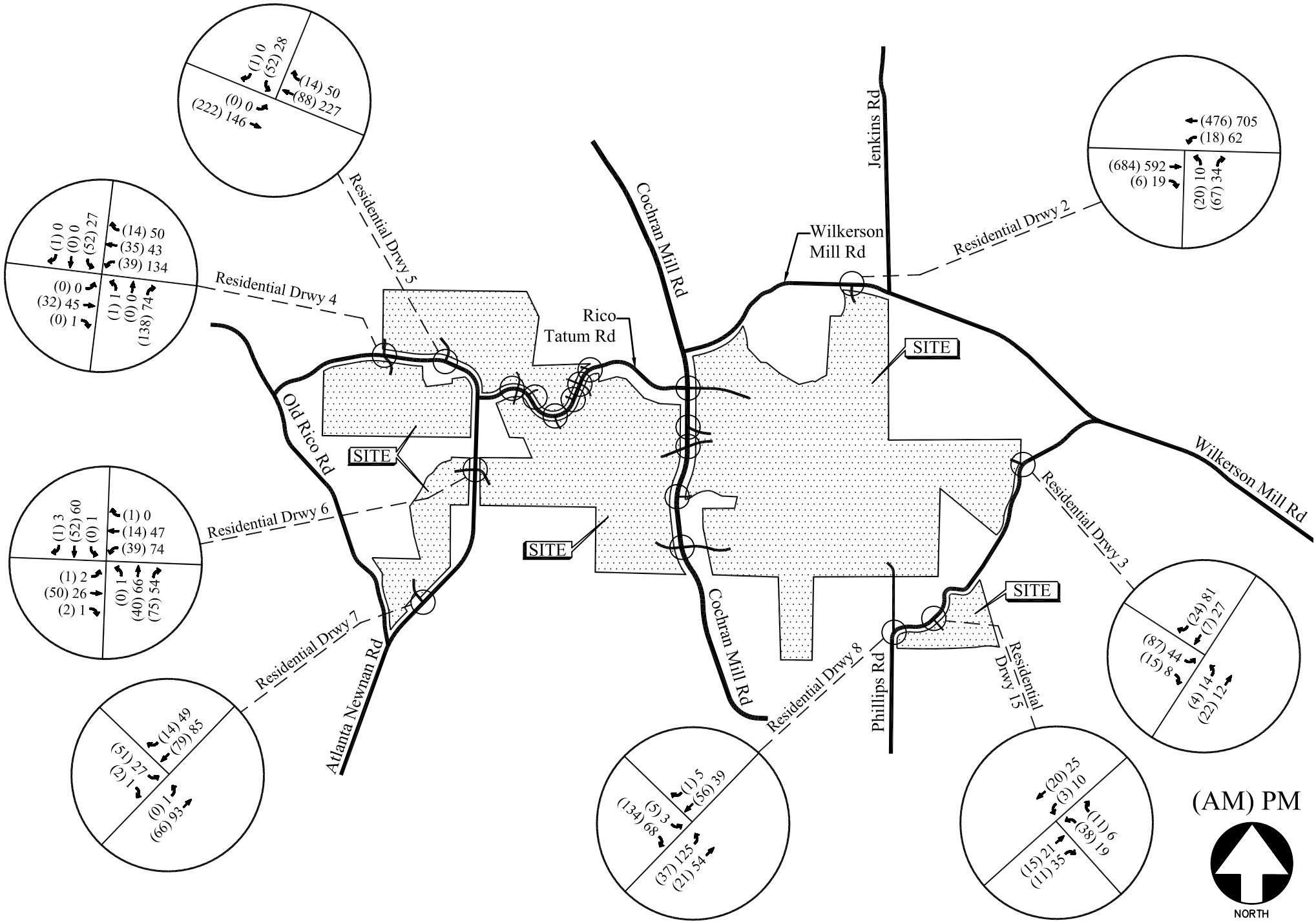
The recommended traffic control and lane geometry for the site driveways for the year 2028 are shown in Figures 51 and 52.



FUTURE 2028 SITE ACCESS WEEKDAY PEAK HOUR VOLUMES 1 of 2

FIGURE 47

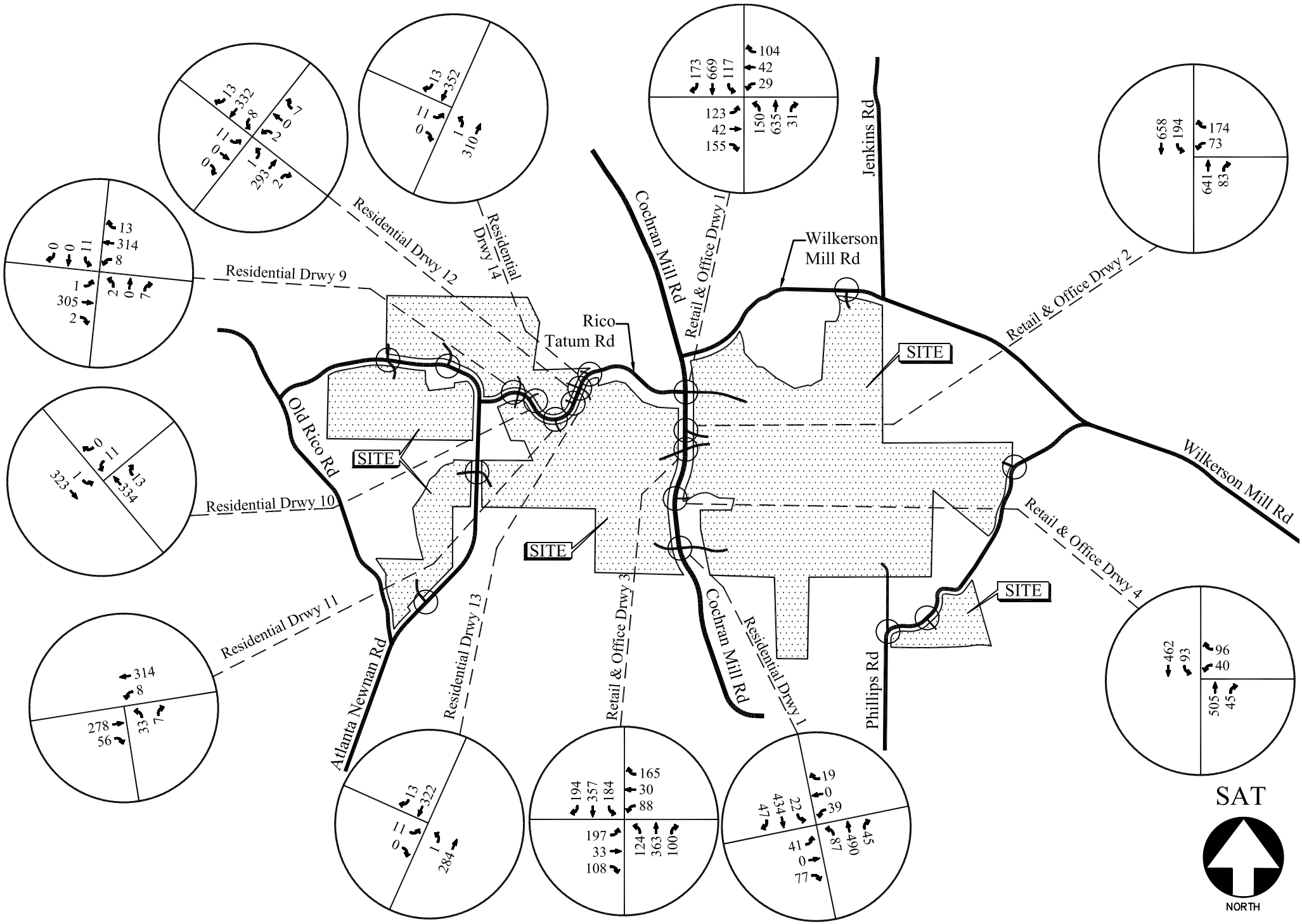
A&R Engineering Inc.



FUTURE 2028 SITE ACCESS WEEKDAY PEAK HOUR VOLUMES 2 of 2

FIGURE 48

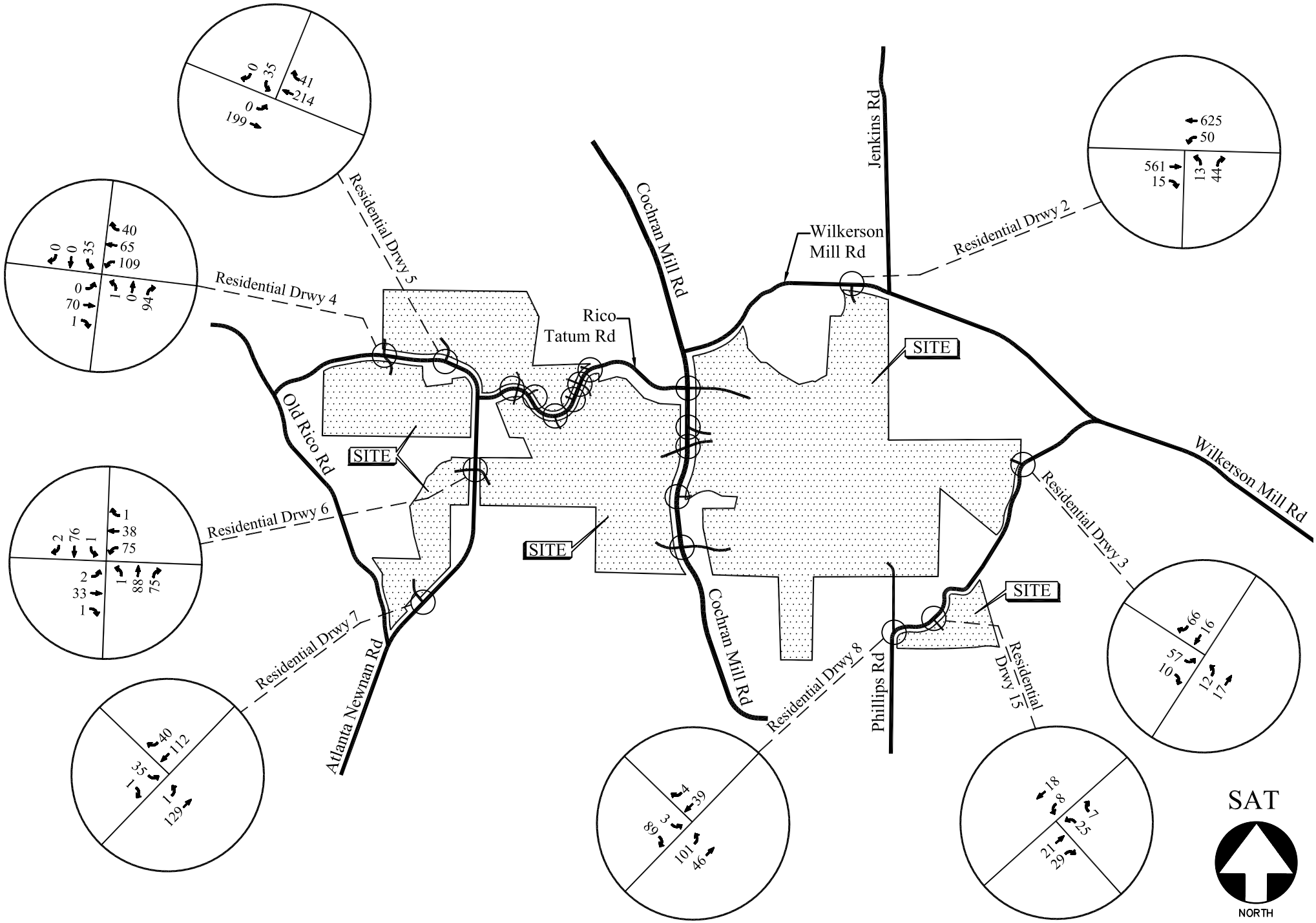
A&R Engineering Inc.



FUTURE 2028 SITE ACCESS SATURDAY PEAK HOUR VOLUMES 1 of 2

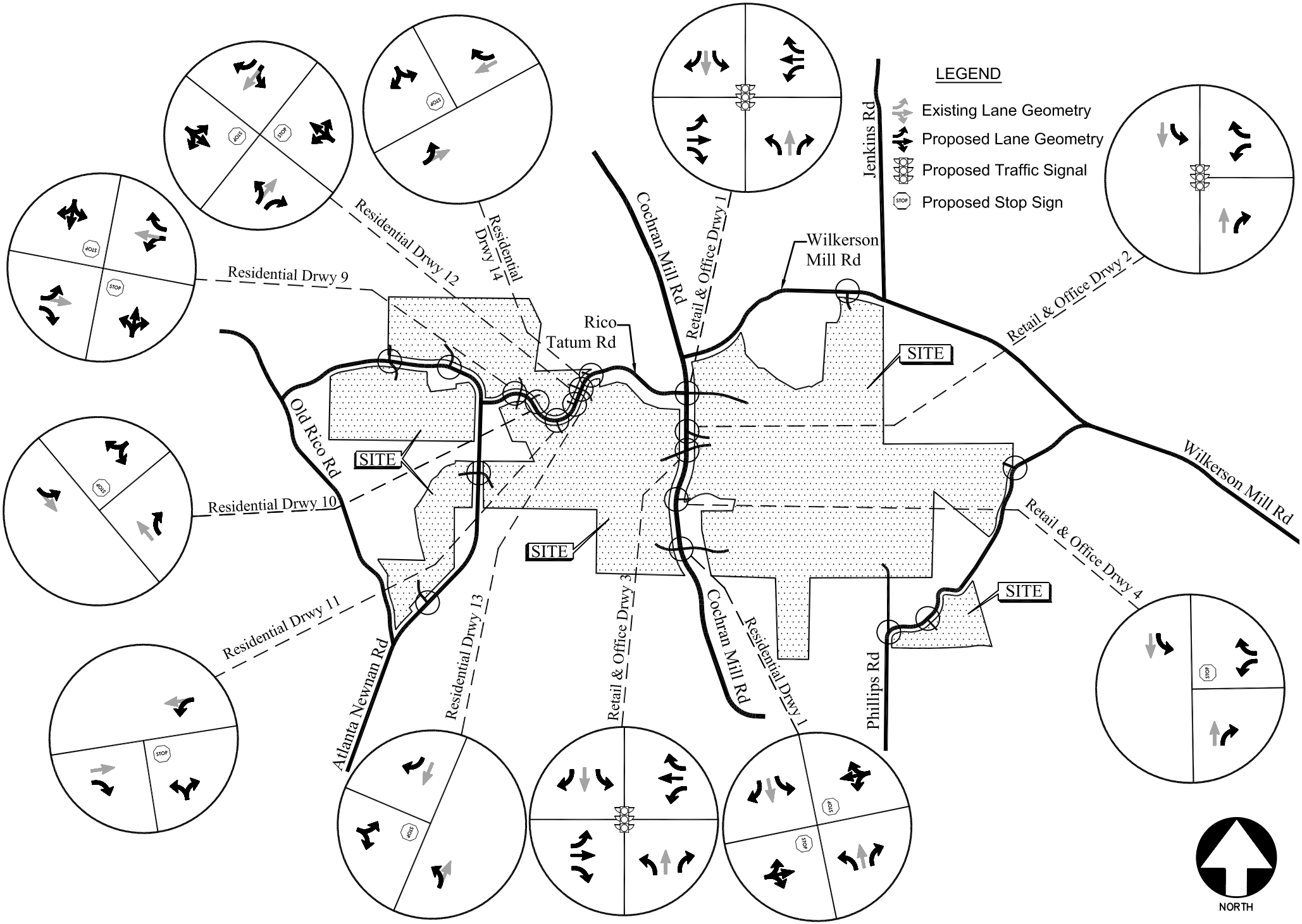
FIGURE 49

A&R Engineering Inc.



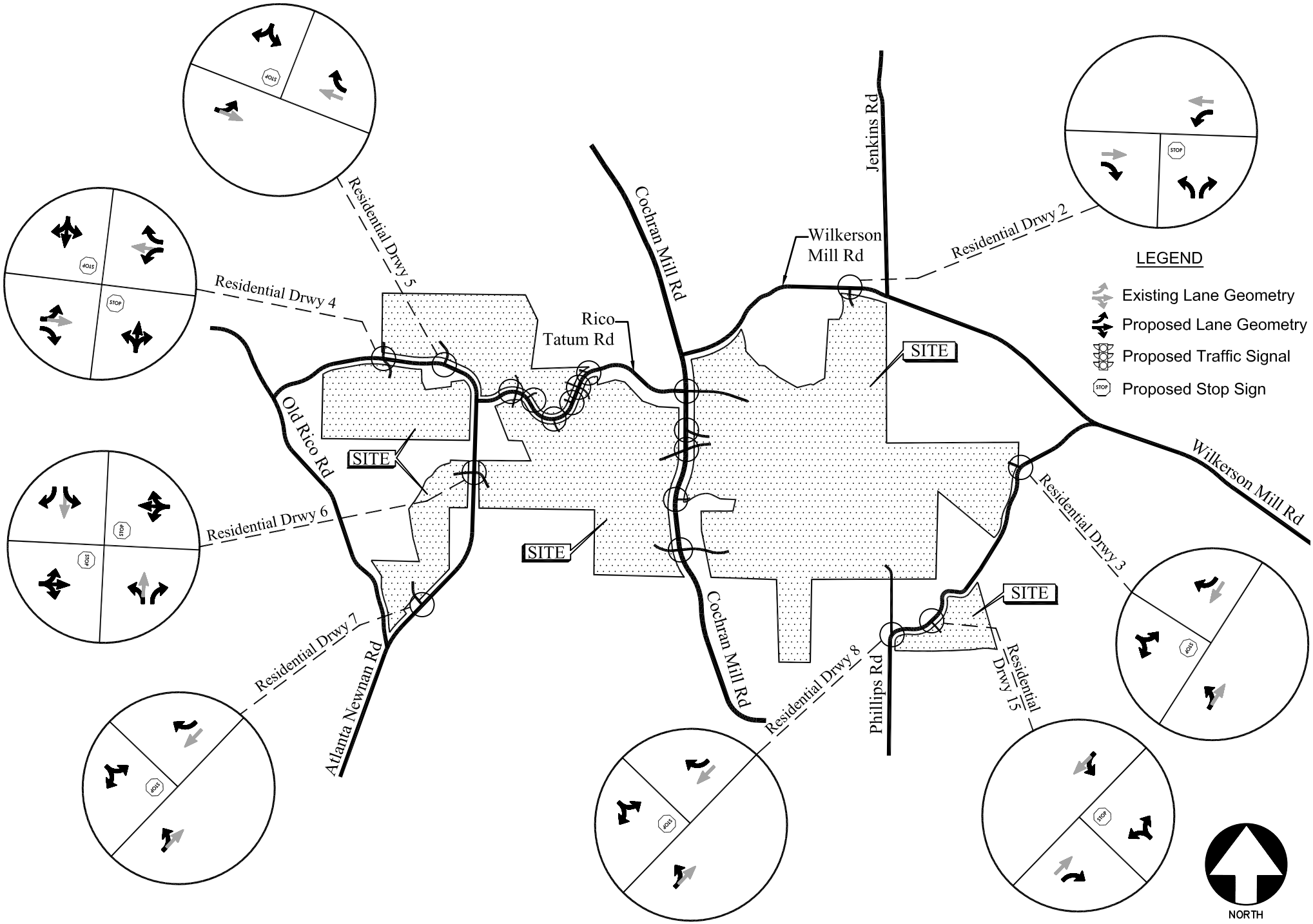
FUTURE 2028 SITE ACCESS SATURDAY PEAK HOUR VOLUMES 2 of 2

FIGURE 50



FUTURE 2028 SITE ACCESS TRAFFIC CONTROL AND LANE GEOMETRY 1 of 2

FIGURE 51



FUTURE 2028 SITE ACCESS TRAFFIC CONTROL AND LANE GEOMETRY 2 of 2

FIGURE 52

A&R Engineering Inc.

10. NON-EXPEDITED CRITERIA

10.1 Regional Mobility and Location

1. Quality, Character, Convenience, and Flexibility of Transportation Options

The proposed development will be comprised of a mixture of retail, office and residential uses. This mixture of uses will provide for significant trip reductions. There will be opportunities for individuals within the project to engage in business or work at the adjacent land uses. The development will also provide pedestrians connections between various land use components. These features will provide the quality, character, and convenience that are desired in developments of this magnitude.

2. Vehicle Miles Traveled

The table below displays the reductions in trip generation due to mixed-use and pass-by reductions.

	Interim Phase (2015)	Full Build-out (2028)
24-hour Trip Generation	19,219	43,405
- Mixed Use Reductions (internal capture)	-1,736	-2,768
- Pass-by reductions	-2,000	-2,650
Net Trips:	15,483	37,987

3. Relationship Between Location of Proposed DRI and Regional Mobility

The proposed DRI will provide multiple new connections between Cochran Mill Road and Phillips Road, Cochran Mill Road and Atlanta Newnan Road, and Cochran Mill Road and Wilkerson Mill Road. These new connections will help significantly to improve mobility in the area.

4. Relationship Between Proposed DRI and Existing or Planned Transit Facilities

There are no public transit facilities in the vicinity of the area.

5. Transportation Management Area Designation

This part of Fulton County is not designated as a transportation management area.

6. Offsite Trip Reduction and Trip Reduction Techniques

Due to the nature of the development, there will be significant mixed-use and pass by trip reductions. These reductions have been applied for the AM, PM, Saturday peak hours and 24-hour trips projected to be generated by the site.

7. Balance of Land Uses – Jobs/Housing Balance
Please refer to the AOI study submitted along with this report.

8. Relationships between Proposed DRI and Existing Development and Infrastructure
The proposed DRI is located in an area where adequate public facilities will be available to serve the proposed development. Regarding transportation, the traffic study has identified transportation improvements relating to the site access, along with improvements to the surrounding roadway network, which will allow traffic in the area to operate at the LOS standard with the exception of a few unsignalized side streets.

10.2 Pedestrian and Internal Circulation

Please refer to the site plan for information regarding pedestrian facilities. Regarding internal circulation, as shown in the traffic study, vehicles will be able to access the adjacent roadway efficiently and the site plan provides for sufficient internal circulation.

11. Other Pertinent Information

At this time no other pertinent information is available with regards to this development. All significant characteristics of the proposed development are fully discussed within this report. Additionally, an Area of Influence study has been prepared and submitted at the same time as the rest of this package.

12. Significant Impact Analysis

After the implementation of the recommended improvements, all intersections in the study area network will operate at acceptable levels of service with the exception of a few unsignalized side streets.

Appendix

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Existing AM Intersection Analysis

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	391	273	573	40	283
Sign Control	Free		Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	319	40	246	533	32	263
Peak Hour Factor	0.93	0.83	0.90	0.93	0.80	0.93
Hourly flow rate (vph)	343	48	273	573	40	283
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			391		1487	367
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			391		1487	367
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		62	58
cM capacity (veh/h)			1167		105	678

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	391	273	573	323
Volume Left	0	273	0	40
Volume Right	48	0	0	283
cSH	1700	1167	1700	774
Volume to Capacity	0.23	0.23	0.34	0.42
Queue Length 95th (ft)	0	23	0	52
Control Delay (s)	0.0	9.0	0.0	19.6
Lane LOS		A		C
Approach Delay (s)	0.0	2.9		19.6
Approach LOS				C

Intersection Summary				
Average Delay		5.6		
Intersection Capacity Utilization		46.2%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	32	271	270	299	225	36
Sign Control	Stop			Free	Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	32.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	24	263	248	272	207	28
Peak Hour Factor	0.75	0.97	0.92	0.91	0.92	0.78
Hourly flow rate (vph)	32	271	270	299	225	36
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	914	112	225			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	914	112	225			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	85	70	80			
cM capacity (veh/h)	218	919	1341			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	32	271	270	149	149	112	112	36
Volume Left	32	0	270	0	0	0	0	0
Volume Right	0	271	0	0	0	0	0	36
cSH	218	919	1341	1700	1700	1700	1700	1700
Volume to Capacity	0.15	0.30	0.20	0.09	0.09	0.07	0.07	0.02
Queue Length 95th (ft)	13	31	19	0	0	0	0	0
Control Delay (s)	24.4	10.5	8.4	0.0	0.0	0.0	0.0	0.0
Lane LOS	C	B	A					
Approach Delay (s)	12.0		4.0			0.0		
Approach LOS	B							

Intersection Summary				
Average Delay	5.2			
Intersection Capacity Utilization	32.8%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	229	312	275	534	157	172
Act Effct Green (s)	96.9	96.9	87.4	120.0	15.1	106.5
Actuated g/C Ratio	0.81	0.81	0.73	1.00	0.13	0.89
v/c Ratio	0.31	0.11	0.20	0.34	0.70	0.12
Control Delay	1.4	0.4	6.1	0.6	66.7	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.4	0.4	6.1	0.6	66.7	0.3
LOS	A	A	A	A	E	A
Approach Delay		0.8	2.5			
Approach LOS		A	A			
Queue Length 50th (ft)	4	2	59	0	119	0
Queue Length 95th (ft)	7	4	108	0	182	4
Internal Link Dist (ft)		808	1512			
Turn Bay Length (ft)	150					
Base Capacity (vph)	1099	2858	1357	1583	502	1424
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.11	0.20	0.34	0.31	0.12

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 116 (97%), Referenced to phase 2:WBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 7.7		Intersection LOS: A	
Intersection Capacity Utilization 45.3%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	0.95			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	3539			1863	1583	1770		1583			
Flt Permitted	0.58	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	1077	3539			1863	1583	1770		1583			
Volume (vph)	211	290	0	0	253	502	144	0	150	0	0	0
Peak-hour factor, PHF	0.92	0.93	0.92	0.92	0.92	0.94	0.92	0.92	0.87	0.92	0.92	0.92
Adj. Flow (vph)	229	312	0	0	275	534	157	0	172	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	19	0	0	0
Lane Group Flow (vph)	229	312	0	0	275	534	157	0	153	0	0	0
Turn Type	pm+pt					Free	Prot		custom			
Protected Phases	1	6			2		7					
Permitted Phases	6					Free			2 7			
Actuated Green, G (s)	96.9	96.9			87.4	120.0	15.1		106.5			
Effective Green, g (s)	96.9	96.9			87.4	120.0	15.1		106.5			
Actuated g/C Ratio	0.81	0.81			0.73	1.00	0.13		0.89			
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)	901	2858			1357	1583	223		1405			
v/s Ratio Prot	0.01	0.09			0.15		c0.09					
v/s Ratio Perm	0.19					c0.34			0.10			
v/c Ratio	0.25	0.11			0.20	0.34	0.70		0.11			
Uniform Delay, d1	3.3	2.4			5.2	0.0	50.3		0.8			
Progression Factor	0.09	0.12			1.00	1.00	1.00		1.00			
Incremental Delay, d2	0.1	0.0			0.3	0.6	9.7		0.0			
Delay (s)	0.4	0.3			5.5	0.6	60.0		0.9			
Level of Service	A	A			A	A	E		A			
Approach Delay (s)		0.4			2.3			29.1			0.0	
Approach LOS		A			A			C			A	

Intersection Summary				
HCM Average Control Delay	6.9	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.39			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	4.0	
Intersection Capacity Utilization	45.3%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	502	128	136	312	72	96
Act Effct Green (s)	73.2	120.0	84.0	84.0	28.0	105.2
Actuated g/C Ratio	0.61	1.00	0.70	0.70	0.23	0.88
v/c Ratio	0.44	0.08	0.30	0.24	0.09	0.07
Control Delay	14.1	0.1	5.0	3.9	36.5	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.1	0.1	5.0	3.9	36.5	0.3
LOS	B	A	A	A	D	A
Approach Delay	11.3			4.2		
Approach LOS	B			A		
Queue Length 50th (ft)	195	0	16	37	22	0
Queue Length 95th (ft)	278	0	m24	50	38	4
Internal Link Dist (ft)	1279			808		
Turn Bay Length (ft)		150	150			
Base Capacity (vph)	1137	1583	608	1304	801	1400
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.08	0.22	0.24	0.09	0.07

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 88 (73%), Referenced to phase 2:WBTL and 6:EBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.44			
Intersection Signal Delay: 9.3		Intersection LOS: A	
Intersection Capacity Utilization 45.3%		ICU Level of Service A	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00					0.97		1.00
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		1863	1583	1770	1863					3433		1583
Flt Permitted		1.00	1.00	0.37	1.00					0.95		1.00
Satd. Flow (perm)		1863	1583	683	1863					3433		1583
Volume (vph)	0	477	113	124	293	0	0	0	0	59	0	79
Peak-hour factor, PHF	0.92	0.95	0.88	0.91	0.94	0.92	0.92	0.92	0.92	0.82	0.92	0.82
Adj. Flow (vph)	0	502	128	136	312	0	0	0	0	72	0	96
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	12
Lane Group Flow (vph)	0	502	128	136	312	0	0	0	0	72	0	84
Turn Type			Free	pm+pt						Prot		custom
Protected Phases		6		5	2					3		
Permitted Phases			Free	2								3 6
Actuated Green, G (s)		73.2	120.0	84.0	84.0					28.0		105.2
Effective Green, g (s)		73.2	120.0	84.0	84.0					28.0		105.2
Actuated g/C Ratio		0.61	1.00	0.70	0.70					0.23		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)		1136	1583	540	1304					801		1388
v/s Ratio Prot		c0.27		0.01	c0.17					0.02		
v/s Ratio Perm			c0.08	0.16								0.05
v/c Ratio		0.44	0.08	0.25	0.24					0.09		0.06
Uniform Delay, d1		12.5	0.0	7.5	6.5					36.0		1.0
Progression Factor		1.00	1.00	0.58	0.52					1.00		1.00
Incremental Delay, d2		1.2	0.1	0.2	0.4					0.2		0.1
Delay (s)		13.7	0.1	4.6	3.8					36.2		1.0
Level of Service		B	A	A	A					D		A
Approach Delay (s)		11.0			4.0			0.0			16.1	
Approach LOS		B			A			A			B	

Intersection Summary					
HCM Average Control Delay	9.2	HCM Level of Service		A	
HCM Volume to Capacity ratio	0.33				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	45.3%	ICU Level of Service		A	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	382	396	307
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	64.2%	ICU Level of Service C
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	35	291	99	262	278	4
Peak Hour Factor	0.80	0.86	0.92	0.91	0.93	0.50
Hourly flow rate (vph)	44	338	108	288	299	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	108				677	252
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	108				677	252
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				26	99
cM capacity (veh/h)	1483				406	787

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	382	396	307
Volume Left	44	0	299
Volume Right	0	288	8
cSH	1483	1700	411
Volume to Capacity	0.03	0.23	0.75
Queue Length 95th (ft)	2	0	151
Control Delay (s)	1.1	0.0	35.5
Lane LOS	A		E
Approach Delay (s)	1.1	0.0	35.5
Approach LOS			E

Intersection Summary			
Average Delay	10.4		
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	104	88	405	380
Act Effct Green (s)	11.0	10.9	103.9	103.9
Actuated g/C Ratio	0.09	0.09	0.87	0.87
v/c Ratio	0.62	0.51	0.26	0.25
Control Delay	64.9	34.1	2.5	1.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	64.9	34.1	2.5	1.8
LOS	E	C	A	A
Approach Delay	64.9	34.1	2.5	1.8
Approach LOS	E	C	A	A
Queue Length 50th (ft)	74	39	46	9
Queue Length 95th (ft)	97	66	89	12
Internal Link Dist (ft)	3138	678	2784	4178
Turn Bay Length (ft)				
Base Capacity (vph)	680	633	1581	1529
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.15	0.14	0.26	0.25

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 120		
Offset: 104 (87%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.62		
Intersection Signal Delay: 11.7	Intersection LOS: B	
Intersection Capacity Utilization 40.5%	ICU Level of Service A	
Analysis Period (min) 15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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			1.00	
Frt		0.98			0.95			0.99			0.99	
Flt Protected		0.99			0.98			1.00			1.00	
Satd. Flow (prot)		1820			1744			1848			1845	
Flt Permitted		0.91			0.67			0.99			0.96	
Satd. Flow (perm)		1676			1192			1827			1769	
Volume (vph)	11	53	9	18	21	20	8	347	12	20	323	10
Peak-hour factor, PHF	0.69	0.70	0.75	0.64	0.75	0.62	0.67	0.93	0.60	0.71	0.96	0.62
Adj. Flow (vph)	16	76	12	28	28	32	12	373	20	28	336	16
RTOR Reduction (vph)	0	6	0	0	26	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	98	0	0	62	0	0	405	0	0	380	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		9.7			9.7			102.3			102.3	
Effective Green, g (s)		9.7			9.7			102.3			102.3	
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)		135			96			1558			1508	
v/s Ratio Prot												
v/s Ratio Perm		c0.06			0.05			c0.22			0.21	
v/c Ratio		0.73			0.65			0.26			0.25	
Uniform Delay, d1		53.9			53.5			1.7			1.7	
Progression Factor		1.00			0.67			1.00			0.69	
Incremental Delay, d2		17.8			14.0			0.4			0.4	
Delay (s)		71.7			49.8			2.1			1.5	
Level of Service		E			D			A			A	
Approach Delay (s)		71.7			49.8			2.1			1.5	
Approach LOS		E			D			A			A	

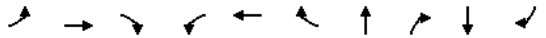
Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	156	300	4	286	172	4	233	140
Act Effct Green (s)	82.7	80.7	75.7	70.1	70.1	29.3	29.3	29.3
Actuated g/C Ratio	0.69	0.67	0.63	0.58	0.58	0.24	0.24	0.24
v/c Ratio	0.28	0.24	0.01	0.26	0.17	0.01	0.70	0.30
Control Delay	7.5	8.6	7.0	14.1	2.5	32.0	43.4	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.5	8.6	7.0	14.1	2.5	32.0	43.4	7.6
LOS	A	A	A	B	A	C	D	A
Approach Delay		8.2		9.7		32.0	29.9	
Approach LOS		A		A		C	C	
Queue Length 50th (ft)	38	75	1	111	0	2	99	1
Queue Length 95th (ft)	61	192	2	182	34	6	40	30
Internal Link Dist (ft)		4178		602		2286	7832	
Turn Bay Length (ft)	95		150					70
Base Capacity (vph)	696	1253	751	1088	996	699	509	662
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.24	0.01	0.26	0.17	0.01	0.46	0.21

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 100 (83%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 15.1		Intersection LOS: B	
Intersection Capacity Utilization 49.8%		ICU Level of Service A	
Analysis Period (min) 15			

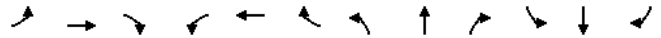
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85		1.00			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.95	1.00
Satd. Flow (prot)	1770	1863		1770	1863	1583		1863			1775	1583
Flt Permitted	0.51	1.00		0.58	1.00	1.00		1.00			0.73	1.00
Satd. Flow (perm)	950	1863		1075	1863	1583		1863			1355	1583
Volume (vph)	142	279	0	1	257	160	0	2	0	211	1	127
Peak-hour factor, PHF	0.91	0.93	0.92	0.25	0.90	0.93	0.92	0.50	0.92	0.92	0.25	0.91
Adj. Flow (vph)	156	300	0	4	286	172	0	4	0	229	4	140
RTOR Reduction (vph)	0	0	0	0	0	72	0	0	0	0	0	83
Lane Group Flow (vph)	156	300	0	4	286	100	0	4	0	0	233	57
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			Perm		Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2		2	4			8		8
Actuated Green, G (s)	82.7	77.5		71.3	70.1	70.1		29.3			29.3	29.3
Effective Green, g (s)	82.7	77.5		71.3	70.1	70.1		29.3			29.3	29.3
Actuated g/C Ratio	0.69	0.65		0.59	0.58	0.58		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
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	713	1203		646	1088	925		455			331	387
v/s Ratio Prot	c0.02	0.16		0.00	c0.15			0.00				
v/s Ratio Perm	0.13			0.00		0.06					c0.17	0.04
v/c Ratio	0.22	0.25		0.01	0.26	0.11		0.01			0.70	0.15
Uniform Delay, d1	6.8	9.0		9.9	12.3	11.1		34.4			41.4	35.6
Progression Factor	0.88	0.90		1.00	1.00	1.00		1.00			0.77	0.60
Incremental Delay, d2	0.2	0.5		0.0	0.6	0.2		0.0			6.6	0.2
Delay (s)	6.1	8.5		9.9	12.8	11.3		34.4			38.4	21.5
Level of Service	A	A		A	B	B		C			D	C
Approach Delay (s)		7.7			12.3			34.4			32.0	
Approach LOS		A			B			C			C	

Intersection Summary					
HCM Average Control Delay	16.4	HCM Level of Service	B		
HCM Volume to Capacity ratio	0.38				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0		
Intersection Capacity Utilization	49.8%	ICU Level of Service	A		
Analysis Period (min)	15				
c Critical Lane Group					



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	24	490	20	20	415	36	16	28	52	20
Sign Control		Free			Free		Stop		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	32.2%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	20	470	15	18	386	27	7	2	21	36	5	15
Peak Hour Factor	0.83	0.96	0.75	0.90	0.93	0.75	0.58	0.50	0.75	0.82	0.62	0.75
Hourly flow rate (vph)	24	490	20	20	415	36	12	4	28	44	8	20
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	415			490			789	993	245	750	993	208
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	415			490			789	993	245	750	993	208
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			98			95	98	96	84	97	97
cM capacity (veh/h)	1140			1070			259	234	756	277	234	799

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	24	245	245	20	20	208	208	36	44	72
Volume Left	24	0	0	0	20	0	0	0	12	44
Volume Right	0	0	0	20	0	0	0	36	28	20
cSH	1140	1700	1700	1700	1070	1700	1700	1700	693	374
Volume to Capacity	0.02	0.14	0.14	0.01	0.02	0.12	0.12	0.02	0.06	0.19
Queue Length 95th (ft)	2	0	0	0	1	0	0	0	5	18
Control Delay (s)	8.2	0.0	0.0	0.0	8.4	0.0	0.0	0.0	13.7	18.2
Lane LOS	A				A				B	C
Approach Delay (s)	0.4				0.4				13.7	18.2
Approach LOS									B	C

Intersection Summary					
Average Delay	2.0				
Intersection Capacity Utilization	32.2%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	92	52	232	8	253	16
Sign Control	Stop	Stop	Free		Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	40.2%	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			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	18	19	29	4	16	18	15	195	4	18	211	11
Peak Hour Factor	0.64	0.68	0.81	0.50	0.80	0.75	0.75	0.92	0.50	0.75	0.92	0.69
Hourly flow rate (vph)	28	28	36	8	20	24	20	212	8	24	229	16
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	563	529	229	579	529	212	229			212		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	563	529	229	579	529	212	229			212		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	93	94	96	98	95	97	99			98		
cM capacity (veh/h)	399	440	810	378	440	828	1339			1358		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	92	52	232	8	253	16
Volume Left	28	8	20	0	24	0
Volume Right	36	24	0	8	0	16
cSH	516	544	1339	1700	1358	1700
Volume to Capacity	0.18	0.10	0.01	0.00	0.02	0.01
Queue Length 95th (ft)	16	8	1	0	1	0
Control Delay (s)	13.5	12.3	0.8	0.0	0.9	0.0
Lane LOS	B	B	A		A	
Approach Delay (s)	13.5	12.3	0.8		0.8	
Approach LOS	B	B				

Intersection Summary					
Average Delay	3.5				
Intersection Capacity Utilization	40.2%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	NBL
Lane Group Flow (vph)	100	32	8
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	14.3%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	81	1	1	21	1	3
Peak Hour Factor	0.84	0.25	0.25	0.75	0.25	0.75
Hourly flow rate (vph)	96	4	4	28	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			100		134	98
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			100		134	98
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1492		857	957

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	100	32	8
Volume Left	0	4	4
Volume Right	4	0	4
cSH	1700	1492	904
Volume to Capacity	0.06	0.00	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.9	9.0
Lane LOS		A	A
Approach Delay (s)	0.0	0.9	9.0
Approach LOS			A

Intersection Summary				
Average Delay		0.7		
Intersection Capacity Utilization	14.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	96	40	8
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	15.6%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	2	76	28	1	2	1
Peak Hour Factor	0.50	0.83	0.78	0.25	0.50	0.25
Hourly flow rate (vph)	4	92	36	4	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	40				137	38
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	40				137	38
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1570				854	1034

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	96	40	8
Volume Left	4	0	4
Volume Right	0	4	4
cSH	1570	1700	935
Volume to Capacity	0.00	0.02	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.3	0.0	8.9
Lane LOS	A		A
Approach Delay (s)	0.3	0.0	8.9
Approach LOS			A

Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	15.6%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	16	48	72
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	19.5%	ICU Level of Service A
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	6	6	27	7	20	33
Peak Hour Factor	0.75	0.75	0.75	0.58	0.62	0.82
Hourly flow rate (vph)	8	8	36	12	32	40
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	147	42			48	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	147	42			48	
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			98	
cM capacity (veh/h)	828	1029			1559	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	16	48	73
Volume Left	8	0	32
Volume Right	8	12	0
cSH	917	1700	1559
Volume to Capacity	0.02	0.03	0.02
Queue Length 95th (ft)	1	0	2
Control Delay (s)	9.0	0.0	3.4
Lane LOS	A		A
Approach Delay (s)	9.0	0.0	3.4
Approach LOS	A		

Intersection Summary				
Average Delay		2.8		
Intersection Capacity Utilization		19.5%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	469	60	135	40	40	16
Sign Control	Free		Free	Stop		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	39.5%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	2	432	44	19	55	0	13	7	27	0	10	0
Peak Hour Factor	0.50	0.93	0.73	0.32	0.72	0.92	0.46	0.58	0.68	0.92	0.62	0.92
Hourly flow rate (vph)	4	465	60	59	76	0	28	12	40	0	16	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	76			465			676	668	465	674	668	76
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	76			465			676	668	465	674	668	76
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			95			92	97	93	100	95	100
cM capacity (veh/h)	1522			1097			340	358	598	321	358	985

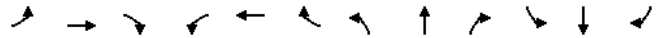
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	469	60	136	0	80	16
Volume Left	4	0	59	0	28	0
Volume Right	0	60	0	0	40	0
cSH	1522	1700	1097	1700	685	342
Volume to Capacity	0.00	0.04	0.05	0.00	0.12	0.05
Queue Length 95th (ft)	0	0	4	0	10	4
Control Delay (s)	0.1	0.0	4.0	0.0	14.2	16.0
Lane LOS	A		A		B	C
Approach Delay (s)	0.1		4.0		14.2	16.0
Approach LOS					B	C

Intersection Summary					
Average Delay	2.6				
Intersection Capacity Utilization	39.5%	ICU Level of Service		A	
Analysis Period (min)	15				



Lane Group	EBT	EBR	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	458	44	104	8	40	48	32
Sign Control	Free		Free		Stop		Stop

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	389	32	0	74	4	7	3	8	28	23	0
Peak Hour Factor	0.92	0.85	0.73	0.92	0.71	0.50	0.58	0.38	0.40	0.58	0.72	0.92
Hourly flow rate (vph)	0	458	44	0	104	8	12	8	20	48	32	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	104			458			578	562	229	337	562	104
vC1, stage 1 conf vol							458	458		104	104	
vC2, stage 2 conf vol							120	104		233	458	
vCu, unblocked vol	104			458			578	562	229	337	562	104
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			98	99	97	93	94	100
cM capacity (veh/h)	1485			1100			524	541	774	684	541	930

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	0	229	229	44	0	104	8	40	48	32
Volume Left	0	0	0	0	0	0	0	12	48	0
Volume Right	0	0	0	44	0	0	8	20	0	0
cSH	1700	1700	1700	1700	1700	1700	1700	630	684	529
Volume to Capacity	0.00	0.13	0.13	0.03	0.00	0.06	0.00	0.06	0.07	0.06
Queue Length 95th (ft)	0	0	0	0	0	0	0	5	6	5
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1	10.7	12.2
Lane LOS								B	B	B
Approach Delay (s)	0.0				0.0			11.1	11.3	
Approach LOS								B	B	

Intersection Summary					
Average Delay	1.8				
Intersection Capacity Utilization	24.7%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	28	477	8	44	107	4	8	405	8	188
Act Effct Green (s)	7.3	67.7	67.7	7.8	70.2	70.2	34.4	34.4	34.4	34.4
Actuated g/C Ratio	0.06	0.56	0.56	0.06	0.58	0.58	0.29	0.29	0.29	0.29
v/c Ratio	0.26	0.24	0.01	0.39	0.05	0.00	0.03	0.77	0.04	0.35
Control Delay	59.2	16.1	10.7	49.7	10.2	7.0	24.0	43.9	25.8	33.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.2	16.1	10.7	49.7	10.2	7.0	24.0	43.9	25.8	33.6
LOS	E	B	B	D	B	A	C	D	C	C
Approach Delay		18.4			21.3			43.5		33.3
Approach LOS		B			C			D		C
Queue Length 50th (ft)	21	92	0	24	21	1	4	249	5	117
Queue Length 95th (ft)	40	154	2	35	37	2	5	264	8	141
Internal Link Dist (ft)		2246			4418			11076		2261
Turn Bay Length (ft)	280		115	290		180	125		105	
Base Capacity (vph)	310	1998	897	310	2071	928	477	789	295	804
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.24	0.01	0.14	0.05	0.00	0.02	0.51	0.03	0.23

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 116 (97%), Referenced to phase 2:WBT and 6:EBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 29.1		Intersection LOS: C	
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												
Ideal Flow (vphpl)	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	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		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)	1770	3539	1583	1770	3539	1583	1770	1799		1770	1851	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.53	1.00		0.21	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	983	1799		384	1851	
Volume (vph)	20	391	3	34	72	1	3	282	74	4	153	3
Peak-hour factor, PHF	0.71	0.82	0.38	0.77	0.67	0.25	0.38	0.90	0.80	0.50	0.85	0.38
Adj. Flow (vph)	28	477	8	44	107	4	8	313	92	8	180	8
RTOR Reduction (vph)	0	0	4	0	0	2	0	11	0	0	1	0
Lane Group Flow (vph)	28	477	4	44	107	2	8	394	0	8	187	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	5.0	66.9	66.9	6.7	68.6	68.6	34.4	34.4		34.4	34.4	
Effective Green, g (s)	5.0	66.9	66.9	6.7	68.6	68.6	34.4	34.4		34.4	34.4	
Actuated g/C Ratio	0.04	0.56	0.56	0.06	0.57	0.57	0.29	0.29		0.29	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)	74	1973	883	99	2023	905	282	516		110	531	
v/s Ratio Prot	0.02	c0.13		c0.02	0.03			c0.22			0.10	
v/s Ratio Perm			0.00			0.00	0.01			0.02		
v/c Ratio	0.38	0.24	0.01	0.44	0.05	0.00	0.03	0.76		0.07	0.35	
Uniform Delay, d1	56.0	13.6	11.8	54.8	11.4	11.0	30.8	39.1		31.2	34.0	
Progression Factor	1.00	1.00	1.00	0.75	0.70	0.60	0.95	0.93		1.00	1.00	
Incremental Delay, d2	3.2	0.3	0.0	3.2	0.0	0.0	0.0	6.6		0.3	0.4	
Delay (s)	59.2	13.9	11.8	44.4	7.9	6.7	29.2	42.8		31.5	34.4	
Level of Service	E	B	B	D	A	A	C	D		C	C	
Approach Delay (s)		16.3			18.3			42.5			34.2	
Approach LOS		B			B			D			C	

Intersection Summary					
HCM Average Control Delay	27.8	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.42				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	43.5%	ICU Level of Service		A	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	24	484	36	111	117	40	16	313	112	159
Act Effct Green (s)	71.1	65.2	65.2	77.3	71.6	71.6	25.4	19.1	34.2	29.8
Actuated g/C Ratio	0.59	0.54	0.54	0.64	0.60	0.60	0.21	0.16	0.28	0.25
v/c Ratio	0.03	0.25	0.04	0.26	0.06	0.04	0.06	0.86	0.38	0.35
Control Delay	7.3	10.7	2.1	11.4	13.4	5.3	27.0	50.8	34.0	36.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.3	10.7	2.1	11.4	13.4	5.3	27.0	50.8	34.0	36.9
LOS	A	B	A	B	B	A	C	D	C	D
Approach Delay		9.9			11.4			49.6		35.7
Approach LOS		A			B			D		D
Queue Length 50th (ft)	4	62	0	30	20	0	9	150	66	92
Queue Length 95th (ft)	m10	79	m2	68	44	16	15	222	97	149
Internal Link Dist (ft)		5533			4590			2266		2361
Turn Bay Length (ft)	300		120	320		145	150		150	
Base Capacity (vph)	886	1922	875	530	2112	961	403	621	350	613
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.25	0.04	0.21	0.06	0.04	0.04	0.50	0.32	0.26

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 108 (90%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 24.4 Intersection LOS: C
Intersection Capacity Utilization 53.3% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.89		1.00	0.98	
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)	1770	3539	1583	1770	3539	1583	1770	1658		1770	1828	
Flt Permitted	0.68	1.00	1.00	0.41	1.00	1.00	0.66	1.00		0.16	1.00	
Satd. Flow (perm)	1263	3539	1583	761	3539	1583	1222	1658		292	1828	
Volume (vph)	18	431	26	98	105	32	10	73	215	101	124	13
Peak-hour factor, PHF	0.75	0.89	0.72	0.88	0.90	0.80	0.62	0.87	0.94	0.90	0.89	0.65
Adj. Flow (vph)	24	484	36	111	117	40	16	84	229	112	139	20
RTOR Reduction (vph)	0	0	16	0	0	17	0	99	0	0	5	0
Lane Group Flow (vph)	24	484	20	111	117	23	16	214	0	112	154	0
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4			8		
Actuated Green, G (s)	66.5	62.8	62.8	75.4	67.7	67.7	24.3	21.5		36.6	29.8	
Effective Green, g (s)	66.5	62.8	62.8	75.4	67.7	67.7	24.3	21.5		36.6	29.8	
Actuated g/C Ratio	0.55	0.52	0.52	0.63	0.56	0.56	0.20	0.18		0.30	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	
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)	716	1852	828	550	1997	893	260	297		226	454	
v/s Ratio Prot	0.00	c0.14		c0.01	0.03		0.00	c0.13		c0.05	0.08	
v/s Ratio Perm	0.02		0.01	0.11		0.01	0.01			0.11		
v/c Ratio	0.03	0.26	0.02	0.20	0.06	0.03	0.06	0.72		0.50	0.34	
Uniform Delay, d1	12.1	15.8	13.8	9.3	11.8	11.6	38.5	46.4		32.9	37.0	
Progression Factor	0.68	0.62	0.28	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.3	0.1	0.2	0.1	0.1	0.1	8.1		1.7	0.4	
Delay (s)	8.2	10.2	3.9	9.4	11.8	11.6	38.6	54.5		34.6	37.5	
Level of Service	A	B	A	A	B	B	D	D		C	D	
Approach Delay (s)		9.7			10.8			53.7			36.3	
Approach LOS		A			B			D			D	

Intersection Summary

HCM Average Control Delay	25.3	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.38			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	53.3%	ICU Level of Service	A	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	132	80	40
Sign Control	Free	Free	Stop

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

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	8	106	49	11	18	10
Peak Hour Factor	0.67	0.88	0.82	0.55	0.75	0.62
Hourly flow rate (vph)	12	120	60	20	24	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	80				214	70
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	80				214	70
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				97	98
cM capacity (veh/h)	1518				768	993

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	132	80	40
Volume Left	12	0	24
Volume Right	0	20	16
cSH	1518	1700	845
Volume to Capacity	0.01	0.05	0.05
Queue Length 95th (ft)	1	0	4
Control Delay (s)	0.7	0.0	9.5
Lane LOS	A		A
Approach Delay (s)	0.7	0.0	9.5
Approach LOS			A

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	22.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	157	76	64
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	24.1%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	46	92	51	12	19	28
Peak Hour Factor	0.88	0.88	0.91	0.60	0.79	0.70
Hourly flow rate (vph)	52	105	56	20	24	40
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	76				275	66
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	76				275	66
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				97	96
cM capacity (veh/h)	1523				690	998

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	157	76	64
Volume Left	52	0	24
Volume Right	0	20	40
cSH	1523	1700	855
Volume to Capacity	0.03	0.04	0.07
Queue Length 95th (ft)	3	0	6
Control Delay (s)	2.7	0.0	9.6
Lane LOS	A		A
Approach Delay (s)	2.7	0.0	9.6
Approach LOS			A

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	24.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	121	76	16
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	16.8%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	2	98	67	2	8	3
Peak Hour Factor	0.50	0.84	0.93	0.50	0.67	0.75
Hourly flow rate (vph)	4	117	72	4	12	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	76				199	74
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	76				199	74
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	100
cM capacity (veh/h)	1523				788	988

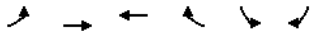
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	121	76	16
Volume Left	4	0	12
Volume Right	0	4	4
cSH	1523	1700	830
Volume to Capacity	0.00	0.04	0.02
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.3	0.0	9.4
Lane LOS	A		A
Approach Delay (s)	0.3	0.0	9.4
Approach LOS			A

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	16.8%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	76	84	64
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	16.5%	ICU Level of Service A
Analysis Period (min)	15	



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	4	61	51	11	42	3
Peak Hour Factor	0.50	0.90	0.75	0.69	0.70	0.75
Hourly flow rate (vph)	8	68	68	16	60	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	84				160	76
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	84				160	76
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				93	100
cM capacity (veh/h)	1513				827	985

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	76	84	64
Volume Left	8	0	60
Volume Right	0	16	4
cSH	1513	1700	835
Volume to Capacity	0.01	0.05	0.08
Queue Length 95th (ft)	0	0	6
Control Delay (s)	0.8	0.0	9.7
Lane LOS	A		A
Approach Delay (s)	0.8	0.0	9.7
Approach LOS			A

Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	16.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	8	8	8
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	13.3%	ICU Level of Service A
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	2	2	2	3	1	2
Peak Hour Factor	0.50	0.50	0.50	0.75	0.25	0.50
Hourly flow rate (vph)	4	4	4	4	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	18	6			8	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	18	6			8	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	997	1077			1612	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	8	8	8
Volume Left	4	0	4
Volume Right	4	4	0
cSH	1035	1700	1612
Volume to Capacity	0.01	0.00	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.5	0.0	3.6
Lane LOS	A		A
Approach Delay (s)	8.5	0.0	3.6
Approach LOS	A		

Intersection Summary				
Average Delay	4.0			
Intersection Capacity Utilization	13.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	12	44	36
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	13.3%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	4	2	1	33	30	0
Peak Hour Factor	0.50	0.50	0.25	0.82	0.83	0.92
Hourly flow rate (vph)	8	4	4	40	36	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	84	36	36			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	84	36	36			
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	100	100			
cM capacity (veh/h)	915	1036	1575			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	12	44	36
Volume Left	8	4	0
Volume Right	4	0	0
cSH	952	1575	1700
Volume to Capacity	0.01	0.00	0.02
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.8	0.7	0.0
Lane LOS	A	A	
Approach Delay (s)	8.8	0.7	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Existing PM Intersection Analysis

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	650	149	341	44	261
Sign Control	Free		Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	521	72	134	307	36	227
Peak Hour Factor	0.92	0.86	0.90	0.90	0.82	0.87
Hourly flow rate (vph)	566	84	149	341	44	261
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			650		1247	608
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			650		1247	608
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			84		73	47
cM capacity (veh/h)			936		161	496

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	650	149	341	305
Volume Left	0	149	0	44
Volume Right	84	0	0	261
cSH	1700	936	1700	579
Volume to Capacity	0.38	0.16	0.20	0.53
Queue Length 95th (ft)	0	14	0	77
Control Delay (s)	0.0	9.6	0.0	22.3
Lane LOS		A		C
Approach Delay (s)	0.0	2.9		22.3
Approach LOS				C

Intersection Summary				
Average Delay	5.7			
Intersection Capacity Utilization	52.5%	ICU Level of Service		A
Analysis Period (min)	15			

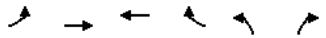
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	36	197	261	269	357	32
Sign Control	Stop			Free	Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	35.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	30	183	240	250	336	26
Peak Hour Factor	0.83	0.93	0.92	0.93	0.94	0.81
Hourly flow rate (vph)	36	197	261	269	357	32
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1014	179	357			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1014	179	357			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	80	76	78			
cM capacity (veh/h)	184	833	1198			

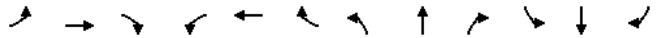
Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	36	197	261	134	134	179	179	32
Volume Left	36	0	261	0	0	0	0	0
Volume Right	0	197	0	0	0	0	0	32
cSH	184	833	1198	1700	1700	1700	1700	1700
Volume to Capacity	0.20	0.24	0.22	0.08	0.08	0.11	0.11	0.02
Queue Length 95th (ft)	18	23	21	0	0	0	0	0
Control Delay (s)	29.3	10.7	8.8	0.0	0.0	0.0	0.0	0.0
Lane LOS	D	B	A					
Approach Delay (s)	13.5		4.4			0.0		
Approach LOS	B							

Intersection Summary				
Average Delay	4.7			
Intersection Capacity Utilization	35.9%	ICU Level of Service		A
Analysis Period (min)	15			



Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	148	635	374	104	167	180
Act Effct Green (s)	96.2	96.2	86.7	120.0	15.8	106.5
Actuated g/C Ratio	0.80	0.80	0.72	1.00	0.13	0.89
v/c Ratio	0.24	0.22	0.28	0.07	0.72	0.13
Control Delay	1.6	0.8	6.9	0.1	66.6	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.6	0.8	6.9	0.1	66.6	0.3
LOS	A	A	A	A	E	A
Approach Delay		0.9	5.4			
Approach LOS		A	A			
Queue Length 50th (ft)	1	2	88	0	126	0
Queue Length 95th (ft)	8	17	155	0	186	5
Internal Link Dist (ft)		808	1512			
Turn Bay Length (ft)	150					
Base Capacity (vph)	923	2838	1347	1583	502	1425
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.22	0.28	0.07	0.33	0.13

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 61 (51%), Referenced to phase 2:WBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 9.0		Intersection LOS: A	
Intersection Capacity Utilization 50.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	0.95			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	3539			1863	1583	1770		1583			
Flt Permitted	0.51	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	952	3539			1863	1583	1770		1583			
Volume (vph)	139	610	0	0	355	94	147	0	167	0	0	0
Peak-hour factor, PHF	0.94	0.96	0.92	0.92	0.95	0.90	0.88	0.92	0.93	0.92	0.92	0.92
Adj. Flow (vph)	148	635	0	0	374	104	167	0	180	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	20	0	0	0
Lane Group Flow (vph)	148	635	0	0	374	104	167	0	160	0	0	0
Turn Type	pm+pt					Free	Prot		custom			
Protected Phases	1	6			2		7					
Permitted Phases	6					Free			2 7			
Actuated Green, G (s)	96.2	96.2			86.7	120.0	15.8		106.5			
Effective Green, g (s)	96.2	96.2			86.7	120.0	15.8		106.5			
Actuated g/C Ratio	0.80	0.80			0.72	1.00	0.13		0.89			
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)	801	2837			1346	1583	233		1405			
v/s Ratio Prot	0.01	c0.18			c0.20		c0.09					
v/s Ratio Perm	0.14					0.07			0.10			
v/c Ratio	0.18	0.22			0.28	0.07	0.72		0.11			
Uniform Delay, d1	4.0	2.9			5.8	0.0	50.0		0.8			
Progression Factor	0.22	0.19			1.00	1.00	1.00		1.00			
Incremental Delay, d2	0.1	0.0			0.5	0.1	10.0		0.0			
Delay (s)	1.0	0.6			6.3	0.1	60.0		0.9			
Level of Service	A	A			A	A	E		A			
Approach Delay (s)		0.6			4.9			29.3			0.0	
Approach LOS		A			A			C			A	

Intersection Summary				
HCM Average Control Delay	8.1	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.33			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	50.0%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	337	148	209	381	494	267
Act Effct Green (s)	61.3	120.0	75.0	75.0	37.0	102.3
Actuated g/C Ratio	0.51	1.00	0.62	0.62	0.31	0.85
v/c Ratio	0.35	0.09	0.42	0.33	0.47	0.19
Control Delay	19.2	0.1	9.3	7.9	35.3	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.2	0.1	9.3	7.9	35.3	0.5
LOS	B	A	A	A	D	A
Approach Delay	13.3			8.4		
Approach LOS	B			A		
Queue Length 50th (ft)	150	0	44	87	159	0
Queue Length 95th (ft)	228	0	m67	121	210	11
Internal Link Dist (ft)	1279			808		
Turn Bay Length (ft)		150	150			
Base Capacity (vph)	952	1583	666	1164	1059	1389
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.09	0.31	0.33	0.47	0.19

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 23 (19%), Referenced to phase 2:WBTL and 6:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.47
Intersection Signal Delay: 15.8 Intersection LOS: B
Intersection Capacity Utilization 50.0% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00					0.97		1.00
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		1863	1583	1770	1863					3433		1583
Flt Permitted		1.00	1.00	0.44	1.00					0.95		1.00
Satd. Flow (perm)		1863	1583	824	1863					3433		1583
Volume (vph)	0	307	132	188	354	0	0	0	0	469	0	251
Peak-hour factor, PHF	0.92	0.91	0.89	0.90	0.93	0.92	0.92	0.92	0.92	0.95	0.92	0.94
Adj. Flow (vph)	0	337	148	209	381	0	0	0	0	494	0	267
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	39
Lane Group Flow (vph)	0	337	148	209	381	0	0	0	0	494	0	228
Turn Type			Free	pm+pt						Prot		custom
Protected Phases		6		5	2					3		
Permitted Phases			Free	2								3 6
Actuated Green, G (s)		61.3	120.0	75.0	75.0					37.0		102.3
Effective Green, g (s)		61.3	120.0	75.0	75.0					37.0		102.3
Actuated g/C Ratio		0.51	1.00	0.62	0.62					0.31		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)		952	1583	591	1164					1059		1350
v/s Ratio Prot		0.18		c0.03	0.20					c0.14		
v/s Ratio Perm			0.09	c0.19								0.14
v/c Ratio		0.35	0.09	0.35	0.33					0.47		0.17
Uniform Delay, d1		17.5	0.0	10.5	10.6					33.5		1.5
Progression Factor		1.00	1.00	0.70	0.67					1.00		1.00
Incremental Delay, d2		1.0	0.1	0.3	0.7					1.5		0.3
Delay (s)		18.6	0.1	7.8	7.8					35.0		1.8
Level of Service		B	A	A	A					D		A
Approach Delay (s)		12.9			7.8			0.0			23.4	
Approach LOS		B			A			A			C	

Intersection Summary

HCM Average Control Delay	15.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	176	660	348
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	57.2%	ICU Level of Service B
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	8	149	277	304	269	40
Peak Hour Factor	0.67	0.91	0.89	0.87	0.92	0.71
Hourly flow rate (vph)	12	164	311	349	292	56
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	311				674	486
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	311				674	486
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				30	90
cM capacity (veh/h)	1249				416	581

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	176	661	349
Volume Left	12	0	292
Volume Right	0	349	56
cSH	1249	1700	436
Volume to Capacity	0.01	0.39	0.80
Queue Length 95th (ft)	1	0	180
Control Delay (s)	0.6	0.0	38.9
Lane LOS	A		E
Approach Delay (s)	0.6	0.0	38.9
Approach LOS			E

Intersection Summary			
Average Delay	11.5		
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	100	124	344	682
Act Effct Green (s)	11.9	11.9	100.1	100.1
Actuated g/C Ratio	0.10	0.10	0.83	0.83
v/c Ratio	0.55	0.67	0.23	0.45
Control Delay	53.9	49.7	2.7	3.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	53.9	49.7	2.7	3.1
LOS	D	D	A	A
Approach Delay	53.9	49.7	2.7	3.1
Approach LOS	D	D	A	A
Queue Length 50th (ft)	63	77	41	70
Queue Length 95th (ft)	105	126	79	128
Internal Link Dist (ft)	3138	678	2784	4178
Turn Bay Length (ft)				
Base Capacity (vph)	488	489	1506	1513
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.20	0.25	0.23	0.45

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 49 (41%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 11.7		Intersection LOS: B	
Intersection Capacity Utilization 58.5%		ICU Level of Service B	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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			1.00	
Frt		0.96			0.96			0.99			1.00	
Flt Protected		0.99			0.99			1.00			1.00	
Satd. Flow (prot)		1775			1765			1848			1852	
Flt Permitted		0.83			0.87			0.98			0.98	
Satd. Flow (perm)		1482			1553			1806			1813	
Volume (vph)	14	43	21	20	55	34	7	303	14	22	602	16
Peak-hour factor, PHF	0.70	0.83	0.75	0.83	0.92	0.85	0.58	0.96	0.88	0.79	0.95	0.80
Adj. Flow (vph)	20	52	28	24	60	40	12	316	16	28	634	20
RTOR Reduction (vph)	0	14	0	0	18	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	86	0	0	106	0	0	343	0	0	682	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		11.9			11.9			100.1			100.1	
Effective Green, g (s)		11.9			11.9			100.1			100.1	
Actuated g/C Ratio		0.10			0.10			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)		147			154			1507			1512	
v/s Ratio Prot												
v/s Ratio Perm		0.06			c0.07			0.19			c0.38	
v/c Ratio		0.58			0.69			0.23			0.45	
Uniform Delay, d1		51.7			52.3			2.0			2.6	
Progression Factor		1.00			0.75			1.00			0.73	
Incremental Delay, d2		5.8			11.8			0.4			0.9	
Delay (s)		57.4			50.8			2.4			2.8	
Level of Service		E			D			A			A	
Approach Delay (s)		57.4			50.8			2.4			2.8	
Approach LOS		E			D			A			A	

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	180	301	8	4	357	225	12	247	288
Act Effct Green (s)	86.6	84.6	84.6	79.1	73.5	73.5	25.4	25.4	25.4
Actuated g/C Ratio	0.72	0.70	0.70	0.66	0.61	0.61	0.21	0.21	0.21
v/c Ratio	0.34	0.23	0.01	0.01	0.31	0.21	0.03	0.83	0.58
Control Delay	7.4	7.4	4.7	7.0	13.8	2.4	26.8	47.9	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.4	7.4	4.7	7.0	13.8	2.4	26.8	47.9	7.8
LOS	A	A	A	A	B	A	C	D	A
Approach Delay		7.3			9.3		26.8	26.3	
Approach LOS		A			A		C	C	
Queue Length 50th (ft)	35	62	0	1	126	0	5	159	63
Queue Length 95th (ft)	m72	150	m1	2	237	39	4	m219	m59
Internal Link Dist (ft)		4178			602		2286	7832	
Turn Bay Length (ft)	95		100	150					70
Base Capacity (vph)	661	1314	1119	812	1141	1057	585	489	687
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.23	0.01	0.00	0.31	0.21	0.02	0.51	0.42

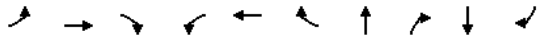
Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 3 (3%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 14.5		Intersection LOS: B	
Intersection Capacity Utilization 56.9%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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		1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.96			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98			0.95	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583		1750			1770	1583
Flt Permitted	0.47	1.00	1.00	0.58	1.00	1.00		0.92			0.75	1.00
Satd. Flow (perm)	869	1863	1583	1074	1863	1583		1642			1397	1583
Volume (vph)	166	277	3	1	343	207	1	1	2	235	0	271
Peak-hour factor, PHF	0.92	0.92	0.38	0.25	0.96	0.92	0.25	0.25	0.50	0.95	0.92	0.94
Adj. Flow (vph)	180	301	8	4	357	225	4	4	4	247	0	288
RTOR Reduction (vph)	0	0	2	0	0	87	0	3	0	0	0	161
Lane Group Flow (vph)	180	301	6	4	357	138	0	9	0	0	247	127
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			Perm		Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2		2	4			8		8
Actuated Green, G (s)	86.6	81.4	81.4	74.7	73.5	73.5		25.4			25.4	25.4
Effective Green, g (s)	86.6	81.4	81.4	74.7	73.5	73.5		25.4			25.4	25.4
Actuated g/C Ratio	0.72	0.68	0.68	0.62	0.61	0.61		0.21			0.21	0.21
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)	695	1264	1074	676	1141	970		348			296	335
v/s Ratio Prot	c0.02	0.16		0.00	c0.19							
v/s Ratio Perm	0.17		0.00	0.00		0.09		0.01			c0.18	0.08
v/c Ratio	0.26	0.24	0.01	0.01	0.31	0.14		0.03			0.83	0.38
Uniform Delay, d1	5.8	7.4	6.2	8.6	11.1	9.9		37.5			45.3	40.5
Progression Factor	0.90	0.87	0.80	1.00	1.00	1.00		1.00			0.58	0.28
Incremental Delay, d2	0.2	0.4	0.0	0.0	0.7	0.3		0.0			16.9	0.7
Delay (s)	5.4	6.9	5.0	8.6	11.9	10.2		37.5			43.3	11.9
Level of Service	A	A	A	A	B	B		D			D	B
Approach Delay (s)		6.3			11.2			37.5			26.4	
Approach LOS		A			B			D			C	

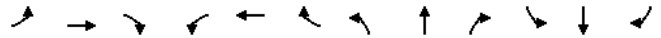
Intersection Summary					
HCM Average Control Delay	14.9	HCM Level of Service		B	
HCM Volume to Capacity ratio	0.43				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	56.9%	ICU Level of Service		B	
Analysis Period (min)	15				

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	20	407	8	28	511	48	28	28	36	12
Sign Control		Free			Free		Stop		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	29.9%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	10	391	4	17	480	40	14	3	19	28	0	10
Peak Hour Factor	0.50	0.96	0.50	0.61	0.94	0.83	0.70	0.38	0.68	0.78	0.92	0.83
Hourly flow rate (vph)	20	407	8	28	511	48	20	8	28	36	0	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	511			407			758	1014	204	814	1014	255
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	511			407			758	1014	204	814	1014	255
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			98			93	97	97	85	100	98
cM capacity (veh/h)	1051			1148			282	227	803	245	227	744

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	20	204	204	8	28	255	255	48	56	48
Volume Left	20	0	0	0	28	0	0	0	20	36
Volume Right	0	0	0	8	0	0	0	48	28	12
cSH	1051	1700	1700	1700	1148	1700	1700	1700	533	327
Volume to Capacity	0.02	0.12	0.12	0.00	0.02	0.15	0.15	0.03	0.10	0.15
Queue Length 95th (ft)	1	0	0	0	2	0	0	0	9	13
Control Delay (s)	8.5	0.0	0.0	0.0	8.2	0.0	0.0	0.0	14.9	19.1
Lane LOS	A				A				B	C
Approach Delay (s)	0.4				0.4				14.9	19.1
Approach LOS									B	C

Intersection Summary					
Average Delay	1.9				
Intersection Capacity Utilization	29.9%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	48	60	260	8	415	20
Sign Control	Stop	Stop	Free		Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	8	12	13	2	28	15	29	199	3	20	364	14
Peak Hour Factor	0.50	0.75	0.81	0.50	0.78	0.75	0.81	0.89	0.38	0.71	0.94	0.70
Hourly flow rate (vph)	16	16	16	4	36	20	36	224	8	28	387	20
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	777	739	387	763	739	224	387			224		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	777	739	387	763	739	224	387			224		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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	95	98	99	89	98	97			98		
cM capacity (veh/h)	270	328	661	290	328	816	1171			1345		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	48	60	259	8	415	20
Volume Left	16	4	36	0	28	0
Volume Right	16	20	0	8	0	20
cSH	363	405	1171	1700	1345	1700
Volume to Capacity	0.13	0.15	0.03	0.00	0.02	0.01
Queue Length 95th (ft)	11	13	2	0	2	0
Control Delay (s)	16.4	15.4	1.4	0.0	0.7	0.0
Lane LOS	C	C	A		A	
Approach Delay (s)	16.4	15.4	1.3		0.7	
Approach LOS	C	C				

Intersection Summary					
Average Delay	2.9				
Intersection Capacity Utilization	47.1%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	NBL
Lane Group Flow (vph)	48	92	8
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	18.9%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	32	2	6	75	1	2
Peak Hour Factor	0.73	0.50	0.50	0.94	0.25	0.50
Hourly flow rate (vph)	44	4	12	80	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			48		150	46
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			48		150	46
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		100	100
cM capacity (veh/h)			1559		836	1024

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	48	92	8
Volume Left	0	12	4
Volume Right	4	0	4
cSH	1700	1559	920
Volume to Capacity	0.03	0.01	0.01
Queue Length 95th (ft)	0	1	1
Control Delay (s)	0.0	1.0	8.9
Lane LOS		A	A
Approach Delay (s)	0.0	1.0	8.9
Approach LOS			A

Intersection Summary				
Average Delay		1.1		
Intersection Capacity Utilization	18.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	48	96	8
Sign Control	Free	Free	Stop

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

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	1	36	83	1	2	1
Peak Hour Factor	0.25	0.82	0.90	0.25	0.50	0.25
Hourly flow rate (vph)	4	44	92	4	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	96				146	94
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	96				146	94
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1497				844	963

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	48	96	8
Volume Left	4	0	4
Volume Right	0	4	4
cSH	1497	1700	899
Volume to Capacity	0.00	0.06	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.6	0.0	9.0
Lane LOS	A		A
Approach Delay (s)	0.6	0.0	9.0
Approach LOS			A

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	14.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	32	56	60
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	19.4%	ICU Level of Service A
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	8	15	40	6	9	43
Peak Hour Factor	0.67	0.75	0.83	0.75	0.75	0.90
Hourly flow rate (vph)	12	20	48	8	12	48
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	124	52			56	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	124	52			56	
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	98			99	
cM capacity (veh/h)	864	1015			1548	

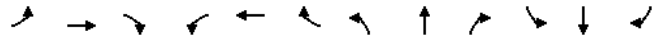
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	32	56	60
Volume Left	12	0	12
Volume Right	20	8	0
cSH	953	1700	1548
Volume to Capacity	0.03	0.03	0.01
Queue Length 95th (ft)	3	0	1
Control Delay (s)	8.9	0.0	1.5
Lane LOS	A		A
Approach Delay (s)	8.9	0.0	1.5
Approach LOS	A		

Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	19.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	72	16	498	4	76	20	12	8
Sign Control	Free		Free		Stop		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	42.8%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	53	12	16	360	1	39	16	14	0	9	3
Peak Hour Factor	0.25	0.78	0.75	0.44	0.78	0.25	0.89	0.50	0.70	0.92	0.75	0.38
Hourly flow rate (vph)	4	68	16	36	462	4	44	32	20	0	12	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	462			68			616	610	68	626	610	462
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	462			68			616	610	68	626	610	462
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			98			88	92	98	100	97	99
cM capacity (veh/h)	1100			1533			380	398	995	357	398	600

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	72	16	498	4	96	20
Volume Left	4	0	36	0	44	0
Volume Right	0	16	0	4	20	8
cSH	1100	1700	1533	1700	490	660
Volume to Capacity	0.00	0.01	0.02	0.00	0.20	0.03
Queue Length 95th (ft)	0	0	2	0	18	2
Control Delay (s)	0.5	0.0	0.8	0.0	14.9	13.0
Lane LOS	A		A		B	B
Approach Delay (s)	0.4		0.8		14.9	13.0
Approach LOS					B	B

Intersection Summary					
Average Delay	3.0				
Intersection Capacity Utilization	42.8%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	56	20	8	449	32	88	18	13
Sign Control	Free			Free		Stop	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	34.6%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	46	15	3	341	27	34	16	0	0	9	12
Peak Hour Factor	0.92	0.82	0.75	0.38	0.76	0.84	0.57	0.57	0.92	0.56	0.50	0.92
Hourly flow rate (vph)	0	56	20	8	449	32	60	28	0	0	18	13
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	449			56			530	521	28	507	521	449
vC1, stage 1 conf vol							56	56		464	464	
vC2, stage 2 conf vol							473	464		42	56	
vCu, unblocked vol	449			56			530	521	28	507	521	449
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			88	95	100	100	97	98
cM capacity (veh/h)	1108			1547			494	540	1041	527	540	558

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	0	28	28	20	8	449	32	88	0	31
Volume Left	0	0	0	0	8	0	0	60	0	0
Volume Right	0	0	0	20	0	0	32	0	0	13
cSH	1700	1700	1700	1700	1547	1700	1700	508	1700	932
Volume to Capacity	0.00	0.02	0.02	0.01	0.01	0.26	0.02	0.17	0.00	0.03
Queue Length 95th (ft)	0	0	0	0	0	0	0	15	0	3
Control Delay (s)	0.0	0.0	0.0	0.0	7.3	0.0	0.0	13.6	0.0	11.8
Lane LOS					A			B	A	B
Approach Delay (s)	0.0				0.1			13.6	11.8	
Approach LOS								B	B	

Intersection Summary					
Average Delay	2.4				
Intersection Capacity Utilization	34.6%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	1	59	1	103	379	7	7	214	4	257
Act Effct Green (s)	5.6	74.6	74.6	13.2	89.9	89.9	20.1	20.1	20.1	20.1
Actuated g/C Ratio	0.05	0.62	0.62	0.11	0.75	0.75	0.17	0.17	0.17	0.17
v/c Ratio	0.01	0.03	0.00	0.53	0.14	0.01	0.05	0.69	0.02	0.82
Control Delay	55.0	11.7	11.0	48.6	2.3	0.2	43.5	60.4	38.2	68.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.0	11.7	11.0	48.6	2.3	0.2	43.5	60.4	38.2	68.1
LOS	D	B	B	D	A	A	D	E	D	E
Approach Delay		12.4			12.0			59.9		67.6
Approach LOS		B			B			E		E
Queue Length 50th (ft)	1	8	0	75	7	0	5	161	3	192
Queue Length 95th (ft)	7	23	3	69	11	m1	m17	240	12	267
Internal Link Dist (ft)		2246			4418			11076		2261
Turn Bay Length (ft)	280		115	290		180	125		105	
Base Capacity (vph)	384	2201	985	457	2651	1188	340	690	377	693
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.03	0.00	0.23	0.14	0.01	0.02	0.31	0.01	0.37

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 5 (4%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 36.4 Intersection LOS: D
Intersection Capacity Utilization 31.2% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00	
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)	1770	3539	1583	1770	3539	1583	1770	1827		1770	1841	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.22	1.00		0.33	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	415	1827		614	1841	
Volume (vph)	1	54	1	95	349	6	6	172	25	4	218	18
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	59	1	103	379	7	7	187	27	4	237	20
RTOR Reduction (vph)	0	0	0	0	0	2	0	6	0	0	3	0
Lane Group Flow (vph)	1	59	1	103	379	5	7	208	0	4	254	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	1.2	74.7	74.7	13.2	86.7	86.7	20.1	20.1		20.1	20.1	
Effective Green, g (s)	1.2	74.7	74.7	13.2	86.7	86.7	20.1	20.1		20.1	20.1	
Actuated g/C Ratio	0.01	0.62	0.62	0.11	0.72	0.72	0.17	0.17		0.17	0.17	
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)	18	2203	985	195	2557	1144	70	306		103	308	
v/s Ratio Prot	0.00	0.02		c0.06	c0.11			0.11			c0.14	
v/s Ratio Perm			0.00			0.00	0.02			0.01		
v/c Ratio	0.06	0.03	0.00	0.53	0.15	0.00	0.10	0.68		0.04	0.82	
Uniform Delay, d1	58.8	8.7	8.6	50.5	5.2	4.6	42.3	46.9		41.9	48.2	
Progression Factor	1.00	1.00	1.00	0.80	0.42	0.05	1.11	1.10		1.00	1.00	
Incremental Delay, d2	1.3	0.0	0.0	2.5	0.1	0.0	0.6	6.0		0.2	16.1	
Delay (s)	60.1	8.7	8.6	42.7	2.3	0.2	47.7	57.6		42.0	64.4	
Level of Service	E	A	A	D	A	A	D	E		D	E	
Approach Delay (s)		9.6			10.8			57.3			64.0	
Approach LOS		A			B			E			E	

Intersection Summary

HCM Average Control Delay	34.1	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.31				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	31.2%	ICU Level of Service		A	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	20	80	28	236	455	104	44	231	48	88
Act Effct Green (s)	74.3	68.2	68.2	83.8	79.6	79.6	24.7	18.1	25.2	18.4
Actuated g/C Ratio	0.62	0.57	0.57	0.70	0.66	0.66	0.21	0.15	0.21	0.15
v/c Ratio	0.03	0.04	0.03	0.28	0.19	0.10	0.15	0.79	0.20	0.31
Control Delay	7.5	14.7	6.4	8.8	10.4	2.9	32.7	59.6	33.6	41.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.5	14.7	6.4	8.8	10.4	2.9	32.7	59.6	33.6	41.5
LOS	A	B	A	A	B	A	C	E	C	D
Approach Delay		11.7			8.9			55.3		38.7
Approach LOS		B			A			E		D
Queue Length 50th (ft)	4	16	2	61	61	0	26	148	29	55
Queue Length 95th (ft)	m12	m31	m6	116	134	27	36	222	51	98
Internal Link Dist (ft)		5533			4590			2266		2361
Turn Bay Length (ft)	300		120	320		145	150		150	
Base Capacity (vph)	758	2012	912	932	2346	1085	390	517	348	520
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.04	0.03	0.25	0.19	0.10	0.11	0.45	0.14	0.17

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 112 (93%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 21.8 Intersection LOS: C
Intersection Capacity Utilization 43.4% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	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)	1770	3539	1583	1770	3539	1583	1770	1733		1770	1812	
Flt Permitted	0.49	1.00	1.00	0.66	1.00	1.00	0.66	1.00		0.24	1.00	
Satd. Flow (perm)	912	3539	1583	1235	3539	1583	1231	1733		449	1812	
Volume (vph)	14	73	17	205	428	93	28	112	101	41	65	11
Peak-hour factor, PHF	0.70	0.91	0.61	0.87	0.94	0.89	0.64	0.90	0.94	0.85	0.90	0.69
Adj. Flow (vph)	20	80	28	236	455	104	44	124	107	48	72	16
RTOR Reduction (vph)	0	0	12	0	0	38	0	31	0	0	8	0
Lane Group Flow (vph)	20	80	16	236	455	66	44	200	0	48	80	0
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4			8		
Actuated Green, G (s)	70.1	67.4	67.4	83.0	76.3	76.3	24.8	18.2		25.2	18.4	
Effective Green, g (s)	70.1	67.4	67.4	83.0	76.3	76.3	24.8	18.2		25.2	18.4	
Actuated g/C Ratio	0.58	0.56	0.56	0.69	0.64	0.64	0.21	0.15		0.21	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	
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)	552	1988	889	906	2250	1007	284	263		169	278	
v/s Ratio Prot	0.00	0.02		c0.03	0.13		0.01	c0.12		c0.02	0.04	
v/s Ratio Perm	0.02		0.01	c0.16		0.04	0.02			0.04		
v/c Ratio	0.04	0.04	0.02	0.26	0.20	0.07	0.15	0.76		0.28	0.29	
Uniform Delay, d1	10.5	11.8	11.6	6.7	9.1	8.3	38.7	48.8		39.0	45.0	
Progression Factor	0.84	0.96	0.98	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.0	0.0	0.2	0.2	0.1	0.3	12.3		0.9	0.6	
Delay (s)	8.8	11.4	11.4	6.8	9.3	8.4	39.0	61.1		40.0	45.6	
Level of Service	A	B	B	A	A	A	D	E		D	D	
Approach Delay (s)		11.0			8.5			57.6			43.6	
Approach LOS		B			A			E			D	

Intersection Summary

HCM Average Control Delay	22.4	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.35			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	43.4%	ICU Level of Service	A	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	120	196	12
Sign Control	Free	Free	Stop

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

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	7	96	146	12	5	3
Peak Hour Factor	0.58	0.89	0.83	0.60	0.62	0.75
Hourly flow rate (vph)	12	108	176	20	8	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	196				318	186
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	196				318	186
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				99	100
cM capacity (veh/h)	1377				669	856

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	120	196	12
Volume Left	12	0	8
Volume Right	0	20	4
cSH	1377	1700	722
Volume to Capacity	0.01	0.12	0.02
Queue Length 95th (ft)	1	0	1
Control Delay (s)	0.8	0.0	10.1
Lane LOS	A		B
Approach Delay (s)	0.8	0.0	10.1
Approach LOS			B

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	20.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	100	180	72
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	20.6%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	8	75	116	33	30	20
Peak Hour Factor	0.67	0.85	0.83	0.82	0.68	0.71
Hourly flow rate (vph)	12	88	140	40	44	28
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	180				272	160
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	180				272	160
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				94	97
cM capacity (veh/h)	1396				711	885

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	100	180	72
Volume Left	12	0	44
Volume Right	0	40	28
cSH	1396	1700	770
Volume to Capacity	0.01	0.11	0.09
Queue Length 95th (ft)	1	0	8
Control Delay (s)	1.0	0.0	10.2
Lane LOS	A		B
Approach Delay (s)	1.0	0.0	10.2
Approach LOS			B

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	20.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	92	143	12
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	18.1%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	5	76	117	8	3	2
Peak Hour Factor	0.62	0.90	0.89	0.67	0.38	0.50
Hourly flow rate (vph)	8	84	131	12	8	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	143				238	137
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	143				238	137
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				99	100
cM capacity (veh/h)	1439				746	911

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	93	143	12
Volume Left	8	0	8
Volume Right	0	12	4
cSH	1439	1700	794
Volume to Capacity	0.01	0.08	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.7	0.0	9.6
Lane LOS	A		A
Approach Delay (s)	0.7	0.0	9.6
Approach LOS			A

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	18.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	68	136	24
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	16.8%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	5	50	68	49	14	5
Peak Hour Factor	0.62	0.83	0.90	0.82	0.88	0.62
Hourly flow rate (vph)	8	60	76	60	16	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	135				182	105
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	135				182	105
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				98	99
cM capacity (veh/h)	1449				803	949

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	68	135	24
Volume Left	8	0	16
Volume Right	0	60	8
cSH	1449	1700	847
Volume to Capacity	0.01	0.08	0.03
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.9	0.0	9.4
Lane LOS	A		A
Approach Delay (s)	0.9	0.0	9.4
Approach LOS			A

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	16.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	4	4	8
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	13.3%	ICU Level of Service A
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	1	1	2	0	1	2
Peak Hour Factor	0.50	0.50	0.50	0.75	0.25	0.50
Hourly flow rate (vph)	2	2	4	0	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	16	4			4	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	16	4			4	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	1000	1080			1618	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	4	4	8
Volume Left	2	0	4
Volume Right	2	0	0
cSH	1038	1700	1618
Volume to Capacity	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	8.5	0.0	3.6
Lane LOS	A		A
Approach Delay (s)	8.5	0.0	3.6
Approach LOS	A		

Intersection Summary				
Average Delay		3.9		
Intersection Capacity Utilization		13.3%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	4	64	60
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	14.3%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	1	2	50	45	4
Peak Hour Factor	0.92	0.25	0.50	0.83	0.86	0.50
Hourly flow rate (vph)	0	4	4	60	52	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	125	56	60			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	125	56	60			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	868	1010	1543			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	4	64	60
Volume Left	0	4	0
Volume Right	4	0	8
cSH	1010	1543	1700
Volume to Capacity	0.00	0.00	0.04
Queue Length 95th (ft)	0	0	0
Control Delay (s)	8.6	0.5	0.0
Lane LOS	A	A	
Approach Delay (s)	8.6	0.5	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	14.3%	ICU Level of Service	A
Analysis Period (min)	15		

Existing Saturday Intersection Analysis

Lane Group	EBT	WBT	NBL
Lane Group Flow (vph)	44	52	8
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	13.8%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	35	1	2	42	2	2
Peak Hour Factor	0.88	0.25	0.50	0.88	0.50	0.50
Hourly flow rate (vph)	40	4	4	48	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			44		98	42
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			44		98	42
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1565		899	1029

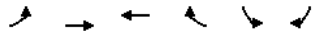
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	44	52	8
Volume Left	0	4	4
Volume Right	4	0	4
cSH	1700	1565	960
Volume to Capacity	0.03	0.00	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.6	8.8
Lane LOS		A	A
Approach Delay (s)	0.0	0.6	8.8
Approach LOS			A

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	13.8%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	44	44	8
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	13.5%	ICU Level of Service A
Analysis Period (min)	15	



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	2	35	36	2	1	2
Peak Hour Factor	0.50	0.88	0.90	0.50	0.25	0.50
Hourly flow rate (vph)	4	40	40	4	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	44				90	42
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	44				90	42
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1564				908	1029

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	44	44	8
Volume Left	4	0	4
Volume Right	0	4	4
cSH	1564	1700	965
Volume to Capacity	0.00	0.03	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.7	0.0	8.8
Lane LOS	A		A
Approach Delay (s)	0.7	0.0	8.8
Approach LOS			A

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	13.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	20	60	48
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	17.0%	ICU Level of Service A
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	7	6	44	5	6	36
Peak Hour Factor	0.58	0.75	0.85	0.62	0.75	0.90
Hourly flow rate (vph)	12	8	52	8	8	40
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	112	56			60	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	112	56			60	
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)	880	1011			1544	

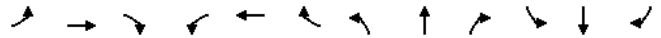
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	20	60	48
Volume Left	12	0	8
Volume Right	8	8	0
cSH	928	1700	1544
Volume to Capacity	0.02	0.04	0.01
Queue Length 95th (ft)	2	0	0
Control Delay (s)	9.0	0.0	1.3
Lane LOS	A		A
Approach Delay (s)	9.0	0.0	1.3
Approach LOS	A		

Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	17.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	72	20	120	4	40	20	32	12
Sign Control	Free		Free		Stop		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	27.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	3	61	13	14	87	1	16	16	13	4	19	7
Peak Hour Factor	0.75	0.90	0.65	0.70	0.87	0.25	0.80	0.80	0.65	0.50	0.79	0.58
Hourly flow rate (vph)	4	68	20	20	100	4	20	20	20	8	24	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	100			68			228	216	68	226	216	100
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	100			68			228	216	68	226	216	100
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			99			97	97	98	99	96	99
cM capacity (veh/h)	1493			1534			690	671	996	690	671	956

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	72	20	120	4	60	44
Volume Left	4	0	20	0	20	8
Volume Right	0	20	0	4	20	12
cSH	1493	1700	1534	1700	1021	931
Volume to Capacity	0.00	0.01	0.01	0.00	0.06	0.05
Queue Length 95th (ft)	0	0	1	0	5	4
Control Delay (s)	0.4	0.0	1.3	0.0	10.0	10.1
Lane LOS	A		A		A	B
Approach Delay (s)	0.3		1.3		10.0	10.1
Approach LOS					A	B

Intersection Summary					
Average Delay	3.9				
Intersection Capacity Utilization	27.1%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	112	108	8
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	16.6%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	2	94	94	2	2	3
Peak Hour Factor	0.50	0.87	0.90	0.50	0.50	0.75
Hourly flow rate (vph)	4	108	104	4	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	108				222	106
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	108				222	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 %	100				99	100
cM capacity (veh/h)	1482				764	948

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	112	108	8
Volume Left	4	0	4
Volume Right	0	4	4
cSH	1482	1700	846
Volume to Capacity	0.00	0.06	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.3	0.0	9.3
Lane LOS	A		A
Approach Delay (s)	0.3	0.0	9.3
Approach LOS			A

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	16.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	100	108	64
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	21.3%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	22	64	76	22	27	23
Peak Hour Factor	0.79	0.89	0.91	0.92	0.84	0.72
Hourly flow rate (vph)	28	72	84	24	32	32
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	107				223	95
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	107				223	95
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				96	97
cM capacity (veh/h)	1483				751	961

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	100	107	64
Volume Left	28	0	32
Volume Right	0	24	32
cSH	1483	1700	843
Volume to Capacity	0.02	0.06	0.08
Queue Length 95th (ft)	1	0	6
Control Delay (s)	2.2	0.0	9.6
Lane LOS	A		A
Approach Delay (s)	2.2	0.0	9.6
Approach LOS			A

Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	21.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	8	8	8
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	13.3%	ICU Level of Service A
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	1	2	2	3	1	1
Peak Hour Factor	0.25	0.50	0.50	0.75	0.25	0.25
Hourly flow rate (vph)	4	4	4	4	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	18	6			8	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	18	6			8	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	997	1077			1612	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	8	8	8
Volume Left	4	0	4
Volume Right	4	4	0
cSH	1035	1700	1612
Volume to Capacity	0.01	0.00	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.5	0.0	3.6
Lane LOS	A		A
Approach Delay (s)	8.5	0.0	3.6
Approach LOS	A		

Intersection Summary				
Average Delay	4.0			
Intersection Capacity Utilization	13.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	4	60	52
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	13.3%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	2	0	51	43	2
Peak Hour Factor	0.92	0.50	0.92	0.85	0.90	0.50
Hourly flow rate (vph)	0	4	0	60	48	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	110	50	52			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	110	50	52			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	887	1019	1554			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	4	60	52
Volume Left	0	0	0
Volume Right	4	0	4
cSH	1019	1554	1700
Volume to Capacity	0.00	0.00	0.03
Queue Length 95th (ft)	0	0	0
Control Delay (s)	8.5	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.5	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Base AM Intersection Analysis (Interim Phase)

Base 2015 AM

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	460	321	673	48	332
Sign Control	Free		Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	51.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	375	47	289	626	38	309
Peak Hour Factor	0.93	0.83	0.90	0.93	0.80	0.93
Hourly flow rate (vph)	403	57	321	673	48	332
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			460		1747	432
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			460		1747	432
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			71		29	47
cM capacity (veh/h)			1101		67	624

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	460	321	673	380
Volume Left	0	321	0	48
Volume Right	57	0	0	332
cSH	1700	1101	1700	536
Volume to Capacity	0.27	0.29	0.40	0.71
Queue Length 95th (ft)	0	30	0	141
Control Delay (s)	0.0	9.6	0.0	32.4
Lane LOS		A		D
Approach Delay (s)	0.0	3.1		32.4
Approach LOS				D

Intersection Summary				
Average Delay	8.4			
Intersection Capacity Utilization	51.9%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	37	319	316	352	264	42
Sign Control	Stop			Free	Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	36.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	28	309	291	320	243	33
Peak Hour Factor	0.75	0.97	0.92	0.91	0.92	0.78
Hourly flow rate (vph)	37	319	316	352	264	42
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1073	132	264			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1073	132	264			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	77	64	76			
cM capacity (veh/h)	163	893	1297			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	37	319	316	176	176	132	132	42
Volume Left	37	0	316	0	0	0	0	0
Volume Right	0	319	0	0	0	0	0	42
cSH	163	893	1297	1700	1700	1700	1700	1700
Volume to Capacity	0.23	0.36	0.24	0.10	0.10	0.08	0.08	0.02
Queue Length 95th (ft)	21	41	24	0	0	0	0	0
Control Delay (s)	33.6	11.3	8.7	0.0	0.0	0.0	0.0	0.0
Lane LOS	D	B	A					
Approach Delay (s)	13.6		4.1			0.0		
Approach LOS	B							

Intersection Summary				
Average Delay	5.7			
Intersection Capacity Utilization	36.2%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	270	367	323	628	184	202
Act Effct Green (s)	95.1	95.1	85.6	120.0	16.9	106.5
Actuated g/C Ratio	0.79	0.79	0.71	1.00	0.14	0.89
v/c Ratio	0.41	0.13	0.24	0.40	0.74	0.14
Control Delay	2.3	0.5	7.1	0.7	66.4	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.3	0.5	7.1	0.7	66.4	0.3
LOS	A	A	A	A	E	A
Approach Delay		1.3	2.9			
Approach LOS		A	A			
Queue Length 50th (ft)	5	3	77	0	139	0
Queue Length 95th (ft)	9	5	138	0	205	5
Internal Link Dist (ft)		808	1512			
Turn Bay Length (ft)	150					
Base Capacity (vph)	1022	2805	1329	1583	487	1428
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.13	0.24	0.40	0.38	0.14

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 4 (3%), Referenced to phase 2:WBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 8.0		Intersection LOS: A	
Intersection Capacity Utilization 50.9%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	0.95			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	3539			1863	1583	1770		1583			
Flt Permitted	0.54	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	1011	3539			1863	1583	1770		1583			
Volume (vph)	248	341	0	0	297	590	169	0	176	0	0	0
Peak-hour factor, PHF	0.92	0.93	0.92	0.92	0.92	0.94	0.92	0.92	0.87	0.92	0.92	0.92
Adj. Flow (vph)	270	367	0	0	323	628	184	0	202	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	23	0	0	0
Lane Group Flow (vph)	270	367	0	0	323	628	184	0	179	0	0	0
Turn Type	pm+pt					Free	Prot		custom			
Protected Phases	1	6			2		7					
Permitted Phases	6					Free			2 7			
Actuated Green, G (s)	95.1	95.1			85.6	120.0	16.9		106.5			
Effective Green, g (s)	95.1	95.1			85.6	120.0	16.9		106.5			
Actuated g/C Ratio	0.79	0.79			0.71	1.00	0.14		0.89			
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)	836	2805			1329	1583	249		1405			
v/s Ratio Prot	0.01	0.10			0.17		c0.10					
v/s Ratio Perm	0.24					c0.40			0.11			
v/c Ratio	0.32	0.13			0.24	0.40	0.74		0.13			
Uniform Delay, d1	4.5	2.9			6.0	0.0	49.4		0.9			
Progression Factor	0.12	0.12			1.00	1.00	1.00		1.00			
Incremental Delay, d2	0.2	0.0			0.4	0.7	10.9		0.0			
Delay (s)	0.8	0.4			6.4	0.7	60.3		0.9			
Level of Service	A	A			A	A	E		A			
Approach Delay (s)		0.5			2.7			29.2			0.0	
Approach LOS		A			A			C			A	

Intersection Summary				
HCM Average Control Delay	7.2	HCM Level of Service	A	
HCM Volume to Capacity ratio	0.45			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	4.0	
Intersection Capacity Utilization	50.9%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	589	151	160	366	84	113
Act Effct Green (s)	75.0	120.0	86.0	86.0	26.0	105.0
Actuated g/C Ratio	0.62	1.00	0.72	0.72	0.22	0.88
v/c Ratio	0.51	0.10	0.40	0.27	0.11	0.08
Control Delay	14.3	0.1	6.7	3.7	38.3	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.3	0.1	6.7	3.7	38.3	0.3
LOS	B	A	A	A	D	A
Approach Delay	11.4			4.6		
Approach LOS	B			A		
Queue Length 50th (ft)	234	0	19	43	27	0
Queue Length 95th (ft)	330	0	m28	56	44	4
Internal Link Dist (ft)	1279			808		
Turn Bay Length (ft)		150	150			
Base Capacity (vph)	1165	1583	564	1335	744	1400
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.10	0.28	0.27	0.11	0.08

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 96 (80%), Referenced to phase 2:WBTL and 6:EBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay: 9.6		Intersection LOS: A	
Intersection Capacity Utilization 50.9%		ICU Level of Service A	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00					0.97		1.00
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		1863	1583	1770	1863					3433		1583
Flt Permitted		1.00	1.00	0.32	1.00					0.95		1.00
Satd. Flow (perm)		1863	1583	596	1863					3433		1583
Volume (vph)	0	560	133	146	344	0	0	0	0	69	0	93
Peak-hour factor, PHF	0.92	0.95	0.88	0.91	0.94	0.92	0.92	0.92	0.92	0.82	0.92	0.82
Adj. Flow (vph)	0	589	151	160	366	0	0	0	0	84	0	113
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	14
Lane Group Flow (vph)	0	589	151	160	366	0	0	0	0	84	0	99
Turn Type			Free	pm+pt						Prot		custom
Protected Phases		6		5	2					3		
Permitted Phases			Free	2								3 6
Actuated Green, G (s)		75.0	120.0	86.0	86.0					26.0		105.0
Effective Green, g (s)		75.0	120.0	86.0	86.0					26.0		105.0
Actuated g/C Ratio		0.62	1.00	0.72	0.72					0.22		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)		1164	1583	496	1335					744		1385
v/s Ratio Prot		c0.32		c0.02	0.20					c0.02		
v/s Ratio Perm			0.10	0.21								0.06
v/c Ratio		0.51	0.10	0.32	0.27					0.11		0.07
Uniform Delay, d1		12.3	0.0	7.8	6.0					37.7		1.0
Progression Factor		1.00	1.00	0.73	0.52					1.00		1.00
Incremental Delay, d2		1.6	0.1	0.4	0.5					0.3		0.1
Delay (s)		13.9	0.1	6.0	3.6					38.0		1.1
Level of Service		B	A	A	A					D		A
Approach Delay (s)		11.1			4.3			0.0			16.9	
Approach LOS		B			A			A			B	

Intersection Summary					
HCM Average Control Delay	9.4	HCM Level of Service		A	
HCM Volume to Capacity ratio	0.40				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	50.9%	ICU Level of Service		A	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	449	464	362
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	73.7%	ICU Level of Service D
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	41	342	116	308	327	5
Peak Hour Factor	0.80	0.86	0.92	0.91	0.93	0.50
Hourly flow rate (vph)	51	398	126	338	352	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	126				795	295
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	126				795	295
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	99
cM capacity (veh/h)	1460				344	744

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	449	465	362
Volume Left	51	0	352
Volume Right	0	338	10
cSH	1460	1700	349
Volume to Capacity	0.04	0.27	1.04
Queue Length 95th (ft)	3	0	312
Control Delay (s)	1.2	0.0	93.3
Lane LOS	A		F
Approach Delay (s)	1.2	0.0	93.3
Approach LOS			F

Intersection Summary				
Average Delay	26.9			
Intersection Capacity Utilization	73.7%	ICU Level of Service	D	
Analysis Period (min)	15			

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	123	105	475	449
Act Effct Green (s)	12.4	12.4	99.6	99.6
Actuated g/C Ratio	0.10	0.10	0.83	0.83
v/c Ratio	0.66	0.56	0.31	0.31
Control Delay	65.6	36.7	3.2	1.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	65.6	36.7	3.2	1.8
LOS	E	D	A	A
Approach Delay	65.6	36.7	3.2	1.8
Approach LOS	E	D	A	A
Queue Length 50th (ft)	89	52	63	11
Queue Length 95th (ft)	110	73	120	17
Internal Link Dist (ft)	3138	678	2784	4178
Turn Bay Length (ft)				
Base Capacity (vph)	632	586	1515	1450
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.19	0.18	0.31	0.31

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 116 (97%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 12.3		Intersection LOS: B	
Intersection Capacity Utilization 46.9%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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			1.00	
Frt		0.98			0.95			0.99			0.99	
Flt Protected		0.99			0.98			1.00			1.00	
Satd. Flow (prot)		1818			1742			1848			1845	
Flt Permitted		0.92			0.70			0.99			0.94	
Satd. Flow (perm)		1685			1238			1825			1749	
Volume (vph)	13	62	11	21	25	24	9	408	14	24	380	12
Peak-hour factor, PHF	0.69	0.70	0.75	0.64	0.75	0.62	0.67	0.93	0.60	0.71	0.96	0.62
Adj. Flow (vph)	19	89	15	33	33	39	13	439	23	34	396	19
RTOR Reduction (vph)	0	5	0	0	25	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	118	0	0	80	0	0	474	0	0	448	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		12.4			12.4			99.6			99.6	
Effective Green, g (s)		12.4			12.4			99.6			99.6	
Actuated g/C Ratio		0.10			0.10			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)		174			128			1515			1452	
v/s Ratio Prot												
v/s Ratio Perm		c0.07			0.06			c0.26			0.26	
v/c Ratio		0.68			0.62			0.31			0.31	
Uniform Delay, d1		51.9			51.6			2.3			2.3	
Progression Factor		1.00			0.70			1.00			0.47	
Incremental Delay, d2		9.9			9.0			0.5			0.5	
Delay (s)		61.8			44.9			2.9			1.6	
Level of Service		E			D			A			A	
Approach Delay (s)		61.8			44.9			2.9			1.6	
Approach LOS		E			D			A			A	

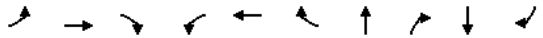
Intersection Summary			
HCM Average Control Delay	12.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	184	353	4	336	202	4	274	164
Act Effct Green (s)	83.1	81.1	75.0	69.4	69.4	28.9	28.9	28.9
Actuated g/C Ratio	0.69	0.68	0.62	0.58	0.58	0.24	0.24	0.24
v/c Ratio	0.36	0.28	0.01	0.31	0.20	0.01	0.84	0.35
Control Delay	8.2	9.2	8.0	16.0	2.8	30.0	56.9	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.2	9.2	8.0	16.0	2.8	30.0	56.9	9.1
LOS	A	A	A	B	A	C	E	A
Approach Delay		8.8		11.0		30.0	39.0	
Approach LOS		A		B		C	D	
Queue Length 50th (ft)	42	81	1	129	0	2	203	1
Queue Length 95th (ft)	65	234	2	232	39	6	44	40
Internal Link Dist (ft)		4178		602		2286	7832	
Turn Bay Length (ft)	95		150					70
Base Capacity (vph)	632	1259	692	1077	1001	714	519	675
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.28	0.01	0.31	0.20	0.01	0.53	0.24

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 118 (98%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 18.3		Intersection LOS: B	
Intersection Capacity Utilization 55.6%		ICU Level of Service B	
Analysis Period (min) 15			

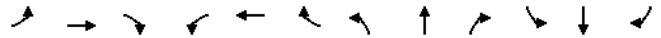
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85		1.00			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.95	1.00
Satd. Flow (prot)	1770	1863		1770	1863	1583		1863			1775	1583
Flt Permitted	0.47	1.00		0.55	1.00	1.00		1.00			0.73	1.00
Satd. Flow (perm)	875	1863		1024	1863	1583		1863			1354	1583
Volume (vph)	167	328	0	1	302	188	0	2	0	248	1	149
Peak-hour factor, PHF	0.91	0.93	0.92	0.25	0.90	0.93	0.92	0.50	0.92	0.92	0.25	0.91
Adj. Flow (vph)	184	353	0	4	336	202	0	4	0	270	4	164
RTOR Reduction (vph)	0	0	0	0	0	85	0	0	0	0	0	84
Lane Group Flow (vph)	184	353	0	4	336	117	0	4	0	0	274	80
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			Perm		Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2		2	4			8		8
Actuated Green, G (s)	83.1	77.9		70.6	69.4	69.4		28.9			28.9	28.9
Effective Green, g (s)	83.1	77.9		70.6	69.4	69.4		28.9			28.9	28.9
Actuated g/C Ratio	0.69	0.65		0.59	0.58	0.58		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
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	678	1209		610	1077	916		449			326	381
v/s Ratio Prot	c0.02	0.19		0.00	c0.18			0.00				
v/s Ratio Perm	0.17			0.00		0.07					c0.20	0.05
v/c Ratio	0.27	0.29		0.01	0.31	0.13		0.01			0.84	0.21
Uniform Delay, d1	7.0	9.1		10.2	13.0	11.5		34.7			43.4	36.4
Progression Factor	0.84	0.89		1.00	1.00	1.00		1.00			0.82	0.58
Incremental Delay, d2	0.2	0.6		0.0	0.8	0.3		0.0			17.3	0.3
Delay (s)	6.1	8.7		10.2	13.8	11.8		34.7			53.0	21.5
Level of Service	A	A		B	B	B		C			D	C
Approach Delay (s)		7.8			13.0			34.7			41.2	
Approach LOS		A			B			C			D	

Intersection Summary					
HCM Average Control Delay	19.3	HCM Level of Service		B	
HCM Volume to Capacity ratio	0.45				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	55.6%	ICU Level of Service		B	
Analysis Period (min)	15				
c Critical Lane Group					



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	29	575	24	23	488	43	18	33	61	24
Sign Control		Free			Free		Stop		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	35.9%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	24	552	18	21	454	32	8	2	25	42	6	18
Peak Hour Factor	0.83	0.96	0.75	0.90	0.93	0.75	0.58	0.50	0.75	0.82	0.62	0.75
Hourly flow rate (vph)	29	575	24	23	488	43	14	4	33	51	10	24
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	488			575			928	1168	288	882	1168	244
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	488			575			928	1168	288	882	1168	244
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 %	97			98			93	98	95	76	95	97
cM capacity (veh/h)	1071			994			199	183	709	217	183	756

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	29	288	288	24	23	244	244	43	51	85
Volume Left	29	0	0	0	23	0	0	0	14	51
Volume Right	0	0	0	24	0	0	0	43	33	24
cSH	1071	1700	1700	1700	994	1700	1700	1700	561	295
Volume to Capacity	0.03	0.17	0.17	0.01	0.02	0.14	0.14	0.03	0.09	0.29
Queue Length 95th (ft)	2	0	0	0	2	0	0	0	7	29
Control Delay (s)	8.5	0.0	0.0	0.0	8.7	0.0	0.0	0.0	15.5	23.4
Lane LOS	A				A				C	C
Approach Delay (s)	0.4				0.4				15.5	23.4
Approach LOS									C	C

Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	35.9%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	107	62	273	10	298	19
Sign Control	Stop	Stop	Free		Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	21	22	34	5	19	21	18	229	5	21	248	13
Peak Hour Factor	0.64	0.68	0.81	0.50	0.80	0.75	0.75	0.92	0.50	0.75	0.92	0.69
Hourly flow rate (vph)	33	32	42	10	24	28	24	249	10	28	270	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)												
pX, platoon unblocked												
vC, conflicting volume	662	622	270	681	622	249	270			249		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	662	622	270	681	622	249	270			249		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	90	92	95	97	94	96	98			98		
cM capacity (veh/h)	334	387	769	313	387	790	1294			1317		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	107	62	273	10	298	19
Volume Left	33	10	24	0	28	0
Volume Right	42	28	0	10	0	19
cSH	453	479	1294	1700	1317	1700
Volume to Capacity	0.24	0.13	0.02	0.01	0.02	0.01
Queue Length 95th (ft)	23	11	1	0	2	0
Control Delay (s)	15.4	13.6	0.8	0.0	0.9	0.0
Lane LOS	C	B	A		A	
Approach Delay (s)	15.4	13.6	0.8		0.9	
Approach LOS	C	B				

Intersection Summary					
Average Delay	3.9				
Intersection Capacity Utilization	45.7%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	NBL
Lane Group Flow (vph)	117	37	9
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	15.1%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	95	1	1	25	1	4
Peak Hour Factor	0.84	0.25	0.25	0.75	0.25	0.75
Hourly flow rate (vph)	113	4	4	33	4	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			117		156	115
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			117		156	115
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			1471		833	937

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	117	37	9
Volume Left	0	4	4
Volume Right	4	0	5
cSH	1700	1471	889
Volume to Capacity	0.07	0.00	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.8	9.1
Lane LOS		A	A
Approach Delay (s)	0.0	0.8	9.1
Approach LOS			A

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	15.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	111	46	8
Sign Control	Free	Free	Stop

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

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	2	89	33	1	2	1
Peak Hour Factor	0.50	0.83	0.78	0.25	0.50	0.25
Hourly flow rate (vph)	4	107	42	4	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	46				160	44
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	46				160	44
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1561				829	1026

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	111	46	8
Volume Left	4	0	4
Volume Right	0	4	4
cSH	1561	1700	917
Volume to Capacity	0.00	0.03	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.3	0.0	9.0
Lane LOS	A		A
Approach Delay (s)	0.3	0.0	9.0
Approach LOS			A

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	16.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	18	57	87
Sign Control	Stop	Free	Free

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	7	7	32	8	24	39
Peak Hour Factor	0.75	0.75	0.75	0.58	0.62	0.82
Hourly flow rate (vph)	9	9	43	14	39	48
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	175	50			56	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	175	50			56	
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			97	
cM capacity (veh/h)	795	1019			1548	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	19	56	86
Volume Left	9	0	39
Volume Right	9	14	0
cSH	893	1700	1548
Volume to Capacity	0.02	0.03	0.03
Queue Length 95th (ft)	2	0	2
Control Delay (s)	9.1	0.0	3.4
Lane LOS	A		A
Approach Delay (s)	9.1	0.0	3.4
Approach LOS	A		

Intersection Summary				
Average Delay		2.9		
Intersection Capacity Utilization		20.0%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	550	71	159	47	47	19
Sign Control	Free		Free	Stop		Stop

Intersection Summary			
Control Type: Unsignalized			
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												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	2	508	52	22	65	0	15	8	32	0	12	0
Peak Hour Factor	0.50	0.93	0.73	0.32	0.72	0.92	0.46	0.58	0.68	0.92	0.62	0.92
Hourly flow rate (vph)	4	546	71	69	90	0	33	14	47	0	19	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	90			546			792	782	546	789	782	90
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	90			546			792	782	546	789	782	90
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			93			88	95	91	100	94	100
cM capacity (veh/h)	1505			1023			277	303	537	257	303	967

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	550	71	159	0	93	19
Volume Left	4	0	69	0	33	0
Volume Right	0	71	0	0	47	0
cSH	1505	1700	1023	1700	573	292
Volume to Capacity	0.00	0.04	0.07	0.00	0.16	0.07
Queue Length 95th (ft)	0	0	5	0	14	5
Control Delay (s)	0.1	0.0	4.1	0.0	16.2	18.2
Lane LOS	A		A		C	C
Approach Delay (s)	0.1		4.1		16.2	18.2
Approach LOS					C	C

Intersection Summary					
Average Delay	2.9				
Intersection Capacity Utilization	43.5%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	EBR	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	538	52	123	10	47	57	38
Sign Control	Free		Free		Stop		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	27.2%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	457	38	0	87	5	8	4	9	33	27	0
Peak Hour Factor	0.92	0.85	0.73	0.92	0.71	0.50	0.58	0.38	0.40	0.58	0.72	0.92
Hourly flow rate (vph)	0	538	52	0	123	10	14	11	22	57	38	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	123			538			679	660	269	397	660	123
vC1, stage 1 conf vol							538	538		123	123	
vC2, stage 2 conf vol							141	123		274	538	
vCu, unblocked vol	123			538			679	660	269	397	660	123
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			97	98	97	91	92	100
cM capacity (veh/h)	1462			1027			468	498	729	638	498	905

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	0	269	269	52	0	123	10	47	57	38
Volume Left	0	0	0	0	0	0	0	14	57	0
Volume Right	0	0	0	52	0	0	10	22	0	0
cSH	1700	1700	1700	1700	1700	1700	1700	575	638	488
Volume to Capacity	0.00	0.16	0.16	0.03	0.00	0.07	0.01	0.08	0.09	0.08
Queue Length 95th (ft)	0	0	0	0	0	0	0	7	7	6
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.8	11.2	13.0
Lane LOS								B	B	B
Approach Delay (s)	0.0				0.0			11.8	11.9	
Approach LOS								B	B	

Intersection Summary					
Average Delay	1.9				
Intersection Capacity Utilization	27.2%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	34	560	11	52	127	4	11	477	10	223
Act Effct Green (s)	7.7	60.1	60.1	8.2	62.7	62.7	41.6	41.6	41.6	41.6
Actuated g/C Ratio	0.06	0.50	0.50	0.07	0.52	0.52	0.35	0.35	0.35	0.35
v/c Ratio	0.30	0.32	0.01	0.43	0.07	0.00	0.03	0.75	0.05	0.35
Control Delay	59.7	21.3	13.8	49.8	15.0	9.0	22.0	39.8	21.8	28.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.7	21.3	13.8	49.8	15.0	9.0	22.0	39.8	21.8	28.6
LOS	E	C	B	D	B	A	C	D	C	C
Approach Delay		23.3			24.7			39.4		28.3
Approach LOS		C			C			D		C
Queue Length 50th (ft)	26	133	1	28	34	0	5	281	5	126
Queue Length 95th (ft)	46	204	4	38	47	1	7	325	8	150
Internal Link Dist (ft)		2246			4418			11076		2261
Turn Bay Length (ft)	280		115	290		180	125		105	
Base Capacity (vph)	251	1774	798	266	1849	829	468	818	261	834
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.32	0.01	0.20	0.07	0.00	0.02	0.58	0.04	0.27

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 4 (3%), Referenced to phase 2:WBT and 6:EBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 29.5		Intersection LOS: C	
Intersection Capacity Utilization 48.7%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		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)	1770	3539	1583	1770	3539	1583	1770	1799		1770	1849	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.51	1.00		0.20	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	957	1799		381	1849	
Volume (vph)	24	459	4	40	85	1	4	331	87	5	180	4
Peak-hour factor, PHF	0.71	0.82	0.38	0.77	0.67	0.25	0.38	0.90	0.80	0.50	0.85	0.38
Adj. Flow (vph)	34	560	11	52	127	4	11	368	109	10	212	11
RTOR Reduction (vph)	0	0	5	0	0	2	0	10	0	0	2	0
Lane Group Flow (vph)	34	560	6	52	127	2	11	467	0	10	221	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	5.3	59.3	59.3	7.1	61.1	61.1	41.6	41.6		41.6	41.6	
Effective Green, g (s)	5.3	59.3	59.3	7.1	61.1	61.1	41.6	41.6		41.6	41.6	
Actuated g/C Ratio	0.04	0.49	0.49	0.06	0.51	0.51	0.35	0.35		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)	78	1749	782	105	1802	806	332	624		132	641	
v/s Ratio Prot	0.02	c0.16		c0.03	0.04			c0.26			0.12	
v/s Ratio Perm			0.00			0.00	0.01			0.03		
v/c Ratio	0.44	0.32	0.01	0.50	0.07	0.00	0.03	0.75		0.08	0.34	
Uniform Delay, d1	55.9	18.2	15.4	54.7	15.0	14.5	25.9	34.6		26.3	29.1	
Progression Factor	1.00	1.00	1.00	0.74	0.81	0.61	1.04	0.98		1.00	1.00	
Incremental Delay, d2	3.9	0.5	0.0	3.6	0.1	0.0	0.0	4.9		0.2	0.3	
Delay (s)	59.8	18.7	15.4	43.9	12.2	8.8	27.0	38.9		26.5	29.4	
Level of Service	E	B	B	D	B	A	C	D		C	C	
Approach Delay (s)		21.0			21.1			38.6			29.3	
Approach LOS		C			C			D			C	

Intersection Summary					
HCM Average Control Delay	28.0	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.50				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	48.7%	ICU Level of Service		A	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	28	569	43	131	137	48	19	368	132	187
Act Effct Green (s)	65.3	59.3	59.3	72.8	66.8	66.8	29.5	23.2	39.1	34.6
Actuated g/C Ratio	0.54	0.49	0.49	0.61	0.56	0.56	0.25	0.19	0.33	0.29
v/c Ratio	0.04	0.33	0.05	0.36	0.07	0.05	0.06	0.88	0.44	0.35
Control Delay	7.8	11.3	1.8	15.1	15.9	5.9	23.8	52.3	31.8	33.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.8	11.3	1.8	15.1	15.9	5.9	23.8	52.3	31.8	33.7
LOS	A	B	A	B	B	A	C	D	C	C
Approach Delay		10.5			14.1			50.9		32.9
Approach LOS		B			B			D		C
Queue Length 50th (ft)	5	65	0	40	26	0	10	193	74	105
Queue Length 95th (ft)	m10	81	m1	88	55	19	16	264	103	160
Internal Link Dist (ft)		5533			4590			2266		2361
Turn Bay Length (ft)	300		120	320		145	150		150	
Base Capacity (vph)	797	1750	800	445	1970	902	403	634	334	644
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.33	0.05	0.29	0.07	0.05	0.05	0.58	0.40	0.29

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 24.9		Intersection LOS: C	
Intersection Capacity Utilization 60.4%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.89		1.00	0.98	
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)	1770	3539	1583	1770	3539	1583	1770	1659		1770	1828	
Flt Permitted	0.67	1.00	1.00	0.35	1.00	1.00	0.64	1.00		0.14	1.00	
Satd. Flow (perm)	1239	3539	1583	648	3539	1583	1192	1659		253	1828	
Volume (vph)	21	506	31	115	123	38	12	86	253	119	146	15
Peak-hour factor, PHF	0.75	0.89	0.72	0.88	0.90	0.80	0.62	0.87	0.94	0.90	0.89	0.65
Adj. Flow (vph)	28	569	43	131	137	48	19	99	269	132	164	23
RTOR Reduction (vph)	0	0	18	0	0	23	0	96	0	0	4	0
Lane Group Flow (vph)	28	569	25	131	137	25	19	272	0	132	183	0
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4			8		
Actuated Green, G (s)	60.7	57.0	57.0	70.6	62.9	62.9	28.3	25.5		41.4	34.6	
Effective Green, g (s)	60.7	57.0	57.0	70.6	62.9	62.9	28.3	25.5		41.4	34.6	
Actuated g/C Ratio	0.51	0.48	0.48	0.59	0.52	0.52	0.24	0.21		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)	643	1681	752	471	1855	830	295	353		238	527	
v/s Ratio Prot	0.00	c0.16		c0.02	0.04		0.00	c0.16		c0.06	0.10	
v/s Ratio Perm	0.02		0.02	0.14		0.02	0.01			0.14		
v/c Ratio	0.04	0.34	0.03	0.28	0.07	0.03	0.06	0.77		0.55	0.35	
Uniform Delay, d1	14.9	19.7	16.8	11.8	14.1	13.8	35.4	44.5		30.5	33.8	
Progression Factor	0.59	0.52	0.17	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.5	0.1	0.3	0.1	0.1	0.1	10.0		2.8	0.4	
Delay (s)	8.8	10.7	3.0	12.1	14.2	13.9	35.5	54.4		33.3	34.2	
Level of Service	A	B	A	B	B	B	D	D		C	C	
Approach Delay (s)		10.1			13.3			53.5			33.8	
Approach LOS		B			B			D			C	

Intersection Summary					
HCM Average Control Delay	25.4	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.47				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		16.0	
Intersection Capacity Utilization	60.4%	ICU Level of Service		B	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	155	95	47
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	23.7%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	9	125	58	13	21	12
Peak Hour Factor	0.67	0.88	0.82	0.55	0.75	0.62
Hourly flow rate (vph)	13	142	71	24	28	19
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	94				251	83
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	94				251	83
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				96	98
cM capacity (veh/h)	1500				730	977

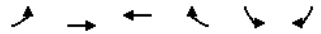
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	155	94	47
Volume Left	13	0	28
Volume Right	0	24	19
cSH	1500	1700	814
Volume to Capacity	0.01	0.06	0.06
Queue Length 95th (ft)	1	0	5
Control Delay (s)	0.7	0.0	9.7
Lane LOS	A		A
Approach Delay (s)	0.7	0.0	9.7
Approach LOS			A

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	23.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	184	89	75
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	25.3%	ICU Level of Service A
Analysis Period (min)	15	



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	54	108	60	14	22	33
Peak Hour Factor	0.88	0.88	0.91	0.60	0.79	0.70
Hourly flow rate (vph)	61	123	66	23	28	47
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	89				323	78
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	89				323	78
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				96	95
cM capacity (veh/h)	1506				643	983

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	184	89	75
Volume Left	61	0	28
Volume Right	0	23	47
cSH	1506	1700	822
Volume to Capacity	0.04	0.05	0.09
Queue Length 95th (ft)	3	0	8
Control Delay (s)	2.7	0.0	9.8
Lane LOS	A		A
Approach Delay (s)	2.7	0.0	9.8
Approach LOS			A

Intersection Summary				
Average Delay	3.5			
Intersection Capacity Utilization	25.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	141	89	18
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	17.7%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	2	115	79	2	9	4
Peak Hour Factor	0.50	0.84	0.93	0.50	0.67	0.75
Hourly flow rate (vph)	4	137	85	4	13	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	89				232	87
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	89				232	87
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	99
cM capacity (veh/h)	1507				754	972

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	141	89	19
Volume Left	4	0	13
Volume Right	0	4	5
cSH	1507	1700	806
Volume to Capacity	0.00	0.05	0.02
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.2	0.0	9.6
Lane LOS	A		A
Approach Delay (s)	0.2	0.0	9.6
Approach LOS			A

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	17.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	90	99	75
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	17.9%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	5	72	60	13	49	4
Peak Hour Factor	0.50	0.90	0.75	0.69	0.70	0.75
Hourly flow rate (vph)	10	80	80	19	70	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	99				189	89
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	99				189	89
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				91	99
cM capacity (veh/h)	1494				794	969

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	90	99	75
Volume Left	10	0	70
Volume Right	0	19	5
cSH	1494	1700	805
Volume to Capacity	0.01	0.06	0.09
Queue Length 95th (ft)	1	0	8
Control Delay (s)	0.9	0.0	9.9
Lane LOS	A		A
Approach Delay (s)	0.9	0.0	9.9
Approach LOS			A

Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	17.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	8	9	8
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	13.3%	ICU Level of Service A
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	2	2	2	4	1	2
Peak Hour Factor	0.50	0.50	0.50	0.75	0.25	0.50
Hourly flow rate (vph)	4	4	4	5	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	19	7			9	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	19	7			9	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	996	1076			1610	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	8	9	8
Volume Left	4	0	4
Volume Right	4	5	0
cSH	1035	1700	1610
Volume to Capacity	0.01	0.01	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.5	0.0	3.6
Lane LOS	A		A
Approach Delay (s)	8.5	0.0	3.6
Approach LOS	A		

Intersection Summary				
Average Delay		3.8		
Intersection Capacity Utilization		13.3%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	14	52	42
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	13.3%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	5	2	1	39	35	0
Peak Hour Factor	0.50	0.50	0.25	0.82	0.83	0.92
Hourly flow rate (vph)	10	4	4	48	42	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	98	42	42			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	98	42	42			
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	100	100			
cM capacity (veh/h)	899	1028	1567			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	14	52	42
Volume Left	10	4	0
Volume Right	4	0	0
cSH	933	1567	1700
Volume to Capacity	0.02	0.00	0.02
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.9	0.6	0.0
Lane LOS	A	A	
Approach Delay (s)	8.9	0.6	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Base 2015 AM Improved

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	460	321	673	48	332
Sign Control	Free		Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	51.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	375	47	289	626	38	309
Peak Hour Factor	0.93	0.83	0.90	0.93	0.80	0.93
Hourly flow rate (vph)	403	57	321	673	48	332
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			460		1747	432
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			460		1747	432
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			71		29	47
cM capacity (veh/h)			1101		67	624

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	460	321	673	380
Volume Left	0	321	0	48
Volume Right	57	0	0	332
cSH	1700	1101	1700	536
Volume to Capacity	0.27	0.29	0.40	0.71
Queue Length 95th (ft)	0	30	0	141
Control Delay (s)	0.0	9.6	0.0	32.4
Lane LOS		A		D
Approach Delay (s)	0.0	3.1		32.4
Approach LOS				D

Intersection Summary				
Average Delay		8.4		
Intersection Capacity Utilization		51.9%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	449	126	338	352	10
Sign Control	Free	Free		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	41	342	116	308	327	5
Peak Hour Factor	0.80	0.86	0.92	0.91	0.93	0.50
Hourly flow rate (vph)	51	398	126	338	352	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	126				626	126
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	126				626	126
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				19	99
cM capacity (veh/h)	1460				432	924

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	449	126	338	362
Volume Left	51	0	0	352
Volume Right	0	0	338	10
cSH	1460	1700	1700	444
Volume to Capacity	0.04	0.07	0.20	0.81
Queue Length 95th (ft)	3	0	0	189
Control Delay (s)	1.2	0.0	0.0	39.9
Lane LOS	A			E
Approach Delay (s)	1.2	0.0		39.9
Approach LOS				E

Intersection Summary				
Average Delay	11.7			
Intersection Capacity Utilization	51.7%	ICU Level of Service		A
Analysis Period (min)	15			

Base PM Intersection Analysis (Interim Phase)

Base 2015 PM

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	764	174	401	51	307
Sign Control	Free		Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	612	85	157	361	42	267
Peak Hour Factor	0.92	0.86	0.90	0.90	0.82	0.87
Hourly flow rate (vph)	665	99	174	401	51	307
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			764		1465	715
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			764		1465	715
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			79		54	29
cM capacity (veh/h)			849		112	431

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	764	174	401	358
Volume Left	0	174	0	51
Volume Right	99	0	0	307
cSH	1700	849	1700	503
Volume to Capacity	0.45	0.21	0.24	0.71
Queue Length 95th (ft)	0	19	0	141
Control Delay (s)	0.0	10.3	0.0	35.8
Lane LOS		B		E
Approach Delay (s)	0.0	3.1		35.8
Approach LOS				E

Intersection Summary				
Average Delay	8.6			
Intersection Capacity Utilization	60.6%	ICU Level of Service		B
Analysis Period (min)	15			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	42	231	307	316	420	38
Sign Control	Stop			Free	Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	35	215	282	294	395	31
Peak Hour Factor	0.83	0.93	0.92	0.93	0.94	0.81
Hourly flow rate (vph)	42	231	307	316	420	38
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1191	210	420			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1191	210	420			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	68	71	73			
cM capacity (veh/h)	131	796	1135			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	42	231	307	158	158	210	210	38
Volume Left	42	0	307	0	0	0	0	0
Volume Right	0	231	0	0	0	0	0	38
cSH	131	796	1135	1700	1700	1700	1700	1700
Volume to Capacity	0.32	0.29	0.27	0.09	0.09	0.12	0.12	0.02
Queue Length 95th (ft)	32	30	27	0	0	0	0	0
Control Delay (s)	44.8	11.4	9.3	0.0	0.0	0.0	0.0	0.0
Lane LOS	E	B	A					
Approach Delay (s)	16.5		4.6			0.0		
Approach LOS	C							

Intersection Summary				
Average Delay	5.4			
Intersection Capacity Utilization	39.9%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	173	747	439	122	197	211
Act Effct Green (s)	94.2	94.2	84.7	120.0	17.8	106.5
Actuated g/C Ratio	0.78	0.78	0.71	1.00	0.15	0.89
v/c Ratio	0.31	0.27	0.33	0.08	0.75	0.15
Control Delay	2.5	0.9	8.2	0.1	66.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.5	0.9	8.2	0.1	66.0	0.3
LOS	A	A	A	A	E	A
Approach Delay		1.2	6.5			
Approach LOS		A	A			
Queue Length 50th (ft)	2	4	117	0	148	0
Queue Length 95th (ft)	9	17	202	0	211	5
Internal Link Dist (ft)		808	1512			
Turn Bay Length (ft)	150					
Base Capacity (vph)	815	2778	1315	1583	487	1429
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.27	0.33	0.08	0.40	0.15

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 6 (5%), Referenced to phase 2:WBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 9.4		Intersection LOS: A	
Intersection Capacity Utilization 57.0%		ICU Level of Service B	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	0.95			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	3539			1863	1583	1770		1583			
Flt Permitted	0.47	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	867	3539			1863	1583	1770		1583			
Volume (vph)	163	717	0	0	417	110	173	0	196	0	0	0
Peak-hour factor, PHF	0.94	0.96	0.92	0.92	0.95	0.90	0.88	0.92	0.93	0.92	0.92	0.92
Adj. Flow (vph)	173	747	0	0	439	122	197	0	211	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	24	0	0	0
Lane Group Flow (vph)	173	747	0	0	439	122	197	0	187	0	0	0
Turn Type	pm+pt					Free	Prot		custom			
Protected Phases	1	6			2		7					
Permitted Phases	6					Free			2 7			
Actuated Green, G (s)	94.2	94.2			84.7	120.0	17.8		106.5			
Effective Green, g (s)	94.2	94.2			84.7	120.0	17.8		106.5			
Actuated g/C Ratio	0.78	0.78			0.71	1.00	0.15		0.89			
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)	722	2778			1315	1583	263		1405			
v/s Ratio Prot	0.01	c0.21			c0.24		c0.11					
v/s Ratio Perm	0.18					0.08			0.12			
v/c Ratio	0.24	0.27			0.33	0.08	0.75		0.13			
Uniform Delay, d1	5.6	3.5			6.8	0.0	49.0		0.9			
Progression Factor	0.25	0.18			1.00	1.00	1.00		1.00			
Incremental Delay, d2	0.2	0.0			0.7	0.1	11.1		0.0			
Delay (s)	1.6	0.7			7.5	0.1	60.0		0.9			
Level of Service	A	A			A	A	E		A			
Approach Delay (s)		0.8			5.9			29.5			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM Average Control Delay	8.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	397	174	246	447	580	314
Act Effct Green (s)	61.4	120.0	76.0	76.0	36.0	101.4
Actuated g/C Ratio	0.51	1.00	0.63	0.63	0.30	0.84
v/c Ratio	0.42	0.11	0.53	0.38	0.56	0.23
Control Delay	20.3	0.1	12.2	7.9	37.9	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.3	0.1	12.2	7.9	37.9	0.6
LOS	C	A	B	A	D	A
Approach Delay	14.2			9.5		
Approach LOS	B			A		
Queue Length 50th (ft)	183	0	52	102	194	0
Queue Length 95th (ft)	281	0	m87	139	253	14
Internal Link Dist (ft)	1279			808		
Turn Bay Length (ft)		150	150			
Base Capacity (vph)	953	1583	626	1180	1030	1386
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.11	0.39	0.38	0.56	0.23

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 92 (77%), Referenced to phase 2:WBTL and 6:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.56
Intersection Signal Delay: 17.1 Intersection LOS: B
Intersection Capacity Utilization 57.0% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00					0.97		1.00
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		1863	1583	1770	1863					3433		1583
Flt Permitted		1.00	1.00	0.39	1.00					0.95		1.00
Satd. Flow (perm)		1863	1583	734	1863					3433		1583
Volume (vph)	0	361	155	221	416	0	0	0	0	551	0	295
Peak-hour factor, PHF	0.92	0.91	0.89	0.90	0.93	0.92	0.92	0.92	0.92	0.95	0.92	0.94
Adj. Flow (vph)	0	397	174	246	447	0	0	0	0	580	0	314
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	49
Lane Group Flow (vph)	0	397	174	246	447	0	0	0	0	580	0	265
Turn Type			Free	pm+pt						Prot		custom
Protected Phases		6		5	2					3		
Permitted Phases			Free	2								3 6
Actuated Green, G (s)		61.4	120.0	76.0	76.0					36.0		101.4
Effective Green, g (s)		61.4	120.0	76.0	76.0					36.0		101.4
Actuated g/C Ratio		0.51	1.00	0.63	0.63					0.30		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)		953	1583	556	1180					1030		1338
v/s Ratio Prot		0.21		c0.04	0.24					c0.17		
v/s Ratio Perm			0.11	c0.24								0.17
v/c Ratio		0.42	0.11	0.44	0.38					0.56		0.20
Uniform Delay, d1		18.2	0.0	10.9	10.6					35.4		1.7
Progression Factor		1.00	1.00	0.86	0.65					1.00		1.00
Incremental Delay, d2		1.3	0.1	0.5	0.9					2.2		0.3
Delay (s)		19.5	0.1	9.9	7.8					37.6		2.1
Level of Service		B	A	A	A					D		A
Approach Delay (s)		13.6			8.5			0.0			25.1	
Approach LOS		B			A			A			C	

Intersection Summary

HCM Average Control Delay	16.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	205	775	409
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	66.0%	ICU Level of Service C
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	9	175	325	357	316	47
Peak Hour Factor	0.67	0.91	0.89	0.87	0.92	0.71
Hourly flow rate (vph)	13	192	365	410	343	66
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	365				790	570
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	365				790	570
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				3	87
cM capacity (veh/h)	1193				355	521

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	206	776	410
Volume Left	13	0	343
Volume Right	0	410	66
cSH	1193	1700	374
Volume to Capacity	0.01	0.46	1.09
Queue Length 95th (ft)	1	0	370
Control Delay (s)	0.6	0.0	107.8
Lane LOS	A		F
Approach Delay (s)	0.6	0.0	107.8
Approach LOS			F

Intersection Summary			
Average Delay	31.8		
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	117	147	403	801
Act Effct Green (s)	13.8	13.8	98.2	98.2
Actuated g/C Ratio	0.12	0.12	0.82	0.82
v/c Ratio	0.57	0.71	0.27	0.54
Control Delay	53.1	50.9	3.4	3.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	53.1	50.9	3.4	3.1
LOS	D	D	A	A
Approach Delay	53.1	50.9	3.4	3.1
Approach LOS	D	D	A	A
Queue Length 50th (ft)	75	99	56	23
Queue Length 95th (ft)	118	149	111	83
Internal Link Dist (ft)	3138	678	2784	4178
Turn Bay Length (ft)				
Base Capacity (vph)	443	443	1468	1475
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.26	0.33	0.27	0.54

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 120		
Offset: 1 (1%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.71		
Intersection Signal Delay: 11.9	Intersection LOS: B	
Intersection Capacity Utilization 68.0%	ICU Level of Service C	
Analysis Period (min) 15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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			1.00	
Frt		0.96			0.96			0.99			1.00	
Flt Protected		0.99			0.99			1.00			1.00	
Satd. Flow (prot)		1774			1765			1848			1851	
Flt Permitted		0.82			0.85			0.97			0.97	
Satd. Flow (perm)		1463			1522			1795			1804	
Volume (vph)	16	51	25	24	65	40	8	356	16	26	707	19
Peak-hour factor, PHF	0.70	0.83	0.75	0.83	0.92	0.85	0.58	0.96	0.88	0.79	0.95	0.80
Adj. Flow (vph)	23	61	33	29	71	47	14	371	18	33	744	24
RTOR Reduction (vph)	0	14	0	0	17	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	103	0	0	130	0	0	402	0	0	800	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		13.8			13.8			98.2			98.2	
Effective Green, g (s)		13.8			13.8			98.2			98.2	
Actuated g/C Ratio		0.12			0.12			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)		168			175			1469			1476	
v/s Ratio Prot												
v/s Ratio Perm		0.07			c0.09			0.22			c0.44	
v/c Ratio		0.61			0.74			0.27			0.54	
Uniform Delay, d1		50.6			51.4			2.6			3.6	
Progression Factor		1.00			0.76			1.00			0.42	
Incremental Delay, d2		6.5			15.2			0.5			1.3	
Delay (s)		57.0			54.4			3.0			2.8	
Level of Service		E			D			A			A	
Approach Delay (s)		57.0			54.4			3.0			2.8	
Approach LOS		E			D			A			A	

Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	212	290	11	4	420	264	12	291	338
Act Effct Green (s)	82.6	80.6	80.6	72.6	66.9	66.9	29.4	29.4	29.4
Actuated g/C Ratio	0.69	0.67	0.67	0.60	0.56	0.56	0.24	0.24	0.24
v/c Ratio	0.46	0.23	0.01	0.01	0.40	0.26	0.03	0.85	0.62
Control Delay	10.5	9.9	5.8	10.0	19.4	3.2	23.5	46.5	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.5	9.9	5.8	10.0	19.4	3.2	23.5	46.5	9.2
LOS	B	A	A	A	B	A	C	D	A
Approach Delay		10.0			13.1		23.5	26.5	
Approach LOS		B			B		C	C	
Queue Length 50th (ft)	49	67	1	1	169	0	5	229	104
Queue Length 95th (ft)	m111	210	m2	2	347	51	4	m240	m108
Internal Link Dist (ft)		4178			602		2286	7832	
Turn Bay Length (ft)	95		100	150					70
Base Capacity (vph)	557	1251	1066	775	1039	1000	610	512	713
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.23	0.01	0.01	0.40	0.26	0.02	0.57	0.47

Intersection Summary

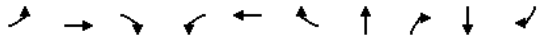
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 17 (14%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 16.9 Intersection LOS: B
Intersection Capacity Utilization 64.0% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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		1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.96			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98			0.95	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583		1750			1770	1583
Flt Permitted	0.40	1.00	1.00	0.58	1.00	1.00		0.92			0.75	1.00
Satd. Flow (perm)	743	1863	1583	1085	1863	1583		1639			1397	1583
Volume (vph)	195	267	4	1	403	243	1	1	2	276	0	318
Peak-hour factor, PHF	0.92	0.92	0.38	0.25	0.96	0.92	0.25	0.25	0.50	0.95	0.92	0.94
Adj. Flow (vph)	212	290	11	4	420	264	4	4	4	291	0	338
RTOR Reduction (vph)	0	0	4	0	0	117	0	3	0	0	0	158
Lane Group Flow (vph)	212	290	7	4	420	147	0	9	0	0	291	180
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			Perm		Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2		2	4			8		8
Actuated Green, G (s)	82.6	77.4	77.4	68.1	66.9	66.9		29.4			29.4	29.4
Effective Green, g (s)	82.6	77.4	77.4	68.1	66.9	66.9		29.4			29.4	29.4
Actuated g/C Ratio	0.69	0.64	0.64	0.57	0.56	0.56		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
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)	612	1202	1021	623	1039	883		402			342	388
v/s Ratio Prot	c0.03	0.16		0.00	c0.23							
v/s Ratio Perm	0.20		0.00	0.00		0.09		0.01			c0.21	0.11
v/c Ratio	0.35	0.24	0.01	0.01	0.40	0.17		0.02			0.85	0.46
Uniform Delay, d1	8.0	9.0	7.6	11.2	15.2	13.0		34.4			43.2	38.6
Progression Factor	0.90	0.95	0.85	1.00	1.00	1.00		1.00			0.61	0.33
Incremental Delay, d2	0.3	0.5	0.0	0.0	1.2	0.4		0.0			16.8	0.8
Delay (s)	7.5	9.0	6.5	11.3	16.3	13.4		34.4			43.2	13.6
Level of Service	A	A	A	B	B	B		C			D	B
Approach Delay (s)		8.3			15.2			34.4			27.3	
Approach LOS		A			B			C			C	

Intersection Summary

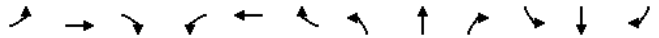
HCM Average Control Delay	17.5	HCM Level of Service		B		
HCM Volume to Capacity ratio	0.52					
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		12.0		
Intersection Capacity Utilization	64.0%	ICU Level of Service		B		
Analysis Period (min)	15					

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	24	478	10	33	600	57	34	32	42	14
Sign Control		Free			Free		Stop		Stop	

Intersection Summary										
Control Type: Unsignalized										
Intersection Capacity Utilization 32.3%				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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	12	459	5	20	564	47	16	4	22	33	0	12
Peak Hour Factor	0.50	0.96	0.50	0.61	0.94	0.83	0.70	0.38	0.68	0.78	0.92	0.83
Hourly flow rate (vph)	24	478	10	33	600	57	23	11	32	42	0	14
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	600			478			892	1192	239	958	1192	300
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	600			478			892	1192	239	958	1192	300
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			97			90	94	96	77	100	98
cM capacity (veh/h)	973			1080			222	176	762	186	176	696

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	24	239	239	10	33	300	300	57	66	57
Volume Left	24	0	0	0	33	0	0	0	23	42
Volume Right	0	0	0	10	0	0	0	57	32	14
cSH	973	1700	1700	1700	1080	1700	1700	1700	409	249
Volume to Capacity	0.02	0.14	0.14	0.01	0.03	0.18	0.18	0.03	0.16	0.23
Queue Length 95th (ft)	2	0	0	0	2	0	0	0	14	21
Control Delay (s)	8.8	0.0	0.0	0.0	8.4	0.0	0.0	0.0	17.9	25.0
Lane LOS	A				A				C	C
Approach Delay (s)	0.4				0.4				17.9	25.0
Approach LOS									C	C

Intersection Summary						
Average Delay		2.3				
Intersection Capacity Utilization		32.3%		ICU Level of Service		A
Analysis Period (min)		15				

Lane Group	EBT	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	56	70	305	11	489	23
Sign Control	Stop	Stop	Free		Free	

Intersection Summary			
Control Type: Unsignalized			
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			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	9	14	15	2	33	18	34	234	4	24	428	16
Peak Hour Factor	0.50	0.75	0.81	0.50	0.78	0.75	0.81	0.89	0.38	0.71	0.94	0.70
Hourly flow rate (vph)	18	19	19	4	42	24	42	263	11	34	455	23
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	915	870	455	898	870	263	455			263		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	915	870	455	898	870	263	455			263		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	91	93	97	98	84	97	96			97		
cM capacity (veh/h)	206	272	605	228	272	776	1105			1301		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	55	70	305	11	489	23
Volume Left	18	4	42	0	34	0
Volume Right	19	24	0	11	0	23
cSH	296	344	1105	1700	1301	1700
Volume to Capacity	0.19	0.20	0.04	0.01	0.03	0.01
Queue Length 95th (ft)	17	19	3	0	2	0
Control Delay (s)	20.0	18.1	1.5	0.0	0.8	0.0
Lane LOS	C	C	A		A	
Approach Delay (s)	20.0	18.1	1.4		0.8	
Approach LOS	C	C				

Intersection Summary				
Average Delay	3.4			
Intersection Capacity Utilization	54.0%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	WBT	NBL
Lane Group Flow (vph)	56	108	8
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	20.4%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	38	2	7	88	1	2
Peak Hour Factor	0.73	0.50	0.50	0.94	0.25	0.50
Hourly flow rate (vph)	52	4	14	94	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			56		176	54
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			56		176	54
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		100	100
cM capacity (veh/h)			1549		807	1013

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	56	108	8
Volume Left	0	14	4
Volume Right	4	0	4
cSH	1700	1549	898
Volume to Capacity	0.03	0.01	0.01
Queue Length 95th (ft)	0	1	1
Control Delay (s)	0.0	1.0	9.0
Lane LOS		A	A
Approach Delay (s)	0.0	1.0	9.0
Approach LOS			A

Intersection Summary				
Average Delay		1.1		
Intersection Capacity Utilization	20.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	55	113	8
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	15.2%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	1	42	98	1	2	1
Peak Hour Factor	0.25	0.82	0.90	0.25	0.50	0.25
Hourly flow rate (vph)	4	51	109	4	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	113				170	111
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	113				170	111
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1477				818	942

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	55	113	8
Volume Left	4	0	4
Volume Right	0	4	4
cSH	1477	1700	876
Volume to Capacity	0.00	0.07	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.6	0.0	9.1
Lane LOS	A		A
Approach Delay (s)	0.6	0.0	9.1
Approach LOS			A

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	15.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	37	66	72
Sign Control	Stop	Free	Free

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	9	18	47	7	11	51
Peak Hour Factor	0.67	0.75	0.83	0.75	0.75	0.90
Hourly flow rate (vph)	13	24	57	9	15	57
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	147	61			66	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	147	61			66	
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)	837	1004			1536	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	37	66	71
Volume Left	13	0	15
Volume Right	24	9	0
cSH	937	1700	1536
Volume to Capacity	0.04	0.04	0.01
Queue Length 95th (ft)	3	0	1
Control Delay (s)	9.0	0.0	1.6
Lane LOS	A		A
Approach Delay (s)	9.0	0.0	1.6
Approach LOS	A		

Intersection Summary				
Average Delay		2.6		
Intersection Capacity Utilization		20.0%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	83	19	585	4	90	23	15	11
Sign Control	Free		Free		Stop		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	46.9%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	62	14	19	423	1	46	19	16	0	11	4
Peak Hour Factor	0.25	0.78	0.75	0.44	0.78	0.25	0.89	0.50	0.70	0.92	0.75	0.38
Hourly flow rate (vph)	4	79	19	43	542	4	52	38	23	0	15	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	542			79			723	716	79	735	716	542
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	542			79			723	716	79	735	716	542
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			97			84	89	98	100	96	98
cM capacity (veh/h)	1026			1519			316	344	981	292	344	540

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	83	19	585	4	113	25
Volume Left	4	0	43	0	52	0
Volume Right	0	19	0	4	23	11
cSH	1026	1700	1519	1700	411	591
Volume to Capacity	0.00	0.01	0.03	0.00	0.27	0.04
Queue Length 95th (ft)	0	0	2	0	27	3
Control Delay (s)	0.4	0.0	0.8	0.0	17.8	14.2
Lane LOS	A		A		C	B
Approach Delay (s)	0.4		0.8		17.8	14.2
Approach LOS					C	B

Intersection Summary					
Average Delay	3.5				
Intersection Capacity Utilization	46.9%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	66	24	11	528	38	103	22	15
Sign Control	Free			Free		Stop	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	37.8%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	54	18	4	401	32	40	19	0	0	11	14
Peak Hour Factor	0.92	0.82	0.75	0.38	0.76	0.84	0.57	0.57	0.92	0.56	0.50	0.92
Hourly flow rate (vph)	0	66	24	11	528	38	70	33	0	0	22	15
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	528			66			626	615	33	598	615	528
vC1, stage 1 conf vol							66	66		549	549	
vC2, stage 2 conf vol							560	549		50	66	
vCu, unblocked vol	528			66			626	615	33	598	615	528
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			84	93	100	100	96	97
cM capacity (veh/h)	1036			1534			430	494	1033	468	494	495

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	0	33	33	24	11	528	38	104	0	37
Volume Left	0	0	0	0	11	0	0	70	0	0
Volume Right	0	0	0	24	0	0	38	0	0	15
cSH	1700	1700	1700	1700	1534	1700	1700	449	1700	836
Volume to Capacity	0.00	0.02	0.02	0.01	0.01	0.31	0.02	0.23	0.00	0.04
Queue Length 95th (ft)	0	0	0	0	1	0	0	22	0	3
Control Delay (s)	0.0	0.0	0.0	0.0	7.4	0.0	0.0	15.4	0.0	12.6
Lane LOS					A			C	A	B
Approach Delay (s)	0.0				0.1			15.4	12.6	
Approach LOS								C	B	

Intersection Summary					
Average Delay	2.7				
Intersection Capacity Utilization	37.8%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	1	68	1	122	446	8	8	252	5	301
Act Effct Green (s)	5.6	70.1	70.1	15.0	87.2	87.2	22.8	22.8	22.8	22.8
Actuated g/C Ratio	0.05	0.58	0.58	0.12	0.73	0.73	0.19	0.19	0.19	0.19
v/c Ratio	0.01	0.03	0.00	0.55	0.17	0.01	0.05	0.71	0.03	0.85
Control Delay	55.0	14.2	14.0	45.9	2.7	0.1	40.6	59.7	36.0	67.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.0	14.2	14.0	45.9	2.7	0.1	40.6	59.7	36.0	67.5
LOS	D	B	B	D	A	A	D	E	D	E
Approach Delay		14.8			11.8			59.1		67.0
Approach LOS		B			B			E		E
Queue Length 50th (ft)	1	10	0	90	0	0	6	191	3	225
Queue Length 95th (ft)	7	30	4	69	13	m0	m17	275	14	303
Internal Link Dist (ft)		2246			4418			11076		2261
Turn Bay Length (ft)	280		115	290		180	125		105	
Base Capacity (vph)	354	2069	926	457	2572	1153	314	705	355	709
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.03	0.00	0.27	0.17	0.01	0.03	0.36	0.01	0.42

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 16 (13%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 36.1 Intersection LOS: D
Intersection Capacity Utilization 34.3% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00	
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)	1770	3539	1583	1770	3539	1583	1770	1827		1770	1841	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.18	1.00		0.29	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	343	1827		541	1841	
Volume (vph)	1	63	1	112	410	7	7	202	29	5	256	21
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	68	1	122	446	8	8	220	32	5	278	23
RTOR Reduction (vph)	0	0	0	0	0	2	0	6	0	0	3	0
Lane Group Flow (vph)	1	68	1	122	446	6	8	246	0	5	298	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	1.2	70.2	70.2	15.0	84.0	84.0	22.8	22.8		22.8	22.8	
Effective Green, g (s)	1.2	70.2	70.2	15.0	84.0	84.0	22.8	22.8		22.8	22.8	
Actuated g/C Ratio	0.01	0.59	0.59	0.12	0.70	0.70	0.19	0.19		0.19	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	
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)	18	2070	926	221	2477	1108	65	347		103	350	
v/s Ratio Prot	0.00	0.02		c0.07	c0.13			0.13			c0.16	
v/s Ratio Perm			0.00			0.00	0.02			0.01		
v/c Ratio	0.06	0.03	0.00	0.55	0.18	0.01	0.12	0.71		0.05	0.85	
Uniform Delay, d1	58.8	10.5	10.3	49.3	6.2	5.4	40.3	45.5		39.7	47.0	
Progression Factor	1.00	1.00	1.00	0.77	0.41	0.03	1.10	1.12		1.00	1.00	
Incremental Delay, d2	1.3	0.0	0.0	2.9	0.2	0.0	0.8	6.3		0.2	17.6	
Delay (s)	60.1	10.6	10.3	40.9	2.7	0.2	45.4	57.1		39.9	64.6	
Level of Service	E	B	B	D	A	A	D	E		D	E	
Approach Delay (s)		11.3			10.8			56.7			64.2	
Approach LOS		B			B			E			E	

Intersection Summary

HCM Average Control Delay	34.2	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.36				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	34.3%	ICU Level of Service		A	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	23	95	33	277	535	122	52	274	56	103
Act Effct Green (s)	69.5	63.3	63.3	80.8	76.5	76.5	27.8	20.9	28.2	21.1
Actuated g/C Ratio	0.58	0.53	0.53	0.67	0.64	0.64	0.23	0.17	0.24	0.18
v/c Ratio	0.04	0.05	0.04	0.34	0.24	0.12	0.16	0.82	0.22	0.31
Control Delay	8.8	17.0	6.8	10.6	12.2	3.1	30.5	60.5	31.8	39.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.8	17.0	6.8	10.6	12.2	3.1	30.5	60.5	31.8	39.6
LOS	A	B	A	B	B	A	C	E	C	D
Approach Delay		13.5			10.6			55.7		36.8
Approach LOS		B			B			E		D
Queue Length 50th (ft)	6	20	3	80	81	0	30	180	33	63
Queue Length 95th (ft)	m14	m36	m6	149	171	32	38	258	55	107
Internal Link Dist (ft)		5533			4590			2266		2361
Turn Bay Length (ft)	300		120	320		145	150		150	
Base Capacity (vph)	674	1868	851	897	2255	1053	400	560	338	565
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.05	0.04	0.31	0.24	0.12	0.13	0.49	0.17	0.18

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 3 (3%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 22.9 Intersection LOS: C
Intersection Capacity Utilization 47.6% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	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)	1770	3539	1583	1770	3539	1583	1770	1733		1770	1811	
Flt Permitted	0.45	1.00	1.00	0.65	1.00	1.00	0.63	1.00		0.20	1.00	
Satd. Flow (perm)	844	3539	1583	1212	3539	1583	1175	1733		371	1811	
Volume (vph)	16	86	20	241	503	109	33	132	119	48	76	13
Peak-hour factor, PHF	0.70	0.91	0.61	0.87	0.94	0.89	0.64	0.90	0.94	0.85	0.90	0.69
Adj. Flow (vph)	23	95	33	277	535	122	52	147	127	56	84	19
RTOR Reduction (vph)	0	0	16	0	0	48	0	31	0	0	8	0
Lane Group Flow (vph)	23	95	17	277	535	74	52	243	0	56	95	0
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4			8		
Actuated Green, G (s)	65.3	62.5	62.5	80.0	73.2	73.2	27.8	20.9		28.2	21.1	
Effective Green, g (s)	65.3	62.5	62.5	80.0	73.2	73.2	27.8	20.9		28.2	21.1	
Actuated g/C Ratio	0.54	0.52	0.52	0.67	0.61	0.61	0.23	0.17		0.24	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)	481	1843	824	871	2159	966	306	302		170	318	
v/s Ratio Prot	0.00	0.03		c0.04	0.15		0.01	c0.14		c0.02	0.05	
v/s Ratio Perm	0.02		0.01	c0.18		0.05	0.03			0.06		
v/c Ratio	0.05	0.05	0.02	0.32	0.25	0.08	0.17	0.81		0.33	0.30	
Uniform Delay, d1	12.6	14.2	13.9	8.0	10.8	9.6	36.5	47.6		37.1	43.0	
Progression Factor	0.83	0.93	0.91	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1	0.0	0.2	0.3	0.2	0.3	14.5		1.1	0.5	
Delay (s)	10.5	13.3	12.7	8.2	11.0	9.7	36.8	62.1		38.3	43.5	
Level of Service	B	B	B	A	B	A	D	E		D	D	
Approach Delay (s)		12.7			10.0			58.0			41.7	
Approach LOS		B			B			E			D	

Intersection Summary

HCM Average Control Delay	23.5	HCM Level of Service	C		
HCM Volume to Capacity ratio	0.41				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0		
Intersection Capacity Utilization	47.6%	ICU Level of Service	A		
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	141	230	15
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	22.5%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	8	113	172	14	6	4
Peak Hour Factor	0.58	0.89	0.83	0.60	0.62	0.75
Hourly flow rate (vph)	14	127	207	23	10	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	231				373	219
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	231				373	219
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				98	99
cM capacity (veh/h)	1337				621	821

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	141	231	15
Volume Left	14	0	10
Volume Right	0	23	5
cSH	1337	1700	680
Volume to Capacity	0.01	0.14	0.02
Queue Length 95th (ft)	1	0	2
Control Delay (s)	0.8	0.0	10.4
Lane LOS	A		B
Approach Delay (s)	0.8	0.0	10.4
Approach LOS			B

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	22.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	117	212	85
Sign Control	Free	Free	Stop

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

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	9	88	136	39	35	24
Peak Hour Factor	0.67	0.85	0.83	0.82	0.68	0.71
Hourly flow rate (vph)	13	104	164	48	51	34
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	211				318	188
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	211				318	188
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				92	96
cM capacity (veh/h)	1359				669	854

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	117	211	85
Volume Left	13	0	51
Volume Right	0	48	34
cSH	1359	1700	732
Volume to Capacity	0.01	0.12	0.12
Queue Length 95th (ft)	1	0	10
Control Delay (s)	1.0	0.0	10.6
Lane LOS	A		B
Approach Delay (s)	1.0	0.0	10.6
Approach LOS			B

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	22.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	109	167	15
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	19.6%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	6	89	137	9	4	2
Peak Hour Factor	0.62	0.90	0.89	0.67	0.38	0.50
Hourly flow rate (vph)	10	99	154	13	11	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	167				279	161
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	167				279	161
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				99	100
cM capacity (veh/h)	1410				706	884

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	109	167	15
Volume Left	10	0	11
Volume Right	0	13	4
cSH	1410	1700	748
Volume to Capacity	0.01	0.10	0.02
Queue Length 95th (ft)	1	0	1
Control Delay (s)	0.7	0.0	9.9
Lane LOS	A		A
Approach Delay (s)	0.7	0.0	9.9
Approach LOS			A

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	19.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	81	160	28
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	18.1%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	6	59	80	58	16	6
Peak Hour Factor	0.62	0.83	0.90	0.82	0.88	0.62
Hourly flow rate (vph)	10	71	89	71	18	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	160				215	124
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	160				215	124
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				98	99
cM capacity (veh/h)	1420				768	926

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	81	160	28
Volume Left	10	0	18
Volume Right	0	71	10
cSH	1420	1700	817
Volume to Capacity	0.01	0.09	0.03
Queue Length 95th (ft)	1	0	3
Control Delay (s)	1.0	0.0	9.6
Lane LOS	A		A
Approach Delay (s)	1.0	0.0	9.6
Approach LOS			A

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	18.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	4	4	8
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	13.3%	ICU Level of Service A
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	1	1	2	0	1	2
Peak Hour Factor	0.50	0.50	0.50	0.75	0.25	0.50
Hourly flow rate (vph)	2	2	4	0	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	16	4			4	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	16	4			4	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	1000	1080			1618	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	4	4	8
Volume Left	2	0	4
Volume Right	2	0	0
cSH	1038	1700	1618
Volume to Capacity	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	8.5	0.0	3.6
Lane LOS	A		A
Approach Delay (s)	8.5	0.0	3.6
Approach LOS	A		

Intersection Summary				
Average Delay		3.9		
Intersection Capacity Utilization		13.3%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	4	75	72
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	14.7%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	1	2	59	53	5
Peak Hour Factor	0.92	0.25	0.50	0.83	0.86	0.50
Hourly flow rate (vph)	0	4	4	71	62	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	146	67	72			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	146	67	72			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	844	997	1529			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	4	75	72
Volume Left	0	4	0
Volume Right	4	0	10
cSH	997	1529	1700
Volume to Capacity	0.00	0.00	0.04
Queue Length 95th (ft)	0	0	0
Control Delay (s)	8.6	0.4	0.0
Lane LOS	A	A	
Approach Delay (s)	8.6	0.4	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	14.7%	ICU Level of Service	A
Analysis Period (min)	15		

Base 2015 PM Improved

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	764	174	401	51	307
Sign Control	Free		Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	612	85	157	361	42	267
Peak Hour Factor	0.92	0.86	0.90	0.90	0.82	0.87
Hourly flow rate (vph)	665	99	174	401	51	307
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			764		1465	715
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			764		1465	715
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			79		54	29
cM capacity (veh/h)			849		112	431

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	764	174	401	358
Volume Left	0	174	0	51
Volume Right	99	0	0	307
cSH	1700	849	1700	503
Volume to Capacity	0.45	0.21	0.24	0.71
Queue Length 95th (ft)	0	19	0	141
Control Delay (s)	0.0	10.3	0.0	35.8
Lane LOS		B		E
Approach Delay (s)	0.0	3.1		35.8
Approach LOS				E

Intersection Summary				
Average Delay		8.6		
Intersection Capacity Utilization	60.6%	ICU Level of Service		B
Analysis Period (min)	15			

Lane Group	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	205	365	410	343	66
Sign Control	Free	Free		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	41.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	9	175	325	357	316	47
Peak Hour Factor	0.67	0.91	0.89	0.87	0.92	0.71
Hourly flow rate (vph)	13	192	365	410	343	66
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	365				584	365
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	365				584	365
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				27	90
cM capacity (veh/h)	1193				468	680

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	206	365	410	410
Volume Left	13	0	0	343
Volume Right	0	0	410	66
cSH	1193	1700	1700	559
Volume to Capacity	0.01	0.21	0.24	0.73
Queue Length 95th (ft)	1	0	0	155
Control Delay (s)	0.6	0.0	0.0	27.8
Lane LOS	A			D
Approach Delay (s)	0.6	0.0		27.8
Approach LOS				D

Intersection Summary				
Average Delay		8.3		
Intersection Capacity Utilization		41.3%	ICU Level of Service	A
Analysis Period (min)		15		

Base Saturday Intersection Analysis (Interim Phase)

Base 2015 Saturday

Lane Group	EBT	WBT	NBL
Lane Group Flow (vph)	51	60	8
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	14.2%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	41	1	2	49	2	2
Peak Hour Factor	0.88	0.25	0.50	0.88	0.50	0.50
Hourly flow rate (vph)	47	4	4	56	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			51		112	49
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			51		112	49
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1556		882	1020

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	51	60	8
Volume Left	0	4	4
Volume Right	4	0	4
cSH	1700	1556	946
Volume to Capacity	0.03	0.00	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.5	8.8
Lane LOS		A	A
Approach Delay (s)	0.0	0.5	8.8
Approach LOS			A

Intersection Summary				
Average Delay		0.9		
Intersection Capacity Utilization		14.2%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	51	51	8
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	13.8%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	2	41	42	2	1	2
Peak Hour Factor	0.50	0.88	0.90	0.50	0.25	0.50
Hourly flow rate (vph)	4	47	47	4	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	51				103	49
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	51				103	49
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1556				893	1020

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	51	51	8
Volume Left	4	0	4
Volume Right	0	4	4
cSH	1556	1700	952
Volume to Capacity	0.00	0.03	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.6	0.0	8.8
Lane LOS	A		A
Approach Delay (s)	0.6	0.0	8.8
Approach LOS			A

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	13.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	23	71	56
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	18.2%	ICU Level of Service A
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	8	7	52	6	7	42
Peak Hour Factor	0.58	0.75	0.85	0.62	0.75	0.90
Hourly flow rate (vph)	14	9	61	10	9	47
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	131	66			71	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	131	66			71	
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	99			99	
cM capacity (veh/h)	857	998			1530	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	23	71	56
Volume Left	14	0	9
Volume Right	9	10	0
cSH	909	1700	1530
Volume to Capacity	0.03	0.04	0.01
Queue Length 95th (ft)	2	0	0
Control Delay (s)	9.1	0.0	1.3
Lane LOS	A		A
Approach Delay (s)	9.1	0.0	1.3
Approach LOS	A		

Intersection Summary				
Average Delay		1.9		
Intersection Capacity Utilization		18.2%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	85	23	140	4	48	23	38	14
Sign Control	Free		Free		Stop		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	28.3%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	4	72	15	16	102	1	19	19	15	5	22	8
Peak Hour Factor	0.75	0.90	0.65	0.70	0.87	0.25	0.80	0.80	0.65	0.50	0.79	0.58
Hourly flow rate (vph)	5	80	23	23	117	4	24	24	23	10	28	14
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	117			80			268	254	80	265	254	117
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	117			80			268	254	80	265	254	117
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			98			96	96	98	98	96	99
cM capacity (veh/h)	1471			1518			643	638	980	643	638	935

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	85	23	140	4	71	52
Volume Left	5	0	23	0	24	10
Volume Right	0	23	0	4	23	14
cSH	1471	1700	1518	1700	952	872
Volume to Capacity	0.00	0.01	0.02	0.00	0.07	0.06
Queue Length 95th (ft)	0	0	1	0	6	5
Control Delay (s)	0.5	0.0	1.3	0.0	10.3	10.4
Lane LOS	A		A		B	B
Approach Delay (s)	0.4		1.3		10.3	10.4
Approach LOS					B	B

Intersection Summary					
Average Delay	4.0				
Intersection Capacity Utilization	28.3%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	130	126	9
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	17.4%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	2	110	110	2	2	4
Peak Hour Factor	0.50	0.87	0.90	0.50	0.50	0.75
Hourly flow rate (vph)	4	126	122	4	4	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	126				259	124
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	126				259	124
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	99
cM capacity (veh/h)	1460				728	926

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	130	126	9
Volume Left	4	0	4
Volume Right	0	4	5
cSH	1460	1700	830
Volume to Capacity	0.00	0.07	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.3	0.0	9.4
Lane LOS	A		A
Approach Delay (s)	0.3	0.0	9.4
Approach LOS			A

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	17.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	117	126	76
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	22.1%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	26	75	89	26	32	27
Peak Hour Factor	0.79	0.89	0.91	0.92	0.84	0.72
Hourly flow rate (vph)	33	84	98	28	38	38
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	126				262	112
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	126				262	112
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				95	96
cM capacity (veh/h)	1460				711	941

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	117	126	76
Volume Left	33	0	38
Volume Right	0	28	38
cSH	1460	1700	809
Volume to Capacity	0.02	0.07	0.09
Queue Length 95th (ft)	2	0	8
Control Delay (s)	2.2	0.0	9.9
Lane LOS	A		A
Approach Delay (s)	2.2	0.0	9.9
Approach LOS			A

Intersection Summary				
Average Delay		3.2		
Intersection Capacity Utilization		22.1%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	8	9	8
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	13.3%	ICU Level of Service A
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	1	2	2	4	1	1
Peak Hour Factor	0.25	0.50	0.50	0.75	0.25	0.25
Hourly flow rate (vph)	4	4	4	5	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	19	7			9	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	19	7			9	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	996	1076			1610	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	8	9	8
Volume Left	4	0	4
Volume Right	4	5	0
cSH	1035	1700	1610
Volume to Capacity	0.01	0.01	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.5	0.0	3.6
Lane LOS	A		A
Approach Delay (s)	8.5	0.0	3.6
Approach LOS	A		

Intersection Summary				
Average Delay	3.8			
Intersection Capacity Utilization	13.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	4	71	61
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	13.3%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	2	0	60	51	2
Peak Hour Factor	0.92	0.50	0.92	0.85	0.90	0.50
Hourly flow rate (vph)	0	4	0	71	57	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	129	59	61			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	129	59	61			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	865	1007	1543			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	4	71	61
Volume Left	0	0	0
Volume Right	4	0	4
cSH	1007	1543	1700
Volume to Capacity	0.00	0.00	0.04
Queue Length 95th (ft)	0	0	0
Control Delay (s)	8.6	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.6	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Base AM Intersection Analysis (Full Build Out)

Base 2028 AM

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	579	404	848	59	418
Sign Control	Free		Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	472	59	364	789	47	389
Peak Hour Factor	0.93	0.83	0.90	0.93	0.80	0.93
Hourly flow rate (vph)	508	71	404	848	59	418
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			579		2200	543
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			579		2200	543
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			59		0	22
cM capacity (veh/h)			995		29	540

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	579	404	848	477
Volume Left	0	404	0	59
Volume Right	71	0	0	418
cSH	1700	995	1700	202
Volume to Capacity	0.34	0.41	0.50	2.37
Queue Length 95th (ft)	0	50	0	975
Control Delay (s)	0.0	11.1	0.0	666.8
Lane LOS		B		F
Approach Delay (s)	0.0	3.6		666.8
Approach LOS				F

Intersection Summary				
Average Delay	139.7			
Intersection Capacity Utilization	61.9%	ICU Level of Service		B
Analysis Period (min)	15			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	48	401	399	443	333	53
Sign Control	Stop			Free	Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	42.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	36	389	367	403	306	41
Peak Hour Factor	0.75	0.97	0.92	0.91	0.92	0.78
Hourly flow rate (vph)	48	401	399	443	333	53
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1352	166	333			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1352	166	333			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	50	53	67			
cM capacity (veh/h)	95	849	1224			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	48	401	399	221	221	166	166	53
Volume Left	48	0	399	0	0	0	0	0
Volume Right	0	401	0	0	0	0	0	53
cSH	95	849	1224	1700	1700	1700	1700	1700
Volume to Capacity	0.50	0.47	0.33	0.13	0.13	0.10	0.10	0.03
Queue Length 95th (ft)	55	64	36	0	0	0	0	0
Control Delay (s)	76.2	13.0	9.4	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	B	A					
Approach Delay (s)	19.7		4.4			0.0		
Approach LOS	C							

Intersection Summary				
Average Delay	7.5			
Intersection Capacity Utilization	42.1%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	339	461	408	790	232	255
Act Effct Green (s)	91.6	91.6	79.1	120.0	20.4	103.4
Actuated g/C Ratio	0.76	0.76	0.66	1.00	0.17	0.86
v/c Ratio	0.71	0.17	0.33	0.50	0.77	0.18
Control Delay	12.4	0.5	11.4	1.1	64.2	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.4	0.5	11.4	1.1	64.2	0.5
LOS	B	A	B	A	E	A
Approach Delay		5.5	4.6			
Approach LOS		A	A			
Queue Length 50th (ft)	20	2	123	0	174	0
Queue Length 95th (ft)	54	2	250	0	243	11
Internal Link Dist (ft)		808	1512			
Turn Bay Length (ft)	150					
Base Capacity (vph)	735	2703	1227	1583	472	1523
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.17	0.33	0.50	0.49	0.17

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 33 (28%), Referenced to phase 2:WBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 10.1		Intersection LOS: B	
Intersection Capacity Utilization 60.7%		ICU Level of Service B	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	0.95			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	3539			1863	1583	1770		1583			
Flt Permitted	0.45	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	833	3539			1863	1583	1770		1583			
Volume (vph)	312	429	0	0	375	743	213	0	222	0	0	0
Peak-hour factor, PHF	0.92	0.93	0.92	0.92	0.92	0.94	0.92	0.92	0.87	0.92	0.92	0.92
Adj. Flow (vph)	339	461	0	0	408	790	232	0	255	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	35	0	0	0
Lane Group Flow (vph)	339	461	0	0	408	790	232	0	220	0	0	0
Turn Type	pm+pt					Free	Prot		custom			
Protected Phases	1	6			2		7					
Permitted Phases	6					Free			2 7			
Actuated Green, G (s)	91.6	91.6			79.0	120.0	20.4		103.4			
Effective Green, g (s)	91.6	91.6			79.0	120.0	20.4		103.4			
Actuated g/C Ratio	0.76	0.76			0.66	1.00	0.17		0.86			
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)	703	2701			1226	1583	301		1364			
v/s Ratio Prot	0.03	0.13			0.22		c0.13					
v/s Ratio Perm	0.33					c0.50			0.14			
v/c Ratio	0.48	0.17			0.33	0.50	0.77		0.16			
Uniform Delay, d1	5.1	3.9			9.0	0.0	47.6		1.3			
Progression Factor	1.05	0.09			1.00	1.00	1.00		1.00			
Incremental Delay, d2	0.4	0.0			0.7	1.1	11.5		0.1			
Delay (s)	5.8	0.4			9.7	1.1	59.1		1.4			
Level of Service	A	A			A	A	E		A			
Approach Delay (s)		2.7			4.0			28.9			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM Average Control Delay	8.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	743	190	202	462	106	143
Act Effct Green (s)	77.9	120.0	91.0	91.0	21.0	102.9
Actuated g/C Ratio	0.65	1.00	0.76	0.76	0.18	0.86
v/c Ratio	0.61	0.12	0.55	0.33	0.18	0.10
Control Delay	15.6	0.2	13.5	3.3	43.1	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.6	0.2	13.5	3.3	43.1	0.5
LOS	B	A	B	A	D	A
Approach Delay	12.5			6.4		
Approach LOS	B			A		
Queue Length 50th (ft)	299	0	23	57	36	0
Queue Length 95th (ft)	489	0	m70	77	57	8
Internal Link Dist (ft)	1279			808		
Turn Bay Length (ft)		150	150			
Base Capacity (vph)	1209	1583	496	1413	601	1377
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.12	0.41	0.33	0.18	0.10

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 100 (83%), Referenced to phase 2:WBTL and 6:EBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 11.1		Intersection LOS: B	
Intersection Capacity Utilization 60.7%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00					0.97		1.00
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		1863	1583	1770	1863					3433		1583
Flt Permitted		1.00	1.00	0.24	1.00					0.95		1.00
Satd. Flow (perm)		1863	1583	456	1863					3433		1583
Volume (vph)	0	706	167	184	434	0	0	0	0	87	0	117
Peak-hour factor, PHF	0.92	0.95	0.88	0.91	0.94	0.92	0.92	0.92	0.92	0.82	0.92	0.82
Adj. Flow (vph)	0	743	190	202	462	0	0	0	0	106	0	143
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	20
Lane Group Flow (vph)	0	743	190	202	462	0	0	0	0	106	0	123
Turn Type			Free	pm+pt						Prot		custom
Protected Phases		6		5	2					3		
Permitted Phases			Free	2								3 6
Actuated Green, G (s)		77.9	120.0	91.0	91.0					21.0		102.9
Effective Green, g (s)		77.9	120.0	91.0	91.0					21.0		102.9
Actuated g/C Ratio		0.65	1.00	0.76	0.76					0.18		0.86
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)		1209	1583	445	1413					601		1357
v/s Ratio Prot		c0.40		c0.03	0.25					c0.03		
v/s Ratio Perm			0.12	0.31								0.08
v/c Ratio		0.61	0.12	0.45	0.33					0.18		0.09
Uniform Delay, d1		12.3	0.0	9.0	4.7					42.1		1.3
Progression Factor		1.00	1.00	2.04	0.58					1.00		1.00
Incremental Delay, d2		2.3	0.2	0.7	0.6					0.6		0.1
Delay (s)		14.6	0.2	19.1	3.2					42.8		1.5
Level of Service		B	A	B	A					D		A
Approach Delay (s)		11.7			8.1			0.0			19.0	
Approach LOS		B			A			A			B	

Intersection Summary					
HCM Average Control Delay	11.4	HCM Level of Service		B	
HCM Volume to Capacity ratio	0.52				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	60.7%	ICU Level of Service		B	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	566	586	455
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	90.3%	ICU Level of Service E
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	52	431	147	388	412	6
Peak Hour Factor	0.80	0.86	0.92	0.91	0.93	0.50
Hourly flow rate (vph)	65	501	160	426	443	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	160				1004	373
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	160				1004	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	98
cM capacity (veh/h)	1419				256	673

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	566	586	455
Volume Left	65	0	443
Volume Right	0	426	12
cSH	1419	1700	260
Volume to Capacity	0.05	0.34	1.75
Queue Length 95th (ft)	4	0	751
Control Delay (s)	1.3	0.0	386.2
Lane LOS	A		F
Approach Delay (s)	1.3	0.0	386.2
Approach LOS			F

Intersection Summary				
Average Delay	109.8			
Intersection Capacity Utilization	90.3%	ICU Level of Service	E	
Analysis Period (min)	15			

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	151	131	601	564
Act Effct Green (s)	14.4	14.4	97.6	97.6
Actuated g/C Ratio	0.12	0.12	0.81	0.81
v/c Ratio	0.71	0.63	0.41	0.40
Control Delay	65.9	45.6	4.4	2.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	65.9	45.6	4.4	2.1
LOS	E	D	A	A
Approach Delay	65.9	45.6	4.4	2.1
Approach LOS	E	D	A	A
Queue Length 50th (ft)	110	67	101	14
Queue Length 95th (ft)	129	99	190	27
Internal Link Dist (ft)	3138	678	2784	4178
Turn Bay Length (ft)				
Base Capacity (vph)	555	508	1473	1397
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.27	0.26	0.41	0.40

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 109 (91%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 13.6		Intersection LOS: B	
Intersection Capacity Utilization 57.0%		ICU Level of Service B	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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			1.00	
Frt		0.98			0.95			0.99			0.99	
Flt Protected		0.99			0.98			1.00			1.00	
Satd. Flow (prot)		1821			1743			1847			1845	
Flt Permitted		0.90			0.65			0.98			0.93	
Satd. Flow (perm)		1657			1144			1811			1720	
Volume (vph)	16	78	13	27	31	30	12	514	18	30	478	15
Peak-hour factor, PHF	0.69	0.70	0.75	0.64	0.75	0.62	0.67	0.93	0.60	0.71	0.96	0.62
Adj. Flow (vph)	23	111	17	42	41	48	18	553	30	42	498	24
RTOR Reduction (vph)	0	5	0	0	22	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	146	0	0	109	0	0	600	0	0	563	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		14.4			14.4			97.6			97.6	
Effective Green, g (s)		14.4			14.4			97.6			97.6	
Actuated g/C Ratio		0.12			0.12			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)		199			137			1473			1399	
v/s Ratio Prot												
v/s Ratio Perm		0.09			c0.10			c0.33			0.33	
v/c Ratio		0.73			0.80			0.41			0.40	
Uniform Delay, d1		50.9			51.4			3.1			3.1	
Progression Factor		1.00			0.81			1.00			0.36	
Incremental Delay, d2		13.0			26.1			0.8			0.8	
Delay (s)		63.9			67.5			4.0			1.9	
Level of Service		E			E			A			A	
Approach Delay (s)		63.9			67.5			4.0			1.9	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM Average Control Delay	15.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	231	444	4	422	255	6	343	207
Act Effct Green (s)	75.8	73.8	65.5	59.8	59.8	36.2	36.2	36.2
Actuated g/C Ratio	0.63	0.62	0.55	0.50	0.50	0.30	0.30	0.30
v/c Ratio	0.56	0.39	0.01	0.45	0.28	0.01	0.84	0.37
Control Delay	14.1	13.4	12.0	24.4	3.8	24.7	51.7	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.1	13.4	12.0	24.4	3.8	24.7	51.7	10.9
LOS	B	B	B	C	A	C	D	B
Approach Delay		13.6		16.7		24.7	36.3	
Approach LOS		B		B		C	D	
Queue Length 50th (ft)	59	116	1	199	0	3	254	7
Queue Length 95th (ft)	m97	355	2	383	55	7	47	55
Internal Link Dist (ft)		4178		602		2286	7832	
Turn Bay Length (ft)	95		150					70
Base Capacity (vph)	502	1145	519	929	917	730	529	689
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.39	0.01	0.45	0.28	0.01	0.65	0.30

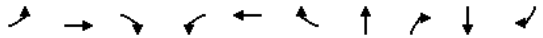
Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 111 (93%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 21.3		Intersection LOS: C	
Intersection Capacity Utilization 65.6%		ICU Level of Service C	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00	1.00		1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85		1.00			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.95	1.00
Satd. Flow (prot)	1770	1863		1770	1863	1583		1863			1775	1583
Flt Permitted	0.37	1.00		0.49	1.00	1.00		1.00			0.72	1.00
Satd. Flow (perm)	683	1863		920	1863	1583		1863			1350	1583
Volume (vph)	210	413	0	1	380	237	0	3	0	312	1	188
Peak-hour factor, PHF	0.91	0.93	0.92	0.25	0.90	0.93	0.92	0.50	0.92	0.92	0.25	0.91
Adj. Flow (vph)	231	444	0	4	422	255	0	6	0	339	4	207
RTOR Reduction (vph)	0	0	0	0	0	128	0	0	0	0	0	79
Lane Group Flow (vph)	231	444	0	4	422	127	0	6	0	0	343	128
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			Perm		Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2		2	4			8		8
Actuated Green, G (s)	75.8	70.6		61.0	59.8	59.8		36.2			36.2	36.2
Effective Green, g (s)	75.8	70.6		61.0	59.8	59.8		36.2			36.2	36.2
Actuated g/C Ratio	0.63	0.59		0.51	0.50	0.50		0.30			0.30	0.30
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)	540	1096		476	928	789		562			407	478
v/s Ratio Prot	c0.04	0.24		0.00	c0.23			0.00				
v/s Ratio Perm	0.23			0.00		0.08					c0.25	0.08
v/c Ratio	0.43	0.41		0.01	0.45	0.16		0.01			0.84	0.27
Uniform Delay, d1	11.2	13.3		14.5	19.5	16.4		29.4			39.2	31.8
Progression Factor	0.83	0.87		1.00	1.00	1.00		1.00			0.87	0.69
Incremental Delay, d2	0.5	1.0		0.0	1.6	0.4		0.0			14.5	0.3
Delay (s)	9.8	12.7		14.6	21.1	16.9		29.4			48.5	22.2
Level of Service	A	B		B	C	B		C			D	C
Approach Delay (s)		11.7			19.5			29.4			38.6	
Approach LOS		B			B			C			D	

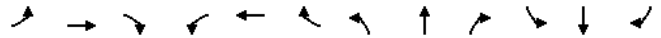
Intersection Summary					
HCM Average Control Delay	22.3	HCM Level of Service	C		
HCM Volume to Capacity ratio	0.58				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0		
Intersection Capacity Utilization	65.6%	ICU Level of Service	C		
Analysis Period (min)	15				

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	36	725	29	30	614	53	23	41	76	29
Sign Control		Free			Free		Stop		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	41.6%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	30	696	22	27	571	40	10	3	31	53	7	22
Peak Hour Factor	0.83	0.96	0.75	0.90	0.93	0.75	0.58	0.50	0.75	0.82	0.62	0.75
Hourly flow rate (vph)	36	725	29	30	614	53	17	6	41	65	11	29
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	614			725			1170	1471	362	1112	1471	307
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	614			725			1170	1471	362	1112	1471	307
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			97			86	95	93	53	90	96
cM capacity (veh/h)	961			874			124	117	634	139	117	689

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	36	362	362	29	30	307	307	53	65	105
Volume Left	36	0	0	0	30	0	0	0	17	65
Volume Right	0	0	0	29	0	0	0	53	41	29
cSH	961	1700	1700	1700	874	1700	1700	1700	340	188
Volume to Capacity	0.04	0.21	0.21	0.02	0.03	0.18	0.18	0.03	0.19	0.56
Queue Length 95th (ft)	3	0	0	0	3	0	0	0	17	74
Control Delay (s)	8.9	0.0	0.0	0.0	9.3	0.0	0.0	0.0	21.9	46.8
Lane LOS	A				A				C	E
Approach Delay (s)	0.4				0.4				21.9	46.8
Approach LOS									C	E

Intersection Summary				
Average Delay	4.2			
Intersection Capacity Utilization	41.6%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	136	78	343	12	375	23
Sign Control	Stop	Stop	Free		Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	55.7%	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			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	27	28	43	6	24	27	22	289	6	27	312	16
Peak Hour Factor	0.64	0.68	0.81	0.50	0.80	0.75	0.75	0.92	0.50	0.75	0.92	0.69
Hourly flow rate (vph)	42	41	53	12	30	36	29	314	12	36	339	23
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	835	784	339	858	784	314	339			314		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	835	784	339	858	784	314	339			314		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	83	87	92	95	90	95	98			97		
cM capacity (veh/h)	243	308	703	221	308	726	1220			1246		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	136	78	343	12	375	23
Volume Left	42	12	29	0	36	0
Volume Right	53	36	0	12	0	23
cSH	356	388	1220	1700	1246	1700
Volume to Capacity	0.38	0.20	0.02	0.01	0.03	0.01
Queue Length 95th (ft)	44	19	2	0	2	0
Control Delay (s)	21.2	16.6	0.9	0.0	1.0	0.0
Lane LOS	C	C	A		A	
Approach Delay (s)	21.2	16.6	0.9		1.0	
Approach LOS	C	C				

Intersection Summary					
Average Delay	5.0				
Intersection Capacity Utilization	55.7%	ICU Level of Service		B	
Analysis Period (min)	15				

Lane Group	EBT	WBT	NBL
Lane Group Flow (vph)	147	45	9
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	16.4%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	120	1	1	31	1	4
Peak Hour Factor	0.84	0.25	0.25	0.75	0.25	0.75
Hourly flow rate (vph)	143	4	4	41	4	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			147		194	145
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			147		194	145
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	99
cM capacity (veh/h)			1435		792	902

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	147	45	9
Volume Left	0	4	4
Volume Right	4	0	5
cSH	1700	1435	852
Volume to Capacity	0.09	0.00	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.7	9.3
Lane LOS		A	A
Approach Delay (s)	0.0	0.7	9.3
Approach LOS			A

Intersection Summary				
Average Delay		0.6		
Intersection Capacity Utilization		16.4%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	142	57	10
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	18.4%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	3	113	41	1	3	1
Peak Hour Factor	0.50	0.83	0.78	0.25	0.50	0.25
Hourly flow rate (vph)	6	136	53	4	6	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	57				203	55
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	57				203	55
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	100
cM capacity (veh/h)	1548				783	1012

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	142	57	10
Volume Left	6	0	6
Volume Right	0	4	4
cSH	1548	1700	861
Volume to Capacity	0.00	0.03	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.3	0.0	9.2
Lane LOS	A		A
Approach Delay (s)	0.3	0.0	9.2
Approach LOS			A

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	18.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	24	70	108
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	20.9%	ICU Level of Service A
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	9	9	40	10	30	49
Peak Hour Factor	0.75	0.75	0.75	0.58	0.62	0.82
Hourly flow rate (vph)	12	12	53	17	48	60
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	218	62			71	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	218	62			71	
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	99			97	
cM capacity (veh/h)	745	1003			1530	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	24	71	108
Volume Left	12	0	48
Volume Right	12	17	0
cSH	855	1700	1530
Volume to Capacity	0.03	0.04	0.03
Queue Length 95th (ft)	2	0	2
Control Delay (s)	9.3	0.0	3.5
Lane LOS	A		A
Approach Delay (s)	9.3	0.0	3.5
Approach LOS	A		

Intersection Summary				
Average Delay		2.9		
Intersection Capacity Utilization		20.9%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	694	89	200	58	59	24
Sign Control	Free		Free	Stop		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	51.0%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	3	640	65	28	81	0	19	10	40	0	15	0
Peak Hour Factor	0.50	0.93	0.73	0.32	0.72	0.92	0.46	0.58	0.68	0.92	0.62	0.92
Hourly flow rate (vph)	6	688	89	88	112	0	41	17	59	0	24	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	112			688			1000	988	688	996	988	112
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	112			688			1000	988	688	996	988	112
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			90			78	92	87	100	89	100
cM capacity (veh/h)	1477			906			188	222	446	168	222	940

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	694	89	200	0	117	24
Volume Left	6	0	88	0	41	0
Volume Right	0	89	0	0	59	0
cSH	1477	1700	906	1700	397	216
Volume to Capacity	0.00	0.05	0.10	0.00	0.30	0.11
Queue Length 95th (ft)	0	0	8	0	30	9
Control Delay (s)	0.1	0.0	4.7	0.0	22.4	23.8
Lane LOS	A		A		C	C
Approach Delay (s)	0.1		4.7		22.4	23.8
Approach LOS					C	C

Intersection Summary					
Average Delay	3.8				
Intersection Capacity Utilization	51.0%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	EBR	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	678	64	155	12	58	71	47
Sign Control	Free		Free		Stop		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	30.8%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	576	47	0	110	6	10	4	12	41	34	0
Peak Hour Factor	0.92	0.85	0.73	0.92	0.71	0.50	0.58	0.38	0.40	0.58	0.72	0.92
Hourly flow rate (vph)	0	678	64	0	155	12	17	11	30	71	47	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	155			678			856	833	339	499	833	155
vC1, stage 1 conf vol							678	678		155	155	
vC2, stage 2 conf vol							179	155		344	678	
vCu, unblocked vol	155			678			856	833	339	499	833	155
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			96	98	95	88	89	100
cM capacity (veh/h)	1423			910			385	429	657	567	429	863

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	0	339	339	64	0	155	12	58	71	47
Volume Left	0	0	0	0	0	0	0	17	71	0
Volume Right	0	0	0	64	0	0	12	30	0	0
cSH	1700	1700	1700	1700	1700	1700	1700	502	567	423
Volume to Capacity	0.00	0.20	0.20	0.04	0.00	0.09	0.01	0.11	0.12	0.11
Queue Length 95th (ft)	0	0	0	0	0	0	0	10	11	9
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.1	12.3	14.6
Lane LOS								B	B	B
Approach Delay (s)	0.0				0.0			13.1	13.2	
Approach LOS								B	B	

Intersection Summary					
Average Delay	2.1				
Intersection Capacity Utilization	30.8%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	42	706	11	65	160	4	11	602	12	278
Act Effct Green (s)	8.2	49.3	49.3	9.0	49.9	49.9	51.7	51.7	51.7	51.7
Actuated g/C Ratio	0.07	0.41	0.41	0.08	0.42	0.42	0.43	0.43	0.43	0.43
v/c Ratio	0.35	0.49	0.02	0.49	0.11	0.01	0.03	0.77	0.06	0.35
Control Delay	60.3	30.5	19.2	73.5	17.2	7.0	17.5	32.9	17.5	22.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.3	30.5	19.2	73.5	17.2	7.0	17.5	32.9	17.5	22.8
LOS	E	C	B	E	B	A	B	C	B	C
Approach Delay		32.0			33.0			32.6		22.5
Approach LOS		C			C			C		C
Queue Length 50th (ft)	32	224	2	31	48	0	4	302	5	131
Queue Length 95th (ft)	53	282	5	88	21	1	7	412	9	172
Internal Link Dist (ft)		2246			4418			11076		2261
Turn Bay Length (ft)	280		115	290		180	125		105	
Base Capacity (vph)	177	1454	654	192	1473	661	473	894	220	912
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.49	0.02	0.34	0.11	0.01	0.02	0.67	0.05	0.30

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 30.9		Intersection LOS: C	
Intersection Capacity Utilization 58.0%		ICU Level of Service B	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		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)	1770	3539	1583	1770	3539	1583	1770	1799		1770	1852	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.49	1.00		0.18	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	917	1799		337	1852	
Volume (vph)	30	579	4	50	107	1	4	418	110	6	227	4
Peak-hour factor, PHF	0.71	0.82	0.38	0.77	0.67	0.25	0.38	0.90	0.80	0.50	0.85	0.38
Adj. Flow (vph)	42	706	11	65	160	4	11	464	138	12	267	11
RTOR Reduction (vph)	0	0	4	0	0	2	0	10	0	0	1	0
Lane Group Flow (vph)	42	706	7	65	160	2	11	592	0	12	277	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	7.1	48.5	48.5	7.8	49.2	49.2	51.7	51.7		51.7	51.7	
Effective Green, g (s)	7.1	48.5	48.5	7.8	49.2	49.2	51.7	51.7		51.7	51.7	
Actuated g/C Ratio	0.06	0.40	0.40	0.06	0.41	0.41	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		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)	105	1430	640	115	1451	649	395	775		145	798	
v/s Ratio Prot	0.02	c0.20		c0.04	0.05			c0.33			0.15	
v/s Ratio Perm			0.00			0.00	0.01			0.04		
v/c Ratio	0.40	0.49	0.01	0.57	0.11	0.00	0.03	0.76		0.08	0.35	
Uniform Delay, d1	54.4	26.6	21.4	54.5	21.9	20.9	19.7	29.0		20.2	22.9	
Progression Factor	1.00	1.00	1.00	1.16	0.68	0.39	1.07	0.95		1.00	1.00	
Incremental Delay, d2	2.5	1.2	0.0	6.2	0.2	0.0	0.0	4.4		0.2	0.3	
Delay (s)	56.9	27.8	21.4	69.3	15.0	8.1	21.1	32.0		20.4	23.1	
Level of Service	E	C	C	E	B	A	C	C		C	C	
Approach Delay (s)		29.3			30.3			31.8			23.0	
Approach LOS		C			C			C			C	

Intersection Summary					
HCM Average Control Delay	29.3	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.63				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	58.0%	ICU Level of Service		B	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	36	717	53	165	172	59	24	462	167	236
Act Effct Green (s)	57.3	51.3	51.3	66.4	60.3	60.3	36.6	30.1	45.6	39.0
Actuated g/C Ratio	0.48	0.43	0.43	0.55	0.50	0.50	0.30	0.25	0.38	0.32
v/c Ratio	0.06	0.47	0.08	0.55	0.10	0.07	0.07	0.91	0.60	0.39
Control Delay	7.3	11.4	1.0	22.5	19.2	6.3	20.3	52.6	33.0	31.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.3	11.4	1.0	22.5	19.2	6.3	20.3	52.6	33.0	31.8
LOS	A	B	A	C	B	A	C	D	C	C
Approach Delay		10.5			18.7			51.0		32.3
Approach LOS		B			B			D		C
Queue Length 50th (ft)	6	67	0	61	38	0	12	264	87	143
Queue Length 95th (ft)	m11	81	m1	120	72	22	17	332	116	187
Internal Link Dist (ft)		5533			4590			2266		2361
Turn Bay Length (ft)	300		120	320		145	150		150	
Base Capacity (vph)	630	1513	697	349	1777	824	383	662	284	706
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.47	0.08	0.47	0.10	0.07	0.06	0.70	0.59	0.33

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 25.7 Intersection LOS: C
Intersection Capacity Utilization 72.6% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.89		1.00	0.98	
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)	1770	3539	1583	1770	3539	1583	1770	1658		1770	1828	
Flt Permitted	0.64	1.00	1.00	0.25	1.00	1.00	0.59	1.00		0.11	1.00	
Satd. Flow (perm)	1198	3539	1583	461	3539	1583	1106	1658		209	1828	
Volume (vph)	27	638	38	145	155	47	15	108	318	150	184	19
Peak-hour factor, PHF	0.75	0.89	0.72	0.88	0.90	0.80	0.62	0.87	0.94	0.90	0.89	0.65
Adj. Flow (vph)	36	717	53	165	172	59	24	124	338	167	207	29
RTOR Reduction (vph)	0	0	21	0	0	31	0	93	0	0	5	0
Lane Group Flow (vph)	36	717	32	165	172	28	24	369	0	167	231	0
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4			8		
Actuated Green, G (s)	53.5	49.7	49.7	64.8	57.0	57.0	35.9	31.7		47.2	39.0	
Effective Green, g (s)	53.5	49.7	49.7	64.8	57.0	57.0	35.9	31.7		47.2	39.0	
Actuated g/C Ratio	0.45	0.41	0.41	0.54	0.48	0.48	0.30	0.26		0.39	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)	552	1466	656	370	1681	752	354	438		232	594	
v/s Ratio Prot	0.00	c0.20		c0.04	0.05		0.00	c0.22		c0.07	0.13	
v/s Ratio Perm	0.03		0.02	0.20		0.02	0.02			0.21		
v/c Ratio	0.07	0.49	0.05	0.45	0.10	0.04	0.07	0.84		0.72	0.39	
Uniform Delay, d1	18.8	25.8	21.0	15.9	17.4	16.8	29.9	41.8		28.8	31.3	
Progression Factor	0.44	0.38	0.06	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	1.0	0.1	0.9	0.1	0.1	0.1	13.8		10.2	0.4	
Delay (s)	8.3	10.8	1.5	16.8	17.5	16.9	30.0	55.5		39.0	31.7	
Level of Service	A	B	A	B	B	B	C	E		D	C	
Approach Delay (s)		10.1			17.1			54.3			34.7	
Approach LOS		B			B			D			C	

Intersection Summary

HCM Average Control Delay	26.4	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.62				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		16.0	
Intersection Capacity Utilization	72.6%	ICU Level of Service		C	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	196	118	60
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	25.6%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	12	157	73	16	27	15
Peak Hour Factor	0.67	0.88	0.82	0.55	0.75	0.62
Hourly flow rate (vph)	18	178	89	29	36	24
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	118				318	104
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	118				318	104
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				95	97
cM capacity (veh/h)	1470				667	951

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	196	118	60
Volume Left	18	0	36
Volume Right	0	29	24
cSH	1470	1700	758
Volume to Capacity	0.01	0.07	0.08
Queue Length 95th (ft)	1	0	6
Control Delay (s)	0.8	0.0	10.2
Lane LOS	A		B
Approach Delay (s)	0.8	0.0	10.2
Approach LOS			B

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	25.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	232	114	94
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	28.3%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	68	136	76	18	28	41
Peak Hour Factor	0.88	0.88	0.91	0.60	0.79	0.70
Hourly flow rate (vph)	77	155	84	30	35	59
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	114				408	99
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	114				408	99
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				94	94
cM capacity (veh/h)	1476				568	957

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	232	114	94
Volume Left	77	0	35
Volume Right	0	30	59
cSH	1476	1700	761
Volume to Capacity	0.05	0.07	0.12
Queue Length 95th (ft)	4	0	11
Control Delay (s)	2.8	0.0	10.4
Lane LOS	A		B
Approach Delay (s)	2.8	0.0	10.4
Approach LOS			B

Intersection Summary			
Average Delay	3.7		
Intersection Capacity Utilization	28.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	179	112	23
Sign Control	Free	Free	Stop

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

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	3	145	99	3	12	4
Peak Hour Factor	0.50	0.84	0.93	0.50	0.67	0.75
Hourly flow rate (vph)	6	173	106	6	18	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	112				294	109
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	112				294	109
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				97	99
cM capacity (veh/h)	1477				694	944

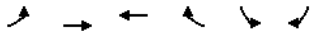
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	179	112	23
Volume Left	6	0	18
Volume Right	0	6	5
cSH	1477	1700	739
Volume to Capacity	0.00	0.07	0.03
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.3	0.0	10.0
Lane LOS	A		B
Approach Delay (s)	0.3	0.0	10.0
Approach LOS			B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	20.0%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	112	124	94
Sign Control	Free	Free	Stop

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



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	6	90	76	16	62	4
Peak Hour Factor	0.50	0.90	0.75	0.69	0.70	0.75
Hourly flow rate (vph)	12	100	101	23	89	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	125				237	113
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	125				237	113
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				88	99
cM capacity (veh/h)	1462				745	940

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	112	125	94
Volume Left	12	0	89
Volume Right	0	23	5
cSH	1462	1700	754
Volume to Capacity	0.01	0.07	0.12
Queue Length 95th (ft)	1	0	11
Control Delay (s)	0.9	0.0	10.5
Lane LOS	A		B
Approach Delay (s)	0.9	0.0	10.5
Approach LOS			B

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	20.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	12	11	10
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	13.3%	ICU Level of Service A
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	3	3	3	4	1	3
Peak Hour Factor	0.50	0.50	0.50	0.75	0.25	0.50
Hourly flow rate (vph)	6	6	6	5	4	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	23	9			11	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	23	9			11	
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			100	
cM capacity (veh/h)	991	1073			1608	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	12	11	10
Volume Left	6	0	4
Volume Right	6	5	0
cSH	1031	1700	1608
Volume to Capacity	0.01	0.01	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.5	0.0	2.9
Lane LOS	A		A
Approach Delay (s)	8.5	0.0	2.9
Approach LOS	A		

Intersection Summary				
Average Delay		3.9		
Intersection Capacity Utilization		13.3%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	18	64	53
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	13.4%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	6	3	1	49	44	0
Peak Hour Factor	0.50	0.50	0.25	0.82	0.83	0.92
Hourly flow rate (vph)	12	6	4	60	53	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	121	53	53			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	121	53	53			
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	100			
cM capacity (veh/h)	872	1014	1553			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	18	64	53
Volume Left	12	4	0
Volume Right	6	0	0
cSH	915	1553	1700
Volume to Capacity	0.02	0.00	0.03
Queue Length 95th (ft)	2	0	0
Control Delay (s)	9.0	0.5	0.0
Lane LOS	A	A	
Approach Delay (s)	9.0	0.5	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	13.4%	ICU Level of Service	A
Analysis Period (min)	15		

Base 2028 AM Improved

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	508	71	404	848	59	418
Sign Control	Free			Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	58.3%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	472	59	364	789	47	389
Peak Hour Factor	0.93	0.83	0.90	0.93	0.80	0.93
Hourly flow rate (vph)	508	71	404	848	59	418
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			579		2165	508
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			579		2165	508
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			59		0	26
cM capacity (veh/h)			995		31	565

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	508	71	404	848	477
Volume Left	0	0	404	0	59
Volume Right	0	71	0	0	418
cSH	1700	1700	995	1700	215
Volume to Capacity	0.30	0.04	0.41	0.50	2.22
Queue Length 95th (ft)	0	0	50	0	938
Control Delay (s)	0.0	0.0	11.1	0.0	599.5
Lane LOS			B		F
Approach Delay (s)	0.0		3.6		599.5
Approach LOS					F

Intersection Summary				
Average Delay	125.8			
Intersection Capacity Utilization	58.3%	ICU Level of Service		B
Analysis Period (min)	15			

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	566	586	455
Act Effct Green (s)	75.0	75.0	37.0
Actuated g/C Ratio	0.62	0.62	0.31
v/c Ratio	0.63	0.52	0.83
Control Delay	19.0	4.8	45.7
Queue Delay	0.0	0.0	0.0
Total Delay	19.0	4.8	45.7
LOS	B	A	D
Approach Delay	19.0	4.8	45.7
Approach LOS	B	A	D
Queue Length 50th (ft)	248	19	327
Queue Length 95th (ft)	419	236	422
Internal Link Dist (ft)	4085	1279	4377
Turn Bay Length (ft)			
Base Capacity (vph)	909	1125	656
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.62	0.52	0.69

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 120		
Offset: 87 (73%), Referenced to phase 2:WBT and 6:EBTL, Start of Green		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.83		
Intersection Signal Delay: 21.4	Intersection LOS: C	
Intersection Capacity Utilization 90.3%	ICU Level of Service E	
Analysis Period (min) 15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
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		1.00	
Frt		1.00	0.90		1.00	
Flt Protected		0.99	1.00		0.95	
Satd. Flow (prot)		1852	1680		1770	
Flt Permitted		0.84	1.00		0.95	
Satd. Flow (perm)		1574	1680		1770	
Volume (vph)	52	431	147	388	412	6
Peak-hour factor, PHF	0.80	0.86	0.92	0.91	0.93	0.50
Adj. Flow (vph)	65	501	160	426	443	12
RTOR Reduction (vph)	0	0	69	0	1	0
Lane Group Flow (vph)	0	566	517	0	454	0
Turn Type	Perm					
Protected Phases		6	2		8	
Permitted Phases	6					
Actuated Green, G (s)		75.0	75.0		37.0	
Effective Green, g (s)		75.0	75.0		37.0	
Actuated g/C Ratio		0.62	0.62		0.31	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		984	1050		546	
v/s Ratio Prot			0.31		c0.26	
v/s Ratio Perm		c0.36				
v/c Ratio		0.58	0.49		0.83	
Uniform Delay, d1		13.2	12.2		38.6	
Progression Factor		1.00	0.34		0.84	
Incremental Delay, d2		2.4	1.6		10.3	
Delay (s)		15.6	5.8		42.7	
Level of Service		B	A		D	
Approach Delay (s)		15.6	5.8		42.7	
Approach LOS		B	A		D	

Intersection Summary			
HCM Average Control Delay	19.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	120.0	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			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	36	725	29	30	614	53	23	41	76	29
Sign Control		Free			Free		Stop		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	41.6%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	30	696	22	27	571	40	10	3	31	53	7	22
Peak Hour Factor	0.83	0.96	0.75	0.90	0.93	0.75	0.58	0.50	0.75	0.82	0.62	0.75
Hourly flow rate (vph)	36	725	29	30	614	53	17	6	41	65	11	29
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	614			725			1170	1471	362	1112	1471	307
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	614			725			1170	1471	362	1112	1471	307
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			97			86	95	93	53	90	96
cM capacity (veh/h)	961			874			124	117	634	139	117	689

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	36	362	362	29	30	307	307	53	65	105
Volume Left	36	0	0	0	30	0	0	0	17	65
Volume Right	0	0	0	29	0	0	0	53	41	29
cSH	961	1700	1700	1700	874	1700	1700	1700	340	188
Volume to Capacity	0.04	0.21	0.21	0.02	0.03	0.18	0.18	0.03	0.19	0.56
Queue Length 95th (ft)	3	0	0	0	3	0	0	0	17	74
Control Delay (s)	8.9	0.0	0.0	0.0	9.3	0.0	0.0	0.0	21.9	46.8
Lane LOS	A				A				C	E
Approach Delay (s)	0.4				0.4				21.9	46.8
Approach LOS									C	E

Intersection Summary					
Average Delay	4.2				
Intersection Capacity Utilization	41.6%	ICU Level of Service		A	
Analysis Period (min)	15				

Base PM Intersection Analysis (Full Build Out)

Base 2028 PM

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	962	220	506	65	386
Sign Control	Free		Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	771	107	198	455	53	336
Peak Hour Factor	0.92	0.86	0.90	0.90	0.82	0.87
Hourly flow rate (vph)	838	124	220	506	65	386
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			962		1846	900
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			962		1846	900
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			69		0	0
cM capacity (veh/h)			715		57	337

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	962	220	506	451
Volume Left	0	220	0	65
Volume Right	124	0	0	386
cSH	1700	715	1700	393
Volume to Capacity	0.57	0.31	0.30	1.15
Queue Length 95th (ft)	0	33	0	427
Control Delay (s)	0.0	12.3	0.0	151.4
Lane LOS		B		F
Approach Delay (s)	0.0	3.7		151.4
Approach LOS				F

Intersection Summary				
Average Delay		33.2		
Intersection Capacity Utilization		74.5%	ICU Level of Service	D
Analysis Period (min)		15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	53	291	386	398	529	47
Sign Control	Stop			Free	Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	44	271	355	370	497	38
Peak Hour Factor	0.83	0.93	0.92	0.93	0.94	0.81
Hourly flow rate (vph)	53	291	386	398	529	47
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1499	264	529			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1499	264	529			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	25	60	63			
cM capacity (veh/h)	71	734	1035			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	53	291	386	199	199	264	264	47
Volume Left	53	0	386	0	0	0	0	0
Volume Right	0	291	0	0	0	0	0	47
cSH	71	734	1035	1700	1700	1700	1700	1700
Volume to Capacity	0.75	0.40	0.37	0.12	0.12	0.16	0.16	0.03
Queue Length 95th (ft)	87	48	44	0	0	0	0	0
Control Delay (s)	142.0	13.1	10.5	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	B	B					
Approach Delay (s)	32.9		5.2			0.0		
Approach LOS	D							

Intersection Summary				
Average Delay	9.0			
Intersection Capacity Utilization	46.7%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	219	941	554	154	248	266
Act Effct Green (s)	90.6	90.6	79.4	120.0	21.4	104.7
Actuated g/C Ratio	0.76	0.76	0.66	1.00	0.18	0.87
v/c Ratio	0.50	0.35	0.45	0.10	0.79	0.19
Control Delay	6.1	0.8	12.7	0.1	64.0	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.1	0.8	12.7	0.1	64.0	0.8
LOS	A	A	B	A	E	A
Approach Delay		1.8	9.9			
Approach LOS		A	A			
Queue Length 50th (ft)	17	3	183	0	186	6
Queue Length 95th (ft)	m38	28	356	0	250	21
Internal Link Dist (ft)		808	1512			
Turn Bay Length (ft)	150					
Base Capacity (vph)	657	2672	1232	1583	472	1400
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.35	0.45	0.10	0.53	0.19

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 2 (2%), Referenced to phase 2:WBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 10.6		Intersection LOS: B	
Intersection Capacity Utilization 69.1%		ICU Level of Service C	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	0.95			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	3539			1863	1583	1770		1583			
Flt Permitted	0.38	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	707	3539			1863	1583	1770		1583			
Volume (vph)	206	903	0	0	526	139	218	0	247	0	0	0
Peak-hour factor, PHF	0.94	0.96	0.92	0.92	0.95	0.90	0.88	0.92	0.93	0.92	0.92	0.92
Adj. Flow (vph)	219	941	0	0	554	154	248	0	266	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	22	0	0	0
Lane Group Flow (vph)	219	941	0	0	554	154	248	0	244	0	0	0
Turn Type	pm+pt					Free	Prot		custom			
Protected Phases	1	6			2		7					
Permitted Phases	6					Free			2 7			
Actuated Green, G (s)	90.6	90.6			79.3	120.0	21.4		104.7			
Effective Green, g (s)	90.6	90.6			79.3	120.0	21.4		104.7			
Actuated g/C Ratio	0.76	0.76			0.66	1.00	0.18		0.87			
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)	598	2672			1231	1583	316		1381			
v/s Ratio Prot	0.02	c0.27			c0.30		c0.14					
v/s Ratio Perm	0.25					0.10			0.15			
v/c Ratio	0.37	0.35			0.45	0.10	0.78		0.18			
Uniform Delay, d1	10.6	4.9			9.8	0.0	47.1		1.2			
Progression Factor	0.31	0.09			1.00	1.00	1.00		1.00			
Incremental Delay, d2	0.3	0.1			1.2	0.1	12.0		0.1			
Delay (s)	3.6	0.5			11.0	0.1	59.1		1.2			
Level of Service	A	A			B	A	E		A			
Approach Delay (s)		1.1			8.6			29.2			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM Average Control Delay	9.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	120.0	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

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	500	219	309	563	731	396
Act Effct Green (s)	56.6	120.0	76.0	76.0	36.0	96.6
Actuated g/C Ratio	0.47	1.00	0.63	0.63	0.30	0.80
v/c Ratio	0.57	0.14	0.73	0.48	0.71	0.30
Control Delay	27.4	0.2	29.0	11.4	41.9	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	0.2	29.0	11.4	41.9	1.3
LOS	C	A	C	B	D	A
Approach Delay	19.1			17.6		
Approach LOS	B			B		
Queue Length 50th (ft)	270	0	101	136	259	6
Queue Length 95th (ft)	435	0	m218	301	329	34
Internal Link Dist (ft)	1279			808		
Turn Bay Length (ft)		150	150			
Base Capacity (vph)	879	1583	544	1180	1030	1342
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.14	0.57	0.48	0.71	0.30

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 88 (73%), Referenced to phase 2:WBTL and 6:EBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 22.2		Intersection LOS: C	
Intersection Capacity Utilization 69.1%		ICU Level of Service C	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00					0.97		1.00
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		1863	1583	1770	1863					3433		1583
Flt Permitted		1.00	1.00	0.29	1.00					0.95		1.00
Satd. Flow (perm)		1863	1583	535	1863					3433		1583
Volume (vph)	0	455	195	278	524	0	0	0	0	694	0	372
Peak-hour factor, PHF	0.92	0.91	0.89	0.90	0.93	0.92	0.92	0.92	0.92	0.95	0.92	0.94
Adj. Flow (vph)	0	500	219	309	563	0	0	0	0	731	0	396
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	67
Lane Group Flow (vph)	0	500	219	309	563	0	0	0	0	731	0	329
Turn Type			Free	pm+pt						Prot		custom
Protected Phases		6		5	2					3		
Permitted Phases			Free	2								3 6
Actuated Green, G (s)		56.6	120.0	76.0	76.0					36.0		96.6
Effective Green, g (s)		56.6	120.0	76.0	76.0					36.0		96.6
Actuated g/C Ratio		0.47	1.00	0.63	0.63					0.30		0.80
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)		879	1583	497	1180					1030		1274
v/s Ratio Prot		0.27		c0.08	0.30					c0.21		
v/s Ratio Perm			0.14	c0.31								0.21
v/c Ratio		0.57	0.14	0.62	0.48					0.71		0.26
Uniform Delay, d1		22.9	0.0	13.6	11.6					37.4		2.9
Progression Factor		1.00	1.00	1.76	0.86					1.00		1.00
Incremental Delay, d2		2.7	0.2	2.1	1.2					4.1		0.5
Delay (s)		25.6	0.2	26.0	11.2					41.5		3.4
Level of Service		C	A	C	B					D		A
Approach Delay (s)		17.8			16.4			0.0			28.1	
Approach LOS		B			B			A			C	

Intersection Summary					
HCM Average Control Delay	21.6	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.64				
Actuated Cycle Length (s)	120.0	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

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	261	978	516
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	81.4%	ICU Level of Service D
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	12	221	410	450	398	59
Peak Hour Factor	0.67	0.91	0.89	0.87	0.92	0.71
Hourly flow rate (vph)	18	243	461	517	433	83
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	461				998	719
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	461				998	719
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				0	81
cM capacity (veh/h)	1100				266	428

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	261	978	516
Volume Left	18	0	433
Volume Right	0	517	83
cSH	1100	1700	283
Volume to Capacity	0.02	0.58	1.82
Queue Length 95th (ft)	1	0	866
Control Delay (s)	0.7	0.0	413.6
Lane LOS	A		F
Approach Delay (s)	0.7	0.0	413.6
Approach LOS			F

Intersection Summary			
Average Delay	121.7		
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	148	183	509	1010
Act Effct Green (s)	16.8	16.8	95.2	95.2
Actuated g/C Ratio	0.14	0.14	0.79	0.79
v/c Ratio	0.62	0.75	0.36	0.71
Control Delay	54.8	52.2	4.9	5.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	54.8	52.2	4.9	5.5
LOS	D	D	A	A
Approach Delay	54.8	52.2	4.9	5.5
Approach LOS	D	D	A	A
Queue Length 50th (ft)	99	116	92	47
Queue Length 95th (ft)	144	184	180	113
Internal Link Dist (ft)	3138	678	2784	4178
Turn Bay Length (ft)				
Base Capacity (vph)	332	339	1408	1420
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.45	0.54	0.36	0.71

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 109 (91%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 13.9		Intersection LOS: B	
Intersection Capacity Utilization 83.9%		ICU Level of Service E	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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			1.00	
Frt		0.96			0.96			0.99			1.00	
Flt Protected		0.99			0.99			1.00			1.00	
Satd. Flow (prot)		1775			1764			1848			1851	
Flt Permitted		0.79			0.83			0.96			0.96	
Satd. Flow (perm)		1415			1482			1774			1788	
Volume (vph)	21	64	31	30	81	50	10	449	21	33	891	24
Peak-hour factor, PHF	0.70	0.83	0.75	0.83	0.92	0.85	0.58	0.96	0.88	0.79	0.95	0.80
Adj. Flow (vph)	30	77	41	36	88	59	17	468	24	42	938	30
RTOR Reduction (vph)	0	12	0	0	15	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	136	0	0	168	0	0	508	0	0	1009	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		16.8			16.8			95.2			95.2	
Effective Green, g (s)		16.8			16.8			95.2			95.2	
Actuated g/C Ratio		0.14			0.14			0.79			0.79	
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)		198			207			1407			1418	
v/s Ratio Prot												
v/s Ratio Perm		0.10			c0.11			0.29			c0.56	
v/c Ratio		0.69			0.81			0.36			0.71	
Uniform Delay, d1		49.1			50.0			3.6			5.9	
Progression Factor		1.00			0.78			1.00			0.40	
Incremental Delay, d2		9.5			19.3			0.7			2.5	
Delay (s)		58.6			58.1			4.3			4.9	
Level of Service		E			E			A			A	
Approach Delay (s)		58.6			58.1			4.3			4.9	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM Average Control Delay	14.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	267	365	11	4	529	333	14	366	427
Act Effct Green (s)	76.8	74.8	74.8	65.1	59.5	59.5	35.2	35.2	35.2
Actuated g/C Ratio	0.64	0.62	0.62	0.54	0.50	0.50	0.29	0.29	0.29
v/c Ratio	0.71	0.31	0.01	0.01	0.57	0.35	0.03	0.90	0.70
Control Delay	20.9	12.1	6.8	12.0	27.4	3.7	19.2	47.9	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.9	12.1	6.8	12.0	27.4	3.7	19.2	47.9	11.3
LOS	C	B	A	B	C	A	B	D	B
Approach Delay		15.6			18.2		19.2	28.2	
Approach LOS		B			B		B	C	
Queue Length 50th (ft)	71	98	1	1	276	0	4	264	121
Queue Length 95th (ft)	m116	279	m1	2	485	58	3	m300	m163
Internal Link Dist (ft)		4178			602		2286	7832	
Turn Bay Length (ft)	95		100	150					70
Base Capacity (vph)	430	1161	990	595	924	953	603	511	713
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.31	0.01	0.01	0.57	0.35	0.02	0.72	0.60

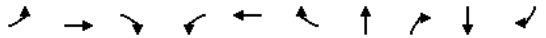
Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 4 (3%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 20.9		Intersection LOS: C	
Intersection Capacity Utilization 76.3%		ICU Level of Service D	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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		1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.94			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99			0.95	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583		1730			1770	1583
Flt Permitted	0.28	1.00	1.00	0.54	1.00	1.00		0.93			0.75	1.00
Satd. Flow (perm)	525	1863	1583	1013	1863	1583		1626			1394	1583
Volume (vph)	246	336	4	1	508	306	1	1	3	348	0	401
Peak-hour factor, PHF	0.92	0.92	0.38	0.25	0.96	0.92	0.25	0.25	0.50	0.95	0.92	0.94
Adj. Flow (vph)	267	365	11	4	529	333	4	4	6	366	0	427
RTOR Reduction (vph)	0	0	3	0	0	168	0	4	0	0	0	148
Lane Group Flow (vph)	267	365	8	4	529	165	0	10	0	0	366	279
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			Perm		Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2		2	4			8		8
Actuated Green, G (s)	76.8	71.6	71.6	60.7	59.5	59.5		35.2			35.2	35.2
Effective Green, g (s)	76.8	71.6	71.6	60.7	59.5	59.5		35.2			35.2	35.2
Actuated g/C Ratio	0.64	0.60	0.60	0.51	0.50	0.50		0.29			0.29	0.29
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)	474	1112	945	520	924	785		477			409	464
v/s Ratio Prot	c0.06	0.20		0.00	0.28							
v/s Ratio Perm	c0.30		0.00	0.00		0.10		0.01			c0.26	0.18
v/c Ratio	0.56	0.33	0.01	0.01	0.57	0.21		0.02			0.89	0.60
Uniform Delay, d1	13.0	12.1	9.8	14.7	21.3	17.0		30.1			40.6	36.4
Progression Factor	0.86	0.88	0.76	1.00	1.00	1.00		1.00			0.62	0.31
Incremental Delay, d2	1.5	0.7	0.0	0.0	2.6	0.6		0.0			19.7	2.0
Delay (s)	12.6	11.5	7.5	14.7	23.9	17.6		30.2			45.0	13.3
Level of Service	B	B	A	B	C	B		C			D	B
Approach Delay (s)		11.9			21.4			30.2			27.9	
Approach LOS		B			C			C			C	

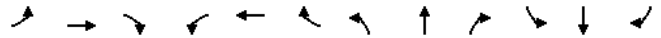
Intersection Summary					
HCM Average Control Delay	21.1	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.66				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	76.3%	ICU Level of Service		D	
Analysis Period (min)	15				

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	30	603	12	41	756	71	41	41	53	18
Sign Control		Free			Free		Stop		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	36.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	15	579	6	25	711	59	21	4	28	41	0	15
Peak Hour Factor	0.50	0.96	0.50	0.61	0.94	0.83	0.70	0.38	0.68	0.78	0.92	0.83
Hourly flow rate (vph)	30	603	12	41	756	71	30	11	41	53	0	18
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	756			603			1123	1501	302	1205	1501	378
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	756			603			1123	1501	302	1205	1501	378
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			96			80	91	94	54	100	97
cM capacity (veh/h)	850			970			147	112	695	115	112	620

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	30	302	302	12	41	378	378	71	82	71
Volume Left	30	0	0	0	41	0	0	0	30	53
Volume Right	0	0	0	12	0	0	0	71	41	18
cSH	850	1700	1700	1700	970	1700	1700	1700	277	154
Volume to Capacity	0.04	0.18	0.18	0.01	0.04	0.22	0.22	0.04	0.29	0.46
Queue Length 95th (ft)	3	0	0	0	3	0	0	0	30	53
Control Delay (s)	9.4	0.0	0.0	0.0	8.9	0.0	0.0	0.0	26.0	47.8
Lane LOS	A				A				D	E
Approach Delay (s)	0.4				0.4				26.0	47.8
Approach LOS									D	E

Intersection Summary				
Average Delay	3.7			
Intersection Capacity Utilization	36.4%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	71	88	384	11	615	30
Sign Control	Stop	Stop	Free		Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	65.3%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	12	18	19	3	41	22	43	295	4	30	539	21
Peak Hour Factor	0.50	0.75	0.81	0.50	0.78	0.75	0.81	0.89	0.38	0.71	0.94	0.70
Hourly flow rate (vph)	24	24	23	6	53	29	53	331	11	42	573	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)												
pX, platoon unblocked												
vC, conflicting volume	1151	1096	573	1131	1096	331	573			331		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1151	1096	573	1131	1096	331	573			331		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	81	88	95	96	73	96	95			97		
cM capacity (veh/h)	125	195	519	146	195	710	1000			1228		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	71	88	385	11	616	30
Volume Left	24	6	53	0	42	0
Volume Right	23	29	0	11	0	30
cSH	198	250	1000	1700	1228	1700
Volume to Capacity	0.36	0.35	0.05	0.01	0.03	0.02
Queue Length 95th (ft)	39	38	4	0	3	0
Control Delay (s)	33.1	27.0	1.7	0.0	0.9	0.0
Lane LOS	D	D	A		A	
Approach Delay (s)	33.1	27.0	1.7		0.9	
Approach LOS	D	D				

Intersection Summary					
Average Delay	5.0				
Intersection Capacity Utilization	65.3%	ICU Level of Service	C		
Analysis Period (min)	15				

Lane Group	EBT	WBT	NBL
Lane Group Flow (vph)	70	136	10
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	23.0%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	47	3	9	111	1	3
Peak Hour Factor	0.73	0.50	0.50	0.94	0.25	0.50
Hourly flow rate (vph)	64	6	18	118	4	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			70		221	67
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			70		221	67
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		99	99
cM capacity (veh/h)			1530		758	996

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	70	136	10
Volume Left	0	18	4
Volume Right	6	0	6
cSH	1700	1530	885
Volume to Capacity	0.04	0.01	0.01
Queue Length 95th (ft)	0	1	1
Control Delay (s)	0.0	1.1	9.1
Lane LOS		A	A
Approach Delay (s)	0.0	1.1	9.1
Approach LOS			A

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	23.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	69	141	10
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	16.5%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	1	53	123	1	3	1
Peak Hour Factor	0.25	0.82	0.90	0.25	0.50	0.25
Hourly flow rate (vph)	4	65	137	4	6	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	141				211	139
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	141				211	139
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	100
cM capacity (veh/h)	1442				775	910

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	69	141	10
Volume Left	4	0	6
Volume Right	0	4	4
cSH	1442	1700	824
Volume to Capacity	0.00	0.08	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.5	0.0	9.4
Lane LOS	A		A
Approach Delay (s)	0.5	0.0	9.4
Approach LOS			A

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	16.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	47	83	88
Sign Control	Stop	Free	Free

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	12	22	59	9	13	64
Peak Hour Factor	0.67	0.75	0.83	0.75	0.75	0.90
Hourly flow rate (vph)	18	29	71	12	17	71
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	183	77			83	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	183	77			83	
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	97			99	
cM capacity (veh/h)	797	984			1514	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	47	83	88
Volume Left	18	0	17
Volume Right	29	12	0
cSH	904	1700	1514
Volume to Capacity	0.05	0.05	0.01
Queue Length 95th (ft)	4	0	1
Control Delay (s)	9.2	0.0	1.5
Lane LOS	A		A
Approach Delay (s)	9.2	0.0	1.5
Approach LOS	A		

Intersection Summary				
Average Delay	2.6			
Intersection Capacity Utilization	20.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	104	24	738	4	113	30	17	11
Sign Control	Free		Free		Stop		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	53.9%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	78	18	24	533	1	58	24	21	0	13	4
Peak Hour Factor	0.25	0.78	0.75	0.44	0.78	0.25	0.89	0.50	0.70	0.92	0.75	0.38
Hourly flow rate (vph)	4	100	24	55	683	4	65	48	30	0	17	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	683			100			909	900	100	924	900	683
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	683			100			909	900	100	924	900	683
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			96			72	82	97	100	94	98
cM capacity (veh/h)	910			1493			230	267	956	202	267	449

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	104	24	738	4	143	28
Volume Left	4	0	55	0	65	0
Volume Right	0	24	0	4	30	11
cSH	910	1700	1493	1700	311	429
Volume to Capacity	0.00	0.01	0.04	0.00	0.46	0.06
Queue Length 95th (ft)	0	0	3	0	58	5
Control Delay (s)	0.4	0.0	1.0	0.0	26.8	17.1
Lane LOS	A		A		D	C
Approach Delay (s)	0.3		1.0		26.8	17.1
Approach LOS					D	C

Intersection Summary					
Average Delay	4.9				
Intersection Capacity Utilization	53.9%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	83	29	11	664	48	130	26	20
Sign Control	Free			Free		Stop	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	43.9%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	68	22	4	505	40	50	24	0	0	13	18
Peak Hour Factor	0.92	0.82	0.75	0.38	0.76	0.84	0.57	0.57	0.92	0.56	0.50	0.92
Hourly flow rate (vph)	0	83	29	11	664	48	88	42	0	0	26	20
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	664			83			781	768	41	748	768	664
vC1, stage 1 conf vol							83	83		686	686	
vC2, stage 2 conf vol							699	686		63	83	
vCu, unblocked vol	664			83			781	768	41	748	768	664
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			74	90	100	100	94	95
cM capacity (veh/h)	921			1512			343	428	1020	388	428	403

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	0	41	41	29	11	664	48	130	0	46
Volume Left	0	0	0	0	11	0	0	88	0	0
Volume Right	0	0	0	29	0	0	48	0	0	20
cSH	1700	1700	1700	1700	1512	1700	1700	366	1700	750
Volume to Capacity	0.00	0.02	0.02	0.02	0.01	0.39	0.03	0.35	0.00	0.06
Queue Length 95th (ft)	0	0	0	0	1	0	0	39	0	5
Control Delay (s)	0.0	0.0	0.0	0.0	7.4	0.0	0.0	20.1	0.0	14.1
Lane LOS					A			C	A	B
Approach Delay (s)	0.0				0.1			20.1	14.1	
Approach LOS								C	B	

Intersection Summary					
Average Delay	3.3				
Intersection Capacity Utilization	43.9%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	1	87	1	153	562	10	10	317	7	380
Act Effct Green (s)	5.6	63.8	63.8	16.5	82.3	82.3	27.7	27.7	27.7	27.7
Actuated g/C Ratio	0.05	0.53	0.53	0.14	0.69	0.69	0.23	0.23	0.23	0.23
v/c Ratio	0.01	0.05	0.00	0.63	0.23	0.01	0.06	0.74	0.04	0.89
Control Delay	55.0	17.5	17.0	43.4	4.4	0.6	38.6	57.5	32.2	66.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.0	17.5	17.0	43.4	4.4	0.6	38.6	57.5	32.2	66.4
LOS	D	B	B	D	A	A	D	E	C	E
Approach Delay		18.0			12.6			56.9		65.7
Approach LOS		B			B			E		E
Queue Length 50th (ft)	1	15	0	69	4	1	7	240	4	284
Queue Length 95th (ft)	7	41	4	58	127	m2	m16	327	16	365
Internal Link Dist (ft)		2246			4418			11076		2261
Turn Bay Length (ft)	280		115	290		180	125		105	
Base Capacity (vph)	310	1881	842	457	2428	1089	283	750	334	755
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.05	0.00	0.33	0.23	0.01	0.04	0.42	0.02	0.50

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 10 (8%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 35.8 Intersection LOS: D
Intersection Capacity Utilization 39.8% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00	
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)	1770	3539	1583	1770	3539	1583	1770	1827		1770	1841	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.14	1.00		0.25	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	269	1827		457	1841	
Volume (vph)	1	80	1	141	517	9	9	255	37	6	323	27
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	87	1	153	562	10	10	277	40	7	351	29
RTOR Reduction (vph)	0	0	0	0	0	3	0	5	0	0	3	0
Lane Group Flow (vph)	1	87	1	153	562	7	10	312	0	7	377	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	1.2	63.8	63.8	16.5	79.1	79.1	27.7	27.7		27.7	27.7	
Effective Green, g (s)	1.2	63.8	63.8	16.5	79.1	79.1	27.7	27.7		27.7	27.7	
Actuated g/C Ratio	0.01	0.53	0.53	0.14	0.66	0.66	0.23	0.23		0.23	0.23	
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)	18	1882	842	243	2333	1043	62	422		105	425	
v/s Ratio Prot	0.00	0.02		c0.09	c0.16			0.17			c0.20	
v/s Ratio Perm			0.00			0.00	0.04			0.02		
v/c Ratio	0.06	0.05	0.00	0.63	0.24	0.01	0.16	0.74		0.07	0.89	
Uniform Delay, d1	58.8	13.5	13.2	48.9	8.3	7.0	36.9	42.8		36.1	44.6	
Progression Factor	1.00	1.00	1.00	0.68	0.50	0.10	1.17	1.15		1.00	1.00	
Incremental Delay, d2	1.3	0.0	0.0	4.9	0.2	0.0	1.1	6.1		0.3	19.4	
Delay (s)	60.1	13.5	13.2	38.2	4.4	0.7	44.2	55.4		36.3	64.1	
Level of Service	E	B	B	D	A	A	D	E		D	E	
Approach Delay (s)		14.1			11.4			55.1			63.6	
Approach LOS		B			B			E			E	

Intersection Summary

HCM Average Control Delay	34.1	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.45				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	39.8%	ICU Level of Service		A	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	30	119	41	349	674	155	64	344	72	130
Act Effct Green (s)	60.5	54.2	54.2	75.6	69.1	69.1	32.8	25.6	33.6	26.0
Actuated g/C Ratio	0.50	0.45	0.45	0.63	0.58	0.58	0.27	0.21	0.28	0.22
v/c Ratio	0.07	0.07	0.06	0.45	0.33	0.16	0.18	0.86	0.28	0.32
Control Delay	11.0	21.4	7.2	14.5	17.0	5.2	27.2	59.8	29.2	36.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.0	21.4	7.2	14.5	17.0	5.2	27.2	59.8	29.2	36.8
LOS	B	C	A	B	B	A	C	E	C	D
Approach Delay		16.7			14.7			54.7		34.1
Approach LOS		B			B			D		C
Queue Length 50th (ft)	7	27	3	122	154	8	35	232	39	79
Queue Length 95th (ft)	m17	m48	m6	219	247	50	41	312	60	122
Internal Link Dist (ft)		5533			4590			2266		2361
Turn Bay Length (ft)	300		120	320		145	150		150	
Base Capacity (vph)	524	1598	737	848	2037	967	416	589	313	596
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.07	0.06	0.41	0.33	0.16	0.15	0.58	0.23	0.22

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 107 (89%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 25.1 Intersection LOS: C
Intersection Capacity Utilization 54.8% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	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)	1770	3539	1583	1770	3539	1583	1770	1733		1770	1813	
Flt Permitted	0.40	1.00	1.00	0.63	1.00	1.00	0.60	1.00		0.16	1.00	
Satd. Flow (perm)	737	3539	1583	1173	3539	1583	1112	1733		290	1813	
Volume (vph)	21	108	25	304	634	138	41	166	150	61	96	16
Peak-hour factor, PHF	0.70	0.91	0.61	0.87	0.94	0.89	0.64	0.90	0.94	0.85	0.90	0.69
Adj. Flow (vph)	30	119	41	349	674	155	64	184	160	72	107	23
RTOR Reduction (vph)	0	0	23	0	0	59	0	31	0	0	8	0
Lane Group Flow (vph)	30	119	18	349	674	96	64	313	0	72	122	0
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4			8		
Actuated Green, G (s)	57.5	53.4	53.4	74.8	66.7	66.7	32.8	25.6		33.6	26.0	
Effective Green, g (s)	57.5	53.4	53.4	74.8	66.7	66.7	32.8	25.6		33.6	26.0	
Actuated g/C Ratio	0.48	0.44	0.44	0.62	0.56	0.56	0.27	0.21		0.28	0.22	
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)	388	1575	704	818	1967	880	343	370		175	393	
v/s Ratio Prot	0.00	0.03		c0.06	0.19		0.01	c0.18		c0.03	0.07	
v/s Ratio Perm	0.03		0.01	c0.20		0.06	0.04			0.09		
v/c Ratio	0.08	0.08	0.03	0.43	0.34	0.11	0.19	0.85		0.41	0.31	
Uniform Delay, d1	16.6	19.1	18.7	10.7	14.6	12.6	32.9	45.3		34.0	39.5	
Progression Factor	0.78	0.87	0.74	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.1	0.1	0.4	0.5	0.3	0.3	16.2		1.6	0.5	
Delay (s)	13.0	16.8	14.0	11.1	15.1	12.9	33.2	61.5		35.6	39.9	
Level of Service	B	B	B	B	B	B	C	E		D	D	
Approach Delay (s)		15.6			13.6			57.1			38.4	
Approach LOS		B			B			E			D	

Intersection Summary
HCM Average Control Delay 25.3 HCM Level of Service C
HCM Volume to Capacity ratio 0.52
Actuated Cycle Length (s) 120.0 Sum of lost time (s) 12.0
Intersection Capacity Utilization 54.8% ICU Level of Service A
Analysis Period (min) 15
c Critical Lane Group

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	177	290	16
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	25.7%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	10	142	216	18	7	4
Peak Hour Factor	0.58	0.89	0.83	0.60	0.62	0.75
Hourly flow rate (vph)	17	160	260	30	11	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	290				469	275
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	290				469	275
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				98	99
cM capacity (veh/h)	1272				545	764

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	177	290	17
Volume Left	17	0	11
Volume Right	0	30	5
cSH	1272	1700	600
Volume to Capacity	0.01	0.17	0.03
Queue Length 95th (ft)	1	0	2
Control Delay (s)	0.9	0.0	11.2
Lane LOS	A		B
Approach Delay (s)	0.9	0.0	11.2
Approach LOS			B

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	25.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	149	267	107
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	26.8%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	12	111	172	49	44	30
Peak Hour Factor	0.67	0.85	0.83	0.82	0.68	0.71
Hourly flow rate (vph)	18	131	207	60	65	42
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	267				404	237
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	267				404	237
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				89	95
cM capacity (veh/h)	1297				595	802

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	148	267	107
Volume Left	18	0	65
Volume Right	0	60	42
cSH	1297	1700	662
Volume to Capacity	0.01	0.16	0.16
Queue Length 95th (ft)	1	0	14
Control Delay (s)	1.0	0.0	11.5
Lane LOS	A		B
Approach Delay (s)	1.0	0.0	11.5
Approach LOS			B

Intersection Summary				
Average Delay	2.6			
Intersection Capacity Utilization	26.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	137	212	17
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	21.7%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	7	113	173	12	4	3
Peak Hour Factor	0.62	0.90	0.89	0.67	0.38	0.50
Hourly flow rate (vph)	11	126	194	18	11	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	212				351	203
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	212				351	203
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				98	99
cM capacity (veh/h)	1358				641	837

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	137	212	17
Volume Left	11	0	11
Volume Right	0	18	6
cSH	1358	1700	700
Volume to Capacity	0.01	0.12	0.02
Queue Length 95th (ft)	1	0	2
Control Delay (s)	0.7	0.0	10.3
Lane LOS	A		B
Approach Delay (s)	0.7	0.0	10.3
Approach LOS			B

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	21.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	100	201	35
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	19.8%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	7	74	101	73	21	7
Peak Hour Factor	0.62	0.83	0.90	0.82	0.88	0.62
Hourly flow rate (vph)	11	89	112	89	24	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	201				268	157
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	201				268	157
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				97	99
cM capacity (veh/h)	1371				715	889

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	100	201	35
Volume Left	11	0	24
Volume Right	0	89	11
cSH	1371	1700	763
Volume to Capacity	0.01	0.12	0.05
Queue Length 95th (ft)	1	0	4
Control Delay (s)	0.9	0.0	9.9
Lane LOS	A		A
Approach Delay (s)	0.9	0.0	9.9
Approach LOS			A

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	19.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	4	6	10
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	13.3%	ICU Level of Service A
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	1	1	3	0	1	3
Peak Hour Factor	0.50	0.50	0.50	0.75	0.25	0.50
Hourly flow rate (vph)	2	2	6	0	4	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	20	6			6	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	20	6			6	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	995	1077			1615	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	4	6	10
Volume Left	2	0	4
Volume Right	2	0	0
cSH	1034	1700	1615
Volume to Capacity	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	8.5	0.0	2.9
Lane LOS	A		A
Approach Delay (s)	8.5	0.0	2.9
Approach LOS	A		

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	4	95	90
Sign Control	Stop	Free	Free

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

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	1	3	74	67	6
Peak Hour Factor	0.92	0.25	0.50	0.83	0.86	0.50
Hourly flow rate (vph)	0	4	6	89	78	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	185	84	90			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	185	84	90			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	801	975	1505			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	4	95	90
Volume Left	0	6	0
Volume Right	4	0	12
cSH	975	1505	1700
Volume to Capacity	0.00	0.00	0.05
Queue Length 95th (ft)	0	0	0
Control Delay (s)	8.7	0.5	0.0
Lane LOS	A	A	
Approach Delay (s)	8.7	0.5	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	16.3%	ICU Level of Service	A
Analysis Period (min)	15		

Base 2028 PM Improved

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	838	124	220	506	65	386
Sign Control	Free			Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	771	107	198	455	53	336
Peak Hour Factor	0.92	0.86	0.90	0.90	0.82	0.87
Hourly flow rate (vph)	838	124	220	506	65	386
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			962		1784	838
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			962		1784	838
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			69		0	0
cM capacity (veh/h)			715		62	366

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	838	124	220	506	451
Volume Left	0	0	220	0	65
Volume Right	0	124	0	0	386
cSH	1700	1700	715	1700	427
Volume to Capacity	0.49	0.07	0.31	0.30	1.05
Queue Length 95th (ft)	0	0	33	0	364
Control Delay (s)	0.0	0.0	12.3	0.0	116.7
Lane LOS			B		F
Approach Delay (s)	0.0		3.7		116.7
Approach LOS					F

Intersection Summary				
Average Delay	25.9			
Intersection Capacity Utilization	68.1%	ICU Level of Service	C	
Analysis Period (min)	15			

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	261	978	516
Act Effct Green (s)	75.1	75.1	36.9
Actuated g/C Ratio	0.63	0.63	0.31
v/c Ratio	0.32	0.88	0.95
Control Delay	12.5	19.2	64.8
Queue Delay	0.0	0.0	0.0
Total Delay	12.5	19.2	64.8
LOS	B	B	E
Approach Delay	12.5	19.2	64.8
Approach LOS	B	B	E
Queue Length 50th (ft)	95	346	374
Queue Length 95th (ft)	148	#908	#570
Internal Link Dist (ft)	4085	1279	4377
Turn Bay Length (ft)			
Base Capacity (vph)	818	1114	589
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.32	0.88	0.88

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 120		
Offset: 103 (86%), Referenced to phase 2:WBT and 6:EBTL, Start of Green		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.95		
Intersection Signal Delay: 31.6	Intersection LOS: C	
Intersection Capacity Utilization 81.4%	ICU Level of Service D	
Analysis Period (min) 15		
# 95th percentile volume exceeds capacity, queue may be longer.		
Queue shown is maximum after two cycles.		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
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		1.00	
Frt		1.00	0.93		0.98	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		1856	1730		1749	
Flt Permitted		0.77	1.00		0.96	
Satd. Flow (perm)		1438	1730		1749	
Volume (vph)	12	221	410	450	398	59
Peak-hour factor, PHF	0.67	0.91	0.89	0.87	0.92	0.71
Adj. Flow (vph)	18	243	461	517	433	83
RTOR Reduction (vph)	0	0	31	0	6	0
Lane Group Flow (vph)	0	261	947	0	510	0
Turn Type	Perm					
Protected Phases		6	2		8	
Permitted Phases	6					
Actuated Green, G (s)		75.1	75.1		36.9	
Effective Green, g (s)		75.1	75.1		36.9	
Actuated g/C Ratio		0.63	0.63		0.31	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		900	1083		538	
v/s Ratio Prot			c0.55		c0.29	
v/s Ratio Perm		0.18				
v/c Ratio		0.29	0.87		0.95	
Uniform Delay, d1		10.3	18.5		40.6	
Progression Factor		1.00	0.48		0.94	
Incremental Delay, d2		0.8	9.3		25.9	
Delay (s)		11.1	18.1		63.9	
Level of Service		B	B		E	
Approach Delay (s)		11.1	18.1		63.9	
Approach LOS		B	B		E	

Intersection Summary			
HCM Average Control Delay	30.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	30	603	12	41	756	71	41	41	53	18
Sign Control		Free			Free		Stop		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	36.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	15	579	6	25	711	59	21	4	28	41	0	15
Peak Hour Factor	0.50	0.96	0.50	0.61	0.94	0.83	0.70	0.38	0.68	0.78	0.92	0.83
Hourly flow rate (vph)	30	603	12	41	756	71	30	11	41	53	0	18
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	756			603			1123	1501	302	1205	1501	378
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	756			603			1123	1501	302	1205	1501	378
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			96			80	91	94	54	100	97
cM capacity (veh/h)	850			970			147	112	695	115	112	620

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	30	302	302	12	41	378	378	71	82	71
Volume Left	30	0	0	0	41	0	0	0	30	53
Volume Right	0	0	0	12	0	0	0	71	41	18
cSH	850	1700	1700	1700	970	1700	1700	1700	277	154
Volume to Capacity	0.04	0.18	0.18	0.01	0.04	0.22	0.22	0.04	0.29	0.46
Queue Length 95th (ft)	3	0	0	0	3	0	0	0	30	53
Control Delay (s)	9.4	0.0	0.0	0.0	8.9	0.0	0.0	0.0	26.0	47.8
Lane LOS	A				A				D	E
Approach Delay (s)	0.4				0.4				26.0	47.8
Approach LOS									D	E

Intersection Summary					
Average Delay	3.7				
Intersection Capacity Utilization	36.4%	ICU Level of Service		A	
Analysis Period (min)	15				

Base Saturday Intersection Analysis (Full Build Out)

Base 2028 Saturday

Lane Group	EBT	WBT	NBL
Lane Group Flow (vph)	63	76	12
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	15.7%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	52	1	3	62	3	3
Peak Hour Factor	0.88	0.25	0.50	0.88	0.50	0.50
Hourly flow rate (vph)	59	4	6	70	6	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			63		144	61
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			63		144	61
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	99
cM capacity (veh/h)			1540		846	1004

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	63	76	12
Volume Left	0	6	6
Volume Right	4	0	6
cSH	1700	1540	918
Volume to Capacity	0.04	0.00	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.6	9.0
Lane LOS		A	A
Approach Delay (s)	0.0	0.6	9.0
Approach LOS			A

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	15.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	65	65	10
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	15.2%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	3	52	53	3	1	3
Peak Hour Factor	0.50	0.88	0.90	0.50	0.25	0.50
Hourly flow rate (vph)	6	59	59	6	4	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	65				133	62
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	65				133	62
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	99
cM capacity (veh/h)	1537				857	1003

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	65	65	10
Volume Left	6	0	4
Volume Right	0	6	6
cSH	1537	1700	939
Volume to Capacity	0.00	0.04	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.7	0.0	8.9
Lane LOS	A		A
Approach Delay (s)	0.7	0.0	8.9
Approach LOS			A

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	15.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	29	87	71
Sign Control	Stop	Free	Free

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	10	9	65	7	9	53
Peak Hour Factor	0.58	0.75	0.85	0.62	0.75	0.90
Hourly flow rate (vph)	17	12	76	11	12	59
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	165	82			88	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	165	82			88	
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	99			99	
cM capacity (veh/h)	819	978			1508	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	29	88	71
Volume Left	17	0	12
Volume Right	12	11	0
cSH	877	1700	1508
Volume to Capacity	0.03	0.05	0.01
Queue Length 95th (ft)	3	0	1
Control Delay (s)	9.2	0.0	1.3
Lane LOS	A		A
Approach Delay (s)	9.2	0.0	1.3
Approach LOS	A		

Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	20.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	105	29	178	4	60	29	47	17
Sign Control	Free		Free		Stop		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	30.5%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	4	90	19	21	129	1	24	24	19	6	28	10
Peak Hour Factor	0.75	0.90	0.65	0.70	0.87	0.25	0.80	0.80	0.65	0.50	0.79	0.58
Hourly flow rate (vph)	5	100	29	30	148	4	30	30	29	12	35	17
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	148			100			337	319	100	334	319	148
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	148			100			337	319	100	334	319	148
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			98			95	95	97	98	94	98
cM capacity (veh/h)	1433			1493			567	583	956	567	583	898

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	105	29	178	4	89	65
Volume Left	5	0	30	0	30	12
Volume Right	0	29	0	4	29	17
cSH	1433	1700	1493	1700	855	790
Volume to Capacity	0.00	0.02	0.02	0.00	0.10	0.08
Queue Length 95th (ft)	0	0	2	0	9	7
Control Delay (s)	0.4	0.0	1.4	0.0	11.0	11.1
Lane LOS	A		A		B	B
Approach Delay (s)	0.3		1.4		11.0	11.1
Approach LOS					B	B

Intersection Summary					
Average Delay	4.2				
Intersection Capacity Utilization	30.5%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	166	160	11
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	19.7%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	3	139	139	3	3	4
Peak Hour Factor	0.50	0.87	0.90	0.50	0.50	0.75
Hourly flow rate (vph)	6	160	154	6	6	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	160				329	157
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	160				329	157
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	99
cM capacity (veh/h)	1419				662	888

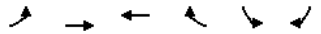
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	166	160	11
Volume Left	6	0	6
Volume Right	0	6	5
cSH	1419	1700	752
Volume to Capacity	0.00	0.09	0.02
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.3	0.0	9.9
Lane LOS	A		A
Approach Delay (s)	0.3	0.0	9.9
Approach LOS			A

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	19.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	149	160	95
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	29.1%	ICU Level of Service A
Analysis Period (min)	15	



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	33	95	113	33	40	34
Peak Hour Factor	0.79	0.89	0.91	0.92	0.84	0.72
Hourly flow rate (vph)	42	107	124	36	48	47
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	160				332	142
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	160				332	142
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				93	95
cM capacity (veh/h)	1419				643	906

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	149	160	95
Volume Left	42	0	48
Volume Right	0	36	47
cSH	1419	1700	752
Volume to Capacity	0.03	0.09	0.13
Queue Length 95th (ft)	2	0	11
Control Delay (s)	2.3	0.0	10.5
Lane LOS	A		B
Approach Delay (s)	2.3	0.0	10.5
Approach LOS			B

Intersection Summary				
Average Delay	3.3			
Intersection Capacity Utilization	29.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	10	11	8
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	13.3%	ICU Level of Service A
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	1	3	3	4	1	1
Peak Hour Factor	0.25	0.50	0.50	0.75	0.25	0.25
Hourly flow rate (vph)	4	6	6	5	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	21	9			11	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	21	9			11	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	994	1073			1608	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	10	11	8
Volume Left	4	0	4
Volume Right	6	5	0
cSH	1040	1700	1608
Volume to Capacity	0.01	0.01	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.5	0.0	3.6
Lane LOS	A		A
Approach Delay (s)	8.5	0.0	3.6
Approach LOS	A		

Intersection Summary				
Average Delay		3.9		
Intersection Capacity Utilization		13.3%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	6	89	77
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	14.0%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	3	0	76	64	3
Peak Hour Factor	0.92	0.50	0.92	0.85	0.90	0.50
Hourly flow rate (vph)	0	6	0	89	71	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	164	74	77			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	164	74	77			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	99	100			
cM capacity (veh/h)	827	988	1522			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	6	89	77
Volume Left	0	0	0
Volume Right	6	0	6
cSH	988	1522	1700
Volume to Capacity	0.01	0.00	0.05
Queue Length 95th (ft)	0	0	0
Control Delay (s)	8.7	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.7	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	14.0%	ICU Level of Service	A
Analysis Period (min)	15		

Future AM Intersection Analysis (Interim Phase)

Future 2015 AM

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	468	410	673	58	466
Sign Control	Free		Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	375	54	369	626	46	433
Peak Hour Factor	0.93	0.83	0.90	0.93	0.80	0.93
Hourly flow rate (vph)	403	65	410	673	58	466
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			468		1929	436
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			468		1929	436
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			62		0	25
cM capacity (veh/h)			1093		46	621

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	468	410	673	523
Volume Left	0	410	0	58
Volume Right	65	0	0	466
cSH	1700	1093	1700	393
Volume to Capacity	0.28	0.38	0.40	1.33
Queue Length 95th (ft)	0	44	0	609
Control Delay (s)	0.0	10.3	0.0	194.3
Lane LOS		B		F
Approach Delay (s)	0.0	3.9		194.3
Approach LOS				F

Intersection Summary				
Average Delay		51.0		
Intersection Capacity Utilization		56.8%	ICU Level of Service	B
Analysis Period (min)		15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	37	408	460	468	345	42
Sign Control	Stop			Free	Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	28	396	423	426	317	33
Peak Hour Factor	0.75	0.97	0.92	0.91	0.92	0.78
Hourly flow rate (vph)	37	408	460	468	345	42
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1498	172	345			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1498	172	345			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	47	51	62			
cM capacity (veh/h)	70	841	1211			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	37	408	460	234	234	172	172	42
Volume Left	37	0	460	0	0	0	0	0
Volume Right	0	408	0	0	0	0	0	42
cSH	70	841	1211	1700	1700	1700	1700	1700
Volume to Capacity	0.53	0.49	0.38	0.14	0.14	0.10	0.10	0.02
Queue Length 95th (ft)	55	67	45	0	0	0	0	0
Control Delay (s)	103.9	13.2	9.8	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	B	A					
Approach Delay (s)	20.8		4.8			0.0		
Approach LOS	C							

Intersection Summary				
Average Delay	7.8			
Intersection Capacity Utilization	45.5%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	434	376	335	628	275	202
Act Effct Green (s)	88.9	88.9	71.2	120.0	23.1	98.3
Actuated g/C Ratio	0.74	0.74	0.59	1.00	0.19	0.82
v/c Ratio	0.80	0.14	0.30	0.40	0.81	0.15
Control Delay	14.8	0.8	15.7	0.7	63.8	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.8	0.8	15.7	0.7	63.8	0.8
LOS	B	A	B	A	E	A
Approach Delay		8.3	5.9			
Approach LOS		A	A			
Queue Length 50th (ft)	12	1	119	0	206	0
Queue Length 95th (ft)	112	13	253	0	279	16
Internal Link Dist (ft)		808	1512			
Turn Bay Length (ft)	150					
Base Capacity (vph)	790	2622	1105	1583	502	1447
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.14	0.30	0.40	0.55	0.14

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 47 (39%), Referenced to phase 2:WBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 13.4		Intersection LOS: B	
Intersection Capacity Utilization 62.3%		ICU Level of Service B	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	0.95			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	3539			1863	1583	1770		1583			
Flt Permitted	0.48	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	887	3539			1863	1583	1770		1583			
Volume (vph)	399	350	0	0	308	590	253	0	176	0	0	0
Peak-hour factor, PHF	0.92	0.93	0.92	0.92	0.92	0.94	0.92	0.92	0.87	0.92	0.92	0.92
Adj. Flow (vph)	434	376	0	0	335	628	275	0	202	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	37	0	0	0
Lane Group Flow (vph)	434	376	0	0	335	628	275	0	165	0	0	0
Turn Type	pm+pt					Free	Prot		custom			
Protected Phases	1	6			2		7					
Permitted Phases	6					Free			2 7			
Actuated Green, G (s)	88.9	88.9			71.2	120.0	23.1		98.3			
Effective Green, g (s)	88.9	88.9			71.2	120.0	23.1		98.3			
Actuated g/C Ratio	0.74	0.74			0.59	1.00	0.19		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)	758	2622			1105	1583	341		1297			
v/s Ratio Prot	c0.07	0.11			0.18		c0.16					
v/s Ratio Perm	c0.36					0.40			0.10			
v/c Ratio	0.57	0.14			0.30	0.40	0.81		0.13			
Uniform Delay, d1	6.2	4.5			12.1	0.0	46.3		2.2			
Progression Factor	0.67	0.14			1.00	1.00	1.00		1.00			
Incremental Delay, d2	0.9	0.0			0.7	0.7	13.0		0.0			
Delay (s)	5.1	0.6			12.8	0.7	59.3		2.2			
Level of Service	A	A			B	A	E		A			
Approach Delay (s)		3.0			4.9			35.1			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	120.0	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			

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	757	198	160	465	84	218
Act Effct Green (s)	79.0	120.0	91.0	91.0	21.0	104.0
Actuated g/C Ratio	0.66	1.00	0.76	0.76	0.18	0.87
v/c Ratio	0.62	0.13	0.44	0.33	0.14	0.16
Control Delay	15.0	0.2	9.3	4.2	42.6	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.0	0.2	9.3	4.2	42.6	0.5
LOS	B	A	A	A	D	A
Approach Delay	11.9			5.5		
Approach LOS	B			A		
Queue Length 50th (ft)	301	0	15	49	28	0
Queue Length 95th (ft)	483	0	m63	m154	47	7
Internal Link Dist (ft)	1279			808		
Turn Bay Length (ft)		150	150			
Base Capacity (vph)	1227	1583	473	1413	601	1401
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.13	0.34	0.33	0.14	0.16

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 105 (88%), Referenced to phase 2:WBTL and 6:EBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 9.8		Intersection LOS: A	
Intersection Capacity Utilization 62.3%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00					0.97		1.00
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		1863	1583	1770	1863					3433		1583
Flt Permitted		1.00	1.00	0.24	1.00					0.95		1.00
Satd. Flow (perm)		1863	1583	452	1863					3433		1583
Volume (vph)	0	719	174	146	437	0	0	0	0	69	0	179
Peak-hour factor, PHF	0.92	0.95	0.88	0.91	0.94	0.92	0.92	0.92	0.92	0.82	0.92	0.82
Adj. Flow (vph)	0	757	198	160	465	0	0	0	0	84	0	218
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	29
Lane Group Flow (vph)	0	757	198	160	465	0	0	0	0	84	0	189
Turn Type			Free	pm+pt						Prot		custom
Protected Phases		6		5	2					3		
Permitted Phases			Free	2								3 6
Actuated Green, G (s)		79.0	120.0	91.0	91.0					21.0		104.0
Effective Green, g (s)		79.0	120.0	91.0	91.0					21.0		104.0
Actuated g/C Ratio		0.66	1.00	0.76	0.76					0.18		0.87
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)		1226	1583	431	1413					601		1372
v/s Ratio Prot		c0.41		0.02	c0.25					0.02		
v/s Ratio Perm			0.13	0.26								c0.12
v/c Ratio		0.62	0.13	0.37	0.33					0.14		0.14
Uniform Delay, d1		11.8	0.0	8.6	4.7					41.9		1.2
Progression Factor		1.00	1.00	1.54	0.77					1.00		1.00
Incremental Delay, d2		2.3	0.2	0.5	0.5					0.5		0.2
Delay (s)		14.1	0.2	13.8	4.1					42.3		1.4
Level of Service		B	A	B	A					D		A
Approach Delay (s)		11.2			6.6			0.0			12.8	
Approach LOS		B			A			A			B	

Intersection Summary					
HCM Average Control Delay	10.0	HCM Level of Service		A	
HCM Volume to Capacity ratio	0.49				
Actuated Cycle Length (s)	120.0	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					

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	449	661	575
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	88.4%	ICU Level of Service E
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	41	342	116	487	525	5
Peak Hour Factor	0.80	0.86	0.92	0.91	0.93	0.50
Hourly flow rate (vph)	51	398	126	535	565	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	126				894	394
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	126				894	394
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	98
cM capacity (veh/h)	1460				301	655

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	449	661	575
Volume Left	51	0	565
Volume Right	0	535	10
cSH	1460	1700	304
Volume to Capacity	0.04	0.39	1.89
Queue Length 95th (ft)	3	0	984
Control Delay (s)	1.2	0.0	442.2
Lane LOS	A		F
Approach Delay (s)	1.2	0.0	442.2
Approach LOS			F

Intersection Summary			
Average Delay	151.1		
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	411	358	506	497
Act Effct Green (s)	34.7	34.7	77.3	77.3
Actuated g/C Ratio	0.29	0.29	0.64	0.64
v/c Ratio	0.79	0.71	0.46	0.48
Control Delay	49.3	34.5	14.1	6.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	49.3	34.5	14.1	6.6
LOS	D	C	B	A
Approach Delay	49.3	34.5	14.1	6.6
Approach LOS	D	C	B	A
Queue Length 50th (ft)	284	174	189	65
Queue Length 95th (ft)	253	138	334	89
Internal Link Dist (ft)	3138	678	2784	4178
Turn Bay Length (ft)				
Base Capacity (vph)	757	724	1110	1038
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.54	0.49	0.46	0.48

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 108 (90%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 24.3		Intersection LOS: C	
Intersection Capacity Utilization 62.6%		ICU Level of Service B	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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			1.00	
Frt		0.98			0.96			0.99			0.99	
Flt Protected		1.00			1.00			1.00			0.99	
Satd. Flow (prot)		1828			1773			1844			1835	
Flt Permitted		0.95			0.88			0.93			0.88	
Satd. Flow (perm)		1748			1563			1725			1618	
Volume (vph)	17	237	35	21	157	72	28	410	14	48	382	19
Peak-hour factor, PHF	0.69	0.70	0.75	0.64	0.75	0.62	0.67	0.93	0.60	0.71	0.96	0.62
Adj. Flow (vph)	25	339	47	33	209	116	42	441	23	68	398	31
RTOR Reduction (vph)	0	5	0	0	18	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	406	0	0	340	0	0	505	0	0	496	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		34.7			34.7			77.3			77.3	
Effective Green, g (s)		34.7			34.7			77.3			77.3	
Actuated g/C Ratio		0.29			0.29			0.64			0.64	
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)		505			452			1111			1042	
v/s Ratio Prot												
v/s Ratio Perm		c0.23			0.22			0.29			c0.31	
v/c Ratio		0.80			0.75			0.45			0.48	
Uniform Delay, d1		39.5			38.8			10.7			11.0	
Progression Factor		1.00			0.77			1.00			0.39	
Incremental Delay, d2		9.0			6.8			1.3			1.5	
Delay (s)		48.5			36.7			12.1			5.7	
Level of Service		D			D			B			A	
Approach Delay (s)		48.5			36.7			12.1			5.7	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM Average Control Delay	23.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	238	357	4	343	329	4	427	191
Act Effct Green (s)	68.4	66.4	54.8	49.1	49.1	43.6	43.6	43.6
Actuated g/C Ratio	0.57	0.55	0.46	0.41	0.41	0.36	0.36	0.36
v/c Ratio	0.54	0.35	0.01	0.45	0.39	0.01	0.87	0.30
Control Delay	14.8	14.4	16.0	31.4	4.9	19.5	45.4	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.8	14.4	16.0	31.4	4.9	19.5	45.4	8.5
LOS	B	B	B	C	A	B	D	A
Approach Delay		14.5		18.4		19.5	34.0	
Approach LOS		B		B		B	C	
Queue Length 50th (ft)	56	94	1	190	0	2	244	25
Queue Length 95th (ft)	m100	m304	2	339	69	5	54	58
Internal Link Dist (ft)		4178		602		2286	7832	
Turn Bay Length (ft)	95		150					70
Base Capacity (vph)	479	1031	491	763	842	854	620	776
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.35	0.01	0.45	0.39	0.00	0.69	0.25

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 4 (3%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 22.3		Intersection LOS: C	
Intersection Capacity Utilization 66.6%		ICU Level of Service C	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00	1.00		1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85		1.00			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.95	1.00
Satd. Flow (prot)	1770	1863		1770	1863	1583		1863			1775	1583
Flt Permitted	0.38	1.00		0.55	1.00	1.00		1.00			0.73	1.00
Satd. Flow (perm)	709	1863		1020	1863	1583		1863			1352	1583
Volume (vph)	217	332	0	1	309	306	0	2	0	389	1	174
Peak-hour factor, PHF	0.91	0.93	0.92	0.25	0.90	0.93	0.92	0.50	0.92	0.92	0.25	0.91
Adj. Flow (vph)	238	357	0	4	343	329	0	4	0	423	4	191
RTOR Reduction (vph)	0	0	0	0	0	194	0	0	0	0	0	60
Lane Group Flow (vph)	238	357	0	4	343	135	0	4	0	0	427	131
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			Perm		Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2		2	4			8		8
Actuated Green, G (s)	68.4	63.2		50.3	49.1	49.1		43.6			43.6	43.6
Effective Green, g (s)	68.4	63.2		50.3	49.1	49.1		43.6			43.6	43.6
Actuated g/C Ratio	0.57	0.53		0.42	0.41	0.41		0.36			0.36	0.36
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)	539	981		435	762	648		677			491	575
v/s Ratio Prot	c0.06	0.19		0.00	0.18			0.00				
v/s Ratio Perm	c0.20			0.00		0.09					c0.32	0.08
v/c Ratio	0.44	0.36		0.01	0.45	0.21		0.01			0.87	0.23
Uniform Delay, d1	14.3	16.6		20.3	25.7	22.9		24.4			35.6	26.5
Progression Factor	0.72	0.76		1.00	1.00	1.00		1.00			0.78	0.62
Incremental Delay, d2	0.5	0.9		0.0	1.9	0.7		0.0			15.1	0.2
Delay (s)	10.8	13.6		20.3	27.6	23.6		24.4			42.7	16.5
Level of Service	B	B		C	C	C		C			D	B
Approach Delay (s)		12.5			25.6			24.4			34.6	
Approach LOS		B			C			C			C	

Intersection Summary					
HCM Average Control Delay	24.4	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.60				
Actuated Cycle Length (s)	120.0	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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	29	726	27	23	620	101	21	33	177	24
Sign Control		Free			Free		Stop		Stop	

Intersection Summary			
Control Type: Unsignalized			
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												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	24	697	20	21	577	76	10	2	25	137	6	18
Peak Hour Factor	0.83	0.96	0.75	0.90	0.93	0.75	0.58	0.50	0.75	0.82	0.62	0.75
Hourly flow rate (vph)	29	726	27	23	620	101	17	4	33	167	10	24
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	620			726			1146	1451	363	1090	1451	310
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	620			726			1146	1451	363	1090	1451	310
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 %	97			97			87	97	95	0	92	96
cM capacity (veh/h)	956			873			134	122	634	150	122	686

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	29	363	363	27	23	310	310	101	55	201
Volume Left	29	0	0	0	23	0	0	0	17	167
Volume Right	0	0	0	27	0	0	0	101	33	24
cSH	956	1700	1700	1700	873	1700	1700	1700	339	164
Volume to Capacity	0.03	0.21	0.21	0.02	0.03	0.18	0.18	0.06	0.16	1.22
Queue Length 95th (ft)	2	0	0	0	2	0	0	0	14	281
Control Delay (s)	8.9	0.0	0.0	0.0	9.2	0.0	0.0	0.0	21.3	197.1
Lane LOS	A				A				C	F
Approach Delay (s)	0.3				0.3				21.3	197.1
Approach LOS									C	F

Intersection Summary					
Average Delay	23.1				
Intersection Capacity Utilization	41.2%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	460	128	448	10	298	61
Sign Control	Stop	Stop	Free		Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	56	123	155	5	72	21	149	229	5	21	248	42
Peak Hour Factor	0.64	0.68	0.81	0.50	0.80	0.75	0.75	0.92	0.50	0.75	0.92	0.69
Hourly flow rate (vph)	88	181	191	10	90	28	199	249	10	28	270	61
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	1045	972	270	1254	972	249	270			249		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1045	972	270	1254	972	249	270			249		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	25	14	75	62	57	96	85			98		
cM capacity (veh/h)	116	209	769	27	209	790	1294			1317		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	460	128	448	10	298	61
Volume Left	88	10	199	0	28	0
Volume Right	191	28	0	10	0	61
cSH	246	152	1294	1700	1317	1700
Volume to Capacity	1.87	0.84	0.15	0.01	0.02	0.04
Queue Length 95th (ft)	801	140	14	0	2	0
Control Delay (s)	438.4	94.2	4.5	0.0	0.9	0.0
Lane LOS	F	F	A		A	
Approach Delay (s)	438.4	94.2	4.4		0.8	
Approach LOS	F	F				

Intersection Summary					
Average Delay	153.8				
Intersection Capacity Utilization	70.2%	ICU Level of Service		C	
Analysis Period (min)	15				

Lane Group	EBT	WBT	NBL
Lane Group Flow (vph)	423	320	9
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	28.6%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	352	1	1	237	1	4
Peak Hour Factor	0.84	0.25	0.25	0.75	0.25	0.75
Hourly flow rate (vph)	419	4	4	316	4	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			423		745	421
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			423		745	421
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	99
cM capacity (veh/h)			1136		380	632

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	423	320	9
Volume Left	0	4	4
Volume Right	4	0	5
cSH	1700	1136	492
Volume to Capacity	0.25	0.00	0.02
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.1	12.5
Lane LOS		A	B
Approach Delay (s)	0.0	0.1	12.5
Approach LOS			B

Intersection Summary				
Average Delay		0.2		
Intersection Capacity Utilization	28.6%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	421	318	8
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	29.8%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	2	346	245	1	2	1
Peak Hour Factor	0.50	0.83	0.78	0.25	0.50	0.25
Hourly flow rate (vph)	4	417	314	4	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	318				741	316
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	318				741	316
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	99
cM capacity (veh/h)	1242				382	724

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	421	318	8
Volume Left	4	0	4
Volume Right	0	4	4
cSH	1242	1700	501
Volume to Capacity	0.00	0.19	0.02
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.1	0.0	12.3
Lane LOS	A		B
Approach Delay (s)	0.1	0.0	12.3
Approach LOS			B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	29.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	301	680	229
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	47.7%	ICU Level of Service A
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	219	7	167	265	24	156
Peak Hour Factor	0.75	0.75	0.75	0.58	0.62	0.82
Hourly flow rate (vph)	292	9	223	457	39	190
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	719	451			680	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	719	451			680	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	23	98			96	
cM capacity (veh/h)	379	608			913	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	301	680	229
Volume Left	292	0	39
Volume Right	9	457	0
cSH	383	1700	913
Volume to Capacity	0.79	0.40	0.04
Queue Length 95th (ft)	167	0	3
Control Delay (s)	41.4	0.0	1.9
Lane LOS	E		A
Approach Delay (s)	41.4	0.0	1.9
Approach LOS	E		

Intersection Summary				
Average Delay		10.7		
Intersection Capacity Utilization		47.7%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	550	85	449	88	212	42
Sign Control	Free		Free	Stop		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		

A-200

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	2	508	62	115	65	0	25	20	144	0	26	0
Peak Hour Factor	0.50	0.93	0.73	0.32	0.72	0.92	0.46	0.58	0.68	0.92	0.62	0.92
Hourly flow rate (vph)	4	546	85	359	90	0	54	34	212	0	42	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	90			546			1384	1363	546	1381	1363	90
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	90			546			1384	1363	546	1381	1363	90
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			65			8	64	61	100	56	100
cM capacity (veh/h)	1505			1023			59	96	537	39	96	967

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	550	85	450	0	301	42
Volume Left	4	0	359	0	54	0
Volume Right	0	85	0	0	212	0
cSH	1505	1700	1023	1700	197	94
Volume to Capacity	0.00	0.05	0.35	0.00	1.53	0.45
Queue Length 95th (ft)	0	0	40	0	474	47
Control Delay (s)	0.1	0.0	9.1	0.0	305.7	71.2
Lane LOS	A		A		F	F
Approach Delay (s)	0.1		9.1		305.7	71.2
Approach LOS					F	F

Intersection Summary					
Average Delay	69.4				
Intersection Capacity Utilization	55.7%	ICU Level of Service		B	
Analysis Period (min)	15				

Lane Group	EBT	EBR	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	653	62	228	10	57	57	38
Sign Control	Free		Free		Stop		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	30.2%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	555	45	0	162	5	14	4	9	33	27	0
Peak Hour Factor	0.92	0.85	0.73	0.92	0.71	0.50	0.58	0.38	0.40	0.58	0.72	0.92
Hourly flow rate (vph)	0	653	62	0	228	10	24	11	22	57	38	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	228			653			900	881	326	560	881	228
vC1, stage 1 conf vol							653	653		228	228	
vC2, stage 2 conf vol							247	228		332	653	
vCu, unblocked vol	228			653			900	881	326	560	881	228
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			94	98	97	90	91	100
cM capacity (veh/h)	1337			930			390	432	669	561	432	775

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	0	326	326	62	0	228	10	57	57	38
Volume Left	0	0	0	0	0	0	0	24	57	0
Volume Right	0	0	0	62	0	0	10	22	0	0
cSH	1700	1700	1700	1700	1700	1700	1700	477	561	424
Volume to Capacity	0.00	0.19	0.19	0.04	0.00	0.13	0.01	0.12	0.10	0.09
Queue Length 95th (ft)	0	0	0	0	0	0	0	10	8	7
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.6	12.1	14.3
Lane LOS								B	B	B
Approach Delay (s)	0.0				0.0			13.6	13.0	
Approach LOS								B	B	

Intersection Summary					
Average Delay	1.8				
Intersection Capacity Utilization	30.2%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	62	655	11	52	216	4	11	479	10	269
Act Effct Green (s)	9.4	57.8	57.8	9.4	57.8	57.8	42.8	42.8	42.8	42.8
Actuated g/C Ratio	0.08	0.48	0.48	0.08	0.48	0.48	0.36	0.36	0.36	0.36
v/c Ratio	0.45	0.38	0.01	0.38	0.13	0.01	0.03	0.74	0.05	0.41
Control Delay	62.0	24.0	16.2	55.0	14.0	8.0	20.2	35.7	20.6	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.0	24.0	16.2	55.0	14.0	8.0	20.2	35.7	20.6	27.9
LOS	E	C	B	D	B	A	C	D	C	C
Approach Delay		27.1			21.8			35.4		27.6
Approach LOS		C			C			D		C
Queue Length 50th (ft)	47	170	1	41	27	0	5	260	5	148
Queue Length 95th (ft)	70	254	4	68	31	0	6	292	8	167
Internal Link Dist (ft)		2246			4418			11076		2261
Turn Bay Length (ft)	280		115	290		180	125		105	
Base Capacity (vph)	251	1704	766	251	1704	764	423	815	253	817
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.38	0.01	0.21	0.13	0.01	0.03	0.59	0.04	0.33

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 8 (7%), Referenced to phase 2:WBT and 6:EBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 28.7		Intersection LOS: C	
Intersection Capacity Utilization 51.0%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		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)	1770	3539	1583	1770	3539	1583	1770	1799		1770	1806	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.46	1.00		0.22	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	859	1799		401	1806	
Volume (vph)	44	537	4	40	145	1	4	333	87	5	182	21
Peak-hour factor, PHF	0.71	0.82	0.38	0.77	0.67	0.25	0.38	0.90	0.80	0.50	0.85	0.38
Adj. Flow (vph)	62	655	11	52	216	4	11	370	109	10	214	55
RTOR Reduction (vph)	0	0	4	0	0	2	0	10	0	0	9	0
Lane Group Flow (vph)	62	655	7	52	216	2	11	469	0	10	260	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	8.3	56.9	56.9	8.3	56.9	56.9	42.8	42.8		42.8	42.8	
Effective Green, g (s)	8.3	56.9	56.9	8.3	56.9	56.9	42.8	42.8		42.8	42.8	
Actuated g/C Ratio	0.07	0.47	0.47	0.07	0.47	0.47	0.36	0.36		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)	122	1678	751	122	1678	751	306	642		143	644	
v/s Ratio Prot	c0.04	c0.19		0.03	0.06			c0.26			0.14	
v/s Ratio Perm			0.00			0.00	0.01			0.02		
v/c Ratio	0.51	0.39	0.01	0.43	0.13	0.00	0.04	0.73		0.07	0.40	
Uniform Delay, d1	53.9	20.4	16.7	53.6	17.7	16.6	25.2	33.6		25.5	29.0	
Progression Factor	1.00	1.00	1.00	0.92	0.66	0.49	1.02	0.92		1.00	1.00	
Incremental Delay, d2	3.3	0.7	0.0	2.4	0.2	0.0	0.0	4.2		0.2	0.4	
Delay (s)	57.2	21.0	16.7	51.5	11.7	8.1	25.6	34.9		25.7	29.4	
Level of Service	E	C	B	D	B	A	C	C		C	C	
Approach Delay (s)		24.1			19.3			34.7			29.3	
Approach LOS		C			B			C			C	

Intersection Summary					
HCM Average Control Delay	27.1	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.53				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	51.0%	ICU Level of Service		A	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	31	653	46	131	199	48	23	368	132	190
Act Effct Green (s)	65.2	59.4	59.4	72.9	67.0	67.0	29.9	23.3	39.0	32.4
Actuated g/C Ratio	0.54	0.50	0.50	0.61	0.56	0.56	0.25	0.19	0.32	0.27
v/c Ratio	0.05	0.37	0.06	0.39	0.10	0.05	0.07	0.88	0.44	0.38
Control Delay	2.7	5.9	0.4	15.7	15.6	5.8	24.2	52.0	32.1	35.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.7	5.9	0.4	15.7	15.6	5.8	24.2	52.0	32.1	35.8
LOS	A	A	A	B	B	A	C	D	C	D
Approach Delay		5.4			14.4			50.4		34.3
Approach LOS		A			B			D		C
Queue Length 50th (ft)	3	42	0	40	39	0	12	194	74	121
Queue Length 95th (ft)	m5	51	m0	88	75	18	18	264	104	164
Internal Link Dist (ft)		5533			4590			2266		2361
Turn Bay Length (ft)	300		120	320		145	150		150	
Base Capacity (vph)	752	1752	800	410	1977	906	388	621	320	628
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.37	0.06	0.32	0.10	0.05	0.06	0.59	0.41	0.30

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 17 (14%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 22.0		Intersection LOS: C	
Intersection Capacity Utilization 62.4%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.89		1.00	0.98	
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)	1770	3539	1583	1770	3539	1583	1770	1659		1770	1825	
Flt Permitted	0.63	1.00	1.00	0.31	1.00	1.00	0.64	1.00		0.14	1.00	
Satd. Flow (perm)	1167	3539	1583	573	3539	1583	1188	1659		257	1825	
Volume (vph)	23	581	33	115	179	38	14	86	253	119	146	17
Peak-hour factor, PHF	0.75	0.89	0.72	0.88	0.90	0.80	0.62	0.87	0.94	0.90	0.89	0.65
Adj. Flow (vph)	31	653	46	131	199	48	23	99	269	132	164	26
RTOR Reduction (vph)	0	0	17	0	0	22	0	96	0	0	5	0
Lane Group Flow (vph)	31	653	29	131	199	26	23	272	0	132	185	0
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4			8		
Actuated Green, G (s)	61.2	57.7	57.7	71.3	63.8	63.8	29.3	25.0		40.7	32.4	
Effective Green, g (s)	61.2	57.7	57.7	71.3	63.8	63.8	29.3	25.0		40.7	32.4	
Actuated g/C Ratio	0.51	0.48	0.48	0.59	0.53	0.53	0.24	0.21		0.34	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)	613	1702	761	436	1882	842	311	346		235	493	
v/s Ratio Prot	0.00	c0.18		c0.02	0.06		0.00	c0.16		c0.05	0.10	
v/s Ratio Perm	0.02		0.02	0.15		0.02	0.02			0.14		
v/c Ratio	0.05	0.38	0.04	0.30	0.11	0.03	0.07	0.79		0.56	0.38	
Uniform Delay, d1	14.7	19.8	16.5	11.8	13.9	13.4	34.7	45.0		31.0	35.6	
Progression Factor	0.20	0.25	0.02	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.6	0.1	0.4	0.1	0.1	0.1	11.2		3.1	0.5	
Delay (s)	3.0	5.5	0.5	12.2	14.1	13.4	34.8	56.2		34.1	36.1	
Level of Service	A	A	A	B	B	B	C	E		C	D	
Approach Delay (s)		5.1			13.3			54.9			35.2	
Approach LOS		A			B			D			D	

Intersection Summary					
HCM Average Control Delay	22.8	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.50				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		16.0	
Intersection Capacity Utilization	62.4%	ICU Level of Service		B	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	438	333	47
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	36.9%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	9	374	253	13	21	12
Peak Hour Factor	0.67	0.88	0.82	0.55	0.75	0.62
Hourly flow rate (vph)	13	425	309	24	28	19
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	332				772	320
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	332				772	320
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				92	97
cM capacity (veh/h)	1227				364	720

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	438	332	47
Volume Left	13	0	28
Volume Right	0	24	19
cSH	1227	1700	456
Volume to Capacity	0.01	0.20	0.10
Queue Length 95th (ft)	1	0	9
Control Delay (s)	0.4	0.0	13.8
Lane LOS	A		B
Approach Delay (s)	0.4	0.0	13.8
Approach LOS			B

Intersection Summary				
Average Delay		1.0		
Intersection Capacity Utilization	36.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	208	414	432
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	54.7%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	75	108	60	209	271	62
Peak Hour Factor	0.88	0.88	0.91	0.60	0.79	0.70
Hourly flow rate (vph)	85	123	66	348	343	89
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	414				533	240
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	414				533	240
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	93				27	89
cM capacity (veh/h)	1145				470	799

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	208	414	432
Volume Left	85	0	343
Volume Right	0	348	89
cSH	1145	1700	513
Volume to Capacity	0.07	0.24	0.84
Queue Length 95th (ft)	6	0	215
Control Delay (s)	3.8	0.0	39.0
Lane LOS	A		E
Approach Delay (s)	3.8	0.0	39.0
Approach LOS			E

Intersection Summary			
Average Delay	16.7		
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	201	106	55
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	24.5%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	31	117	86	7	13	27
Peak Hour Factor	0.50	0.84	0.93	0.50	0.67	0.75
Hourly flow rate (vph)	62	139	92	14	19	36
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	106				363	99
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	106				363	99
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				97	96
cM capacity (veh/h)	1485				610	956

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	201	106	55
Volume Left	62	0	19
Volume Right	0	14	36
cSH	1485	1700	798
Volume to Capacity	0.04	0.06	0.07
Queue Length 95th (ft)	3	0	6
Control Delay (s)	2.6	0.0	9.9
Lane LOS	A		A
Approach Delay (s)	2.6	0.0	9.9
Approach LOS			A

Intersection Summary				
Average Delay		2.9		
Intersection Capacity Utilization		24.5%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	117	143	85
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	19.1%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	5	96	86	19	56	4
Peak Hour Factor	0.50	0.90	0.75	0.69	0.70	0.75
Hourly flow rate (vph)	10	107	115	28	80	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	142				255	128
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	142				255	128
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				89	99
cM capacity (veh/h)	1441				728	922

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	117	142	85
Volume Left	10	0	80
Volume Right	0	28	5
cSH	1441	1700	738
Volume to Capacity	0.01	0.08	0.12
Queue Length 95th (ft)	1	0	10
Control Delay (s)	0.7	0.0	10.5
Lane LOS	A		B
Approach Delay (s)	0.7	0.0	10.5
Approach LOS			B

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	19.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	78	43	88
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	17.9%	ICU Level of Service A
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	21	18	2	29	21	2
Peak Hour Factor	0.50	0.50	0.50	0.75	0.25	0.50
Hourly flow rate (vph)	42	36	4	39	84	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	195	23			43	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	195	23			43	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	94	97			95	
cM capacity (veh/h)	751	1053			1566	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	78	43	88
Volume Left	42	0	84
Volume Right	36	39	0
cSH	866	1700	1566
Volume to Capacity	0.09	0.03	0.05
Queue Length 95th (ft)	7	0	4
Control Delay (s)	9.6	0.0	7.1
Lane LOS	A		A
Approach Delay (s)	9.6	0.0	7.1
Approach LOS	A		

Intersection Summary			
Average Delay	6.6		
Intersection Capacity Utilization	17.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	393	66	459	521
Sign Control	Stop	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	57.6%	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			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	122	6	71	13	4	44	26	269	25	59	273	32
Peak Hour Factor	0.50	0.92	0.50	0.92	0.92	0.92	0.25	0.82	0.92	0.92	0.83	0.25
Hourly flow rate (vph)	244	7	142	14	4	48	104	328	27	64	329	128
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	1121	1084	393	1216	1135	342	457			355		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1121	1084	393	1216	1135	342	457			355		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	0	96	78	87	97	93	91			95		
cM capacity (veh/h)	149	186	656	107	174	701	1104			1203		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	393	66	459	521
Volume Left	244	14	104	64
Volume Right	142	48	27	128
cSH	208	295	1104	1203
Volume to Capacity	1.88	0.22	0.09	0.05
Queue Length 95th (ft)	706	21	8	4
Control Delay (s)	454.1	20.7	2.7	1.5
Lane LOS	F	C	A	A
Approach Delay (s)	454.1	20.7	2.7	1.5
Approach LOS	F	C		

Intersection Summary				
Average Delay	126.2			
Intersection Capacity Utilization	57.6%	ICU Level of Service	B	
Analysis Period (min)	15			

Future 2015 AM Improved

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	468	410	673	58	466
Act Effct Green (s)	89.7	104.9	105.7	9.1	120.0
Actuated g/C Ratio	0.75	0.87	0.88	0.08	1.00
v/c Ratio	0.34	0.75	0.41	0.43	0.29
Control Delay	7.2	12.4	2.7	48.0	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	7.2	12.4	2.7	48.0	0.5
LOS	A	B	A	D	A
Approach Delay	7.2		6.4	5.8	
Approach LOS	A		A	A	
Queue Length 50th (ft)	110	41	82	35	1
Queue Length 95th (ft)	223	112	144	m56	m3
Internal Link Dist (ft)	2724		2449	828	
Turn Bay Length (ft)					160
Base Capacity (vph)	1367	822	1641	325	1583
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.34	0.50	0.41	0.18	0.29

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 38 (32%), Referenced to phase 2:WBTL and 6:EBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 6.4		Intersection LOS: A	
Intersection Capacity Utilization 56.8%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
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	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	1828		1770	1863	1770	1583
Flt Permitted	1.00		0.44	1.00	0.95	1.00
Satd. Flow (perm)	1828		813	1863	1770	1583
Volume (vph)	375	54	369	626	46	433
Peak-hour factor, PHF	0.93	0.83	0.90	0.93	0.80	0.93
Adj. Flow (vph)	403	65	410	673	58	466
RTOR Reduction (vph)	2	0	0	0	0	0
Lane Group Flow (vph)	466	0	410	673	58	466
Turn Type			pm+pt			Free
Protected Phases	6		5	2	4	
Permitted Phases			2			Free
Actuated Green, G (s)	88.9		104.1	104.1	7.9	120.0
Effective Green, g (s)	88.9		104.1	104.1	7.9	120.0
Actuated g/C Ratio	0.74		0.87	0.87	0.07	1.00
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)	1354		795	1616	117	1583
v/s Ratio Prot	0.25		c0.05	0.36	c0.03	
v/s Ratio Perm			c0.40			0.29
v/c Ratio	0.34		0.52	0.42	0.50	0.29
Uniform Delay, d1	5.4		2.3	1.6	54.1	0.0
Progression Factor	1.00		1.00	1.00	0.73	1.00
Incremental Delay, d2	0.7		0.6	0.8	3.2	0.5
Delay (s)	6.1		2.8	2.4	42.9	0.5
Level of Service	A		A	A	D	A
Approach Delay (s)	6.1			2.6	5.2	
Approach LOS	A			A	A	

Intersection Summary			
HCM Average Control Delay	4.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	449	661	575
Act Effct Green (s)	67.4	67.4	44.6
Actuated g/C Ratio	0.56	0.56	0.37
v/c Ratio	0.64	0.63	0.87
Control Delay	24.1	10.6	37.0
Queue Delay	0.0	0.0	0.0
Total Delay	24.1	10.6	37.0
LOS	C	B	D
Approach Delay	24.1	10.6	37.0
Approach LOS	C	B	D
Queue Length 50th (ft)	216	68	442
Queue Length 95th (ft)	354	406	m512
Internal Link Dist (ft)	4085	1279	4377
Turn Bay Length (ft)			
Base Capacity (vph)	705	1049	739
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.64	0.63	0.78

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 120		
Offset: 90 (75%), Referenced to phase 2:WBT and 6:EBTL, Start of Green		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.87		
Intersection Signal Delay: 23.2	Intersection LOS: C	
Intersection Capacity Utilization 88.4%	ICU Level of Service E	
Analysis Period (min) 15		

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
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		1.00	
Frt		1.00	0.89		1.00	
Flt Protected		0.99	1.00		0.95	
Satd. Flow (prot)		1852	1659		1771	
Flt Permitted		0.75	1.00		0.95	
Satd. Flow (perm)		1398	1659		1771	
Volume (vph)	41	342	116	487	525	5
Peak-hour factor, PHF	0.80	0.86	0.92	0.91	0.93	0.50
Adj. Flow (vph)	51	398	126	535	565	10
RTOR Reduction (vph)	0	0	116	0	1	0
Lane Group Flow (vph)	0	449	545	0	574	0
Turn Type	Perm					
Protected Phases		6	2		8	
Permitted Phases	6					
Actuated Green, G (s)		67.4	67.4		44.6	
Effective Green, g (s)		67.4	67.4		44.6	
Actuated g/C Ratio		0.56	0.56		0.37	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		785	932		658	
v/s Ratio Prot			c0.33		c0.32	
v/s Ratio Perm		0.32				
v/c Ratio		0.57	0.59		0.87	
Uniform Delay, d1		17.0	17.2		35.1	
Progression Factor		1.00	0.71		0.70	
Incremental Delay, d2		3.0	2.6		10.1	
Delay (s)		20.0	14.9		34.7	
Level of Service		C	B		C	
Approach Delay (s)		20.0	14.9		34.7	
Approach LOS		C	B		C	

Intersection Summary			
HCM Average Control Delay	23.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	29	726	27	23	620	101	21	33	177	24
Act Effct Green (s)	92.4	92.4	92.4	92.4	92.4	92.4	19.6	19.6	19.6	19.6
Actuated g/C Ratio	0.77	0.77	0.77	0.77	0.77	0.77	0.16	0.16	0.16	0.16
v/c Ratio	0.06	0.27	0.02	0.05	0.23	0.08	0.08	0.12	0.80	0.09
Control Delay	3.8	4.4	1.4	4.9	4.6	1.1	40.2	13.3	55.3	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.8	4.4	1.4	4.9	4.6	1.1	40.2	13.3	55.3	11.7
LOS	A	A	A	A	A	A	D	B	E	B
Approach Delay		4.3			4.1		23.7		50.1	
Approach LOS		A			A		C		D	
Queue Length 50th (ft)	6	98	2	4	58	0	14	0	144	9
Queue Length 95th (ft)	m6	m89	m1	14	104	9	19	19	144	m10
Internal Link Dist (ft)		5956			318		2546		3053	
Turn Bay Length (ft)	195		190	210		280		50		50
Base Capacity (vph)	498	2726	1226	420	2726	1243	685	731	607	724
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.27	0.02	0.05	0.23	0.08	0.03	0.05	0.29	0.03

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 19 (16%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 10.0		Intersection LOS: A	
Intersection Capacity Utilization 41.2%		ICU Level of Service A	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.96	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1790	1583		1779	1583
Flt Permitted	0.41	1.00	1.00	0.36	1.00	1.00		0.76	1.00		0.72	1.00
Satd. Flow (perm)	759	3539	1583	674	3539	1583		1425	1583		1346	1583
Volume (vph)	24	697	20	21	577	76	10	2	25	137	6	18
Peak-hour factor, PHF	0.83	0.96	0.75	0.90	0.93	0.75	0.58	0.50	0.75	0.82	0.62	0.75
Adj. Flow (vph)	29	726	27	23	620	101	17	4	33	167	10	24
RTOR Reduction (vph)	0	0	6	0	0	23	0	0	28	0	0	18
Lane Group Flow (vph)	29	726	21	23	620	78	0	21	5	0	177	6
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		6			2			4			8	
Permitted Phases	6		6	2		2	4		4	8		8
Actuated Green, G (s)	92.4	92.4	92.4	92.4	92.4	92.4		19.6	19.6		19.6	19.6
Effective Green, g (s)	92.4	92.4	92.4	92.4	92.4	92.4		19.6	19.6		19.6	19.6
Actuated g/C Ratio	0.77	0.77	0.77	0.77	0.77	0.77		0.16	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
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)	584	2725	1219	519	2725	1219		233	259		220	259
v/s Ratio Prot		c0.21			0.18							
v/s Ratio Perm	0.04		0.01	0.03		0.05		0.01	0.00		c0.13	0.00
v/c Ratio	0.05	0.27	0.02	0.04	0.23	0.06		0.09	0.02		0.80	0.02
Uniform Delay, d1	3.3	4.0	3.2	3.3	3.8	3.3		42.6	42.1		48.4	42.1
Progression Factor	0.78	0.93	0.79	1.00	1.00	1.00		1.00	1.00		0.80	0.72
Incremental Delay, d2	0.1	0.2	0.0	0.2	0.2	0.1		0.2	0.0		12.5	0.0
Delay (s)	2.7	3.9	2.5	3.4	4.0	3.4		42.8	42.2		51.0	30.5
Level of Service	A	A	A	A	A	A		D	D		D	C
Approach Delay (s)		3.8			3.9			42.4			48.6	
Approach LOS		A			A			D			D	

Intersection Summary					
HCM Average Control Delay	10.1	HCM Level of Service		B	
HCM Volume to Capacity ratio	0.36				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	41.2%	ICU Level of Service		A	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBT	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	460	128	448	10	298	61
Act Effct Green (s)	37.3	37.3	74.7	74.7	74.7	74.7
Actuated g/C Ratio	0.31	0.31	0.62	0.62	0.62	0.62
v/c Ratio	0.88	0.23	0.60	0.01	0.27	0.06
Control Delay	50.4	26.5	9.5	1.2	4.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.4	26.5	9.5	1.2	4.1	0.2
LOS	D	C	A	A	A	A
Approach Delay	50.4	26.5	9.3		3.5	
Approach LOS	D	C	A		A	
Queue Length 50th (ft)	275	65	48	0	25	0
Queue Length 95th (ft)	333	86	398	m0	80	1
Internal Link Dist (ft)	3368	5328	7832		11076	
Turn Bay Length (ft)				50		50
Base Capacity (vph)	662	704	742	987	1087	1000
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.18	0.60	0.01	0.27	0.06

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 72 (60%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 22.8		Intersection LOS: C	
Intersection Capacity Utilization 70.2%		ICU Level of Service C	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00
Frt		0.94			0.97			1.00	0.85		1.00	0.85
Flt Protected		0.99			1.00			0.98	1.00		1.00	1.00
Satd. Flow (prot)		1742			1801			1822	1583		1854	1583
Flt Permitted		0.91			0.97			0.68	1.00		0.94	1.00
Satd. Flow (perm)		1598			1745			1261	1583		1748	1583
Volume (vph)	56	123	155	5	72	21	149	229	5	21	248	42
Peak-hour factor, PHF	0.64	0.68	0.81	0.50	0.80	0.75	0.75	0.92	0.50	0.75	0.92	0.69
Adj. Flow (vph)	88	181	191	10	90	28	199	249	10	28	270	61
RTOR Reduction (vph)	0	25	0	0	10	0	0	0	2	0	0	15
Lane Group Flow (vph)	0	435	0	0	118	0	0	448	8	0	298	46
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6		6	2		2
Actuated Green, G (s)		37.3			37.3			74.7	74.7		74.7	74.7
Effective Green, g (s)		37.3			37.3			74.7	74.7		74.7	74.7
Actuated g/C Ratio		0.31			0.31			0.62	0.62		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)		497			542			785	985		1088	985
v/s Ratio Prot												
v/s Ratio Perm		c0.27			0.07			c0.36	0.01		0.17	0.03
v/c Ratio		0.88			0.22			0.57	0.01		0.27	0.05
Uniform Delay, d1		39.2			30.6			13.3	8.6		10.3	8.8
Progression Factor		0.94			1.00			0.38	0.13		0.30	0.02
Incremental Delay, d2		14.5			0.2			2.7	0.0		0.6	0.1
Delay (s)		51.2			30.8			7.7	1.1		3.7	0.3
Level of Service		D			C			A	A		A	A
Approach Delay (s)		51.2			30.8			7.6			3.1	
Approach LOS		D			C			A			A	

Intersection Summary			
HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	301	680	229
Act Effct Green (s)	25.7	86.3	86.3
Actuated g/C Ratio	0.21	0.72	0.72
v/c Ratio	0.79	0.54	0.21
Control Delay	48.9	9.0	6.0
Queue Delay	0.0	0.3	0.0
Total Delay	48.9	9.3	6.0
LOS	D	A	A
Approach Delay	48.9	9.3	6.0
Approach LOS	D	A	A
Queue Length 50th (ft)	203	69	58
Queue Length 95th (ft)	223	252	80
Internal Link Dist (ft)	4006	688	3620
Turn Bay Length (ft)			
Base Capacity (vph)	605	1260	1069
Starvation Cap Reductn	0	148	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.50	0.61	0.21

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 120		
Offset: 4 (3%), Referenced to phase 2:SBTL and 6:NBT, Start of Green		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.79		
Intersection Signal Delay: 18.5	Intersection LOS: B	
Intersection Capacity Utilization 47.7%	ICU Level of Service A	
Analysis Period (min) 15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
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			1.00
Frt	1.00		0.91			1.00
Flt Protected	0.95		1.00			0.99
Satd. Flow (prot)	1769		1694			1847
Flt Permitted	0.95		1.00			0.84
Satd. Flow (perm)	1769		1694			1571
Volume (vph)	219	7	167	265	24	156
Peak-hour factor, PHF	0.75	0.75	0.75	0.58	0.62	0.82
Adj. Flow (vph)	292	9	223	457	39	190
RTOR Reduction (vph)	1	0	42	0	0	0
Lane Group Flow (vph)	300	0	638	0	0	229
Turn Type					Perm	
Protected Phases	4		6			2
Permitted Phases					2	
Actuated Green, G (s)	25.7		86.3			86.3
Effective Green, g (s)	25.7		86.3			86.3
Actuated g/C Ratio	0.21		0.72			0.72
Clearance Time (s)	4.0		4.0			4.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	379		1218			1130
v/s Ratio Prot	c0.17		c0.38			
v/s Ratio Perm						0.15
v/c Ratio	0.79		0.52			0.20
Uniform Delay, d1	44.6		7.6			5.5
Progression Factor	0.79		1.08			0.82
Incremental Delay, d2	10.1		1.4			0.4
Delay (s)	45.6		9.6			4.9
Level of Service	D		A			A
Approach Delay (s)	45.6		9.6			4.9
Approach LOS	D		A			A

Intersection Summary			
HCM Average Control Delay	17.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	47.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	550	85	359	90	88	212	42
Act Effct Green (s)	100.5	100.5	100.5	100.5	11.5	11.5	11.5
Actuated g/C Ratio	0.84	0.84	0.84	0.84	0.10	0.10	0.10
v/c Ratio	0.35	0.06	0.57	0.06	0.61	0.62	0.24
Control Delay	3.2	0.6	9.1	1.7	65.8	13.1	51.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.2	0.6	9.1	1.7	65.8	13.1	51.8
LOS	A	A	A	A	E	B	D
Approach Delay	2.9			7.6	28.6		51.8
Approach LOS	A			A	C		D
Queue Length 50th (ft)	72	0	39	7	65	11	31
Queue Length 95th (ft)	139	5	19	13	71	31	43
Internal Link Dist (ft)	3224			8793	3620		2278
Turn Bay Length (ft)		150	150			50	
Base Capacity (vph)	1559	1340	633	1561	303	486	373
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.06	0.57	0.06	0.29	0.44	0.11

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 110 (92%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 11.2		Intersection LOS: B	
Intersection Capacity Utilization 52.3%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00			1.00	1.00		1.00	
Frt		1.00	0.85	1.00	1.00			1.00	0.85		1.00	
Flt Protected		1.00	1.00	0.95	1.00			0.97	1.00		1.00	
Satd. Flow (prot)		1862	1583	1770	1863			1807	1583		1863	
Flt Permitted		1.00	1.00	0.44	1.00			0.79	1.00		1.00	
Satd. Flow (perm)		1861	1583	815	1863			1468	1583		1863	
Volume (vph)	2	508	62	115	65	0	25	20	144	0	26	0
Peak-hour factor, PHF	0.50	0.93	0.73	0.32	0.72	0.92	0.46	0.58	0.68	0.92	0.62	0.92
Adj. Flow (vph)	4	546	85	359	90	0	54	34	212	0	42	0
RTOR Reduction (vph)	0	0	14	0	0	0	0	0	192	0	0	0
Lane Group Flow (vph)	0	550	71	359	90	0	0	88	20	0	42	0
Turn Type	Perm		Perm	Perm			Perm		Perm	Perm		Perm
Protected Phases		6			2			4			8	
Permitted Phases	6		6	2			4		4	8		8
Actuated Green, G (s)		100.5	100.5	100.5	100.5			11.5	11.5		11.5	
Effective Green, g (s)		100.5	100.5	100.5	100.5			11.5	11.5		11.5	
Actuated g/C Ratio		0.84	0.84	0.84	0.84			0.10	0.10		0.10	
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)		1559	1326	683	1560			141	152		179	
v/s Ratio Prot					0.05						0.02	
v/s Ratio Perm		0.30	0.04	c0.44				c0.06	0.01			
v/c Ratio		0.35	0.05	0.53	0.06			0.62	0.13		0.23	
Uniform Delay, d1		2.2	1.7	2.8	1.7			52.2	49.7		50.2	
Progression Factor		1.00	1.00	1.36	0.78			0.96	0.84		1.00	
Incremental Delay, d2		0.6	0.1	2.9	0.1			7.7	0.4		0.7	
Delay (s)		2.9	1.7	6.7	1.4			58.0	42.4		50.9	
Level of Service		A	A	A	A			E	D		D	
Approach Delay (s)		2.7			5.6			46.9			50.9	
Approach LOS		A			A			D			D	

Intersection Summary					
HCM Average Control Delay	14.4	HCM Level of Service	B		
HCM Volume to Capacity ratio	0.54				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0		
Intersection Capacity Utilization	52.3%	ICU Level of Service	A		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	208	66	348	432
Sign Control	Free	Free		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	42.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	75	108	60	209	271	62
Peak Hour Factor	0.88	0.88	0.91	0.60	0.79	0.70
Hourly flow rate (vph)	85	123	66	348	343	89
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	414				359	66
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	414				359	66
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	93				42	91
cM capacity (veh/h)	1145				592	998

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	208	66	348	432
Volume Left	85	0	0	343
Volume Right	0	0	348	89
cSH	1145	1700	1700	646
Volume to Capacity	0.07	0.04	0.20	0.67
Queue Length 95th (ft)	6	0	0	127
Control Delay (s)	3.8	0.0	0.0	21.1
Lane LOS	A			C
Approach Delay (s)	3.8	0.0		21.1
Approach LOS				C

Intersection Summary				
Average Delay		9.4		
Intersection Capacity Utilization		42.0%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	393	14	52	104	355	64	457
Act Effct Green (s)	34.2	34.2	34.2	77.8	77.8	77.8	77.8
Actuated g/C Ratio	0.28	0.28	0.28	0.65	0.65	0.65	0.65
v/c Ratio	0.94	0.05	0.11	0.27	0.30	0.13	0.39
Control Delay	68.2	26.5	8.4	13.9	11.5	4.8	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.2	26.5	8.4	13.9	11.5	4.8	4.6
LOS	E	C	A	B	B	A	A
Approach Delay	68.2		12.2		12.0		4.6
Approach LOS	E		B		B		A
Queue Length 50th (ft)	277	8	2	31	108	6	41
Queue Length 95th (ft)	353	21	27	18	191	m17	92
Internal Link Dist (ft)	1618		893		756		688
Turn Bay Length (ft)		150		150		150	
Base Capacity (vph)	708	513	827	382	1195	501	1164
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.03	0.06	0.27	0.30	0.13	0.39

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 96 (80%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 24.7		Intersection LOS: C	
Intersection Capacity Utilization 47.7%		ICU Level of Service A	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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		1.00	1.00		1.00	1.00	
Frt		0.95		1.00	0.86		1.00	0.99		1.00	0.96	
Flt Protected		0.97		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1719		1770	1605		1770	1841		1770	1784	
Flt Permitted		0.78		0.58	1.00		0.43	1.00		0.50	1.00	
Satd. Flow (perm)		1382		1089	1605		807	1841		938	1784	
Volume (vph)	122	6	71	13	4	44	26	269	25	59	273	32
Peak-hour factor, PHF	0.50	0.92	0.50	0.92	0.92	0.92	0.25	0.82	0.92	0.92	0.83	0.25
Adj. Flow (vph)	244	7	142	14	4	48	104	328	27	64	329	128
RTOR Reduction (vph)	0	24	0	0	34	0	0	1	0	0	7	0
Lane Group Flow (vph)	0	369	0	14	18	0	104	354	0	64	450	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		34.2		34.2	34.2		77.8	77.8		77.8	77.8	
Effective Green, g (s)		34.2		34.2	34.2		77.8	77.8		77.8	77.8	
Actuated g/C Ratio		0.29		0.29	0.29		0.65	0.65		0.65	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)		394		310	457		523	1194		608	1157	
v/s Ratio Prot					0.01			0.19			c0.25	
v/s Ratio Perm		c0.27		0.01			0.13			0.07		
v/c Ratio		0.94		0.05	0.04		0.20	0.30		0.11	0.39	
Uniform Delay, d1		41.8		31.1	31.0		8.5	9.2		8.0	9.9	
Progression Factor		1.00		1.00	1.00		1.00	1.00		0.40	0.33	
Incremental Delay, d2		29.3		0.1	0.0		0.9	0.6		0.3	0.9	
Delay (s)		71.2		31.1	31.1		9.4	9.8		3.5	4.1	
Level of Service		E		C	C		A	A		A	A	
Approach Delay (s)		71.2			31.1			9.7			4.1	
Approach LOS		E			C			A			A	

Intersection Summary					
HCM Average Control Delay	25.4	HCM Level of Service	C		
HCM Volume to Capacity ratio	0.56				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0		
Intersection Capacity Utilization	47.7%	ICU Level of Service	A		
Analysis Period (min)	15				

c Critical Lane Group

Future PM Intersection Analysis (Interim Phase)

Future 2015 PM

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	771	308	401	60	424
Sign Control	Free		Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	612	91	277	361	49	369
Peak Hour Factor	0.92	0.86	0.90	0.90	0.82	0.87
Hourly flow rate (vph)	665	106	308	401	60	424
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			771		1735	718
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			771		1735	718
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			64		2	1
cM capacity (veh/h)			844		61	429

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	771	308	401	484
Volume Left	0	308	0	60
Volume Right	106	0	0	424
cSH	1700	844	1700	489
Volume to Capacity	0.45	0.36	0.24	0.99
Queue Length 95th (ft)	0	42	0	328
Control Delay (s)	0.0	11.7	0.0	90.2
Lane LOS		B		F
Approach Delay (s)	0.0	5.1		90.2
Approach LOS				F

Intersection Summary				
Average Delay		24.1		
Intersection Capacity Utilization		67.2%	ICU Level of Service	C
Analysis Period (min)		15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	42	367	425	416	534	38
Sign Control	Stop			Free	Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	48.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	35	341	391	387	502	31
Peak Hour Factor	0.83	0.93	0.92	0.93	0.94	0.81
Hourly flow rate (vph)	42	367	425	416	534	38
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1592	267	534			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1592	267	534			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	27	50	59			
cM capacity (veh/h)	58	731	1030			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	42	367	425	208	208	267	267	38
Volume Left	42	0	425	0	0	0	0	0
Volume Right	0	367	0	0	0	0	0	38
cSH	58	731	1030	1700	1700	1700	1700	1700
Volume to Capacity	0.73	0.50	0.41	0.12	0.12	0.16	0.16	0.02
Queue Length 95th (ft)	78	71	51	0	0	0	0	0
Control Delay (s)	163.2	14.8	10.9	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	B	B					
Approach Delay (s)	30.1		5.5			0.0		
Approach LOS	D							

Intersection Summary				
Average Delay	9.3			
Intersection Capacity Utilization	48.9%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	297	758	448	122	244	211
Act Effct Green (s)	90.9	90.9	76.0	120.0	21.1	101.1
Actuated g/C Ratio	0.76	0.76	0.63	1.00	0.18	0.84
v/c Ratio	0.55	0.28	0.38	0.08	0.78	0.15
Control Delay	7.1	1.7	13.2	0.1	64.1	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.1	1.7	13.2	0.1	64.1	0.5
LOS	A	A	B	A	E	A
Approach Delay		3.2	10.4			
Approach LOS		A	B			
Queue Length 50th (ft)	14	15	158	0	183	0
Queue Length 95th (ft)	26	31	281	0	246	11
Internal Link Dist (ft)		808	1512			
Turn Bay Length (ft)	150					
Base Capacity (vph)	790	2681	1180	1583	487	1366
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.28	0.38	0.08	0.50	0.15

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 117 (98%), Referenced to phase 2:WBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 12.0		Intersection LOS: B	
Intersection Capacity Utilization 63.6%		ICU Level of Service B	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	0.95			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	3539			1863	1583	1770		1583			
Flt Permitted	0.44	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	814	3539			1863	1583	1770		1583			
Volume (vph)	279	728	0	0	426	110	215	0	196	0	0	0
Peak-hour factor, PHF	0.94	0.96	0.92	0.92	0.95	0.90	0.88	0.92	0.93	0.92	0.92	0.92
Adj. Flow (vph)	297	758	0	0	448	122	244	0	211	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	33	0	0	0
Lane Group Flow (vph)	297	758	0	0	448	122	244	0	178	0	0	0
Turn Type	pm+pt					Free	Prot		custom			
Protected Phases	1	6			2		7					
Permitted Phases	6					Free			2 7			
Actuated Green, G (s)	90.9	90.9			76.0	120.0	21.1		101.1			
Effective Green, g (s)	90.9	90.9			76.0	120.0	21.1		101.1			
Actuated g/C Ratio	0.76	0.76			0.63	1.00	0.18		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)	703	2681			1180	1583	311		1334			
v/s Ratio Prot	c0.04	0.21			0.24		c0.14					
v/s Ratio Perm	c0.28					0.08			0.11			
v/c Ratio	0.42	0.28			0.38	0.08	0.78		0.13			
Uniform Delay, d1	9.6	4.5			10.6	0.0	47.3		1.7			
Progression Factor	0.35	0.28			1.00	1.00	1.00		1.00			
Incremental Delay, d2	0.3	0.0			0.9	0.1	12.2		0.0			
Delay (s)	3.7	1.3			11.6	0.1	59.5		1.7			
Level of Service	A	A			B	A	E		A			
Approach Delay (s)		2.0			9.1			32.7			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM Average Control Delay	10.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	535	265	246	502	580	468
Act Effct Green (s)	65.4	120.0	79.0	79.0	33.0	102.4
Actuated g/C Ratio	0.54	1.00	0.66	0.66	0.28	0.85
v/c Ratio	0.53	0.17	0.64	0.41	0.61	0.33
Control Delay	20.2	0.2	18.0	6.4	41.3	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.2	0.2	18.0	6.4	41.3	1.0
LOS	C	A	B	A	D	A
Approach Delay	13.6			10.2		
Approach LOS	B			B		
Queue Length 50th (ft)	250	0	43	90	202	5
Queue Length 95th (ft)	381	0	m99	113	262	23
Internal Link Dist (ft)	1279			808		
Turn Bay Length (ft)		150	150			
Base Capacity (vph)	1015	1583	536	1226	944	1411
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.17	0.46	0.41	0.61	0.33

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 88 (73%), Referenced to phase 2:WBTL and 6:EBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 16.5		Intersection LOS: B	
Intersection Capacity Utilization 63.6%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00					0.97		1.00
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		1863	1583	1770	1863					3433		1583
Flt Permitted		1.00	1.00	0.31	1.00					0.95		1.00
Satd. Flow (perm)		1863	1583	578	1863					3433		1583
Volume (vph)	0	487	236	221	467	0	0	0	0	551	0	440
Peak-hour factor, PHF	0.92	0.91	0.89	0.90	0.93	0.92	0.92	0.92	0.92	0.95	0.92	0.94
Adj. Flow (vph)	0	535	265	246	502	0	0	0	0	580	0	468
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	60
Lane Group Flow (vph)	0	535	265	246	502	0	0	0	0	580	0	408
Turn Type			Free	pm+pt						Prot		custom
Protected Phases		6		5	2					3		
Permitted Phases			Free	2								3 6
Actuated Green, G (s)		65.4	120.0	79.0	79.0					33.0		102.4
Effective Green, g (s)		65.4	120.0	79.0	79.0					33.0		102.4
Actuated g/C Ratio		0.55	1.00	0.66	0.66					0.28		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)		1015	1583	476	1226					944		1351
v/s Ratio Prot		0.29		c0.04	0.27					c0.17		
v/s Ratio Perm			0.17	c0.30								0.26
v/c Ratio		0.53	0.17	0.52	0.41					0.61		0.30
Uniform Delay, d1		17.4	0.0	11.2	9.6					37.9		1.7
Progression Factor		1.00	1.00	1.33	0.56					1.00		1.00
Incremental Delay, d2		2.0	0.2	0.8	0.9					3.0		0.6
Delay (s)		19.4	0.2	15.8	6.3					40.9		2.3
Level of Service		B	A	B	A					D		A
Approach Delay (s)		13.0			9.4			0.0			23.7	
Approach LOS		B			A			A			C	

Intersection Summary					
HCM Average Control Delay	16.3	HCM Level of Service		B	
HCM Volume to Capacity ratio	0.54				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	63.6%	ICU Level of Service		B	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	205	1001	633
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	89.5%	ICU Level of Service E
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	9	175	325	553	522	47
Peak Hour Factor	0.67	0.91	0.89	0.87	0.92	0.71
Hourly flow rate (vph)	13	192	365	636	567	66
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	365				902	683
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	365				902	683
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				0	85
cM capacity (veh/h)	1193				305	449

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	206	1001	634
Volume Left	13	0	567
Volume Right	0	636	66
cSH	1193	1700	315
Volume to Capacity	0.01	0.59	2.01
Queue Length 95th (ft)	1	0	1127
Control Delay (s)	0.6	0.0	492.4
Lane LOS	A		F
Approach Delay (s)	0.6	0.0	492.4
Approach LOS			F

Intersection Summary			
Average Delay	169.6		
Intersection Capacity Utilization	89.5%	ICU Level of Service	E
Analysis Period (min)	15		

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	351	362	448	869
Act Effct Green (s)	28.5	28.5	83.5	83.5
Actuated g/C Ratio	0.24	0.24	0.70	0.70
v/c Ratio	0.88	0.88	0.42	0.74
Control Delay	65.4	55.6	10.2	10.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	65.4	55.6	10.2	10.9
LOS	E	E	B	B
Approach Delay	65.4	55.6	10.2	10.9
Approach LOS	E	E	B	B
Queue Length 50th (ft)	255	248	137	422
Queue Length 95th (ft)	314	331	235	188
Internal Link Dist (ft)	3138	678	2784	4178
Turn Bay Length (ft)				
Base Capacity (vph)	487	501	1066	1167
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.72	0.72	0.42	0.74

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 103 (86%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 28.2		Intersection LOS: C	
Intersection Capacity Utilization 86.6%		ICU Level of Service E	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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			1.00	
Frt		0.98			0.97			0.99			1.00	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1809			1804			1841			1844	
Flt Permitted		0.84			0.88			0.83			0.91	
Satd. Flow (perm)		1530			1599			1530			1678	
Volume (vph)	23	212	47	24	238	63	33	358	16	71	710	26
Peak-hour factor, PHF	0.70	0.83	0.75	0.83	0.92	0.85	0.58	0.96	0.88	0.79	0.95	0.80
Adj. Flow (vph)	33	255	63	29	259	74	57	373	18	90	747	32
RTOR Reduction (vph)	0	7	0	0	8	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	344	0	0	354	0	0	447	0	0	868	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		28.5			28.5			83.5			83.5	
Effective Green, g (s)		28.5			28.5			83.5			83.5	
Actuated g/C Ratio		0.24			0.24			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)		363			380			1065			1168	
v/s Ratio Prot												
v/s Ratio Perm		c0.22			0.22			0.29			c0.52	
v/c Ratio		0.95			0.93			0.42			0.74	
Uniform Delay, d1		45.0			44.8			7.8			11.5	
Progression Factor		1.00			0.80			1.00			0.52	
Incremental Delay, d2		33.6			28.2			1.2			3.8	
Delay (s)		78.6			63.9			9.1			9.8	
Level of Service		E			E			A			A	
Approach Delay (s)		78.6			63.9			9.1			9.8	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM Average Control Delay	31.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	239	298	11	4	427	422	12	435	389
Act Effct Green (s)	71.2	69.2	69.2	59.9	54.2	54.2	40.8	40.8	40.8
Actuated g/C Ratio	0.59	0.58	0.58	0.50	0.45	0.45	0.34	0.34	0.34
v/c Ratio	0.62	0.28	0.01	0.01	0.51	0.45	0.02	0.92	0.59
Control Delay	17.2	13.4	6.8	15.0	29.3	4.4	17.2	49.0	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	13.4	6.8	15.0	29.3	4.4	17.2	49.0	8.4
LOS	B	B	A	B	C	A	B	D	A
Approach Delay		14.9			16.9		17.3	29.9	
Approach LOS		B			B		B	C	
Queue Length 50th (ft)	63	79	0	1	234	0	4	286	33
Queue Length 95th (ft)	m122	m246	m2	2	409	72	3	m353	m83
Internal Link Dist (ft)		4178			602		2286	7832	
Turn Bay Length (ft)	95		100	150					70
Base Capacity (vph)	430	1074	917	588	841	946	711	605	788
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.28	0.01	0.01	0.51	0.45	0.02	0.72	0.49

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 4 (3%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 21.2		Intersection LOS: C	
Intersection Capacity Utilization 73.3%		ICU Level of Service D	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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		1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.96			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98			0.95	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583		1750			1770	1583
Flt Permitted	0.33	1.00	1.00	0.58	1.00	1.00		0.91			0.75	1.00
Satd. Flow (perm)	620	1863	1583	1077	1863	1583		1624			1397	1583
Volume (vph)	220	274	4	1	410	388	1	1	2	413	0	366
Peak-hour factor, PHF	0.92	0.92	0.38	0.25	0.96	0.92	0.25	0.25	0.50	0.95	0.92	0.94
Adj. Flow (vph)	239	298	11	4	427	422	4	4	4	435	0	389
RTOR Reduction (vph)	0	0	4	0	0	231	0	3	0	0	0	119
Lane Group Flow (vph)	239	298	7	4	427	191	0	9	0	0	435	270
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			Perm		Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2		2	4			8		8
Actuated Green, G (s)	71.2	66.0	66.0	55.4	54.2	54.2		40.8			40.8	40.8
Effective Green, g (s)	71.2	66.0	66.0	55.4	54.2	54.2		40.8			40.8	40.8
Actuated g/C Ratio	0.59	0.55	0.55	0.46	0.45	0.45		0.34			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
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)	492	1025	871	504	841	715		552			475	538
v/s Ratio Prot	c0.05	0.16		0.00	0.23							
v/s Ratio Perm	c0.24		0.00	0.00		0.12		0.01			c0.31	0.17
v/c Ratio	0.49	0.29	0.01	0.01	0.51	0.27		0.02			0.92	0.50
Uniform Delay, d1	13.8	14.5	12.2	17.4	23.4	20.5		26.3			38.0	31.5
Progression Factor	0.78	0.82	0.66	1.00	1.00	1.00		1.00			0.67	0.30
Incremental Delay, d2	0.7	0.6	0.0	0.0	2.2	0.9		0.0			21.7	0.7
Delay (s)	11.5	12.5	8.1	17.4	25.6	21.4		26.3			47.0	10.2
Level of Service	B	B	A	B	C	C		C			D	B
Approach Delay (s)		12.0			23.5			26.3			29.6	
Approach LOS		B			C			C			C	

Intersection Summary					
HCM Average Control Delay	23.0	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.64				
Actuated Cycle Length (s)	120.0	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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	24	626	14	33	760	165	35	32	124	14
Sign Control		Free			Free		Stop		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	38.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	12	601	7	20	714	137	17	4	22	97	0	12
Peak Hour Factor	0.50	0.96	0.50	0.61	0.94	0.83	0.70	0.38	0.68	0.78	0.92	0.83
Hourly flow rate (vph)	24	626	14	33	760	165	24	11	32	124	0	14
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	760			626			1119	1499	313	1191	1499	380
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	760			626			1119	1499	313	1191	1499	380
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 %	97			97			84	91	95	0	100	98
cM capacity (veh/h)	848			952			150	114	683	121	114	618

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	24	313	313	14	33	380	380	165	67	139
Volume Left	24	0	0	0	33	0	0	0	24	124
Volume Right	0	0	0	14	0	0	0	165	32	14
cSH	848	1700	1700	1700	952	1700	1700	1700	268	132
Volume to Capacity	0.03	0.18	0.18	0.01	0.03	0.22	0.22	0.10	0.25	1.05
Queue Length 95th (ft)	2	0	0	0	3	0	0	0	24	191
Control Delay (s)	9.4	0.0	0.0	0.0	8.9	0.0	0.0	0.0	25.4	156.9
Lane LOS	A				A				D	F
Approach Delay (s)	0.3				0.3				25.4	156.9
Approach LOS									D	F

Intersection Summary				
Average Delay	13.1			
Intersection Capacity Utilization	38.4%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	387	197	458	11	489	69
Sign Control	Stop	Stop	Free		Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	39	87	156	2	132	18	158	234	4	24	428	48
Peak Hour Factor	0.50	0.75	0.81	0.50	0.78	0.75	0.81	0.89	0.38	0.71	0.94	0.70
Hourly flow rate (vph)	78	116	193	4	169	24	195	263	11	34	455	69
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	1285	1176	455	1427	1176	263	455			263		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1285	1176	455	1427	1176	263	455			263		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	0	24	68	84	0	97	82			97		
cM capacity (veh/h)	0	153	605	26	153	776	1105			1301		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	387	197	458	11	489	69
Volume Left	78	4	195	0	34	0
Volume Right	193	24	0	11	0	69
cSH	0	153	1105	1700	1301	1700
Volume to Capacity	Err	1.29	0.18	0.01	0.03	0.04
Queue Length 95th (ft)	Err	295	16	0	2	0
Control Delay (s)	Err	228.1	4.9	0.0	0.8	0.0
Lane LOS	F	F	A		A	
Approach Delay (s)	Err	228.1	4.8		0.7	
Approach LOS	F	F				

Intersection Summary				
Average Delay		Err		
Intersection Capacity Utilization	82.7%	ICU Level of Service	E	
Analysis Period (min)	15			

Lane Group	EBT	WBT	NBL
Lane Group Flow (vph)	392	379	8
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	33.7%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	283	2	7	343	1	2
Peak Hour Factor	0.73	0.50	0.50	0.94	0.25	0.50
Hourly flow rate (vph)	388	4	14	365	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			392		783	390
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			392		783	390
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		99	99
cM capacity (veh/h)			1167		358	659

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	392	379	8
Volume Left	0	14	4
Volume Right	4	0	4
cSH	1700	1167	464
Volume to Capacity	0.23	0.01	0.02
Queue Length 95th (ft)	0	1	1
Control Delay (s)	0.0	0.4	12.9
Lane LOS		A	B
Approach Delay (s)	0.0	0.4	12.9
Approach LOS			B

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	354	396	8
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	28.6%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	1	287	353	1	2	1
Peak Hour Factor	0.25	0.82	0.90	0.25	0.50	0.25
Hourly flow rate (vph)	4	350	392	4	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	396				752	394
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	396				752	394
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	99
cM capacity (veh/h)	1162				377	655

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	354	396	8
Volume Left	4	0	4
Volume Right	0	4	4
cSH	1162	1700	478
Volume to Capacity	0.00	0.23	0.02
Queue Length 95th (ft)	0	0	1
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	0.2		
Intersection Capacity Utilization	28.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	418	556	229
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	47.5%	ICU Level of Service A
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	264	18	183	252	11	193
Peak Hour Factor	0.67	0.75	0.83	0.75	0.75	0.90
Hourly flow rate (vph)	394	24	220	336	15	214
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	632	388			556	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	632	388			556	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	10	96			99	
cM capacity (veh/h)	438	660			1014	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	418	556	229
Volume Left	394	0	15
Volume Right	24	336	0
cSH	446	1700	1014
Volume to Capacity	0.94	0.33	0.01
Queue Length 95th (ft)	272	0	1
Control Delay (s)	58.8	0.0	0.7
Lane LOS	F		A
Approach Delay (s)	58.8	0.0	0.7
Approach LOS	F		

Intersection Summary				
Average Delay		20.5		
Intersection Capacity Utilization		47.5%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	83	33	847	4	130	180	33	11
Sign Control	Free		Free		Stop		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	54.6%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	62	25	134	423	1	57	33	126	0	25	4
Peak Hour Factor	0.25	0.78	0.75	0.44	0.78	0.25	0.89	0.50	0.70	0.92	0.75	0.38
Hourly flow rate (vph)	4	79	33	305	542	4	64	66	180	0	33	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	542			79			1256	1239	79	1272	1239	542
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	542			79			1256	1239	79	1272	1239	542
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			80			36	53	82	100	76	98
cM capacity (veh/h)	1026			1519			101	140	981	64	140	540

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	83	33	847	4	310	44
Volume Left	4	0	305	0	64	0
Volume Right	0	33	0	4	180	11
cSH	1026	1700	1519	1700	254	184
Volume to Capacity	0.00	0.02	0.20	0.00	1.22	0.24
Queue Length 95th (ft)	0	0	19	0	372	22
Control Delay (s)	0.4	0.0	4.4	0.0	170.9	32.2
Lane LOS	A		A		F	D
Approach Delay (s)	0.3		4.3		170.9	32.2
Approach LOS					F	D

Intersection Summary					
Average Delay	44.0				
Intersection Capacity Utilization	54.6%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	176	33	11	654	38	114	22	15
Sign Control	Free			Free		Stop	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	43.0%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	144	25	4	497	32	46	19	0	0	11	14
Peak Hour Factor	0.92	0.82	0.75	0.38	0.76	0.84	0.57	0.57	0.92	0.56	0.50	0.92
Hourly flow rate (vph)	0	176	33	11	654	38	81	33	0	0	22	15
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	654			176			862	851	88	779	851	654
vC1, stage 1 conf vol							176	176		675	675	
vC2, stage 2 conf vol							686	675		104	176	
vCu, unblocked vol	654			176			862	851	88	779	851	654
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			77	92	100	100	95	96
cM capacity (veh/h)	929			1398			352	425	953	391	425	409

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	0	88	88	33	11	654	38	114	0	37
Volume Left	0	0	0	0	11	0	0	81	0	0
Volume Right	0	0	0	33	0	0	38	0	0	15
cSH	1700	1700	1700	1700	1398	1700	1700	371	1700	719
Volume to Capacity	0.00	0.05	0.05	0.02	0.01	0.38	0.02	0.31	0.00	0.05
Queue Length 95th (ft)	0	0	0	0	1	0	0	32	0	4
Control Delay (s)	0.0	0.0	0.0	0.0	7.6	0.0	0.0	19.0	0.0	14.0
Lane LOS					A			C	A	B
Approach Delay (s)	0.0				0.1			19.0	14.0	
Approach LOS								C	B	

Intersection Summary					
Average Delay	2.6				
Intersection Capacity Utilization	43.0%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	25	143	1	122	525	8	8	252	5	324
Act Effct Green (s)	7.0	69.1	69.1	14.7	82.8	82.8	24.2	24.2	24.2	24.2
Actuated g/C Ratio	0.06	0.58	0.58	0.12	0.69	0.69	0.20	0.20	0.20	0.20
v/c Ratio	0.24	0.07	0.00	0.56	0.22	0.01	0.05	0.67	0.03	0.87
Control Delay	58.9	13.9	13.0	46.7	3.9	1.3	41.4	56.9	34.8	67.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.9	13.9	13.0	46.7	3.9	1.3	41.4	56.9	34.8	67.0
LOS	E	B	B	D	A	A	D	E	C	E
Approach Delay		20.6			11.8			56.4		66.5
Approach LOS		C			B			E		E
Queue Length 50th (ft)	19	24	0	56	3	0	6	184	3	240
Queue Length 95th (ft)	48	54	3	71	167	m3	m13	267	13	319
Internal Link Dist (ft)		2246			4418			11076		2261
Turn Bay Length (ft)	280		115	290		180	125		105	
Base Capacity (vph)	339	2038	912	443	2441	1094	306	720	366	719
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.07	0.00	0.28	0.22	0.01	0.03	0.35	0.01	0.45

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 12 (10%), Referenced to phase 2:WBT and 6:EBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 33.8		Intersection LOS: C	
Intersection Capacity Utilization 42.7%		ICU Level of Service A	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.98	
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)	1770	3539	1583	1770	3539	1583	1770	1827		1770	1823	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.17	1.00		0.31	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	312	1827		585	1823	
Volume (vph)	23	132	1	112	483	7	7	202	29	5	256	42
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	25	143	1	122	525	8	8	220	32	5	278	46
RTOR Reduction (vph)	0	0	0	0	0	3	0	6	0	0	6	0
Lane Group Flow (vph)	25	143	1	122	525	5	8	246	0	5	318	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	3.4	69.1	69.1	14.7	80.4	80.4	24.2	24.2		24.2	24.2	
Effective Green, g (s)	3.4	69.1	69.1	14.7	80.4	80.4	24.2	24.2		24.2	24.2	
Actuated g/C Ratio	0.03	0.58	0.58	0.12	0.67	0.67	0.20	0.20		0.20	0.20	
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)	50	2038	912	217	2371	1061	63	368		118	368	
v/s Ratio Prot	0.01	0.04		c0.07	c0.15			0.13			c0.17	
v/s Ratio Perm			0.00			0.00	0.03			0.01		
v/c Ratio	0.50	0.07	0.00	0.56	0.22	0.01	0.13	0.67		0.04	0.86	
Uniform Delay, d1	57.5	11.2	10.8	49.6	7.7	6.6	39.2	44.2		38.6	46.3	
Progression Factor	1.00	1.00	1.00	0.76	0.44	0.21	1.17	1.14		1.00	1.00	
Incremental Delay, d2	7.7	0.1	0.0	3.2	0.2	0.0	0.9	4.3		0.1	18.4	
Delay (s)	65.1	11.3	10.8	41.1	3.6	1.4	46.7	54.9		38.7	64.7	
Level of Service	E	B	B	D	A	A	D	D		D	E	
Approach Delay (s)		19.3			10.5			54.6			64.3	
Approach LOS		B			B			D			E	

Intersection Summary					
HCM Average Control Delay	32.2	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.40				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	42.7%	ICU Level of Service		A	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	26	167	36	277	610	122	53	274	56	104
Act Effct Green (s)	72.1	66.0	66.0	83.0	76.7	76.7	29.6	20.9	18.2	12.2
Actuated g/C Ratio	0.60	0.55	0.55	0.69	0.64	0.64	0.25	0.17	0.15	0.10
v/c Ratio	0.05	0.09	0.04	0.37	0.27	0.12	0.14	0.82	0.34	0.54
Control Delay	7.4	13.2	4.2	9.7	12.0	3.6	33.1	60.5	40.1	56.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.4	13.2	4.2	9.7	12.0	3.6	33.1	60.5	40.1	56.7
LOS	A	B	A	A	B	A	C	E	D	E
Approach Delay		11.2			10.3			56.1		50.9
Approach LOS		B			B			E		D
Queue Length 50th (ft)	5	27	1	75	115	4	32	180	33	71
Queue Length 95th (ft)	m12	m46	m4	136	183	34	41	258	58	126
Internal Link Dist (ft)		5533			4590			2266		2361
Turn Bay Length (ft)	300		120	320		145	150		150	
Base Capacity (vph)	632	1947	887	865	2263	1052	410	560	315	565
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.09	0.04	0.32	0.27	0.12	0.13	0.49	0.18	0.18

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 1 (1%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 22.9		Intersection LOS: C	
Intersection Capacity Utilization 50.1%		ICU Level of Service A	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	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)	1770	3539	1583	1770	3539	1583	1770	1733		1770	1809	
Flt Permitted	0.42	1.00	1.00	0.61	1.00	1.00	0.58	1.00		0.33	1.00	
Satd. Flow (perm)	784	3539	1583	1134	3539	1583	1078	1733		611	1809	
Volume (vph)	18	152	22	241	573	109	34	132	119	48	76	14
Peak-hour factor, PHF	0.70	0.91	0.61	0.87	0.94	0.89	0.64	0.90	0.94	0.85	0.90	0.69
Adj. Flow (vph)	26	167	36	277	610	122	53	147	127	56	84	20
RTOR Reduction (vph)	0	0	16	0	0	42	0	31	0	0	9	0
Lane Group Flow (vph)	26	167	20	277	610	80	53	243	0	56	95	0
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4			8		
Actuated Green, G (s)	69.1	65.2	65.2	82.2	74.3	74.3	29.8	20.9		17.1	12.2	
Effective Green, g (s)	69.1	65.2	65.2	82.2	74.3	74.3	29.8	20.9		17.1	12.2	
Actuated g/C Ratio	0.58	0.54	0.54	0.68	0.62	0.62	0.25	0.17		0.14	0.10	
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)	483	1923	860	846	2191	980	346	302		134	184	
v/s Ratio Prot	0.00	0.05		c0.04	0.17		0.02	c0.14		c0.02	0.05	
v/s Ratio Perm	0.03		0.01	c0.19		0.05	0.02			0.04		
v/c Ratio	0.05	0.09	0.02	0.33	0.28	0.08	0.15	0.81		0.42	0.52	
Uniform Delay, d1	11.0	13.1	12.7	7.1	10.5	9.2	37.4	47.6		55.2	51.1	
Progression Factor	0.80	0.83	0.66	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1	0.0	0.2	0.3	0.2	0.2	14.5		2.1	2.4	
Delay (s)	8.8	11.0	8.4	7.4	10.8	9.3	37.6	62.1		57.3	53.5	
Level of Service	A	B	A	A	B	A	D	E		E	D	
Approach Delay (s)		10.4			9.7			58.1			54.9	
Approach LOS		B			A			E			D	

Intersection Summary					
HCM Average Control Delay	23.2	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.42				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	50.1%	ICU Level of Service		A	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	403	531	15
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	34.6%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	8	346	422	14	6	4
Peak Hour Factor	0.58	0.89	0.83	0.60	0.62	0.75
Hourly flow rate (vph)	14	389	508	23	10	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	532				936	520
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	532				936	520
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				97	99
cM capacity (veh/h)	1036				290	556

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	403	532	15
Volume Left	14	0	10
Volume Right	0	23	5
cSH	1036	1700	350
Volume to Capacity	0.01	0.31	0.04
Queue Length 95th (ft)	1	0	3
Control Delay (s)	0.4	0.0	15.8
Lane LOS	A		C
Approach Delay (s)	0.4	0.0	15.8
Approach LOS			C

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	34.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	158	516	462
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	59.3%	ICU Level of Service B
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	36	88	136	289	268	48
Peak Hour Factor	0.67	0.85	0.83	0.82	0.68	0.71
Hourly flow rate (vph)	54	104	164	352	394	68
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	516				551	340
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	516				551	340
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				16	90
cM capacity (veh/h)	1049				470	702

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	157	516	462
Volume Left	54	0	394
Volume Right	0	352	68
cSH	1049	1700	494
Volume to Capacity	0.05	0.30	0.93
Queue Length 95th (ft)	4	0	282
Control Delay (s)	3.3	0.0	54.9
Lane LOS	A		F
Approach Delay (s)	3.3	0.0	54.9
Approach LOS			F

Intersection Summary				
Average Delay		22.8		
Intersection Capacity Utilization		59.3%	ICU Level of Service	B
Analysis Period (min)		15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	162	177	88
Sign Control	Free	Free	Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	28.5%	ICU Level of Service A	
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	35	95	141	13	9	32
Peak Hour Factor	0.62	0.90	0.89	0.67	0.38	0.50
Hourly flow rate (vph)	56	106	158	19	24	64
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	178				387	168
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	178				387	168
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				96	93
cM capacity (veh/h)	1398				592	876

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	162	178	88
Volume Left	56	0	24
Volume Right	0	19	64
cSH	1398	1700	775
Volume to Capacity	0.04	0.10	0.11
Queue Length 95th (ft)	3	0	10
Control Delay (s)	2.9	0.0	10.2
Lane LOS	A		B
Approach Delay (s)	2.9	0.0	10.2
Approach LOS			B

Intersection Summary				
Average Delay		3.2		
Intersection Capacity Utilization		28.5%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	114	199	36
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	19.7%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	6	86	107	66	23	6
Peak Hour Factor	0.62	0.83	0.90	0.82	0.88	0.62
Hourly flow rate (vph)	10	104	119	80	26	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	199				282	159
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	199				282	159
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				96	99
cM capacity (veh/h)	1373				703	886

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	113	199	36
Volume Left	10	0	26
Volume Right	0	80	10
cSH	1373	1700	745
Volume to Capacity	0.01	0.12	0.05
Queue Length 95th (ft)	1	0	4
Control Delay (s)	0.7	0.0	10.1
Lane LOS	A		B
Approach Delay (s)	0.7	0.0	10.1
Approach LOS			B

Intersection Summary				
Average Delay	1.3			
Intersection Capacity Utilization	19.7%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	114	48	88
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	17.9%	ICU Level of Service A
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	36	21	2	33	21	2
Peak Hour Factor	0.50	0.50	0.50	0.75	0.25	0.50
Hourly flow rate (vph)	72	42	4	44	84	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	198	26			48	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	198	26			48	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	90	96			95	
cM capacity (veh/h)	748	1050			1559	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	114	48	88
Volume Left	72	0	84
Volume Right	42	44	0
cSH	837	1700	1559
Volume to Capacity	0.14	0.03	0.05
Queue Length 95th (ft)	12	0	4
Control Delay (s)	10.0	0.0	7.1
Lane LOS	A		A
Approach Delay (s)	10.0	0.0	7.1
Approach LOS	A		

Intersection Summary				
Average Delay		7.1		
Intersection Capacity Utilization		17.9%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	470	135	554	617
Sign Control	Stop	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	53.3%	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			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	61	9	54	32	16	76	80	304	26	61	283	111
Peak Hour Factor	0.25	0.92	0.25	0.92	0.92	0.92	0.50	0.83	0.92	0.92	0.86	0.50
Hourly flow rate (vph)	244	10	216	35	17	83	160	366	28	66	329	222
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	1364	1287	440	1494	1384	380	551			395		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1364	1287	440	1494	1384	380	551			395		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	0	93	65	34	85	88	84			94		
cM capacity (veh/h)	82	130	617	52	114	667	1019			1164		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	470	135	555	617
Volume Left	244	35	160	66
Volume Right	216	83	28	222
cSH	138	143	1019	1164
Volume to Capacity	3.41	0.94	0.16	0.06
Queue Length 95th (ft)	Err	165	14	5
Control Delay (s)	Err	120.5	4.0	1.5
Lane LOS	F	F	A	A
Approach Delay (s)	Err	120.5	4.0	1.5
Approach LOS	F	F		

Intersection Summary				
Average Delay	2655.1			
Intersection Capacity Utilization	53.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Future 2015 PM Improved

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	771	308	401	60	424
Act Effct Green (s)	97.3	112.4	113.2	9.5	128.0
Actuated g/C Ratio	0.76	0.88	0.88	0.07	1.00
v/c Ratio	0.55	0.77	0.24	0.45	0.27
Control Delay	10.0	20.3	2.0	66.9	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	10.0	20.3	2.0	66.9	0.4
LOS	B	C	A	E	A
Approach Delay	10.0		9.9	8.7	
Approach LOS	B		A	A	
Queue Length 50th (ft)	225	30	41	49	0
Queue Length 95th (ft)	487	140	76	84	0
Internal Link Dist (ft)	2724		2449	828	
Turn Bay Length (ft)					160
Base Capacity (vph)	1391	570	1648	249	1583
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.55	0.54	0.24	0.24	0.27

Intersection Summary			
Cycle Length: 128			
Actuated Cycle Length: 128			
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 9.7		Intersection LOS: A	
Intersection Capacity Utilization 66.4%		ICU Level of Service C	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
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	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	1828		1770	1863	1770	1583
Flt Permitted	1.00		0.29	1.00	0.95	1.00
Satd. Flow (perm)	1828		531	1863	1770	1583
Volume (vph)	612	91	277	361	49	369
Peak-hour factor, PHF	0.92	0.86	0.90	0.90	0.82	0.87
Adj. Flow (vph)	665	106	308	401	60	424
RTOR Reduction (vph)	2	0	0	0	0	0
Lane Group Flow (vph)	769	0	308	401	60	424
Turn Type			pm+pt			Free
Protected Phases	6		5	2	4	
Permitted Phases			2			Free
Actuated Green, G (s)	96.4		111.6	111.6	8.4	128.0
Effective Green, g (s)	96.4		111.6	111.6	8.4	128.0
Actuated g/C Ratio	0.75		0.87	0.87	0.07	1.00
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)	1377		571	1624	116	1583
v/s Ratio Prot	c0.42		c0.05	0.22	c0.03	
v/s Ratio Perm			0.42			0.27
v/c Ratio	0.56		0.54	0.25	0.52	0.27
Uniform Delay, d1	6.7		5.2	1.3	57.8	0.0
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	1.6		1.0	0.4	3.9	0.4
Delay (s)	8.4		6.2	1.7	61.7	0.4
Level of Service	A		A	A	E	A
Approach Delay (s)	8.4			3.7	8.0	
Approach LOS	A			A	A	

Intersection Summary			
HCM Average Control Delay	6.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	128.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	205	1001	633
Act Effct Green (s)	68.0	68.0	44.0
Actuated g/C Ratio	0.57	0.57	0.37
v/c Ratio	0.30	0.98	0.98
Control Delay	14.7	39.2	62.3
Queue Delay	0.0	0.0	0.0
Total Delay	14.7	39.2	62.3
LOS	B	D	E
Approach Delay	14.7	39.2	62.3
Approach LOS	B	D	E
Queue Length 50th (ft)	77	700	~499
Queue Length 95th (ft)	125	#961	m#709
Internal Link Dist (ft)	4085	1279	4377
Turn Bay Length (ft)			
Base Capacity (vph)	703	1032	647
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.29	0.97	0.98

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 120		
Offset: 88 (73%), Referenced to phase 2:WBT and 6:EBTL, Start of Green		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.98		
Intersection Signal Delay: 44.4	Intersection LOS: D	
Intersection Capacity Utilization 89.5%	ICU Level of Service E	
Analysis Period (min) 15		

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
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		1.00	
Frt		1.00	0.91		0.99	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		1857	1703		1758	
Flt Permitted		0.63	1.00		0.96	
Satd. Flow (perm)		1171	1703		1758	
Volume (vph)	9	175	325	553	522	47
Peak-hour factor, PHF	0.67	0.91	0.89	0.87	0.92	0.71
Adj. Flow (vph)	13	192	365	636	567	66
RTOR Reduction (vph)	0	0	53	0	3	0
Lane Group Flow (vph)	0	205	948	0	630	0
Turn Type	Perm					
Protected Phases		6	2		8	
Permitted Phases	6					
Actuated Green, G (s)		68.0	68.0		44.0	
Effective Green, g (s)		68.0	68.0		44.0	
Actuated g/C Ratio		0.57	0.57		0.37	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		664	965		645	
v/s Ratio Prot			c0.56		c0.36	
v/s Ratio Perm		0.18				
v/c Ratio		0.31	0.98		0.98	
Uniform Delay, d1		13.7	25.4		37.5	
Progression Factor		1.00	0.64		0.87	
Incremental Delay, d2		1.2	24.2		27.5	
Delay (s)		14.9	40.5		60.0	
Level of Service		B	D		E	
Approach Delay (s)		14.9	40.5		60.0	
Approach LOS		B	D		E	

Intersection Summary			
HCM Average Control Delay	44.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	89.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	24	626	14	33	760	165	35	32	124	14
Act Effct Green (s)	97.0	97.0	97.0	97.0	97.0	97.0	15.0	15.0	15.0	15.0
Actuated g/C Ratio	0.81	0.81	0.81	0.81	0.81	0.81	0.12	0.12	0.12	0.12
v/c Ratio	0.05	0.22	0.01	0.06	0.27	0.13	0.18	0.14	0.73	0.07
Control Delay	1.7	1.3	0.4	3.4	3.4	0.8	46.8	15.2	66.1	27.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.7	1.3	0.4	3.4	3.4	0.8	46.8	15.2	66.1	27.4
LOS	A	A	A	A	A	A	D	B	E	C
Approach Delay		1.3			3.0		31.7		62.2	
Approach LOS		A			A		C		E	
Queue Length 50th (ft)	1	13	0	4	58	0	25	0	100	4
Queue Length 95th (ft)	m3	m34	m0	10	108	12	22	16	m123	m8
Internal Link Dist (ft)		5956			318		2546		3053	
Turn Bay Length (ft)	195		190	210		280		50		50
Base Capacity (vph)	437	2861	1283	533	2861	1311	644	678	570	668
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.22	0.01	0.06	0.27	0.13	0.05	0.05	0.22	0.02

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 80 (67%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 7.9		Intersection LOS: A	
Intersection Capacity Utilization 38.4%		ICU Level of Service A	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.97	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1801	1583		1770	1583
Flt Permitted	0.35	1.00	1.00	0.41	1.00	1.00		0.75	1.00		0.73	1.00
Satd. Flow (perm)	659	3539	1583	763	3539	1583		1389	1583		1368	1583
Volume (vph)	12	601	7	20	714	137	17	4	22	97	0	12
Peak-hour factor, PHF	0.50	0.96	0.50	0.61	0.94	0.83	0.70	0.38	0.68	0.78	0.92	0.83
Adj. Flow (vph)	24	626	14	33	760	165	24	11	32	124	0	14
RTOR Reduction (vph)	0	0	3	0	0	32	0	0	28	0	0	12
Lane Group Flow (vph)	24	626	11	33	760	133	0	35	4	0	124	2
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		6			2			4			8	
Permitted Phases	6		6	2		2	4		4	8		8
Actuated Green, G (s)	97.0	97.0	97.0	97.0	97.0	97.0		15.0	15.0		15.0	15.0
Effective Green, g (s)	97.0	97.0	97.0	97.0	97.0	97.0		15.0	15.0		15.0	15.0
Actuated g/C Ratio	0.81	0.81	0.81	0.81	0.81	0.81		0.12	0.12		0.12	0.12
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)	533	2861	1280	617	2861	1280		174	198		171	198
v/s Ratio Prot		0.18			c0.21							
v/s Ratio Perm	0.04		0.01	0.04		0.08		0.03	0.00		c0.09	0.00
v/c Ratio	0.05	0.22	0.01	0.05	0.27	0.10		0.20	0.02		0.73	0.01
Uniform Delay, d1	2.3	2.7	2.2	2.3	2.8	2.4		47.1	46.1		50.5	46.0
Progression Factor	0.46	0.38	0.30	1.00	1.00	1.00		1.00	1.00		1.01	1.44
Incremental Delay, d2	0.1	0.1	0.0	0.2	0.2	0.2		0.6	0.0		9.5	0.0
Delay (s)	1.2	1.2	0.7	2.5	3.0	2.6		47.7	46.1		60.4	66.3
Level of Service	A	A	A	A	A	A		D	D		E	E
Approach Delay (s)		1.1			2.9			46.9			61.0	
Approach LOS		A			A			D			E	

Intersection Summary					
HCM Average Control Delay	8.3	HCM Level of Service		A	
HCM Volume to Capacity ratio	0.33				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	38.4%	ICU Level of Service		A	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBT	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	387	197	458	11	489	69
Act Effct Green (s)	31.2	31.2	80.8	80.8	80.8	80.8
Actuated g/C Ratio	0.26	0.26	0.67	0.67	0.67	0.67
v/c Ratio	0.91	0.41	0.68	0.01	0.41	0.06
Control Delay	54.6	36.7	15.4	2.2	7.2	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.6	36.7	15.4	2.2	7.2	1.3
LOS	D	D	B	A	A	A
Approach Delay	54.6	36.7	15.0		6.4	
Approach LOS	D	D	B		A	
Queue Length 50th (ft)	272	121	153	0	38	0
Queue Length 95th (ft)	136	149	450	1	m321	m12
Internal Link Dist (ft)	3368	5328	7832		11076	
Turn Bay Length (ft)				50		50
Base Capacity (vph)	522	596	672	1068	1191	1077
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.33	0.68	0.01	0.41	0.06

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 88 (73%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 24.2		Intersection LOS: C	
Intersection Capacity Utilization 82.7%		ICU Level of Service E	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00
Frt		0.93			0.98			1.00	0.85		1.00	0.85
Flt Protected		0.99			1.00			0.98	1.00		1.00	1.00
Satd. Flow (prot)		1720			1830			1824	1583		1856	1583
Flt Permitted		0.81			0.99			0.57	1.00		0.95	1.00
Satd. Flow (perm)		1415			1820			1071	1583		1768	1583
Volume (vph)	39	87	156	2	132	18	158	234	4	24	428	48
Peak-hour factor, PHF	0.50	0.75	0.81	0.50	0.78	0.75	0.81	0.89	0.38	0.71	0.94	0.70
Adj. Flow (vph)	78	116	193	4	169	24	195	263	11	34	455	69
RTOR Reduction (vph)	0	33	0	0	4	0	0	0	2	0	0	10
Lane Group Flow (vph)	0	354	0	0	193	0	0	458	9	0	489	59
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6		6	2		2
Actuated Green, G (s)		31.2			31.2			80.8	80.8		80.8	80.8
Effective Green, g (s)		31.2			31.2			80.8	80.8		80.8	80.8
Actuated g/C Ratio		0.26			0.26			0.67	0.67		0.67	0.67
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			473			721	1066		1190	1066
v/s Ratio Prot												
v/s Ratio Perm		c0.25			0.11			c0.43	0.01		0.28	0.04
v/c Ratio		0.96			0.41			0.64	0.01		0.41	0.05
Uniform Delay, d1		43.8			36.7			11.2	6.4		8.9	6.6
Progression Factor		0.81			0.99			0.70	0.35		0.61	0.22
Incremental Delay, d2		35.3			0.6			3.7	0.0		0.9	0.1
Delay (s)		70.8			37.1			11.6	2.3		6.3	1.6
Level of Service		E			D			B	A		A	A
Approach Delay (s)		70.8			37.1			11.4			5.7	
Approach LOS		E			D			B			A	

Intersection Summary			
HCM Average Control Delay	26.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	418	556	229
Act Effct Green (s)	34.9	77.1	77.1
Actuated g/C Ratio	0.29	0.64	0.64
v/c Ratio	0.81	0.49	0.20
Control Delay	48.8	14.7	6.5
Queue Delay	0.0	0.0	0.0
Total Delay	48.8	14.7	6.5
LOS	D	B	A
Approach Delay	48.8	14.7	6.5
Approach LOS	D	B	A
Queue Length 50th (ft)	274	202	43
Queue Length 95th (ft)	239	m312	62
Internal Link Dist (ft)	4006	688	3620
Turn Bay Length (ft)			
Base Capacity (vph)	752	1132	1147
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.56	0.49	0.20

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 120		
Offset: 102 (85%), Referenced to phase 2:SBTL and 6:NBT, Start of Green		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.81		
Intersection Signal Delay: 25.0	Intersection LOS: C	
Intersection Capacity Utilization 47.5%	ICU Level of Service A	
Analysis Period (min) 15		

m Volume for 95th percentile queue is metered by upstream signal.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
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			1.00
Frt	0.99		0.92			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1765		1711			1857
Flt Permitted	0.95		1.00			0.96
Satd. Flow (perm)	1765		1711			1786
Volume (vph)	264	18	183	252	11	193
Peak-hour factor, PHF	0.67	0.75	0.83	0.75	0.75	0.90
Adj. Flow (vph)	394	24	220	336	15	214
RTOR Reduction (vph)	2	0	33	0	0	0
Lane Group Flow (vph)	416	0	523	0	0	229
Turn Type					Perm	
Protected Phases	4		6			2
Permitted Phases					2	
Actuated Green, G (s)	34.9		77.1			77.1
Effective Green, g (s)	34.9		77.1			77.1
Actuated g/C Ratio	0.29		0.64			0.64
Clearance Time (s)	4.0		4.0			4.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	513		1099			1148
v/s Ratio Prot	c0.24		c0.31			
v/s Ratio Perm						0.13
v/c Ratio	0.81		0.48			0.20
Uniform Delay, d1	39.5		11.0			8.8
Progression Factor	0.95		1.28			0.60
Incremental Delay, d2	8.8		1.3			0.4
Delay (s)	46.4		15.4			5.7
Level of Service	D		B			A
Approach Delay (s)	46.4		15.4			5.7
Approach LOS	D		B			A

Intersection Summary			
HCM Average Control Delay	24.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	47.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	83	33	305	546	130	180	33	11
Act Effct Green (s)	98.6	98.6	98.6	98.6	13.4	13.4	13.4	13.4
Actuated g/C Ratio	0.82	0.82	0.82	0.82	0.11	0.11	0.11	0.11
v/c Ratio	0.06	0.03	0.28	0.36	0.73	0.53	0.16	0.06
Control Delay	2.6	1.0	3.2	3.6	66.9	13.6	47.7	22.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.6	1.0	3.2	3.6	66.9	13.6	47.7	22.0
LOS	A	A	A	A	E	B	D	C
Approach Delay	2.1			3.5	35.9		41.3	
Approach LOS	A			A	D		D	
Queue Length 50th (ft)	9	0	36	69	99	26	24	0
Queue Length 95th (ft)	21	5	30	96	86	54	44	3
Internal Link Dist (ft)	3224			8570	3620		2278	
Turn Bay Length (ft)		150	150			50		50
Base Capacity (vph)	1504	1306	1076	1529	557	671	652	561
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.03	0.28	0.36	0.23	0.27	0.05	0.02

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 113 (94%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 12.2		Intersection LOS: B	
Intersection Capacity Utilization 40.5%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	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		1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00			0.98	1.00		1.00	1.00
Satd. Flow (prot)		1858	1583	1770	1861			1818	1583		1863	1583
Flt Permitted		0.98	1.00	0.70	1.00			0.83	1.00		1.00	1.00
Satd. Flow (perm)		1833	1583	1310	1861			1541	1583		1863	1583
Volume (vph)	1	62	25	134	423	1	57	33	126	0	25	4
Peak-hour factor, PHF	0.25	0.78	0.75	0.44	0.78	0.25	0.89	0.50	0.70	0.92	0.75	0.38
Adj. Flow (vph)	4	79	33	305	542	4	64	66	180	0	33	11
RTOR Reduction (vph)	0	0	6	0	0	0	0	0	160	0	0	10
Lane Group Flow (vph)	0	83	27	305	546	0	0	130	20	0	33	1
Turn Type	Perm		Perm	Perm			Perm		Perm	Perm		Perm
Protected Phases		6			2			4			8	
Permitted Phases	6		6	2			4		4	8		8
Actuated Green, G (s)		98.6	98.6	98.6	98.6			13.4	13.4		13.4	13.4
Effective Green, g (s)		98.6	98.6	98.6	98.6			13.4	13.4		13.4	13.4
Actuated g/C Ratio		0.82	0.82	0.82	0.82			0.11	0.11		0.11	0.11
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)		1506	1301	1076	1529			172	177		208	177
v/s Ratio Prot					c0.29						0.02	
v/s Ratio Perm		0.05	0.02	0.23				c0.08	0.01			0.00
v/c Ratio		0.06	0.02	0.28	0.36			0.76	0.11		0.16	0.01
Uniform Delay, d1		2.0	1.9	2.5	2.7			51.7	48.0		48.2	47.4
Progression Factor		1.00	1.00	0.86	0.94			0.89	1.19		1.00	1.00
Incremental Delay, d2		0.1	0.0	0.7	0.6			16.0	0.3		0.4	0.0
Delay (s)		2.1	2.0	2.8	3.2			62.3	57.4		48.6	47.4
Level of Service		A	A	A	A			E	E		D	D
Approach Delay (s)		2.0			3.0			59.5			48.3	
Approach LOS		A			A			E			D	

Intersection Summary					
HCM Average Control Delay	17.7	HCM Level of Service		B	
HCM Volume to Capacity ratio	0.40				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	40.5%	ICU Level of Service		A	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	158	164	352	462
Sign Control	Free	Free		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	36	88	136	289	268	48
Peak Hour Factor	0.67	0.85	0.83	0.82	0.68	0.71
Hourly flow rate (vph)	54	104	164	352	394	68
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	516				375	164
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	516				375	164
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				34	92
cM capacity (veh/h)	1049				594	881

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	157	164	352	462
Volume Left	54	0	0	394
Volume Right	0	0	352	68
cSH	1049	1700	1700	624
Volume to Capacity	0.05	0.10	0.21	0.74
Queue Length 95th (ft)	4	0	0	162
Control Delay (s)	3.3	0.0	0.0	25.4
Lane LOS	A			D
Approach Delay (s)	3.3	0.0		25.4
Approach LOS				D

Intersection Summary				
Average Delay	10.8			
Intersection Capacity Utilization	41.6%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	470	35	100	160	394	66	551
Act Effct Green (s)	41.2	41.2	41.2	70.8	70.8	70.8	70.8
Actuated g/C Ratio	0.34	0.34	0.34	0.59	0.59	0.59	0.59
v/c Ratio	0.94	0.11	0.16	0.53	0.36	0.15	0.53
Control Delay	61.0	23.8	6.9	26.6	15.8	5.9	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.0	23.8	6.9	26.6	15.8	5.9	6.4
LOS	E	C	A	C	B	A	A
Approach Delay	61.0		11.2		18.9		6.4
Approach LOS	E		B		B		A
Queue Length 50th (ft)	322	18	9	71	150	6	38
Queue Length 95th (ft)	406	36	39	73	247	m16	96
Internal Link Dist (ft)	1618		893		756		688
Turn Bay Length (ft)				150		150	
Base Capacity (vph)	642	421	780	301	1089	447	1049
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.08	0.13	0.53	0.36	0.15	0.53

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 52 (43%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 25.1		Intersection LOS: C	
Intersection Capacity Utilization 49.9%		ICU Level of Service A	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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		1.00	1.00		1.00	1.00	
Frt		0.94		1.00	0.88		1.00	0.99		1.00	0.94	
Flt Protected		0.97		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1703		1770	1631		1770	1843		1770	1750	
Flt Permitted		0.77		0.51	1.00		0.34	1.00		0.46	1.00	
Satd. Flow (perm)		1349		945	1631		640	1843		850	1750	
Volume (vph)	61	9	54	32	16	76	80	304	26	61	283	111
Peak-hour factor, PHF	0.25	0.92	0.25	0.92	0.92	0.92	0.50	0.83	0.92	0.92	0.86	0.50
Adj. Flow (vph)	244	10	216	35	17	83	160	366	28	66	329	222
RTOR Reduction (vph)	0	30	0	0	55	0	0	2	0	0	16	0
Lane Group Flow (vph)	0	440	0	35	45	0	160	392	0	66	535	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		41.2		41.2	41.2		70.8	70.8		70.8	70.8	
Effective Green, g (s)		41.2		41.2	41.2		70.8	70.8		70.8	70.8	
Actuated g/C Ratio		0.34		0.34	0.34		0.59	0.59		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)		463		324	560		378	1087		502	1033	
v/s Ratio Prot					0.03			0.21			c0.31	
v/s Ratio Perm		c0.33		0.04			0.25			0.08		
v/c Ratio		0.95		0.11	0.08		0.42	0.36		0.13	0.52	
Uniform Delay, d1		38.4		26.9	26.6		13.4	12.8		10.9	14.5	
Progression Factor		1.00		1.00	1.00		1.00	1.00		0.36	0.31	
Incremental Delay, d2		29.1		0.1	0.1		3.4	0.9		0.4	1.5	
Delay (s)		67.5		27.0	26.7		16.9	13.7		4.4	6.0	
Level of Service		E		C	C		B	B		A	A	
Approach Delay (s)		67.5			26.8			14.7			5.8	
Approach LOS		E			C			B			A	

Intersection Summary					
HCM Average Control Delay	26.5	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.68				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	49.9%	ICU Level of Service		A	
Analysis Period (min)	15				

c Critical Lane Group

Future Saturday Intersection Analysis (Interim Phase)

Future 2015 Saturday

Lane Group	EBT	WBT	NBL
Lane Group Flow (vph)	301	337	8
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	27.0%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	261	1	2	293	2	2
Peak Hour Factor	0.88	0.25	0.50	0.88	0.50	0.50
Hourly flow rate (vph)	297	4	4	333	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			301		640	299
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			301		640	299
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	99
cM capacity (veh/h)			1260		439	741

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	301	337	8
Volume Left	0	4	4
Volume Right	4	0	4
cSH	1700	1260	551
Volume to Capacity	0.18	0.00	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.1	11.6
Lane LOS		A	B
Approach Delay (s)	0.0	0.1	11.6
Approach LOS			B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	27.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	301	322	8
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	25.3%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	2	261	286	2	1	2
Peak Hour Factor	0.50	0.88	0.90	0.50	0.25	0.50
Hourly flow rate (vph)	4	297	318	4	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	322				624	320
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	322				624	320
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	99
cM capacity (veh/h)	1238				448	721

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	301	322	8
Volume Left	4	0	4
Volume Right	0	4	4
cSH	1238	1700	552
Volume to Capacity	0.00	0.19	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.1	0.0	11.6
Lane LOS	A		B
Approach Delay (s)	0.1	0.0	11.6
Approach LOS			B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	25.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	443	598	236
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	45.3%	ICU Level of Service A
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	252	7	198	226	7	204
Peak Hour Factor	0.58	0.75	0.85	0.62	0.75	0.90
Hourly flow rate (vph)	434	9	233	365	9	227
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	661	415			597	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	661	415			597	
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	99			99	
cM capacity (veh/h)	424	637			979	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	444	597	236
Volume Left	434	0	9
Volume Right	9	365	0
cSH	427	1700	979
Volume to Capacity	1.04	0.35	0.01
Queue Length 95th (ft)	351	0	1
Control Delay (s)	86.0	0.0	0.4
Lane LOS	F		A
Approach Delay (s)	86.0	0.0	0.4
Approach LOS	F		

Intersection Summary				
Average Delay		30.0		
Intersection Capacity Utilization		45.3%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	85	51	308	4	96	188	69	14
Sign Control	Free		Free		Stop		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	36.9%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	4	72	33	134	102	1	35	42	122	5	47	8
Peak Hour Factor	0.75	0.90	0.65	0.70	0.87	0.25	0.80	0.80	0.65	0.50	0.79	0.58
Hourly flow rate (vph)	5	80	51	191	117	4	44	52	188	10	59	14
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	117			80			621	591	80	617	591	117
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	117			80			621	591	80	617	591	117
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			87			86	86	81	96	84	99
cM capacity (veh/h)	1471			1518			312	365	980	261	365	935

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	85	51	309	4	284	83
Volume Left	5	0	191	0	44	10
Volume Right	0	51	0	4	188	14
cSH	1471	1700	1518	1700	1006	420
Volume to Capacity	0.00	0.03	0.13	0.00	0.28	0.20
Queue Length 95th (ft)	0	0	11	0	29	18
Control Delay (s)	0.5	0.0	5.2	0.0	13.0	16.3
Lane LOS	A		A		B	C
Approach Delay (s)	0.3		5.1		13.0	16.3
Approach LOS					B	C

Intersection Summary					
Average Delay	8.2				
Intersection Capacity Utilization	36.9%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	368	382	9
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	28.3%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	2	317	340	2	2	4
Peak Hour Factor	0.50	0.87	0.90	0.50	0.50	0.75
Hourly flow rate (vph)	4	364	378	4	4	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	382				752	380
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	382				752	380
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	99
cM capacity (veh/h)	1177				377	667

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	368	382	9
Volume Left	4	0	4
Volume Right	0	4	5
cSH	1177	1700	501
Volume to Capacity	0.00	0.22	0.02
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.1	0.0	12.3
Lane LOS	A		B
Approach Delay (s)	0.1	0.0	12.3
Approach LOS			B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	28.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	151	376	357
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	53.7%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	53	75	89	256	239	52
Peak Hour Factor	0.79	0.89	0.91	0.92	0.84	0.72
Hourly flow rate (vph)	67	84	98	278	285	72
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	376				455	237
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	376				455	237
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				46	91
cM capacity (veh/h)	1182				531	802

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	151	376	357
Volume Left	67	0	285
Volume Right	0	278	72
cSH	1182	1700	570
Volume to Capacity	0.06	0.22	0.63
Queue Length 95th (ft)	5	0	108
Control Delay (s)	3.9	0.0	21.3
Lane LOS	A		C
Approach Delay (s)	3.9	0.0	21.3
Approach LOS			C

Intersection Summary			
Average Delay	9.3		
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	294	89	164
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	20.9%	ICU Level of Service A
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	55	37	2	64	40	1
Peak Hour Factor	0.25	0.50	0.50	0.75	0.25	0.25
Hourly flow rate (vph)	220	74	4	85	160	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	371	47			89	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	371	47			89	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	61	93			89	
cM capacity (veh/h)	563	1023			1506	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	294	89	164
Volume Left	220	0	160
Volume Right	74	85	0
cSH	635	1700	1506
Volume to Capacity	0.46	0.05	0.11
Queue Length 95th (ft)	61	0	9
Control Delay (s)	15.5	0.0	7.5
Lane LOS	C		A
Approach Delay (s)	15.5	0.0	7.5
Approach LOS	C		

Intersection Summary				
Average Delay	10.6			
Intersection Capacity Utilization	20.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	511	102	740	582
Sign Control	Stop	Stop	Free	Free

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	59.7%	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			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	73	19	99	18	18	57	93	296	18	64	315	81
Peak Hour Factor	0.25	0.92	0.50	0.92	0.92	0.92	0.25	0.85	0.92	0.92	0.90	0.50
Hourly flow rate (vph)	292	21	198	20	20	62	372	348	20	70	350	162
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	1744	1682	431	1880	1753	358	512			368		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1744	1682	431	1880	1753	358	512			368		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	0	64	68	0	62	91	65			94		
cM capacity (veh/h)	31	57	624	19	52	686	1053			1191		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	511	101	740	582
Volume Left	292	20	372	70
Volume Right	198	62	20	162
cSH	51	68	1053	1191
Volume to Capacity	10.07	1.50	0.35	0.06
Queue Length 95th (ft)	Err	215	40	5
Control Delay (s)	Err	389.5	7.5	1.6
Lane LOS	F	F	A	A
Approach Delay (s)	Err	389.5	7.5	1.6
Approach LOS	F	F		

Intersection Summary				
Average Delay	2665.1			
Intersection Capacity Utilization	59.7%	ICU Level of Service	B	
Analysis Period (min)	15			

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Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	443	598	236
Act Effct Green (s)	33.1	78.9	78.9
Actuated g/C Ratio	0.28	0.66	0.66
v/c Ratio	0.91	0.52	0.20
Control Delay	64.2	7.6	7.9
Queue Delay	0.0	0.0	0.0
Total Delay	64.2	7.6	7.9
LOS	E	A	A
Approach Delay	64.2	7.6	7.9
Approach LOS	E	A	A
Queue Length 50th (ft)	332	82	52
Queue Length 95th (ft)	225	m79	104
Internal Link Dist (ft)	4006	688	3620
Turn Bay Length (ft)			
Base Capacity (vph)	753	1158	1198
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.59	0.52	0.20

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 120		
Offset: 8 (7%), Referenced to phase 2:SBTL and 6:NBT, Start of Green		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.91		
Intersection Signal Delay: 27.3	Intersection LOS: C	
Intersection Capacity Utilization 45.3%	ICU Level of Service A	
Analysis Period (min) 15		

m Volume for 95th percentile queue is metered by upstream signal.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
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			1.00
Frt	1.00		0.92			1.00
Flt Protected	0.95		1.00			1.00
Satd. Flow (prot)	1771		1709			1859
Flt Permitted	0.95		1.00			0.98
Satd. Flow (perm)	1771		1709			1823
Volume (vph)	252	7	198	226	7	204
Peak-hour factor, PHF	0.58	0.75	0.85	0.62	0.75	0.90
Adj. Flow (vph)	434	9	233	365	9	227
RTOR Reduction (vph)	1	0	33	0	0	0
Lane Group Flow (vph)	442	0	565	0	0	236
Turn Type					Perm	
Protected Phases	4		6			2
Permitted Phases					2	
Actuated Green, G (s)	33.1		78.9			78.9
Effective Green, g (s)	33.1		78.9			78.9
Actuated g/C Ratio	0.28		0.66			0.66
Clearance Time (s)	4.0		4.0			4.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	489		1124			1199
v/s Ratio Prot	c0.25		c0.33			
v/s Ratio Perm						0.13
v/c Ratio	0.90		0.50			0.20
Uniform Delay, d1	41.9		10.5			8.1
Progression Factor	1.00		0.61			0.79
Incremental Delay, d2	20.0		1.3			0.4
Delay (s)	61.9		7.7			6.8
Level of Service	E		A			A
Approach Delay (s)	61.9		7.7			6.8
Approach LOS	E		A			A

Intersection Summary			
HCM Average Control Delay	26.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	85	51	191	121	96	188	69	14
Act Effct Green (s)	100.5	100.5	100.5	100.5	11.5	11.5	11.5	11.5
Actuated g/C Ratio	0.84	0.84	0.84	0.84	0.10	0.10	0.10	0.10
v/c Ratio	0.06	0.04	0.17	0.08	0.62	0.59	0.40	0.09
Control Delay	2.2	0.8	2.6	2.2	56.4	14.9	56.4	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.2	0.8	2.6	2.2	56.4	14.9	56.4	21.4
LOS	A	A	A	A	E	B	E	C
Approach Delay	1.7			2.5	28.9		50.5	
Approach LOS	A			A	C		D	
Queue Length 50th (ft)	8	0	19	11	68	18	52	0
Queue Length 95th (ft)	23	3	37	29	m101	42	81	9
Internal Link Dist (ft)	3224			3453	3620		2278	
Turn Bay Length (ft)		150	150			50		50
Base Capacity (vph)	1545	1335	1096	1553	712	804	798	707
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.04	0.17	0.08	0.13	0.23	0.09	0.02

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 65 (54%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 16.4		Intersection LOS: B	
Intersection Capacity Utilization 31.6%		ICU Level of Service A	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	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		1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00			0.98	1.00		0.99	1.00
Satd. Flow (prot)		1857	1583	1770	1854			1821	1583		1849	1583
Flt Permitted		0.99	1.00	0.70	1.00			0.80	1.00		0.95	1.00
Satd. Flow (perm)		1846	1583	1307	1854			1483	1583		1771	1583
Volume (vph)	4	72	33	134	102	1	35	42	122	5	47	8
Peak-hour factor, PHF	0.75	0.90	0.65	0.70	0.87	0.25	0.80	0.80	0.65	0.50	0.79	0.58
Adj. Flow (vph)	5	80	51	191	117	4	44	52	188	10	59	14
RTOR Reduction (vph)	0	0	8	0	0	0	0	0	170	0	0	13
Lane Group Flow (vph)	0	85	43	191	121	0	0	96	18	0	69	1
Turn Type	Perm		Perm	Perm			Perm		Perm	Perm		Perm
Protected Phases		6			2			4			8	
Permitted Phases	6		6	2			4		4	8		8
Actuated Green, G (s)		100.5	100.5	100.5	100.5			11.5	11.5		11.5	11.5
Effective Green, g (s)		100.5	100.5	100.5	100.5			11.5	11.5		11.5	11.5
Actuated g/C Ratio		0.84	0.84	0.84	0.84			0.10	0.10		0.10	0.10
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)		1546	1326	1095	1553			142	152		170	152
v/s Ratio Prot					0.07							
v/s Ratio Perm		0.05	0.03	c0.15				c0.06	0.01		0.04	0.00
v/c Ratio		0.05	0.03	0.17	0.08			0.68	0.12		0.41	0.01
Uniform Delay, d1		1.7	1.6	1.9	1.7			52.4	49.6		51.0	49.1
Progression Factor		1.00	1.00	1.00	1.00			0.79	1.18		1.00	1.00
Incremental Delay, d2		0.1	0.0	0.3	0.1			11.0	0.3		1.6	0.0
Delay (s)		1.7	1.7	2.2	1.8			52.3	58.8		52.6	49.1
Level of Service		A	A	A	A			D	E		D	D
Approach Delay (s)		1.7			2.0			56.6			52.0	
Approach LOS		A			A			E			D	

Intersection Summary					
HCM Average Control Delay	26.1	HCM Level of Service	C		
HCM Volume to Capacity ratio	0.23				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0		
Intersection Capacity Utilization	31.6%	ICU Level of Service	A		
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	151	98	278	357
Sign Control	Free	Free		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	53	75	89	256	239	52
Peak Hour Factor	0.79	0.89	0.91	0.92	0.84	0.72
Hourly flow rate (vph)	67	84	98	278	285	72
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	376				316	98
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	376				316	98
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				55	92
cM capacity (veh/h)	1182				638	958

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	151	98	278	357
Volume Left	67	0	0	285
Volume Right	0	0	278	72
cSH	1182	1700	1700	685
Volume to Capacity	0.06	0.06	0.16	0.52
Queue Length 95th (ft)	5	0	0	76
Control Delay (s)	3.9	0.0	0.0	15.8
Lane LOS	A			C
Approach Delay (s)	3.9	0.0		15.8
Approach LOS				C

Intersection Summary				
Average Delay	7.1			
Intersection Capacity Utilization	36.6%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	511	20	82	372	368	70	512
Act Effct Green (s)	44.0	44.0	44.0	68.0	68.0	68.0	68.0
Actuated g/C Ratio	0.37	0.37	0.37	0.57	0.57	0.57	0.57
v/c Ratio	0.98	0.06	0.13	0.98	0.35	0.14	0.50
Control Delay	70.8	25.3	9.6	69.6	15.1	15.0	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.8	25.3	9.6	69.6	15.1	15.0	14.7
LOS	E	C	A	E	B	B	B
Approach Delay	70.8		12.7		42.5		14.7
Approach LOS	E		B		D		B
Queue Length 50th (ft)	371	10	10	269	145	12	83
Queue Length 95th (ft)	#605	28	44	55	194	m48	m277
Internal Link Dist (ft)	1650		893		756		688
Turn Bay Length (ft)				150		150	
Base Capacity (vph)	522	358	645	378	1050	494	1021
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.06	0.13	0.98	0.35	0.14	0.50

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 24 (20%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 40.0		Intersection LOS: D	
Intersection Capacity Utilization 54.4%		ICU Level of Service A	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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		1.00	1.00		1.00	1.00	
Frt		0.95		1.00	0.89		1.00	0.99		1.00	0.95	
Flt Protected		0.97		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1716		1770	1651		1770	1848		1770	1774	
Flt Permitted		0.78		0.52	1.00		0.36	1.00		0.47	1.00	
Satd. Flow (perm)		1372		977	1651		668	1848		871	1774	
Volume (vph)	73	19	99	18	18	57	93	296	18	64	315	81
Peak-hour factor, PHF	0.25	0.92	0.50	0.92	0.92	0.92	0.25	0.85	0.92	0.92	0.90	0.50
Adj. Flow (vph)	292	21	198	20	20	62	372	348	20	70	350	162
RTOR Reduction (vph)	0	19	0	0	39	0	0	2	0	0	14	0
Lane Group Flow (vph)	0	492	0	20	43	0	372	366	0	70	498	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		44.0		44.0	44.0		68.0	68.0		68.0	68.0	
Effective Green, g (s)		44.0		44.0	44.0		68.0	68.0		68.0	68.0	
Actuated g/C Ratio		0.37		0.37	0.37		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	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		503		358	605		379	1047		494	1005	
v/s Ratio Prot					0.03			0.20			0.28	
v/s Ratio Perm		c0.36		0.02			c0.56			0.08		
v/c Ratio		0.98		0.06	0.07		0.98	0.35		0.14	0.50	
Uniform Delay, d1		37.5		24.6	24.7		25.4	14.1		12.3	15.7	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.15	0.89	
Incremental Delay, d2		34.1		0.1	0.0		41.8	0.9		0.4	1.3	
Delay (s)		71.6		24.6	24.8		67.2	15.0		14.6	15.3	
Level of Service		E		C	C		E	B		B	B	
Approach Delay (s)		71.6			24.7			41.2			15.2	
Approach LOS		E			C			D			B	

Intersection Summary					
HCM Average Control Delay	40.6	HCM Level of Service		D	
HCM Volume to Capacity ratio	0.98				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	54.4%	ICU Level of Service		A	
Analysis Period (min)	15				

c Critical Lane Group

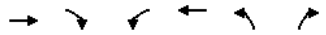
Future AM Intersection Analysis (Full Build Out)

Future 2028 AM



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	594	606	848	84	809
Sign Control	Free		Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	82.4%	ICU Level of Service	E
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	472	71	545	789	67	752
Peak Hour Factor	0.93	0.83	0.90	0.93	0.80	0.93
Hourly flow rate (vph)	508	86	606	848	84	809
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			593		2610	550
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			593		2610	550
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			38		0	0
cM capacity (veh/h)			983		10	535

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	593	606	848	892
Volume Left	0	606	0	84
Volume Right	86	0	0	809
cSH	1700	983	1700	94
Volume to Capacity	0.35	0.62	0.50	9.49
Queue Length 95th (ft)	0	110	0	Err
Control Delay (s)	0.0	14.4	0.0	Err
Lane LOS		B		F
Approach Delay (s)	0.0	6.0		9999.0
Approach LOS				F

Intersection Summary				
Average Delay	3038.5			
Intersection Capacity Utilization	82.4%	ICU Level of Service		E
Analysis Period (min)	15			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	48	601	816	759	499	53
Sign Control	Stop			Free	Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	67.6%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	36	583	751	691	459	41
Peak Hour Factor	0.75	0.97	0.92	0.91	0.92	0.78
Hourly flow rate (vph)	48	601	816	759	499	53
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2511	249	499			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2511	249	499			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	20	23			
cM capacity (veh/h)	5	750	1061			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	48	601	816	380	380	249	249	53
Volume Left	48	0	816	0	0	0	0	0
Volume Right	0	601	0	0	0	0	0	53
cSH	5	750	1061	1700	1700	1700	1700	1700
Volume to Capacity	8.94	0.80	0.77	0.22	0.22	0.15	0.15	0.03
Queue Length 95th (ft)	Err	209	198	0	0	0	0	0
Control Delay (s)	Err	26.1	18.7	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	D	C					
Approach Delay (s)	763.7		9.7			0.0		
Approach LOS	F							

Intersection Summary				
Average Delay	184.0			
Intersection Capacity Utilization	67.6%	ICU Level of Service		C
Analysis Period (min)	15			

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	825	484	428	790	403	255
Act Effct Green (s)	84.0	84.0	28.0	120.0	28.0	60.0
Actuated g/C Ratio	0.70	0.70	0.23	1.00	0.23	0.50
v/c Ratio	1.00	0.20	0.98	0.50	0.98	0.28
Control Delay	37.4	3.2	85.6	1.1	84.8	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.4	3.2	85.6	1.1	84.8	2.7
LOS	D	A	F	A	F	A
Approach Delay		24.8	30.8			
Approach LOS		C	C			
Queue Length 50th (ft)	446	43	332	0	312	0
Queue Length 95th (ft)	m#650	m44	#541	0	#515	37
Internal Link Dist (ft)		808	1512			
Turn Bay Length (ft)	150					
Base Capacity (vph)	829	2477	435	1583	413	919
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.00	0.20	0.98	0.50	0.98	0.28

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 40 (33%), Referenced to phase 2:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 32.9 Intersection LOS: C
Intersection Capacity Utilization 93.3% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	0.95			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	3539			1863	1583	1770		1583			
Flt Permitted	0.12	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	233	3539			1863	1583	1770		1583			
Volume (vph)	759	450	0	0	394	743	371	0	222	0	0	0
Peak-hour factor, PHF	0.92	0.93	0.92	0.92	0.92	0.94	0.92	0.92	0.87	0.92	0.92	0.92
Adj. Flow (vph)	825	484	0	0	428	790	403	0	255	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	128	0	0	0
Lane Group Flow (vph)	825	484	0	0	428	790	403	0	128	0	0	0
Turn Type	pm+pt					Free	Prot		custom			
Protected Phases	1	6			2		7					
Permitted Phases	6					Free			2 7			
Actuated Green, G (s)	84.0	84.0			28.0	120.0	28.0		60.0			
Effective Green, g (s)	84.0	84.0			28.0	120.0	28.0		60.0			
Actuated g/C Ratio	0.70	0.70			0.23	1.00	0.23		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)	829	2477			435	1583	413		792			
v/s Ratio Prot	c0.43	0.14			0.23		c0.23					
v/s Ratio Perm	c0.27					0.50			0.08			
v/c Ratio	1.00	0.20			0.98	0.50	0.98		0.16			
Uniform Delay, d1	29.1	6.3			45.8	0.0	45.7		16.3			
Progression Factor	0.61	0.50			1.00	1.00	1.00		1.00			
Incremental Delay, d2	18.3	0.0			39.3	1.1	37.6		0.1			
Delay (s)	36.0	3.1			85.1	1.1	83.2		16.4			
Level of Service	D	A			F	A	F		B			
Approach Delay (s)		23.8			30.6			57.3			0.0	
Approach LOS		C			C			E			A	

Intersection Summary

HCM Average Control Delay	33.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	1238	310	202	650	106	389
Act Effct Green (s)	82.0	120.0	96.0	96.0	16.0	102.0
Actuated g/C Ratio	0.68	1.00	0.80	0.80	0.13	0.85
v/c Ratio	0.97	0.20	0.96	0.44	0.23	0.28
Control Delay	38.4	0.3	70.2	1.0	48.0	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.4	0.3	70.2	1.0	48.0	0.7
LOS	D	A	E	A	D	A
Approach Delay	30.8			17.4		
Approach LOS	C			B		
Queue Length 50th (ft)	821	0	99	2	38	1
Queue Length 95th (ft)	#1231	0	m103	m2	59	7
Internal Link Dist (ft)	1279			808		
Turn Bay Length (ft)		150	150			
Base Capacity (vph)	1273	1583	211	1490	458	1403
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.20	0.96	0.44	0.23	0.28

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 70 (58%), Referenced to phase 2:WBTL and 6:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 23.4 Intersection LOS: C
Intersection Capacity Utilization 93.3% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00					0.97		1.00
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		1863	1583	1770	1863					3433		1583
Flt Permitted		1.00	1.00	0.05	1.00					0.95		1.00
Satd. Flow (perm)		1863	1583	87	1863					3433		1583
Volume (vph)	0	1176	273	184	611	0	0	0	0	87	0	319
Peak-hour factor, PHF	0.92	0.95	0.88	0.91	0.94	0.92	0.92	0.92	0.92	0.82	0.92	0.82
Adj. Flow (vph)	0	1238	310	202	650	0	0	0	0	106	0	389
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	57
Lane Group Flow (vph)	0	1238	310	202	650	0	0	0	0	106	0	332
Turn Type			Free	pm+pt						Prot		custom
Protected Phases		6		5	2					3		
Permitted Phases			Free	2								3 6
Actuated Green, G (s)		82.0	120.0	96.0	96.0					16.0		102.0
Effective Green, g (s)		82.0	120.0	96.0	96.0					16.0		102.0
Actuated g/C Ratio		0.68	1.00	0.80	0.80					0.13		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)		1273	1583	210	1490					458		1346
v/s Ratio Prot		0.66		c0.08	0.35					0.03		
v/s Ratio Perm			0.20	c0.69								c0.21
v/c Ratio		0.97	0.20	0.96	0.44					0.23		0.25
Uniform Delay, d1		17.9	0.0	45.6	3.7					46.5		1.7
Progression Factor		1.00	1.00	1.46	0.17					1.00		1.00
Incremental Delay, d2		19.4	0.3	25.4	0.3					1.2		0.4
Delay (s)		37.4	0.3	92.1	0.9					47.7		2.1
Level of Service		D	A	F	A					D		A
Approach Delay (s)		30.0			22.6			0.0			11.9	
Approach LOS		C			C			A			B	

Intersection Summary

HCM Average Control Delay	24.7	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.82			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	4.0	
Intersection Capacity Utilization	93.3%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	566	1003	1074
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	128.0%	ICU Level of Service H
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	52	431	147	767	988	6
Peak Hour Factor	0.80	0.86	0.92	0.91	0.93	0.50
Hourly flow rate (vph)	65	501	160	843	1062	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	160				1212	581
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	160				1212	581
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	98
cM capacity (veh/h)	1419				192	513

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	566	1003	1074
Volume Left	65	0	1062
Volume Right	0	843	12
cSH	1419	1700	193
Volume to Capacity	0.05	0.59	5.56
Queue Length 95th (ft)	4	0	Err
Control Delay (s)	1.3	0.0	Err
Lane LOS	A		F
Approach Delay (s)	1.3	0.0	Err
Approach LOS			F

Intersection Summary				
Average Delay	4064.6			
Intersection Capacity Utilization	128.0%	ICU Level of Service	H	
Analysis Period (min)	15			

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	970	662	657	674
Act Effct Green (s)	56.0	56.0	56.0	56.0
Actuated g/C Ratio	0.47	0.47	0.47	0.47
v/c Ratio	1.16	0.91	0.89	1.17
Control Delay	117.8	31.5	45.6	107.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	117.8	31.5	45.6	107.3
LOS	F	C	D	F
Approach Delay	117.8	31.5	45.6	107.3
Approach LOS	F	C	D	F
Queue Length 50th (ft)	~893	328	452	~637
Queue Length 95th (ft)	#739	324	#695	m#710
Internal Link Dist (ft)	3138	678	2784	4178
Turn Bay Length (ft)				
Base Capacity (vph)	833	725	736	575
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.16	0.91	0.89	1.17

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 87 (73%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.17
Intersection Signal Delay: 80.1 Intersection LOS: F
Intersection Capacity Utilization 102.2% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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			1.00	
Frt		0.99			0.96			0.99			0.99	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1835			1783			1842			1830	
Flt Permitted		0.97			0.85			0.85			0.66	
Satd. Flow (perm)		1777			1527			1573			1229	
Volume (vph)	22	590	71	27	319	121	46	519	18	94	483	24
Peak-hour factor, PHF	0.69	0.70	0.75	0.64	0.75	0.62	0.67	0.93	0.60	0.71	0.96	0.62
Adj. Flow (vph)	32	843	95	42	425	195	69	558	30	132	503	39
RTOR Reduction (vph)	0	3	0	0	12	0	0	2	0	0	2	0
Lane Group Flow (vph)	0	967	0	0	650	0	0	655	0	0	672	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		56.0			56.0			56.0			56.0	
Effective Green, g (s)		56.0			56.0			56.0			56.0	
Actuated g/C Ratio		0.47			0.47			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)		829			713			734			574	
v/s Ratio Prot												
v/s Ratio Perm		c0.54			0.43			0.42			c0.55	
v/c Ratio		1.17			0.91			0.89			1.17	
Uniform Delay, d1		32.0			29.7			29.3			32.0	
Progression Factor		1.00			0.44			1.00			0.40	
Incremental Delay, d2		87.8			15.3			15.5			89.5	
Delay (s)		119.8			28.3			44.7			102.2	
Level of Service		F			C			D			F	
Approach Delay (s)		119.8			28.3			44.7			102.2	
Approach LOS		F			C			D			F	

Intersection Summary

HCM Average Control Delay	78.7	HCM Level of Service	E
HCM Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	120.0	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

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	336	451	4	432	508	6	761	284
Act Effct Green (s)	46.6	46.6	28.0	28.0	28.0	63.0	63.0	63.0
Actuated g/C Ratio	0.39	0.39	0.23	0.23	0.23	0.52	0.52	0.52
v/c Ratio	0.98	0.62	0.02	0.99	0.67	0.01	1.07	0.32
Control Delay	57.4	23.7	36.0	87.8	8.3	13.7	79.9	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.4	23.7	36.0	87.8	8.3	13.7	79.9	10.1
LOS	E	C	D	F	A	B	E	B
Approach Delay		38.1		44.8		13.7	61.0	
Approach LOS		D		D		B	E	
Queue Length 50th (ft)	156	156	2	336	1	2	~658	60
Queue Length 95th (ft)	m#290	m316	4	#547	99	5	96	111
Internal Link Dist (ft)		4178		602		2286	7832	
Turn Bay Length (ft)	95		150					70
Base Capacity (vph)	343	724	253	435	757	978	708	874
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.62	0.02	0.99	0.67	0.01	1.07	0.32

Intersection Summary

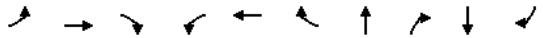
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 104 (87%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.07
Intersection Signal Delay: 48.9 Intersection LOS: D
Intersection Capacity Utilization 92.7% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00	1.00		1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85		1.00			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.95	1.00
Satd. Flow (prot)	1770	1863		1770	1863	1583		1863			1774	1583
Flt Permitted	0.15	1.00		0.49	1.00	1.00		1.00			0.72	1.00
Satd. Flow (perm)	282	1863		914	1863	1583		1863			1348	1583
Volume (vph)	306	419	0	1	389	472	0	3	0	696	1	258
Peak-hour factor, PHF	0.91	0.93	0.92	0.25	0.90	0.93	0.92	0.50	0.92	0.92	0.25	0.91
Adj. Flow (vph)	336	451	0	4	432	508	0	6	0	757	4	284
RTOR Reduction (vph)	0	0	0	0	0	388	0	0	0	0	0	43
Lane Group Flow (vph)	336	451	0	4	432	120	0	6	0	0	761	241
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			Perm		Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2		2	4			8		8
Actuated Green, G (s)	43.4	43.4		28.0	28.0	28.0		63.0			63.0	63.0
Effective Green, g (s)	43.4	43.4		28.0	28.0	28.0		63.0			63.0	63.0
Actuated g/C Ratio	0.36	0.36		0.23	0.23	0.23		0.52			0.52	0.52
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)	313	674		225	435	369		978			708	831
v/s Ratio Prot	c0.15	0.24		0.00	c0.23			0.00				
v/s Ratio Perm	c0.24			0.00		0.08					c0.56	0.15
v/c Ratio	1.07	0.67		0.02	0.99	0.33		0.01			1.07	0.29
Uniform Delay, d1	53.7	32.3		35.9	45.9	38.2		13.6			28.5	16.0
Progression Factor	0.99	0.70		1.00	1.00	1.00		1.00			0.79	0.83
Incremental Delay, d2	53.8	2.1		0.0	41.5	2.3		0.0			55.7	0.2
Delay (s)	106.9	24.6		35.9	87.4	40.5		13.6			78.3	13.5
Level of Service	F	C		D	F	D		B			E	B
Approach Delay (s)		59.7			61.9			13.6			60.7	
Approach LOS		E			E			B			E	

Intersection Summary

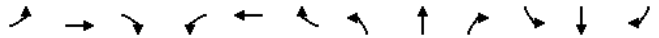
HCM Average Control Delay	60.7	HCM Level of Service	E	
HCM Volume to Capacity ratio	1.05			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	92.7%	ICU Level of Service	F	
Analysis Period (min)	15			

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	36	1130	32	30	873	203	27	41	424	29
Sign Control		Free			Free		Stop		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	62.5%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	30	1085	24	27	812	152	12	3	31	339	7	22
Peak Hour Factor	0.83	0.96	0.75	0.90	0.93	0.75	0.58	0.50	0.75	0.82	0.62	0.75
Hourly flow rate (vph)	36	1130	32	30	873	203	21	6	41	413	11	29
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	873			1130			1705	2136	565	1574	2136	437
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	873			1130			1705	2136	565	1574	2136	437
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			95			51	86	91	0	74	95
cM capacity (veh/h)	768			614			42	44	468	56	44	568

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	36	565	565	32	30	437	437	203	68	454
Volume Left	36	0	0	0	30	0	0	0	21	413
Volume Right	0	0	0	32	0	0	0	203	41	29
cSH	768	1700	1700	1700	614	1700	1700	1700	108	59
Volume to Capacity	0.05	0.33	0.33	0.02	0.05	0.26	0.26	0.12	0.63	7.64
Queue Length 95th (ft)	4	0	0	0	4	0	0	0	78	Err
Control Delay (s)	9.9	0.0	0.0	0.0	11.2	0.0	0.0	0.0	79.8	Err
Lane LOS	A				B				F	F
Approach Delay (s)	0.3				0.3				79.8	Err
Approach LOS									F	F

Intersection Summary				
Average Delay	1608.5			
Intersection Capacity Utilization	62.5%	ICU Level of Service		B
Analysis Period (min)	15			

Lane Group	EBT	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	1125	233	682	12	375	143
Sign Control	Stop	Stop	Free		Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	117.8%	ICU Level of Service	H
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	128	322	365	6	148	27	276	289	6	27	312	99
Peak Hour Factor	0.64	0.68	0.81	0.50	0.80	0.75	0.75	0.92	0.50	0.75	0.92	0.69
Hourly flow rate (vph)	200	474	451	12	185	36	368	314	12	36	339	143
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	1590	1461	339	2149	1461	314	339			314		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1590	1461	339	2149	1461	314	339			314		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	0	0	36	0	0	95	70			97		
cM capacity (veh/h)	0	87	703	0	87	726	1220			1246		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	1124	233	682	12	375	143
Volume Left	200	12	368	0	36	0
Volume Right	451	36	0	12	0	143
cSH	0	0	1220	1700	1246	1700
Volume to Capacity	Err	Err	0.30	0.01	0.03	0.08
Queue Length 95th (ft)	Err	Err	32	0	2	0
Control Delay (s)	Err	Err	6.5	0.0	1.0	0.0
Lane LOS	F	F	A		A	
Approach Delay (s)	Err	Err	6.4		0.7	
Approach LOS	F	F				

Intersection Summary					
Average Delay	Err				
Intersection Capacity Utilization	117.8%	ICU Level of Service	H		
Analysis Period (min)	15				

Lane Group	EBT	WBT	NBL
Lane Group Flow (vph)	917	721	192
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	58.1%	ICU Level of Service B
Analysis Period (min)	15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	750	6	25	466	18	90
Peak Hour Factor	0.84	0.25	0.25	0.75	0.25	0.75
Hourly flow rate (vph)	893	24	100	621	72	120
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			917		1726	905
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			917		1726	905
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		15	64
cM capacity (veh/h)			744		84	335

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	917	721	192
Volume Left	0	100	72
Volume Right	24	0	120
cSH	1700	744	159
Volume to Capacity	0.54	0.13	1.21
Queue Length 95th (ft)	0	12	271
Control Delay (s)	0.0	3.4	196.2
Lane LOS		A	F
Approach Delay (s)	0.0	3.4	196.2
Approach LOS			F

Intersection Summary				
Average Delay	21.9			
Intersection Capacity Utilization	58.1%	ICU Level of Service	B	
Analysis Period (min)	15			

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	907	636	10
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	51.8%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	3	748	493	1	3	1
Peak Hour Factor	0.50	0.83	0.78	0.25	0.50	0.25
Hourly flow rate (vph)	6	901	632	4	6	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	636				1547	634
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	636				1547	634
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				95	99
cM capacity (veh/h)	947				125	479

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	907	636	10
Volume Left	6	0	6
Volume Right	0	4	4
cSH	947	1700	177
Volume to Capacity	0.01	0.37	0.06
Queue Length 95th (ft)	0	0	4
Control Delay (s)	0.2	0.0	26.5
Lane LOS	A		D
Approach Delay (s)	0.2	0.0	26.5
Approach LOS			D

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	629	1463	358
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	87.0%	ICU Level of Service E
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	426	46	355	574	40	240
Peak Hour Factor	0.75	0.75	0.75	0.58	0.62	0.82
Hourly flow rate (vph)	568	61	473	990	65	293
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1390	968			1463	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1390	968			1463	
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	80			86	
cM capacity (veh/h)	135	308			462	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	629	1463	357
Volume Left	568	0	65
Volume Right	61	990	0
cSH	143	1700	462
Volume to Capacity	4.41	0.86	0.14
Queue Length 95th (ft)	Err	0	12
Control Delay (s)	Err	0.0	4.5
Lane LOS	F		A
Approach Delay (s)	Err	0.0	4.5
Approach LOS	F		

Intersection Summary				
Average Delay	2569.6			
Intersection Capacity Utilization	87.0%	ICU Level of Service	E	
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	694	112	706	153	504	60
Sign Control	Free		Free	Stop		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	3	640	82	190	81	0	42	36	343	0	37	0
Peak Hour Factor	0.50	0.93	0.73	0.32	0.72	0.92	0.46	0.58	0.68	0.92	0.62	0.92
Hourly flow rate (vph)	6	688	112	594	112	0	91	62	504	0	60	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	112			688			2030	2000	688	2031	2000	112
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	112			688			2030	2000	688	2031	2000	112
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			34			0	0	0	0	0	100
cM capacity (veh/h)	1477			906			0	21	446	0	21	940

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	694	112	706	0	658	60
Volume Left	6	0	594	0	91	0
Volume Right	0	112	0	0	504	0
cSH	1477	1700	906	1700	0	20
Volume to Capacity	0.00	0.07	0.66	0.00	3440.40	2.94
Queue Length 95th (ft)	0	0	126	0	Err	195
Control Delay (s)	0.1	0.0	15.4	0.0	Err	1270.9
Lane LOS	A		C		F	F
Approach Delay (s)	0.1		15.4		Err	1270.9
Approach LOS					F	F

Intersection Summary					
Average Delay	2988.1				
Intersection Capacity Utilization	69.5%	ICU Level of Service		C	
Analysis Period (min)	15				

Lane Group	EBT	EBR	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	1000	88	354	12	67	71	47
Sign Control	Free		Free		Stop		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	38.6%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	850	64	0	251	6	15	4	12	41	34	0
Peak Hour Factor	0.92	0.85	0.73	0.92	0.71	0.50	0.58	0.38	0.40	0.58	0.72	0.92
Hourly flow rate (vph)	0	1000	88	0	354	12	26	11	30	71	47	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	354			1000			1377	1354	500	859	1354	354
vC1, stage 1 conf vol							1000	1000		354	354	
vC2, stage 2 conf vol							377	354		505	1000	
vCu, unblocked vol	354			1000			1377	1354	500	859	1354	354
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			89	96	94	83	84	100
cM capacity (veh/h)	1202			688			240	297	516	417	297	643

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	0	500	500	88	0	354	12	66	71	47
Volume Left	0	0	0	0	0	0	0	26	71	0
Volume Right	0	0	0	88	0	0	12	30	0	0
cSH	1700	1700	1700	1700	1700	1700	1700	330	417	293
Volume to Capacity	0.00	0.29	0.29	0.05	0.00	0.21	0.01	0.20	0.17	0.16
Queue Length 95th (ft)	0	0	0	0	0	0	0	18	15	14
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.6	15.4	19.6
Lane LOS								C	C	C
Approach Delay (s)	0.0				0.0			18.6	17.1	
Approach LOS								C	C	

Intersection Summary					
Average Delay	2.0				
Intersection Capacity Utilization	38.6%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	115	977	11	65	349	4	11	609	12	340
Act Effct Green (s)	13.5	53.9	53.9	8.3	46.7	46.7	47.8	47.8	47.8	47.8
Actuated g/C Ratio	0.11	0.45	0.45	0.07	0.39	0.39	0.40	0.40	0.40	0.40
v/c Ratio	0.58	0.61	0.02	0.53	0.25	0.01	0.03	0.84	0.08	0.46
Control Delay	62.2	29.2	17.0	61.0	16.9	7.0	15.5	36.1	21.2	27.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.2	29.2	17.0	61.0	16.9	7.0	15.5	36.1	21.2	27.3
LOS	E	C	B	E	B	A	B	D	C	C
Approach Delay		32.5			23.6			35.8		27.1
Approach LOS		C			C			D		C
Queue Length 50th (ft)	85	303	2	49	45	0	4	354	6	190
Queue Length 95th (ft)	114	372	5	84	46	0	m4	m303	10	225
Internal Link Dist (ft)		2246			4418			11076		2261
Turn Bay Length (ft)	280		115	290		180	125		105	
Base Capacity (vph)	221	1591	715	133	1378	619	379	833	173	841
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.61	0.02	0.49	0.25	0.01	0.03	0.73	0.07	0.40

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 31.1 Intersection LOS: C
Intersection Capacity Utilization 64.5% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.98	
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)	1770	3539	1583	1770	3539	1583	1770	1799		1770	1824	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.41	1.00		0.14	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	758	1799		252	1824	
Volume (vph)	82	801	4	50	234	1	4	424	110	6	249	18
Peak-hour factor, PHF	0.71	0.82	0.38	0.77	0.67	0.25	0.38	0.90	0.80	0.50	0.85	0.38
Adj. Flow (vph)	115	977	11	65	349	4	11	471	138	12	293	47
RTOR Reduction (vph)	0	0	3	0	0	2	0	10	0	0	5	0
Lane Group Flow (vph)	115	977	8	65	349	2	11	599	0	12	335	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	14.3	53.1	53.1	7.1	45.9	45.9	47.8	47.8		47.8	47.8	
Effective Green, g (s)	14.3	53.1	53.1	7.1	45.9	45.9	47.8	47.8		47.8	47.8	
Actuated g/C Ratio	0.12	0.44	0.44	0.06	0.38	0.38	0.40	0.40		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)	211	1566	700	105	1354	605	302	717		100	727	
v/s Ratio Prot	c0.06	c0.28		0.04	0.10			c0.33			0.18	
v/s Ratio Perm			0.00			0.00	0.01			0.05		
v/c Ratio	0.55	0.62	0.01	0.62	0.26	0.00	0.04	0.84		0.12	0.46	
Uniform Delay, d1	49.8	25.8	18.7	55.1	25.4	22.9	22.0	32.6		22.8	26.6	
Progression Factor	1.00	1.00	1.00	0.84	0.61	0.40	0.80	0.82		1.00	1.00	
Incremental Delay, d2	2.9	1.9	0.0	10.3	0.5	0.0	0.0	7.9		0.5	0.5	
Delay (s)	52.6	27.6	18.8	56.5	16.0	9.1	17.7	34.5		23.3	27.1	
Level of Service	D	C	B	E	B	A	B	C		C	C	
Approach Delay (s)		30.2			22.3			34.2			26.9	
Approach LOS		C			C			C			C	

Intersection Summary

HCM Average Control Delay	29.4	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.70				
Actuated Cycle Length (s)	120.0	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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	39	963	56	165	308	59	27	462	167	239
Act Effct Green (s)	58.4	52.6	52.6	67.4	61.4	61.4	36.5	29.9	44.4	37.9
Actuated g/C Ratio	0.49	0.44	0.44	0.56	0.51	0.51	0.30	0.25	0.37	0.32
v/c Ratio	0.07	0.62	0.08	0.67	0.17	0.07	0.08	0.92	0.68	0.41
Control Delay	3.8	8.5	0.4	31.7	18.4	5.7	21.7	55.7	39.3	33.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.8	8.5	0.4	31.7	18.4	5.7	21.7	55.7	39.3	33.3
LOS	A	A	A	C	B	A	C	E	D	C
Approach Delay		7.9			21.1			53.9		35.8
Approach LOS		A			C			D		D
Queue Length 50th (ft)	4	65	0	61	71	0	13	267	87	146
Queue Length 95th (ft)	m6	75	m1	132	113	20	20	356	126	204
Internal Link Dist (ft)		5533			4590			2266		2361
Turn Bay Length (ft)	300		120	320		145	150		150	
Base Capacity (vph)	579	1552	711	277	1811	839	363	607	248	628
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.62	0.08	0.60	0.17	0.07	0.07	0.76	0.67	0.38

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 4 (3%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 24.3		Intersection LOS: C	
Intersection Capacity Utilization 78.6%		ICU Level of Service D	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.89		1.00	0.98	
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)	1770	3539	1583	1770	3539	1583	1770	1658		1770	1825	
Flt Permitted	0.56	1.00	1.00	0.15	1.00	1.00	0.57	1.00		0.11	1.00	
Satd. Flow (perm)	1051	3539	1583	282	3539	1583	1058	1658		210	1825	
Volume (vph)	29	857	40	145	277	47	17	108	318	150	184	21
Peak-hour factor, PHF	0.75	0.89	0.72	0.88	0.90	0.80	0.62	0.87	0.94	0.90	0.89	0.65
Adj. Flow (vph)	39	963	56	165	308	59	27	124	338	167	207	32
RTOR Reduction (vph)	0	0	17	0	0	30	0	89	0	0	5	0
Lane Group Flow (vph)	39	963	39	165	308	29	27	374	0	167	234	0
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4			8		
Actuated Green, G (s)	54.6	51.0	51.0	65.8	58.2	58.2	35.8	31.5		46.2	37.9	
Effective Green, g (s)	54.6	51.0	51.0	65.8	58.2	58.2	35.8	31.5		46.2	37.9	
Actuated g/C Ratio	0.46	0.42	0.42	0.55	0.49	0.49	0.30	0.26		0.38	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)	500	1504	673	289	1716	768	341	435		220	576	
v/s Ratio Prot	0.00	c0.27		c0.05	0.09		0.00	c0.23		c0.07	0.13	
v/s Ratio Perm	0.03		0.02	0.26		0.02	0.02			0.22		
v/c Ratio	0.08	0.64	0.06	0.57	0.18	0.04	0.08	0.86		0.76	0.41	
Uniform Delay, d1	18.2	27.3	20.3	17.8	17.4	16.2	30.0	42.1		29.4	32.2	
Progression Factor	0.24	0.25	0.02	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	1.6	0.1	2.7	0.2	0.1	0.1	15.4		13.9	0.5	
Delay (s)	4.4	8.4	0.5	20.6	17.7	16.3	30.1	57.5		43.4	32.7	
Level of Service	A	A	A	C	B	B	C	E		D	C	
Approach Delay (s)		7.9			18.4			56.0			37.1	
Approach LOS		A			B			E			D	

Intersection Summary					
HCM Average Control Delay	24.4	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.71				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		16.0	
Intersection Capacity Utilization	78.6%	ICU Level of Service		D	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	795	649	312
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	65.9%	ICU Level of Service C
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	13	683	432	67	210	20
Peak Hour Factor	0.67	0.88	0.82	0.55	0.75	0.62
Hourly flow rate (vph)	19	776	527	122	280	32
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	649				1403	588
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	649				1403	588
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				0	94
cM capacity (veh/h)	937				151	509

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	796	649	312
Volume Left	19	0	280
Volume Right	0	122	32
cSH	937	1700	163
Volume to Capacity	0.02	0.38	1.92
Queue Length 95th (ft)	2	0	591
Control Delay (s)	0.5	0.0	482.5
Lane LOS	A		F
Approach Delay (s)	0.5	0.0	482.5
Approach LOS			F

Intersection Summary			
Average Delay	86.0		
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	273	717	837
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	86.9%	ICU Level of Service E
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	103	137	81	377	554	95
Peak Hour Factor	0.88	0.88	0.91	0.60	0.79	0.70
Hourly flow rate (vph)	117	156	89	628	701	136
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	717				793	403
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	717				793	403
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				0	79
cM capacity (veh/h)	884				310	647

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	273	717	837
Volume Left	117	0	701
Volume Right	0	628	136
cSH	884	1700	339
Volume to Capacity	0.13	0.42	2.47
Queue Length 95th (ft)	11	0	1674
Control Delay (s)	5.0	0.0	694.8
Lane LOS	A		F
Approach Delay (s)	5.0	0.0	694.8
Approach LOS			F

Intersection Summary				
Average Delay	319.0			
Intersection Capacity Utilization	86.9%	ICU Level of Service	E	
Analysis Period (min)	15			

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	285	124	123
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	29.5%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	56	145	99	9	16	74
Peak Hour Factor	0.50	0.84	0.93	0.50	0.67	0.75
Hourly flow rate (vph)	112	173	106	18	24	99
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	124				512	115
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	124				512	115
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				95	89
cM capacity (veh/h)	1462				482	937

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	285	124	123
Volume Left	112	0	24
Volume Right	0	18	99
cSH	1462	1700	791
Volume to Capacity	0.08	0.07	0.15
Queue Length 95th (ft)	6	0	14
Control Delay (s)	3.4	0.0	10.4
Lane LOS	A		B
Approach Delay (s)	3.4	0.0	10.4
Approach LOS			B

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	29.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	160	220	108
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	22.8%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	6	133	140	23	72	4
Peak Hour Factor	0.50	0.90	0.75	0.69	0.70	0.75
Hourly flow rate (vph)	12	148	187	33	103	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	220				375	203
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	220				375	203
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				83	99
cM capacity (veh/h)	1349				621	837

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	160	220	108
Volume Left	12	0	103
Volume Right	0	33	5
cSH	1349	1700	629
Volume to Capacity	0.01	0.13	0.17
Queue Length 95th (ft)	1	0	15
Control Delay (s)	0.6	0.0	11.9
Lane LOS	A		B
Approach Delay (s)	0.6	0.0	11.9
Approach LOS			B

Intersection Summary				
Average Delay	2.9			
Intersection Capacity Utilization	22.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	278	61	1074
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	36.8%	ICU Level of Service A
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	43	96	7	35	263	11
Peak Hour Factor	0.50	0.50	0.50	0.75	0.25	0.50
Hourly flow rate (vph)	86	192	14	47	1052	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2163	37			61	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2163	37			61	
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	81			32	
cM capacity (veh/h)	17	1035			1543	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	278	61	1074
Volume Left	86	0	1052
Volume Right	192	47	0
cSH	52	1700	1543
Volume to Capacity	5.39	0.04	0.68
Queue Length 95th (ft)	Err	0	147
Control Delay (s)	Err	0.0	12.1
Lane LOS	F		B
Approach Delay (s)	Err	0.0	12.1
Approach LOS	F		

Intersection Summary			
Average Delay	1976.9		
Intersection Capacity Utilization	36.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	637	130	1100	946
Sign Control	Stop	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	90.6%	ICU Level of Service E
Analysis Period (min)	15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	191	14	120	22	12	86	63	657	43	106	484	62
Peak Hour Factor	0.50	0.92	0.50	0.92	0.92	0.92	0.25	0.82	0.92	0.92	0.83	0.25
Hourly flow rate (vph)	382	15	240	24	13	93	252	801	47	115	583	248
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	2366	2290	707	2514	2390	825	831			848		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2366	2290	707	2514	2390	825	831			848		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	0	34	45	0	34	75	69			85		
cM capacity (veh/h)	6	23	435	3	20	373	801			790		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	637	130	1100	946
Volume Left	382	24	252	115
Volume Right	240	93	47	248
cSH	10	14	801	790
Volume to Capacity	63.47	9.29	0.31	0.15
Queue Length 95th (ft)	Err	Err	34	13
Control Delay (s)	Err	Err	8.2	3.9
Lane LOS	F	F	A	A
Approach Delay (s)	Err	Err	8.2	3.9
Approach LOS	F	F		

Intersection Summary				
Average Delay	2732.3			
Intersection Capacity Utilization	90.6%	ICU Level of Service	E	
Analysis Period (min)	15			

Future 2028 AM Improved

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	594	606	848	84	809
Act Effct Green (s)	64.1	103.2	104.0	11.0	120.0
Actuated g/C Ratio	0.53	0.86	0.87	0.09	1.00
v/c Ratio	0.61	0.85	0.53	0.52	0.51
Control Delay	25.5	36.0	4.2	51.4	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.5	36.0	4.2	51.4	1.1
LOS	C	D	A	D	A
Approach Delay	25.5		17.5	5.9	
Approach LOS	C		B	A	
Queue Length 50th (ft)	317	266	140	65	5
Queue Length 95th (ft)	541	416	261	m93	0
Internal Link Dist (ft)	2724		2449	828	
Turn Bay Length (ft)					160
Base Capacity (vph)	979	820	1614	236	1583
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.61	0.74	0.53	0.36	0.51

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 68 (57%), Referenced to phase 2:WBTL and 6:EBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 15.6		Intersection LOS: B	
Intersection Capacity Utilization 73.1%		ICU Level of Service D	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
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	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	1826		1770	1863	1770	1583
Flt Permitted	1.00		0.28	1.00	0.95	1.00
Satd. Flow (perm)	1826		528	1863	1770	1583
Volume (vph)	472	71	545	789	67	752
Peak-hour factor, PHF	0.93	0.83	0.90	0.93	0.80	0.93
Adj. Flow (vph)	508	86	606	848	84	809
RTOR Reduction (vph)	4	0	0	0	0	0
Lane Group Flow (vph)	590	0	606	848	84	809
Turn Type			pm+pt			Free
Protected Phases	6		5	2	4	
Permitted Phases			2			Free
Actuated Green, G (s)	63.3		102.4	102.4	9.6	120.0
Effective Green, g (s)	63.3		102.4	102.4	9.6	120.0
Actuated g/C Ratio	0.53		0.85	0.85	0.08	1.00
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)	963		814	1590	142	1583
v/s Ratio Prot	0.32		c0.22	0.46	0.05	
v/s Ratio Perm			c0.42			c0.51
v/c Ratio	0.61		0.74	0.53	0.59	0.51
Uniform Delay, d1	19.8		16.4	2.4	53.3	0.0
Progression Factor	1.00		1.00	1.00	0.85	1.00
Incremental Delay, d2	2.9		3.7	1.3	4.6	0.8
Delay (s)	22.7		20.1	3.7	49.7	0.8
Level of Service	C		C	A	D	A
Approach Delay (s)	22.7			10.5	5.4	
Approach LOS	C			B	A	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	48	601	816	759	499	53
Act Effct Green (s)	8.5	70.2	105.4	106.2	41.8	41.8
Actuated g/C Ratio	0.07	0.58	0.88	0.88	0.35	0.35
v/c Ratio	0.38	0.64	0.76	0.24	0.40	0.09
Control Delay	38.9	9.0	13.7	1.0	34.6	20.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.9	9.0	13.7	1.0	34.6	20.8
LOS	D	A	B	A	C	C
Approach Delay	11.2			7.6	33.3	
Approach LOS	B			A	C	
Queue Length 50th (ft)	39	94	186	30	178	16
Queue Length 95th (ft)	m38	m67	m98	m32	232	40
Internal Link Dist (ft)	828			7187	5706	
Turn Bay Length (ft)	145		170			60
Base Capacity (vph)	251	1016	1160	3133	1233	569
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.59	0.70	0.24	0.40	0.09

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 63 (53%), Referenced to phase 2:SBT and 6:NBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 13.5		Intersection LOS: B	
Intersection Capacity Utilization 67.6%		ICU Level of Service C	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
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	0.37	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	689	3539	3539	1583
Volume (vph)	36	583	751	691	459	41
Peak-hour factor, PHF	0.75	0.97	0.92	0.91	0.92	0.78
Adj. Flow (vph)	48	601	816	759	499	53
RTOR Reduction (vph)	0	19	0	0	0	17
Lane Group Flow (vph)	48	582	816	759	499	36
Turn Type		pm+ov	pm+pt			Perm
Protected Phases	8	1	1	6	2	
Permitted Phases		8	6			2
Actuated Green, G (s)	7.4	67.0	104.6	104.6	41.0	41.0
Effective Green, g (s)	7.4	67.0	104.6	104.6	41.0	41.0
Actuated g/C Ratio	0.06	0.56	0.87	0.87	0.34	0.34
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)	109	937	1137	3085	1209	541
v/s Ratio Prot	0.03	c0.31	c0.36	0.21	0.14	
v/s Ratio Perm		0.06	c0.27			0.02
v/c Ratio	0.44	0.62	0.72	0.25	0.41	0.07
Uniform Delay, d1	54.3	17.9	8.2	1.3	30.3	26.6
Progression Factor	0.65	0.50	0.76	0.63	1.00	1.00
Incremental Delay, d2	1.5	0.7	1.7	0.1	1.0	0.2
Delay (s)	36.7	9.7	7.9	0.9	31.3	26.8
Level of Service	D	A	A	A	C	C
Approach Delay (s)	11.7			4.6	30.9	
Approach LOS	B			A	C	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	67.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	566	160	843	1074
Act Effct Green (s)	39.0	39.0	120.0	73.0
Actuated g/C Ratio	0.32	0.32	1.00	0.61
v/c Ratio	0.99	0.26	0.53	1.00
Control Delay	76.9	38.9	2.1	21.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	76.9	38.9	2.1	21.3
LOS	E	D	A	C
Approach Delay	76.9	8.0		21.3
Approach LOS	E	A		C
Queue Length 50th (ft)	435	118	0	268
Queue Length 95th (ft)	#622	186	5	m375
Internal Link Dist (ft)	4085	1265		439
Turn Bay Length (ft)			150	
Base Capacity (vph)	570	605	1583	1078
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.99	0.26	0.53	1.00

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 51 (43%), Referenced to phase 2:WBT and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 28.1		Intersection LOS: C	
Intersection Capacity Utilization 98.4%		ICU Level of Service F	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
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	
Frt		1.00	1.00	0.85	1.00	
Flt Protected		0.99	1.00	1.00	0.95	
Satd. Flow (prot)		1852	1863	1583	1772	
Flt Permitted		0.94	1.00	1.00	0.95	
Satd. Flow (perm)		1755	1863	1583	1772	
Volume (vph)	52	431	147	767	988	6
Peak-hour factor, PHF	0.80	0.86	0.92	0.91	0.93	0.50
Adj. Flow (vph)	65	501	160	843	1062	12
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	566	160	843	1074	0
Turn Type	Perm			pm+ov		
Protected Phases		6	2	8	8	
Permitted Phases	6			2		
Actuated Green, G (s)		39.0	39.0	112.0	73.0	
Effective Green, g (s)		39.0	39.0	112.0	73.0	
Actuated g/C Ratio		0.32	0.32	0.93	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)		570	605	1583	1078	
v/s Ratio Prot			0.09	0.32	c0.61	
v/s Ratio Perm		c0.32		0.21		
v/c Ratio		0.99	0.26	0.53	1.00	
Uniform Delay, d1		40.4	29.9	0.5	23.4	
Progression Factor		1.00	1.25	1.00	0.50	
Incremental Delay, d2		36.0	1.0	0.3	7.3	
Delay (s)		76.4	38.4	0.9	19.0	
Level of Service		E	D	A	B	
Approach Delay (s)		76.4	6.8		19.0	
Approach LOS		E	A		B	

Intersection Summary			
HCM Average Control Delay	26.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	98.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	970	662	69	588	132	542
Act Effct Green (s)	67.1	67.1	44.9	44.9	44.9	44.9
Actuated g/C Ratio	0.56	0.56	0.37	0.37	0.37	0.37
v/c Ratio	0.97	0.72	0.30	0.85	2.00	0.41
Control Delay	36.3	13.3	32.7	48.5	512.0	20.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.3	13.3	32.7	48.5	512.0	20.4
LOS	D	B	C	D	F	C
Approach Delay	36.3	13.3		46.9		116.7
Approach LOS	D	B		D		F
Queue Length 50th (ft)	308	125	39	430	~163	194
Queue Length 95th (ft)	320	m172	57	#647	#180	98
Internal Link Dist (ft)	3138	678		2784		4158
Turn Bay Length (ft)			150		150	
Base Capacity (vph)	1039	955	233	692	66	1314
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.69	0.30	0.85	2.00	0.41

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 116 (97%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 2.00			
Intersection Signal Delay: 51.8		Intersection LOS: D	
Intersection Capacity Utilization 85.7%		ICU Level of Service E	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	0.95	
Frt		0.99			0.96		1.00	0.99		1.00	0.99	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1835			1783		1770	1848		1770	3501	
Flt Permitted		0.97			0.90		0.35	1.00		0.12	1.00	
Satd. Flow (perm)		1775			1612		649	1848		229	3501	
Volume (vph)	22	590	71	27	319	121	46	519	18	94	483	24
Peak-hour factor, PHF	0.69	0.70	0.75	0.64	0.75	0.62	0.67	0.93	0.60	0.71	0.96	0.62
Adj. Flow (vph)	32	843	95	42	425	195	69	558	30	132	503	39
RTOR Reduction (vph)	0	4	0	0	13	0	0	1	0	0	4	0
Lane Group Flow (vph)	0	966	0	0	649	0	69	587	0	132	538	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		67.1			67.1		44.9	44.9		44.9	44.9	
Effective Green, g (s)		67.1			67.1		44.9	44.9		44.9	44.9	
Actuated g/C Ratio		0.56			0.56		0.37	0.37		0.37	0.37	
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)		993			901		243	691		86	1310	
v/s Ratio Prot								0.32			0.15	
v/s Ratio Perm		c0.54			0.40		0.11			c0.58		
v/c Ratio		0.97			0.72		0.28	0.85		1.53	0.41	
Uniform Delay, d1		25.6			19.5		26.3	34.4		37.6	27.8	
Progression Factor		0.65			0.50		1.00	1.00		0.80	0.69	
Incremental Delay, d2		18.4			2.4		2.9	12.4		285.8	0.9	
Delay (s)		35.1			12.1		29.2	46.8		315.9	20.0	
Level of Service		D			B		C	D		F	B	
Approach Delay (s)		35.1			12.1			45.0			77.9	
Approach LOS		D			B			D			E	

Intersection Summary					
HCM Average Control Delay	41.9	HCM Level of Service		D	
HCM Volume to Capacity ratio	1.20				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	85.7%	ICU Level of Service		E	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	336	451	4	432	508	6	757	4	284
Act Effct Green (s)	80.7	78.8	62.0	56.5	56.5	5.9	29.1	31.3	31.3
Actuated g/C Ratio	0.67	0.66	0.52	0.47	0.47	0.05	0.24	0.26	0.26
v/c Ratio	0.75	0.37	0.01	0.49	0.50	0.07	0.91	0.01	0.46
Control Delay	39.7	5.5	5.0	12.8	7.6	55.7	54.2	25.0	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.7	5.5	5.0	12.8	7.6	55.7	54.2	25.0	4.8
LOS	D	A	A	B	A	E	D	C	A
Approach Delay		20.1		10.0		55.7		40.7	
Approach LOS		C		A		E		D	
Queue Length 50th (ft)	161	62	1	184	136	5	259	2	9
Queue Length 95th (ft)	m225	m112	2	296	225	11	m#386	m3	m40
Internal Link Dist (ft)		4158		602		2286		7832	
Turn Bay Length (ft)	95		150				150		55
Base Capacity (vph)	500	1224	503	877	1014	248	858	776	825
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.37	0.01	0.49	0.50	0.02	0.88	0.01	0.34

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 1 (1%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 24.5		Intersection LOS: C	
Intersection Capacity Utilization 73.9%		ICU Level of Service D	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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		0.97	1.00	1.00
Frt	1.00	1.00		1.00	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		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863		1770	1863	1583		1863		3433	1863	1583
Flt Permitted	0.32	1.00		0.50	1.00	1.00		1.00		0.95	1.00	1.00
Satd. Flow (perm)	602	1863		936	1863	1583		1863		3433	1863	1583
Volume (vph)	306	419	0	1	389	472	0	3	0	696	1	258
Peak-hour factor, PHF	0.91	0.93	0.92	0.25	0.90	0.93	0.92	0.50	0.92	0.92	0.25	0.91
Adj. Flow (vph)	336	451	0	4	432	508	0	6	0	757	4	284
RTOR Reduction (vph)	0	0	0	0	0	282	0	0	0	0	0	202
Lane Group Flow (vph)	336	451	0	4	432	226	0	6	0	757	4	82
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			Prot		Perm
Protected Phases	1	6		5	2			4		3	8	
Permitted Phases	6		6	2		2	4					8
Actuated Green, G (s)	77.5	72.4		54.4	53.3	53.3		1.4		29.1	34.5	34.5
Effective Green, g (s)	77.5	72.4		54.4	53.3	53.3		1.4		29.1	34.5	34.5
Actuated g/C Ratio	0.65	0.60		0.45	0.44	0.44		0.01		0.24	0.29	0.29
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)	585	1124		432	827	703		22		833	536	455
v/s Ratio Prot	c0.10	0.24		0.00	0.23			0.00		c0.22	0.00	
v/s Ratio Perm	c0.27			0.00		0.14						c0.05
v/c Ratio	0.57	0.40		0.01	0.52	0.32		0.27		0.91	0.01	0.18
Uniform Delay, d1	12.1	12.5		18.0	24.1	21.6		58.8		44.2	30.5	32.1
Progression Factor	2.22	0.45		0.49	0.43	2.33		1.00		0.89	0.84	0.73
Incremental Delay, d2	0.7	0.6		0.0	2.2	1.1		6.6		12.8	0.0	0.2
Delay (s)	27.7	6.2		8.8	12.7	51.6		65.4		52.0	25.6	23.6
Level of Service	C	A		A	B	D		E		D	C	C
Approach Delay (s)		15.4			33.6			65.4			44.2	
Approach LOS		B			C			E			D	

Intersection Summary					
HCM Average Control Delay	32.5	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.63				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	73.9%	ICU Level of Service		D	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	36	1130	32	30	873	203	27	41	424	29
Act Effct Green (s)	68.8	68.8	68.8	68.8	68.8	68.8	43.2	43.2	43.2	43.2
Actuated g/C Ratio	0.57	0.57	0.57	0.57	0.57	0.57	0.36	0.36	0.36	0.36
v/c Ratio	0.17	0.56	0.03	0.26	0.43	0.20	0.05	0.07	0.89	0.05
Control Delay	6.9	6.7	1.8	14.4	10.3	0.8	21.3	8.5	50.3	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.9	6.7	1.8	14.4	10.3	0.8	21.3	8.5	50.3	10.0
LOS	A	A	A	B	B	A	C	A	D	A
Approach Delay		6.5			8.6		13.6		47.7	
Approach LOS		A			A		B		D	
Queue Length 50th (ft)	4	90	1	6	95	3	14	4	351	19
Queue Length 95th (ft)	m11	m164	m2	m18	164	2	15	17	278	m6
Internal Link Dist (ft)		5956			318		2546		3053	
Turn Bay Length (ft)	195		190	210		280		50		50
Base Capacity (vph)	218	2028	917	116	2028	994	686	808	663	798
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.56	0.03	0.26	0.43	0.20	0.04	0.05	0.64	0.04

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 14.1		Intersection LOS: B	
Intersection Capacity Utilization 62.5%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.96	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1793	1583		1776	1583
Flt Permitted	0.26	1.00	1.00	0.17	1.00	1.00		0.70	1.00		0.71	1.00
Satd. Flow (perm)	486	3539	1583	324	3539	1583		1304	1583		1326	1583
Volume (vph)	30	1085	24	27	812	152	12	3	31	339	7	22
Peak-hour factor, PHF	0.83	0.96	0.75	0.90	0.93	0.75	0.58	0.50	0.75	0.82	0.62	0.75
Adj. Flow (vph)	36	1130	32	30	873	203	21	6	41	413	11	29
RTOR Reduction (vph)	0	0	10	0	0	87	0	0	20	0	0	8
Lane Group Flow (vph)	36	1130	22	30	873	116	0	27	21	0	424	21
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		6			2			4			8	
Permitted Phases	6		6	2		2	4		4	8		8
Actuated Green, G (s)	68.8	68.8	68.8	68.8	68.8	68.8		43.2	43.2		43.2	43.2
Effective Green, g (s)	68.8	68.8	68.8	68.8	68.8	68.8		43.2	43.2		43.2	43.2
Actuated g/C Ratio	0.57	0.57	0.57	0.57	0.57	0.57		0.36	0.36		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)	279	2029	908	186	2029	908		469	570		477	570
v/s Ratio Prot		c0.32			0.25							
v/s Ratio Perm	0.07		0.01	0.09		0.07		0.02	0.01		c0.32	0.01
v/c Ratio	0.13	0.56	0.02	0.16	0.43	0.13		0.06	0.04		0.89	0.04
Uniform Delay, d1	11.8	16.0	11.1	12.0	14.5	11.8		25.1	24.9		36.1	24.9
Progression Factor	0.34	0.33	0.23	0.50	0.60	0.14		1.00	1.00		1.02	0.72
Incremental Delay, d2	0.7	0.8	0.0	1.6	0.6	0.3		0.1	0.0		12.5	0.0
Delay (s)	4.7	6.0	2.5	7.6	9.2	2.0		25.1	24.9		49.2	17.9
Level of Service	A	A	A	A	A	A		C	C		D	B
Approach Delay (s)		5.9			7.8			25.0			47.2	
Approach LOS		A			A			C			D	

Intersection Summary					
HCM Average Control Delay	13.7	HCM Level of Service		B	
HCM Volume to Capacity ratio	0.68				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	62.5%	ICU Level of Service		B	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	200	474	451	233	368	314	12	36	339	143
Act Effct Green (s)	37.2	37.2	37.2	24.8	74.8	74.8	74.8	58.1	58.1	58.1
Actuated g/C Ratio	0.31	0.31	0.31	0.21	0.62	0.62	0.62	0.48	0.48	0.48
v/c Ratio	0.62	0.82	0.63	0.84	0.74	0.27	0.01	0.09	0.38	0.18
Control Delay	44.9	48.9	12.3	65.2	20.3	4.4	1.3	13.2	14.1	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.9	48.9	12.3	65.2	20.3	4.4	1.3	13.2	14.1	5.6
LOS	D	D	B	E	C	A	A	B	B	A
Approach Delay		33.5		65.2		12.8			11.7	
Approach LOS		C		E		B			B	
Queue Length 50th (ft)	128	343	96	183	40	20	0	6	60	3
Queue Length 95th (ft)	114	302	139	140	111	m123	m2	29	336	40
Internal Link Dist (ft)		3365		5328		7832			11076	
Turn Bay Length (ft)	150		150		150		50	150		50
Base Capacity (vph)	374	716	808	340	724	1164	992	402	902	794
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.66	0.56	0.69	0.51	0.27	0.01	0.09	0.38	0.18

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 84 (70%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 26.4		Intersection LOS: C	
Intersection Capacity Utilization 71.8%		ICU Level of Service C	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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
Frt	1.00	1.00	0.85		0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583		1819		1770	1863	1583	1770	1863	1583
Flt Permitted	0.39	1.00	1.00		0.46		0.46	1.00	1.00	0.52	1.00	1.00
Satd. Flow (perm)	721	1863	1583		831		864	1863	1583	960	1863	1583
Volume (vph)	128	322	365	6	148	27	276	289	6	27	312	99
Peak-hour factor, PHF	0.64	0.68	0.81	0.50	0.80	0.75	0.75	0.92	0.50	0.75	0.92	0.69
Adj. Flow (vph)	200	474	451	12	185	36	368	314	12	36	339	143
RTOR Reduction (vph)	0	0	224	0	6	0	0	0	3	0	0	27
Lane Group Flow (vph)	200	474	227	0	227	0	368	314	9	36	339	116
Turn Type	pm+pt		Perm	Perm			pm+pt		Perm	Perm		Perm
Protected Phases	3	8			4		1	6			2	
Permitted Phases	8		8	4			6		6	2		2
Actuated Green, G (s)	37.2	37.2	37.2		24.8		74.8	74.8	74.8	58.1	58.1	58.1
Effective Green, g (s)	37.2	37.2	37.2		24.8		74.8	74.8	74.8	58.1	58.1	58.1
Actuated g/C Ratio	0.31	0.31	0.31		0.21		0.62	0.62	0.62	0.48	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)	297	578	491		172		634	1161	987	465	902	766
v/s Ratio Prot	0.05	c0.25					c0.06	0.17			0.18	
v/s Ratio Perm	0.16		0.14		c0.27		c0.30		0.01	0.04		0.07
v/c Ratio	0.67	0.82	0.46		1.32		0.58	0.27	0.01	0.08	0.38	0.15
Uniform Delay, d1	45.3	38.3	33.4		47.6		19.9	10.2	8.6	16.6	19.5	17.2
Progression Factor	0.99	1.00	0.97		0.92		0.54	0.34	0.18	0.54	0.55	0.35
Incremental Delay, d2	5.3	8.2	0.6		179.4		1.1	0.5	0.0	0.3	1.1	0.4
Delay (s)	50.3	46.5	33.0		223.2		11.9	4.0	1.6	9.2	11.8	6.4
Level of Service	D	D	C		F		B	A	A	A	B	A
Approach Delay (s)		41.8			223.2			8.1			10.1	
Approach LOS		D			F			A			B	

Intersection Summary					
HCM Average Control Delay		42.8	HCM Level of Service		D
HCM Volume to Capacity ratio		0.75			
Actuated Cycle Length (s)		120.0	Sum of lost time (s)		8.0
Intersection Capacity Utilization		71.8%	ICU Level of Service		C
Analysis Period (min)		15			

c Critical Lane Group

Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	917	721	72	120
Sign Control	Free	Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	750	6	25	466	18	90
Peak Hour Factor	0.84	0.25	0.25	0.75	0.25	0.75
Hourly flow rate (vph)	893	24	100	621	72	120
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			917		1726	905
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			917		1726	905
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		15	64
cM capacity (veh/h)			744		84	335

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	917	721	192
Volume Left	0	100	72
Volume Right	24	0	120
cSH	1700	744	225
Volume to Capacity	0.54	0.13	0.85
Queue Length 95th (ft)	0	12	167
Control Delay (s)	0.0	3.4	68.5
Lane LOS		A	F
Approach Delay (s)	0.0	3.4	68.5
Approach LOS			F

Intersection Summary				
Average Delay	8.5			
Intersection Capacity Utilization	54.9%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	WBL	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	568	61	473	990	358
Act Effct Green (s)	44.4	44.4	67.6	67.6	67.6
Actuated g/C Ratio	0.37	0.37	0.56	0.56	0.56
v/c Ratio	0.87	0.10	0.45	0.76	0.43
Control Delay	44.1	4.4	15.6	5.3	8.3
Queue Delay	0.0	0.0	0.0	1.0	0.0
Total Delay	44.1	4.4	15.6	6.2	8.3
LOS	D	A	B	A	A
Approach Delay	40.3		9.3		8.3
Approach LOS	D		A		A
Queue Length 50th (ft)	357	4	163	34	64
Queue Length 95th (ft)	400	m10	218	0	m153
Internal Link Dist (ft)	4006		690		3609
Turn Bay Length (ft)	150			150	
Base Capacity (vph)	723	682	1050	1296	827
Starvation Cap Reductn	0	0	0	117	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.79	0.09	0.45	0.84	0.43

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 22 (18%), Referenced to phase 2:SBTL and 6:NBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 17.1		Intersection LOS: B	
Intersection Capacity Utilization 67.1%		ICU Level of Service C	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
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	1.00	1.00	1.00	1.00		1.00
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		0.99
Satd. Flow (prot)	1770	1583	1863	1583		1846
Flt Permitted	0.95	1.00	1.00	1.00		0.83
Satd. Flow (perm)	1770	1583	1863	1583		1540
Volume (vph)	426	46	355	574	40	240
Peak-hour factor, PHF	0.75	0.75	0.75	0.58	0.62	0.82
Adj. Flow (vph)	568	61	473	990	65	293
RTOR Reduction (vph)	0	38	0	404	0	0
Lane Group Flow (vph)	568	23	473	586	0	358
Turn Type		Perm		Perm	Perm	
Protected Phases	4		6			2
Permitted Phases		4		6	2	
Actuated Green, G (s)	44.4	44.4	67.6	67.6		67.6
Effective Green, g (s)	44.4	44.4	67.6	67.6		67.6
Actuated g/C Ratio	0.37	0.37	0.56	0.56		0.56
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)	655	586	1049	892		868
v/s Ratio Prot	c0.32		0.25			
v/s Ratio Perm		0.01		c0.37		0.23
v/c Ratio	0.87	0.04	0.45	0.66		0.41
Uniform Delay, d1	35.1	24.2	15.3	18.2		14.9
Progression Factor	0.88	0.71	0.88	1.03		0.43
Incremental Delay, d2	10.7	0.0	1.0	2.7		1.0
Delay (s)	41.6	17.1	14.5	21.4		7.5
Level of Service	D	B	B	C		A
Approach Delay (s)	39.2		19.2			7.5
Approach LOS	D		B			A

Intersection Summary			
HCM Average Control Delay	22.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	694	112	594	112	153	504	60
Act Effct Green (s)	53.7	53.7	96.9	96.9	15.1	58.3	15.1
Actuated g/C Ratio	0.45	0.45	0.81	0.81	0.13	0.49	0.13
v/c Ratio	0.83	0.15	0.85	0.07	0.83	0.60	0.26
Control Delay	40.3	10.5	37.6	1.7	82.1	15.1	49.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.3	10.5	37.6	1.7	82.1	15.1	49.8
LOS	D	B	D	A	F	B	D
Approach Delay	36.2			31.9	30.7		49.8
Approach LOS	D			C	C		D
Queue Length 50th (ft)	498	24	325	9	125	262	42
Queue Length 95th (ft)	#689	41	61	13	117	14	58
Internal Link Dist (ft)	3224			8973	3609		2278
Turn Bay Length (ft)		150	150			150	
Base Capacity (vph)	850	757	712	1504	195	840	248
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.15	0.83	0.07	0.78	0.60	0.24

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 23 (19%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 33.6		Intersection LOS: C	
Intersection Capacity Utilization 68.4%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00			1.00	1.00		1.00	
Frt		1.00	0.85	1.00	1.00			1.00	0.85		1.00	
Flt Protected		1.00	1.00	0.95	1.00			0.97	1.00		1.00	
Satd. Flow (prot)		1862	1583	1770	1863			1809	1583		1863	
Flt Permitted		1.00	1.00	0.14	1.00			0.78	1.00		1.00	
Satd. Flow (perm)		1860	1583	260	1863			1458	1583		1863	
Volume (vph)	3	640	82	190	81	0	42	36	343	0	37	0
Peak-hour factor, PHF	0.50	0.93	0.73	0.32	0.72	0.92	0.46	0.58	0.68	0.92	0.62	0.92
Adj. Flow (vph)	6	688	112	594	112	0	91	62	504	0	60	0
RTOR Reduction (vph)	0	0	34	0	0	0	0	0	77	0	0	0
Lane Group Flow (vph)	0	694	78	594	112	0	0	153	427	0	60	0
Turn Type	Perm		Perm	pm+pt			Perm		pm+ov	Perm		Perm
Protected Phases		6		5	2			4	5		8	
Permitted Phases	6		6	2			4		4	8		8
Actuated Green, G (s)		53.7	53.7	96.9	96.9			15.1	54.3		15.1	
Effective Green, g (s)		53.7	53.7	96.9	96.9			15.1	54.3		15.1	
Actuated g/C Ratio		0.45	0.45	0.81	0.81			0.13	0.45		0.13	
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)		832	708	703	1504			183	769		234	
v/s Ratio Prot				c0.28	0.06				0.18		0.03	
v/s Ratio Perm		0.37	0.05	c0.41				c0.10	0.09			
v/c Ratio		0.83	0.11	0.84	0.07			0.84	0.56		0.26	
Uniform Delay, d1		29.2	19.3	27.0	2.4			51.2	24.0		47.4	
Progression Factor		1.00	1.00	0.86	0.65			0.96	0.78		1.00	
Incremental Delay, d2		9.6	0.3	9.1	0.1			25.9	0.8		0.6	
Delay (s)		38.9	19.6	32.4	1.6			75.1	19.6		48.0	
Level of Service		D	B	C	A			E	B		D	
Approach Delay (s)		36.2			27.5			32.5			48.0	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	32.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	1000	88	354	12	67	71	47
Sign Control	Free		Free		Stop		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	38.6%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	850	64	0	251	6	15	4	12	41	34	0
Peak Hour Factor	0.92	0.85	0.73	0.92	0.71	0.50	0.58	0.38	0.40	0.58	0.72	0.92
Hourly flow rate (vph)	0	1000	88	0	354	12	26	11	30	71	47	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	354			1000			1377	1354	500	859	1354	354
vC1, stage 1 conf vol							1000	1000		354	354	
vC2, stage 2 conf vol							377	354		505	1000	
vCu, unblocked vol	354			1000			1377	1354	500	859	1354	354
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			89	96	94	83	84	100
cM capacity (veh/h)	1202			688			240	297	516	417	297	643

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	0	500	500	88	0	354	12	66	71	47
Volume Left	0	0	0	0	0	0	0	26	71	0
Volume Right	0	0	0	88	0	0	12	30	0	0
cSH	1700	1700	1700	1700	1700	1700	1700	330	417	293
Volume to Capacity	0.00	0.29	0.29	0.05	0.00	0.21	0.01	0.20	0.17	0.16
Queue Length 95th (ft)	0	0	0	0	0	0	0	18	15	14
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.6	15.4	19.6
Lane LOS								C	C	C
Approach Delay (s)	0.0				0.0			18.6	17.1	
Approach LOS								C	C	

Intersection Summary					
Average Delay	2.0				
Intersection Capacity Utilization	38.6%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	795	649	312
Act Effct Green (s)	87.0	87.0	25.0
Actuated g/C Ratio	0.72	0.72	0.21
v/c Ratio	0.60	0.49	0.84
Control Delay	6.7	8.5	64.3
Queue Delay	0.0	0.0	0.0
Total Delay	6.7	8.5	64.3
LOS	A	A	E
Approach Delay	6.7	8.5	64.3
Approach LOS	A	A	E
Queue Length 50th (ft)	178	171	227
Queue Length 95th (ft)	408	194	245
Internal Link Dist (ft)	1690	4737	3802
Turn Bay Length (ft)			
Base Capacity (vph)	1323	1322	560
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.60	0.49	0.56

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 120		
Offset: 52 (43%), Referenced to phase 2:WBT and 6:EBTL, Start of Green		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.84		
Intersection Signal Delay: 17.6	Intersection LOS: B	
Intersection Capacity Utilization 65.9%	ICU Level of Service C	
Analysis Period (min) 15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
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		1.00	
Frt		1.00	0.97		0.99	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		1861	1815		1758	
Flt Permitted		0.98	1.00		0.96	
Satd. Flow (perm)		1826	1815		1758	
Volume (vph)	13	683	432	67	210	20
Peak-hour factor, PHF	0.67	0.88	0.82	0.55	0.75	0.62
Adj. Flow (vph)	19	776	527	122	280	32
RTOR Reduction (vph)	0	0	5	0	4	0
Lane Group Flow (vph)	0	795	644	0	308	0
Turn Type	Perm					
Protected Phases		6	2		8	
Permitted Phases	6					
Actuated Green, G (s)		87.0	87.0		25.0	
Effective Green, g (s)		87.0	87.0		25.0	
Actuated g/C Ratio		0.72	0.72		0.21	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1324	1316		366	
v/s Ratio Prot			0.35		c0.18	
v/s Ratio Perm		c0.44				
v/c Ratio		0.60	0.49		0.84	
Uniform Delay, d1		8.0	7.0		45.6	
Progression Factor		0.58	0.93		1.00	
Incremental Delay, d2		1.2	1.1		15.9	
Delay (s)		5.9	7.6		61.5	
Level of Service		A	A		E	
Approach Delay (s)		5.9	7.6		61.5	
Approach LOS		A	A		E	

Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	273	89	628	837
Act Effct Green (s)	44.1	44.1	44.1	67.9
Actuated g/C Ratio	0.37	0.37	0.37	0.57
v/c Ratio	0.48	0.13	0.64	0.84
Control Delay	35.6	25.4	6.1	30.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	35.6	25.4	6.1	30.6
LOS	D	C	A	C
Approach Delay	35.6	8.5		30.6
Approach LOS	D	A		C
Queue Length 50th (ft)	169	43	68	528
Queue Length 95th (ft)	269	m82	30	504
Internal Link Dist (ft)	6577	1690		4527
Turn Bay Length (ft)			150	
Base Capacity (vph)	587	711	992	1095
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.47	0.13	0.63	0.76

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 96 (80%), Referenced to phase 2:WBT and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 22.7		Intersection LOS: C	
Intersection Capacity Utilization 62.7%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
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	
Frt		1.00	1.00	0.85	0.98	
Flt Protected		0.98	1.00	1.00	0.96	
Satd. Flow (prot)		1824	1863	1583	1749	
Flt Permitted		0.83	1.00	1.00	0.96	
Satd. Flow (perm)		1541	1863	1583	1749	
Volume (vph)	103	137	81	377	554	95
Peak-hour factor, PHF	0.88	0.88	0.91	0.60	0.79	0.70
Adj. Flow (vph)	117	156	89	628	701	136
RTOR Reduction (vph)	0	0	0	397	7	0
Lane Group Flow (vph)	0	273	89	231	830	0
Turn Type	Perm			Perm		
Protected Phases		6	2		8	
Permitted Phases	6			2		
Actuated Green, G (s)		44.1	44.1	44.1	67.9	
Effective Green, g (s)		44.1	44.1	44.1	67.9	
Actuated g/C Ratio		0.37	0.37	0.37	0.57	
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)		566	685	582	990	
v/s Ratio Prot			0.05		c0.47	
v/s Ratio Perm		c0.18		0.15		
v/c Ratio		0.48	0.13	0.40	0.84	
Uniform Delay, d1		29.2	25.2	28.1	21.5	
Progression Factor		1.00	0.86	1.08	1.08	
Incremental Delay, d2		2.9	0.4	1.9	6.3	
Delay (s)		32.1	22.1	32.1	29.6	
Level of Service		C	C	C	C	
Approach Delay (s)		32.1	30.9		29.6	
Approach LOS		C	C		C	

Intersection Summary			
HCM Average Control Delay	30.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	120.0	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

Lane Group	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	86	192	61	1074
Act Effct Green (s)	11.0	11.0	101.0	101.0
Actuated g/C Ratio	0.09	0.09	0.84	0.84
v/c Ratio	0.53	0.60	0.04	1.00
Control Delay	63.1	15.1	0.8	38.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	63.1	15.1	0.8	38.9
LOS	E	B	A	D
Approach Delay	29.9		0.8	38.9
Approach LOS	C		A	D
Queue Length 50th (ft)	65	0	1	611
Queue Length 95th (ft)	61	0	2	179
Internal Link Dist (ft)	268		1455	1038
Turn Bay Length (ft)	150			
Base Capacity (vph)	236	377	1412	1076
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.36	0.51	0.04	1.00

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 4 (3%), Referenced to phase 2:SBTL and 6:NBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 35.5		Intersection LOS: D	
Intersection Capacity Utilization 31.8%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
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
Frt	1.00	0.85	0.90			1.00
Flt Protected	0.95	1.00	1.00			0.95
Satd. Flow (prot)	1770	1583	1669			1776
Flt Permitted	0.95	1.00	1.00			0.69
Satd. Flow (perm)	1770	1583	1669			1277
Volume (vph)	43	96	7	35	263	11
Peak-hour factor, PHF	0.50	0.50	0.50	0.75	0.25	0.50
Adj. Flow (vph)	86	192	14	47	1052	22
RTOR Reduction (vph)	0	174	7	0	0	0
Lane Group Flow (vph)	86	18	54	0	0	1074
Turn Type		Perm			Perm	
Protected Phases	4		6			2
Permitted Phases		4			2	
Actuated Green, G (s)	11.0	11.0	101.0			101.0
Effective Green, g (s)	11.0	11.0	101.0			101.0
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)	162	145	1405			1075
v/s Ratio Prot	c0.05		0.03			
v/s Ratio Perm		0.01				c0.84
v/c Ratio	0.53	0.12	0.04			1.00
Uniform Delay, d1	52.0	50.1	1.6			9.5
Progression Factor	1.00	1.00	0.94			1.00
Incremental Delay, d2	3.3	0.4	0.1			27.2
Delay (s)	55.4	50.4	1.5			36.7
Level of Service	E	D	A			D
Approach Delay (s)	52.0		1.5			36.7
Approach LOS	D		A			D

Intersection Summary			
HCM Average Control Delay	38.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	31.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	382	15	240	24	13	93	252	801	47	115	583	248
Act Effct Green (s)	35.7	35.7	35.7	35.7	35.7	35.7	20.8	63.9	63.9	51.5	51.5	51.5
Actuated g/C Ratio	0.30	0.30	0.30	0.30	0.30	0.30	0.17	0.53	0.53	0.43	0.43	0.43
v/c Ratio	0.92	0.03	0.38	0.06	0.02	0.17	0.42	0.81	0.06	0.63	0.73	0.32
Control Delay	68.6	27.5	5.3	28.2	27.4	6.4	40.5	25.0	3.0	36.1	25.8	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.6	27.5	5.3	28.2	27.4	6.4	40.5	25.0	3.0	36.1	25.8	4.2
LOS	E	C	A	C	C	A	D	C	A	D	C	A
Approach Delay		43.8			12.5			27.6			21.4	
Approach LOS		D			B			C			C	
Queue Length 50th (ft)	273	8	0	13	7	0	95	602	5	41	411	16
Queue Length 95th (ft)	179	24	0	33	22	37	32	478	m9	m72	281	0
Internal Link Dist (ft)		182			893			756			690	
Turn Bay Length (ft)	150		150	150		150	150		150	150		150
Base Capacity (vph)	465	621	688	464	621	590	594	997	858	186	856	815
Starvation Cap Reductn	0	0	0	0	0	0	0	2	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	1	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.02	0.35	0.05	0.02	0.16	0.42	0.81	0.05	0.62	0.68	0.30

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 108 (90%), Referenced to phase 2:SBTL and 6:NBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 28.5		Intersection LOS: C	
Intersection Capacity Utilization 67.7%		ICU Level of Service C	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	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	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	3433	1863	1583	1770	1863	1583
Flt Permitted	0.75	1.00	1.00	0.75	1.00	1.00	0.95	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)	1395	1863	1583	1393	1863	1583	3433	1863	1583	173	1863	1583
Volume (vph)	191	14	120	22	12	86	63	657	43	106	484	62
Peak-hour factor, PHF	0.50	0.92	0.50	0.92	0.92	0.92	0.25	0.82	0.92	0.92	0.83	0.25
Adj. Flow (vph)	382	15	240	24	13	93	252	801	47	115	583	248
RTOR Reduction (vph)	0	0	169	0	0	65	0	0	12	0	0	92
Lane Group Flow (vph)	382	15	71	24	13	28	252	801	35	115	583	156
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	pm+pt		Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4			6	2		2
Actuated Green, G (s)	35.7	35.7	35.7	35.7	35.7	35.7	20.8	63.9	63.9	51.5	51.5	51.5
Effective Green, g (s)	35.7	35.7	35.7	35.7	35.7	35.7	20.8	63.9	63.9	51.5	51.5	51.5
Actuated g/C Ratio	0.30	0.30	0.30	0.30	0.30	0.30	0.17	0.53	0.53	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	4.0	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	3.0
Lane Grp Cap (vph)	415	554	471	414	554	471	595	992	843	186	800	679
v/s Ratio Prot		0.01			0.01		0.07	c0.43		0.04	c0.31	
v/s Ratio Perm	c0.27		0.05	0.02		0.02			0.02	0.22		0.10
v/c Ratio	0.92	0.03	0.15	0.06	0.02	0.06	0.42	0.81	0.04	0.62	0.73	0.23
Uniform Delay, d1	40.8	29.9	31.0	30.1	29.8	30.1	44.3	23.0	13.4	55.5	28.4	21.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.84	0.71	0.33	1.03	0.72	0.41
Incremental Delay, d2	25.5	0.0	0.2	0.1	0.0	0.1	0.5	6.7	0.1	4.5	4.4	0.6
Delay (s)	66.3	29.9	31.2	30.2	29.8	30.2	37.8	23.1	4.5	61.8	24.9	9.5
Level of Service	E	C	C	C	C	C	D	C	A	E	C	A
Approach Delay (s)		52.2			30.2			25.7			25.3	
Approach LOS		D			C			C			C	

Intersection Summary					
HCM Average Control Delay	31.8	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.85				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	67.7%	ICU Level of Service		C	
Analysis Period (min)	15				

c Critical Lane Group

Future PM Intersection Analysis (Full Build Out)

Future 2028 PM

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	986	604	506	84	678
Sign Control	Free		Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	92.2%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	771	127	544	455	69	590
Peak Hour Factor	0.92	0.86	0.90	0.90	0.82	0.87
Hourly flow rate (vph)	838	148	604	506	84	678
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			986		2626	912
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			986		2626	912
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			14		0	0
cM capacity (veh/h)			701		4	332

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	986	604	506	762
Volume Left	0	604	0	84
Volume Right	148	0	0	678
cSH	1700	701	1700	30
Volume to Capacity	0.58	0.86	0.30	25.24
Queue Length 95th (ft)	0	255	0	Err
Control Delay (s)	0.0	33.5	0.0	Err
Lane LOS		D		F
Approach Delay (s)	0.0	18.2		Err
Approach LOS				F

Intersection Summary				
Average Delay	2674.1			
Intersection Capacity Utilization	92.2%	ICU Level of Service		F
Analysis Period (min)	15			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	53	685	679	633	839	47
Sign Control	Stop			Free	Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	44	637	625	589	789	38
Peak Hour Factor	0.83	0.93	0.92	0.93	0.94	0.81
Hourly flow rate (vph)	53	685	679	633	839	47
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2515	420	839			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2515	420	839			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	0	14			
cM capacity (veh/h)	3	582	791			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	53	685	679	317	317	420	420	47
Volume Left	53	0	679	0	0	0	0	0
Volume Right	0	685	0	0	0	0	0	47
cSH	3	582	791	1700	1700	1700	1700	1700
Volume to Capacity	16.21	1.18	0.86	0.19	0.19	0.25	0.25	0.03
Queue Length 95th (ft)	Err	592	261	0	0	0	0	0
Control Delay (s)	Err	120.5	30.4	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	F	D					
Approach Delay (s)	830.1		15.7			0.0		
Approach LOS	F							

Intersection Summary				
Average Delay	215.6			
Intersection Capacity Utilization	69.8%	ICU Level of Service		C
Analysis Period (min)	15			

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	534	965	578	154	372	266
Act Effct Green (s)	84.3	84.3	46.1	120.0	27.7	77.8
Actuated g/C Ratio	0.70	0.70	0.38	1.00	0.23	0.65
v/c Ratio	0.87	0.39	0.81	0.10	0.91	0.24
Control Delay	22.9	0.9	44.4	0.1	71.5	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.9	0.9	44.4	0.1	71.5	3.8
LOS	C	A	D	A	E	A
Approach Delay		8.8	35.1			
Approach LOS		A	D			
Queue Length 50th (ft)	156	23	413	0	275	26
Queue Length 95th (ft)	m221	m26	#616	0	#417	59
Internal Link Dist (ft)		808	1512			
Turn Bay Length (ft)	150					
Base Capacity (vph)	624	2485	716	1583	443	1084
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.39	0.81	0.10	0.84	0.25

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 79 (66%), Referenced to phase 2:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 23.1 Intersection LOS: C
Intersection Capacity Utilization 90.4% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	0.95			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	3539			1863	1583	1770		1583			
Flt Permitted	0.17	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	318	3539			1863	1583	1770		1583			
Volume (vph)	502	926	0	0	549	139	327	0	247	0	0	0
Peak-hour factor, PHF	0.94	0.96	0.92	0.92	0.95	0.90	0.88	0.92	0.93	0.92	0.92	0.92
Adj. Flow (vph)	534	965	0	0	578	154	372	0	266	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	60	0	0	0
Lane Group Flow (vph)	534	965	0	0	578	154	372	0	206	0	0	0
Turn Type	pm+pt					Free	Prot		custom			
Protected Phases	1	6			2		7					
Permitted Phases	6					Free			2 7			
Actuated Green, G (s)	84.3	84.3			46.1	120.0	27.7		77.8			
Effective Green, g (s)	84.3	84.3			46.1	120.0	27.7		77.8			
Actuated g/C Ratio	0.70	0.70			0.38	1.00	0.23		0.65			
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)	637	2486			716	1583	409		1026			
v/s Ratio Prot	c0.24	0.27			0.31		c0.21					
v/s Ratio Perm	c0.35					0.10			0.13			
v/c Ratio	0.84	0.39			0.81	0.10	0.91		0.20			
Uniform Delay, d1	29.5	7.3			33.0	0.0	44.9		8.5			
Progression Factor	0.44	0.10			1.00	1.00	1.00		1.00			
Incremental Delay, d2	4.1	0.0			9.5	0.1	23.5		0.1			
Delay (s)	17.2	0.7			42.5	0.1	68.5		8.6			
Level of Service	B	A			D	A	E		A			
Approach Delay (s)		6.6			33.6			43.5			0.0	
Approach LOS		A			C			D			A	

Intersection Summary

HCM Average Control Delay	21.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	849	401	309	704	731	847
Act Effct Green (s)	61.2	120.0	84.0	84.0	28.0	93.2
Actuated g/C Ratio	0.51	1.00	0.70	0.70	0.23	0.78
v/c Ratio	0.89	0.25	0.91	0.54	0.91	0.65
Control Delay	40.3	0.4	71.8	7.9	61.7	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.3	0.4	71.8	7.9	61.7	6.5
LOS	D	A	E	A	E	A
Approach Delay	27.5			27.4		
Approach LOS	C			C		
Queue Length 50th (ft)	585	0	209	136	286	156
Queue Length 95th (ft)	#863	0	m#266	m193	#396	258
Internal Link Dist (ft)	1279			808		
Turn Bay Length (ft)		150	150			
Base Capacity (vph)	951	1583	356	1304	801	1295
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.25	0.87	0.54	0.91	0.65

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 56 (47%), Referenced to phase 2:WBTL and 6:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 29.3 Intersection LOS: C
Intersection Capacity Utilization 90.4% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00					0.97		1.00
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		1863	1583	1770	1863					3433		1583
Flt Permitted		1.00	1.00	0.07	1.00					0.95		1.00
Satd. Flow (perm)		1863	1583	126	1863					3433		1583
Volume (vph)	0	773	357	278	655	0	0	0	0	694	0	796
Peak-hour factor, PHF	0.92	0.91	0.89	0.90	0.93	0.92	0.92	0.92	0.92	0.95	0.92	0.94
Adj. Flow (vph)	0	849	401	309	704	0	0	0	0	731	0	847
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	66
Lane Group Flow (vph)	0	849	401	309	704	0	0	0	0	731	0	781
Turn Type			Free	pm+pt						Prot		custom
Protected Phases		6		5	2					3		
Permitted Phases			Free	2								3 6
Actuated Green, G (s)		61.2	120.0	84.0	84.0					28.0		93.2
Effective Green, g (s)		61.2	120.0	84.0	84.0					28.0		93.2
Actuated g/C Ratio		0.51	1.00	0.70	0.70					0.23		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)		950	1583	346	1304					801		1229
v/s Ratio Prot		0.46		c0.14	0.38					c0.21		
v/s Ratio Perm			0.25	c0.49								0.49
v/c Ratio		0.89	0.25	0.89	0.54					0.91		0.64
Uniform Delay, d1		26.5	0.0	38.2	8.7					44.8		5.9
Progression Factor		1.00	1.00	1.54	0.78					1.00		1.00
Incremental Delay, d2		12.6	0.4	15.7	0.9					16.5		2.5
Delay (s)		39.1	0.4	74.4	7.7					61.3		8.4
Level of Service		D	A	E	A					E		A
Approach Delay (s)		26.7			28.0			0.0			32.9	
Approach LOS		C			C			A			C	

Intersection Summary

HCM Average Control Delay	29.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	261	1616	1038
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	142.3%	ICU Level of Service H
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	12	221	410	1005	879	59
Peak Hour Factor	0.67	0.91	0.89	0.87	0.92	0.71
Hourly flow rate (vph)	18	243	461	1155	955	83
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	461				1317	1038
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	461				1317	1038
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				0	70
cM capacity (veh/h)	1100				171	280

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	261	1616	1039
Volume Left	18	0	955
Volume Right	0	1155	83
cSH	1100	1700	176
Volume to Capacity	0.02	0.95	5.89
Queue Length 95th (ft)	1	0	Err
Control Delay (s)	0.7	0.0	Err
Lane LOS	A		F
Approach Delay (s)	0.7	0.0	Err
Approach LOS			F

Intersection Summary			
Average Delay	3562.2		
Intersection Capacity Utilization	142.3%	ICU Level of Service	H
Analysis Period (min)	15		

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	702	792	624	1146
Act Effct Green (s)	44.0	44.0	68.0	68.0
Actuated g/C Ratio	0.37	0.37	0.57	0.57
v/c Ratio	1.34	1.31	1.01	1.36
Control Delay	196.5	174.7	66.0	186.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	196.5	174.7	66.0	186.4
LOS	F	F	E	F
Approach Delay	196.5	174.7	66.0	186.4
Approach LOS	F	F	E	F
Queue Length 50th (ft)	~709	~779	~481	~1161
Queue Length 95th (ft)	#838	#1027	#737m	#1286
Internal Link Dist (ft)	3138	678	2784	4178
Turn Bay Length (ft)				
Base Capacity (vph)	525	606	617	843
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.34	1.31	1.01	1.36

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 120		
Offset: 89 (74%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.36		
Intersection Signal Delay: 162.7	Intersection LOS: F	
Intersection Capacity Utilization 125.3%	ICU Level of Service H	
Analysis Period (min) 15		

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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			1.00	
Frt		0.98			0.98			0.99			0.99	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1818			1817			1835			1840	
Flt Permitted		0.78			0.90			0.59			0.80	
Satd. Flow (perm)		1416			1635			1087			1485	
Volume (vph)	34	453	80	30	574	112	73	455	21	124	897	36
Peak-hour factor, PHF	0.70	0.83	0.75	0.83	0.92	0.85	0.58	0.96	0.88	0.79	0.95	0.80
Adj. Flow (vph)	49	546	107	36	624	132	126	474	24	157	944	45
RTOR Reduction (vph)	0	6	0	0	6	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	696	0	0	786	0	0	623	0	0	1145	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		44.0			44.0			68.0			68.0	
Effective Green, g (s)		44.0			44.0			68.0			68.0	
Actuated g/C Ratio		0.37			0.37			0.57			0.57	
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)		519			600			616			842	
v/s Ratio Prot												
v/s Ratio Perm		c0.49			0.48			0.57			c0.77	
v/c Ratio		1.34			1.31			1.01			1.36	
Uniform Delay, d1		38.0			38.0			26.0			26.0	
Progression Factor		1.00			0.73			1.00			0.59	
Incremental Delay, d2		166.3			149.5			39.0			166.5	
Delay (s)		204.3			177.3			65.0			181.8	
Level of Service		F			F			E			F	
Approach Delay (s)		204.3			177.3			65.0			181.8	
Approach LOS		F			F			E			F	

Intersection Summary			
HCM Average Control Delay	163.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.35		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	125.3%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	340	379	11	4	542	753	14	697	530
Act Effct Green (s)	55.0	53.0	53.0	39.7	34.0	34.0	57.0	57.0	57.0
Actuated g/C Ratio	0.46	0.44	0.44	0.33	0.28	0.28	0.48	0.48	0.48
v/c Ratio	1.09	0.46	0.02	0.01	1.03	0.83	0.02	1.05	0.63
Control Delay	87.8	20.0	11.0	19.0	88.8	15.7	12.6	74.4	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.8	20.0	11.0	19.0	88.8	15.7	12.6	74.4	13.8
LOS	F	B	B	B	F	B	B	E	B
Approach Delay		51.4			46.2		12.6	48.2	
Approach LOS		D			D		B	D	
Queue Length 50th (ft)	~242	154	1	2	~448	69	3	~583	101
Queue Length 95th (ft)	m#224	m188	m1	3	#666	274	2	m#796	m249
Internal Link Dist (ft)		4178			602		2286	7832	
Turn Bay Length (ft)	95		100	150					70
Base Capacity (vph)	313	823	703	339	528	907	757	662	839
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.09	0.46	0.02	0.01	1.03	0.83	0.02	1.05	0.63

Intersection Summary

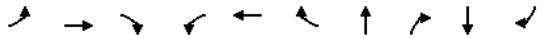
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 108 (90%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.09
Intersection Signal Delay: 48.0 Intersection LOS: D
Intersection Capacity Utilization 98.1% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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		1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.94			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99			0.95	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583		1730			1770	1583
Flt Permitted	0.11	1.00	1.00	0.54	1.00	1.00		0.90			0.75	1.00
Satd. Flow (perm)	196	1863	1583	1000	1863	1583		1586			1394	1583
Volume (vph)	313	349	4	1	520	693	1	1	3	662	0	498
Peak-hour factor, PHF	0.92	0.92	0.38	0.25	0.96	0.92	0.25	0.25	0.50	0.95	0.92	0.94
Adj. Flow (vph)	340	379	11	4	542	753	4	4	6	697	0	530
RTOR Reduction (vph)	0	0	4	0	0	459	0	3	0	0	0	87
Lane Group Flow (vph)	340	379	7	4	542	294	0	11	0	0	697	443
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			Perm		Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2		2	4			8		8
Actuated Green, G (s)	55.0	49.8	49.8	35.2	34.0	34.0		57.0			57.0	57.0
Effective Green, g (s)	55.0	49.8	49.8	35.2	34.0	34.0		57.0			57.0	57.0
Actuated g/C Ratio	0.46	0.42	0.42	0.29	0.28	0.28		0.48			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
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)	313	773	657	301	528	449		753			662	752
v/s Ratio Prot	c0.15	0.20		0.00	0.29							
v/s Ratio Perm	c0.34		0.00	0.00		0.19		0.01			c0.50	0.28
v/c Ratio	1.09	0.49	0.01	0.01	1.03	0.66		0.01			1.05	0.59
Uniform Delay, d1	36.8	25.8	20.6	30.0	43.0	37.8		16.7			31.5	23.0
Progression Factor	1.10	0.79	0.76	1.00	1.00	1.00		1.00			0.74	0.64
Incremental Delay, d2	52.6	0.6	0.0	0.0	46.1	7.3		0.0			49.4	1.2
Delay (s)	93.2	20.9	15.7	30.0	89.1	45.1		16.7			72.7	15.9
Level of Service	F	C	B	C	F	D		B			E	B
Approach Delay (s)		54.5			63.4			16.7			48.2	
Approach LOS		D			E			B			D	

Intersection Summary

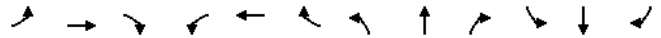
HCM Average Control Delay	55.5	HCM Level of Service		E		
HCM Volume to Capacity ratio	1.06					
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0		
Intersection Capacity Utilization	98.1%	ICU Level of Service		F		
Analysis Period (min)	15					

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	30	941	18	41	1179	393	45	41	273	18
Sign Control		Free			Free		Stop		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	55.8%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	15	903	9	25	1108	326	24	4	28	213	0	15
Peak Hour Factor	0.50	0.96	0.50	0.61	0.94	0.83	0.70	0.38	0.68	0.78	0.92	0.83
Hourly flow rate (vph)	30	941	18	41	1179	393	34	11	41	273	0	18
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1179			941			1672	2261	470	1796	2261	589
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1179			941			1672	2261	470	1796	2261	589
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			94			38	71	92	0	100	96
cM capacity (veh/h)	588			725			55	36	540	33	36	451

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	30	470	470	18	41	589	589	393	86	291
Volume Left	30	0	0	0	41	0	0	0	34	273
Volume Right	0	0	0	18	0	0	0	393	41	18
cSH	588	1700	1700	1700	725	1700	1700	1700	92	35
Volume to Capacity	0.05	0.28	0.28	0.01	0.06	0.35	0.35	0.23	0.93	8.22
Queue Length 95th (ft)	4	0	0	0	4	0	0	0	132	Err
Control Delay (s)	11.4	0.0	0.0	0.0	10.3	0.0	0.0	0.0	157.5	Err
Lane LOS	B				B				F	F
Approach Delay (s)	0.3				0.3				157.5	Err
Approach LOS									F	F

Intersection Summary				
Average Delay	982.3			
Intersection Capacity Utilization	55.8%	ICU Level of Service		B
Analysis Period (min)	15			

Lane Group	EBT	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	904	450	789	11	615	179
Sign Control	Stop	Stop	Free		Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	135.2%	ICU Level of Service	H
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	111	206	330	3	324	22	371	295	4	30	539	125
Peak Hour Factor	0.50	0.75	0.81	0.50	0.78	0.75	0.81	0.89	0.38	0.71	0.94	0.70
Hourly flow rate (vph)	222	275	407	6	415	29	458	331	11	42	573	179
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	2142	1905	573	2450	1905	331	573			331		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2142	1905	573	2450	1905	331	573			331		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	0	0	21	0	0	96	54			97		
cM capacity (veh/h)	0	36	519	0	36	710	1000			1228		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	904	451	789	11	616	179
Volume Left	222	6	458	0	42	0
Volume Right	407	29	0	11	0	179
cSH	0	0	1000	1700	1228	1700
Volume to Capacity	Err	Err	0.46	0.01	0.03	0.11
Queue Length 95th (ft)	Err	Err	61	0	3	0
Control Delay (s)	Err	Err	9.5	0.0	0.9	0.0
Lane LOS	F	F	A		A	
Approach Delay (s)	Err	Err	9.4		0.7	
Approach LOS	F	F				

Intersection Summary					
Average Delay	Err				
Intersection Capacity Utilization	135.2%	ICU Level of Service	H		
Analysis Period (min)	15				

Lane Group	EBT	WBT	NBL
Lane Group Flow (vph)	864	972	134
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	90.5%	ICU Level of Service E
Analysis Period (min)	15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	603	19	89	746	10	47
Peak Hour Factor	0.73	0.50	0.50	0.94	0.25	0.50
Hourly flow rate (vph)	826	38	178	794	40	94
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			864		1995	845
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			864		1995	845
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		22	74
cM capacity (veh/h)			779		51	363

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	864	972	134
Volume Left	0	178	40
Volume Right	38	0	94
cSH	1700	779	129
Volume to Capacity	0.51	0.23	1.04
Queue Length 95th (ft)	0	22	186
Control Delay (s)	0.0	5.9	157.0
Lane LOS		A	F
Approach Delay (s)	0.0	5.9	157.0
Approach LOS			F

Intersection Summary				
Average Delay	13.6			
Intersection Capacity Utilization	90.5%	ICU Level of Service	E	
Analysis Period (min)	15			

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	765	855	10
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	50.4%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	1	624	766	1	3	1
Peak Hour Factor	0.25	0.82	0.90	0.25	0.50	0.25
Hourly flow rate (vph)	4	761	851	4	6	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	855				1622	853
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	855				1622	853
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				95	99
cM capacity (veh/h)	785				112	359

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	765	855	10
Volume Left	4	0	6
Volume Right	0	4	4
cSH	785	1700	155
Volume to Capacity	0.01	0.50	0.06
Queue Length 95th (ft)	0	0	5
Control Delay (s)	0.1	0.0	29.8
Lane LOS	A		D
Approach Delay (s)	0.1	0.0	29.8
Approach LOS			D

Intersection Summary				
Average Delay		0.2		
Intersection Capacity Utilization		50.4%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	930	1092	494
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	101.4%	ICU Level of Service G
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	586	41	319	531	47	388
Peak Hour Factor	0.67	0.75	0.83	0.75	0.75	0.90
Hourly flow rate (vph)	875	55	384	708	63	431
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1295	738			1092	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1295	738			1092	
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	87			90	
cM capacity (veh/h)	162	418			639	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	929	1092	494
Volume Left	875	0	63
Volume Right	55	708	0
cSH	168	1700	639
Volume to Capacity	5.54	0.64	0.10
Queue Length 95th (ft)	Err	0	8
Control Delay (s)	Err	0.0	2.7
Lane LOS	F		A
Approach Delay (s)	Err	0.0	2.7
Approach LOS	F		

Intersection Summary			
Average Delay	3694.6		
Intersection Capacity Utilization	101.4%	ICU Level of Service	G
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	104	61	1415	4	198	353	61	11
Sign Control	Free		Free		Stop		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 73.2%		ICU Level of Service D	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	78	46	322	533	1	82	53	247	0	46	4
Peak Hour Factor	0.25	0.78	0.75	0.44	0.78	0.25	0.89	0.50	0.70	0.92	0.75	0.38
Hourly flow rate (vph)	4	100	61	732	683	4	92	106	353	0	61	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	683			100			2286	2255	100	2308	2255	683
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	683			100			2286	2255	100	2308	2255	683
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			51			0	0	63	0	0	98
cM capacity (veh/h)	910			1493			0	21	956	0	21	449

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	104	61	1415	4	551	72
Volume Left	4	0	732	0	92	0
Volume Right	0	61	0	4	353	11
cSH	910	1700	1493	1700	0	24
Volume to Capacity	0.00	0.04	0.49	0.00	3975.19	2.95
Queue Length 95th (ft)	0	0	70	0	Err	224
Control Delay (s)	0.4	0.0	8.9	0.0	Err	1213.5
Lane LOS	A		A		F	F
Approach Delay (s)	0.2		8.8		Err	1213.5
Approach LOS					F	F

Intersection Summary					
Average Delay	2541.1				
Intersection Capacity Utilization	73.2%	ICU Level of Service		D	
Analysis Period (min)	15				

Lane Group	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	320	41	11	1007	48	158	26	20
Sign Control	Free			Free		Stop	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	58.5%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	262	31	4	765	40	66	24	0	0	13	18
Peak Hour Factor	0.92	0.82	0.75	0.38	0.76	0.84	0.57	0.57	0.92	0.56	0.50	0.92
Hourly flow rate (vph)	0	320	41	11	1007	48	116	42	0	0	26	20
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1007			320			1360	1347	160	1208	1347	1007
vC1, stage 1 conf vol							320	320		1028	1028	
vC2, stage 2 conf vol							1041	1028		181	320	
vCu, unblocked vol	1007			320			1360	1347	160	1208	1347	1007
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			41	85	100	100	91	92
cM capacity (veh/h)	684			1237			197	289	857	239	288	239

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	0	160	160	41	11	1007	48	158	0	46
Volume Left	0	0	0	0	11	0	0	116	0	0
Volume Right	0	0	0	41	0	0	48	0	0	20
cSH	1700	1700	1700	1700	1237	1700	1700	215	1700	506
Volume to Capacity	0.00	0.09	0.09	0.02	0.01	0.59	0.03	0.73	0.00	0.09
Queue Length 95th (ft)	0	0	0	0	1	0	0	123	0	7
Control Delay (s)	0.0	0.0	0.0	0.0	7.9	0.0	0.0	57.4	0.0	19.9
Lane LOS					A			F	A	C
Approach Delay (s)	0.0				0.1			57.4	19.9	
Approach LOS								F	C	

Intersection Summary					
Average Delay	6.2				
Intersection Capacity Utilization	58.5%	ICU Level of Service		B	
Analysis Period (min)	15				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	30	268	1	153	791	10	10	340	7	445
Act Effct Green (s)	7.8	60.1	60.1	15.9	72.1	72.1	32.0	32.0	32.0	32.0
Actuated g/C Ratio	0.06	0.50	0.50	0.13	0.60	0.60	0.27	0.27	0.27	0.27
v/c Ratio	0.26	0.15	0.00	0.65	0.37	0.01	0.06	0.69	0.03	0.90
Control Delay	57.9	19.0	17.0	55.2	5.4	0.6	32.8	48.2	28.5	63.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.9	19.0	17.0	55.2	5.4	0.6	32.8	48.2	28.5	63.2
LOS	E	B	B	E	A	A	C	D	C	E
Approach Delay		22.9			13.3			47.8		62.6
Approach LOS		C			B			D		E
Queue Length 50th (ft)	23	58	0	117	34	0	6	230	4	327
Queue Length 95th (ft)	53	106	4	188	52	m1	m10	m229	14	406
Internal Link Dist (ft)		2246			4418			11076		2261
Turn Bay Length (ft)	280		115	290		180	125		105	
Base Capacity (vph)	236	1772	793	384	2127	955	243	766	325	762
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.15	0.00	0.40	0.37	0.01	0.04	0.44	0.02	0.58

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 31.4 Intersection LOS: C
Intersection Capacity Utilization 55.6% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		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)	1770	3539	1583	1770	3539	1583	1770	1830		1770	1811	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.12	1.00		0.27	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	233	1830		502	1811	
Volume (vph)	28	247	1	141	728	9	9	276	37	6	333	76
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	268	1	153	791	10	10	300	40	7	362	83
RTOR Reduction (vph)	0	0	1	0	0	4	0	5	0	0	9	0
Lane Group Flow (vph)	30	268	0	153	791	6	10	335	0	7	436	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	5.5	58.5	58.5	17.5	70.5	70.5	32.0	32.0		32.0	32.0	
Effective Green, g (s)	5.5	58.5	58.5	17.5	70.5	70.5	32.0	32.0		32.0	32.0	
Actuated g/C Ratio	0.05	0.49	0.49	0.15	0.59	0.59	0.27	0.27		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)	81	1725	772	258	2079	930	62	488		134	483	
v/s Ratio Prot	0.02	0.08		c0.09	c0.22			0.18			c0.24	
v/s Ratio Perm			0.00			0.00	0.04			0.01		
v/c Ratio	0.37	0.16	0.00	0.59	0.38	0.01	0.16	0.69		0.05	0.90	
Uniform Delay, d1	55.6	17.1	15.8	47.9	13.1	10.3	33.7	39.5		32.7	42.5	
Progression Factor	1.00	1.00	1.00	0.88	0.33	0.06	1.11	1.10		1.00	1.00	
Incremental Delay, d2	2.8	0.2	0.0	3.4	0.5	0.0	1.1	3.5		0.2	20.0	
Delay (s)	58.4	17.2	15.8	45.6	4.8	0.6	38.6	47.0		32.9	62.5	
Level of Service	E	B	B	D	A	A	D	D		C	E	
Approach Delay (s)		21.4			11.3			46.8			62.0	
Approach LOS		C			B			D			E	

Intersection Summary

HCM Average Control Delay	30.0	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.58			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	55.6%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	34	297	46	349	894	155	69	344	72	135
Act Effct Green (s)	64.1	58.3	58.3	78.8	72.7	72.7	25.6	25.6	23.2	22.1
Actuated g/C Ratio	0.53	0.49	0.49	0.66	0.61	0.61	0.21	0.21	0.19	0.18
v/c Ratio	0.11	0.17	0.06	0.58	0.42	0.16	0.26	0.86	0.31	0.40
Control Delay	5.9	9.4	1.2	14.6	15.6	6.1	38.7	60.3	45.1	41.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.9	9.4	1.2	14.6	15.6	6.1	38.7	60.3	45.1	41.9
LOS	A	A	A	B	B	A	D	E	D	D
Approach Delay		8.1			14.3			56.7		43.0
Approach LOS		A			B			E		D
Queue Length 50th (ft)	4	27	0	112	205	18	44	233	48	85
Queue Length 95th (ft)	m7	128	0	194	307	58	53	314	81	138
Internal Link Dist (ft)		5533			4590			2266		2361
Turn Bay Length (ft)	300		120	320		145	150		150	
Base Capacity (vph)	408	1719	793	736	2145	1000	283	574	329	579
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.17	0.06	0.47	0.42	0.16	0.24	0.60	0.22	0.23

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 14 (12%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 23.1 Intersection LOS: C
Intersection Capacity Utilization 61.2% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	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)	1770	3539	1583	1770	3539	1583	1770	1733		1770	1805	
Flt Permitted	0.31	1.00	1.00	0.52	1.00	1.00	0.37	1.00		0.36	1.00	
Satd. Flow (perm)	586	3539	1583	959	3539	1583	686	1733		663	1805	
Volume (vph)	24	270	28	304	840	138	44	166	150	61	96	19
Peak-hour factor, PHF	0.70	0.91	0.61	0.87	0.94	0.89	0.64	0.90	0.94	0.85	0.90	0.69
Adj. Flow (vph)	34	297	46	349	894	155	69	184	160	72	107	28
RTOR Reduction (vph)	0	0	24	0	0	43	0	30	0	0	9	0
Lane Group Flow (vph)	34	297	22	349	894	112	69	314	0	72	126	0
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4			8		
Actuated Green, G (s)	61.0	57.4	57.4	77.9	70.3	70.3	25.6	25.6		22.1	22.1	
Effective Green, g (s)	61.0	57.4	57.4	77.9	70.3	70.3	25.6	25.6		22.1	22.1	
Actuated g/C Ratio	0.51	0.48	0.48	0.65	0.59	0.59	0.21	0.21		0.18	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)	333	1693	757	734	2073	927	219	370		164	332	
v/s Ratio Prot	0.00	0.08		c0.07	0.25		0.02	c0.18		0.02	c0.07	
v/s Ratio Perm	0.05		0.01	c0.24		0.07	0.05			0.06		
v/c Ratio	0.10	0.18	0.03	0.48	0.43	0.12	0.32	0.85		0.44	0.38	
Uniform Delay, d1	14.8	17.8	16.6	9.4	13.8	11.1	38.9	45.3		48.6	42.9	
Progression Factor	0.45	0.44	0.14	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.2	0.1	0.5	0.7	0.3	0.8	16.4		1.9	0.7	
Delay (s)	6.8	8.1	2.4	9.9	14.4	11.3	39.7	61.7		50.5	43.7	
Level of Service	A	A	A	A	B	B	D	E		D	D	
Approach Delay (s)		7.3			13.0			58.1			46.0	
Approach LOS		A			B			E			D	

Intersection Summary

HCM Average Control Delay	22.7	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.55				
Actuated Cycle Length (s)	120.0	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

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	700	1209	169
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	63.2%	ICU Level of Service B
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	14	602	744	188	100	6
Peak Hour Factor	0.58	0.89	0.83	0.60	0.62	0.75
Hourly flow rate (vph)	24	676	896	313	161	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1210				1778	1053
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1210				1778	1053
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	97
cM capacity (veh/h)	577				87	275

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	701	1210	169
Volume Left	24	0	161
Volume Right	0	313	8
cSH	577	1700	90
Volume to Capacity	0.04	0.71	1.89
Queue Length 95th (ft)	3	0	359
Control Delay (s)	1.2	0.0	516.7
Lane LOS	A		F
Approach Delay (s)	1.2	0.0	516.7
Approach LOS			F

Intersection Summary				
Average Delay	42.5			
Intersection Capacity Utilization	63.2%	ICU Level of Service	B	
Analysis Period (min)	15			

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	234	914	847
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	96.9%	ICU Level of Service F
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	66	115	174	577	504	75
Peak Hour Factor	0.67	0.85	0.83	0.82	0.68	0.71
Hourly flow rate (vph)	99	135	210	704	741	106
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	913				894	561
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	913				894	561
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				0	80
cM capacity (veh/h)	746				271	527

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	234	913	847
Volume Left	99	0	741
Volume Right	0	704	106
cSH	746	1700	288
Volume to Capacity	0.13	0.54	2.94
Queue Length 95th (ft)	11	0	1853
Control Delay (s)	5.3	0.0	909.1
Lane LOS	A		F
Approach Delay (s)	5.3	0.0	909.1
Approach LOS			F

Intersection Summary				
Average Delay	386.7			
Intersection Capacity Utilization	96.9%	ICU Level of Service	F	
Analysis Period (min)	15			

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	271	224	184
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	36.6%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	90	113	173	20	12	76
Peak Hour Factor	0.62	0.90	0.89	0.67	0.38	0.50
Hourly flow rate (vph)	145	126	194	30	32	152
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	224				625	209
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	224				625	209
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	89				92	82
cM capacity (veh/h)	1344				400	831

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	271	224	184
Volume Left	145	0	32
Volume Right	0	30	152
cSH	1344	1700	701
Volume to Capacity	0.11	0.13	0.26
Queue Length 95th (ft)	9	0	26
Control Delay (s)	4.7	0.0	11.9
Lane LOS	A		B
Approach Delay (s)	4.7	0.0	11.9
Approach LOS			B

Intersection Summary				
Average Delay		5.1		
Intersection Capacity Utilization	36.6%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	183	284	53
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	23.7%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	7	143	160	87	37	7
Peak Hour Factor	0.62	0.83	0.90	0.82	0.88	0.62
Hourly flow rate (vph)	11	172	178	106	42	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	284				426	231
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	284				426	231
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				93	99
cM capacity (veh/h)	1278				580	808

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	184	284	53
Volume Left	11	0	42
Volume Right	0	106	11
cSH	1278	1700	617
Volume to Capacity	0.01	0.17	0.09
Queue Length 95th (ft)	1	0	7
Control Delay (s)	0.6	0.0	11.4
Lane LOS	A		B
Approach Delay (s)	0.6	0.0	11.4
Approach LOS			B

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	23.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	644	99	682
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	42.5%	ICU Level of Service A
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	56	266	11	58	166	9
Peak Hour Factor	0.50	0.50	0.50	0.75	0.25	0.50
Hourly flow rate (vph)	112	532	22	77	664	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1407	61			99	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1407	61			99	
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	47			56	
cM capacity (veh/h)	85	1005			1493	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	644	99	682
Volume Left	112	0	664
Volume Right	532	77	0
cSH	349	1700	1493
Volume to Capacity	1.85	0.06	0.44
Queue Length 95th (ft)	1064	0	59
Control Delay (s)	417.1	0.0	9.2
Lane LOS	F		A
Approach Delay (s)	417.1	0.0	9.2
Approach LOS	F		

Intersection Summary				
Average Delay		192.9		
Intersection Capacity Utilization		42.5%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	829	252	1070	1296
Sign Control	Stop	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	94.9%	ICU Level of Service F
Analysis Period (min)	15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	94	30	105	53	44	134	136	627	40	112	647	211
Peak Hour Factor	0.25	0.92	0.25	0.92	0.92	0.92	0.50	0.83	0.92	0.92	0.86	0.50
Hourly flow rate (vph)	376	33	420	58	48	146	272	755	43	122	752	422
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	2698	2550	963	2964	2739	777	1174			799		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2698	2550	963	2964	2739	777	1174			799		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	0	0	0	0	0	63	54			85		
cM capacity (veh/h)	0	12	310	0	9	397	595			824		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	829	251	1071	1296
Volume Left	376	58	272	122
Volume Right	420	146	43	422
cSH	0	0	595	824
Volume to Capacity	Err	Err	0.46	0.15
Queue Length 95th (ft)	Err	Err	60	13
Control Delay (s)	Err	Err	14.4	5.3
Lane LOS	F	F	B	A
Approach Delay (s)	Err	Err	14.4	5.3
Approach LOS	F	F		

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	94.9%	ICU Level of Service	F	
Analysis Period (min)	15			

Future 2028 PM Improved

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	986	604	506	84	678
Act Effct Green (s)	66.3	103.3	104.1	10.9	120.0
Actuated g/C Ratio	0.55	0.86	0.87	0.09	1.00
v/c Ratio	0.97	1.09	0.31	0.52	0.43
Control Delay	50.3	100.3	2.7	43.4	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	50.3	100.3	2.7	43.4	0.9
LOS	D	F	A	D	A
Approach Delay	50.3		55.8	5.6	
Approach LOS	D		E	A	
Queue Length 50th (ft)	~748	~474	62	65	7
Queue Length 95th (ft)	#1101	#708	113	m78	0
Internal Link Dist (ft)	2724		2449	828	
Turn Bay Length (ft)					160
Base Capacity (vph)	1013	555	1616	236	1583
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.97	1.09	0.31	0.36	0.43

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 25 (21%), Referenced to phase 2:WBTL and 6:EBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.09			
Intersection Signal Delay: 40.5		Intersection LOS: D	
Intersection Capacity Utilization 92.2%		ICU Level of Service F	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
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	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	1825		1770	1863	1770	1583
Flt Permitted	1.00		0.06	1.00	0.95	1.00
Satd. Flow (perm)	1825		107	1863	1770	1583
Volume (vph)	771	127	544	455	69	590
Peak-hour factor, PHF	0.92	0.86	0.90	0.90	0.82	0.87
Adj. Flow (vph)	838	148	604	506	84	678
RTOR Reduction (vph)	5	0	0	0	0	0
Lane Group Flow (vph)	981	0	604	506	84	678
Turn Type			pm+pt			Free
Protected Phases	6		5	2	4	
Permitted Phases			2			Free
Actuated Green, G (s)	65.5		102.5	102.5	9.5	120.0
Effective Green, g (s)	65.5		102.5	102.5	9.5	120.0
Actuated g/C Ratio	0.55		0.85	0.85	0.08	1.00
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)	996		549	1591	140	1583
v/s Ratio Prot	0.54		c0.30	0.27	0.05	
v/s Ratio Perm			c0.64			c0.43
v/c Ratio	0.99		1.10	0.32	0.60	0.43
Uniform Delay, d1	26.8		39.0	1.8	53.4	0.0
Progression Factor	1.00		1.00	1.00	0.67	1.00
Incremental Delay, d2	25.2		68.7	0.5	5.5	0.7
Delay (s)	52.0		107.7	2.3	41.1	0.7
Level of Service	D		F	A	D	A
Approach Delay (s)	52.0			59.6	5.1	
Approach LOS	D			E	A	

Intersection Summary			
HCM Average Control Delay	42.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	92.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	53	685	679	633	839	47
Act Effct Green (s)	9.0	68.9	104.9	105.7	43.1	43.1
Actuated g/C Ratio	0.08	0.57	0.87	0.88	0.36	0.36
v/c Ratio	0.40	0.74	0.70	0.20	0.66	0.08
Control Delay	34.9	7.8	23.3	1.1	35.5	19.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.9	7.8	23.3	1.1	35.5	19.2
LOS	C	A	C	A	D	B
Approach Delay	9.7			12.6	34.7	
Approach LOS	A			B	C	
Queue Length 50th (ft)	36	102	353	22	270	15
Queue Length 95th (ft)	m40	m102	150	33	364	38
Internal Link Dist (ft)	828			7187	5706	
Turn Bay Length (ft)	145		170			60
Base Capacity (vph)	236	916	971	3117	1271	579
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.75	0.70	0.20	0.66	0.08

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 36 (30%), Referenced to phase 2:SBT and 6:NBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 18.5		Intersection LOS: B	
Intersection Capacity Utilization 69.8%		ICU Level of Service C	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
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	0.18	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	339	3539	3539	1583
Volume (vph)	44	637	625	589	789	38
Peak-hour factor, PHF	0.83	0.93	0.92	0.93	0.94	0.81
Adj. Flow (vph)	53	685	679	633	839	47
RTOR Reduction (vph)	0	14	0	0	0	10
Lane Group Flow (vph)	53	671	679	633	839	37
Turn Type		pm+ov	pm+pt			Perm
Protected Phases	8	1	1	6	2	
Permitted Phases		8	6			2
Actuated Green, G (s)	7.9	65.7	104.1	104.1	42.3	42.3
Effective Green, g (s)	7.9	65.7	104.1	104.1	42.3	42.3
Actuated g/C Ratio	0.07	0.55	0.87	0.87	0.35	0.35
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)	117	919	983	3070	1247	558
v/s Ratio Prot	0.03	c0.35	0.33	0.18	0.24	
v/s Ratio Perm		0.07	c0.27			0.02
v/c Ratio	0.45	0.73	0.69	0.21	0.67	0.07
Uniform Delay, d1	54.0	20.5	13.7	1.3	33.0	25.8
Progression Factor	0.65	0.39	1.04	0.69	1.00	1.00
Incremental Delay, d2	0.3	0.3	1.9	0.1	2.9	0.2
Delay (s)	35.6	8.2	16.2	1.0	35.9	26.0
Level of Service	D	A	B	A	D	C
Approach Delay (s)	10.2			8.9	35.4	
Approach LOS	B			A	D	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	261	461	1155	1038
Act Effct Green (s)	32.2	32.2	120.0	79.8
Actuated g/C Ratio	0.27	0.27	1.00	0.66
v/c Ratio	0.77	0.92	0.73	0.88
Control Delay	56.0	56.0	5.1	19.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	56.0	56.0	5.1	19.1
LOS	E	E	A	B
Approach Delay	56.0	19.6		19.1
Approach LOS	E	B		B
Queue Length 50th (ft)	181	335	85	286
Queue Length 95th (ft)	283	#507	428	m#972
Internal Link Dist (ft)	4085	1265		439
Turn Bay Length (ft)			150	
Base Capacity (vph)	368	543	1583	1173
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.71	0.85	0.73	0.88

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 120		
Offset: 48 (40%), Referenced to phase 2:WBT and 6:EBTL, Start of Green		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.92		
Intersection Signal Delay: 22.7	Intersection LOS: C	
Intersection Capacity Utilization 81.2%	ICU Level of Service D	
Analysis Period (min) 15		

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
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	
Frt		1.00	1.00	0.85	0.99	
Flt Protected		1.00	1.00	1.00	0.96	
Satd. Flow (prot)		1856	1863	1583	1762	
Flt Permitted		0.58	1.00	1.00	0.96	
Satd. Flow (perm)		1086	1863	1583	1762	
Volume (vph)	12	221	410	1005	879	59
Peak-hour factor, PHF	0.67	0.91	0.89	0.87	0.92	0.71
Adj. Flow (vph)	18	243	461	1155	955	83
RTOR Reduction (vph)	0	0	0	0	2	0
Lane Group Flow (vph)	0	261	461	1155	1036	0
Turn Type	Perm			pm+ov		
Protected Phases		6	2	8	8	
Permitted Phases	6			2		
Actuated Green, G (s)		32.2	32.2	112.0	79.8	
Effective Green, g (s)		32.2	32.2	112.0	79.8	
Actuated g/C Ratio		0.27	0.27	0.93	0.66	
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)		291	500	1583	1172	
v/s Ratio Prot			c0.25	0.49	c0.59	
v/s Ratio Perm		0.24		0.24		
v/c Ratio		0.90	0.92	0.73	0.88	
Uniform Delay, d1		42.3	42.7	0.8	16.3	
Progression Factor		1.00	0.80	1.00	0.55	
Incremental Delay, d2		31.9	21.6	1.4	6.8	
Delay (s)		74.2	55.7	2.3	15.8	
Level of Service		E	E	A	B	
Approach Delay (s)		74.2	17.5		15.8	
Approach LOS		E	B		B	

Intersection Summary			
HCM Average Control Delay	22.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	702	792	126	498	157	989
Act Effct Green (s)	58.0	58.0	54.0	54.0	54.0	54.0
Actuated g/C Ratio	0.48	0.48	0.45	0.45	0.45	0.45
v/c Ratio	0.90	0.94	0.90	0.60	0.64	0.62
Control Delay	34.8	50.3	87.2	28.4	39.9	27.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.8	50.3	87.2	28.4	39.9	27.3
LOS	C	D	F	C	D	C
Approach Delay	34.8	50.3		40.2		29.0
Approach LOS	C	D		D		C
Queue Length 50th (ft)	237	571	88	282	92	300
Queue Length 95th (ft)	317	#833	96	395	146	370
Internal Link Dist (ft)	3138	678		2784		4158
Turn Bay Length (ft)			150		150	
Base Capacity (vph)	784	842	140	834	245	1584
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.94	0.90	0.60	0.64	0.62

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 100 (83%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 37.6		Intersection LOS: D	
Intersection Capacity Utilization 88.3%		ICU Level of Service E	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	0.95	
Frt		0.98			0.98		1.00	0.99		1.00	0.99	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1818			1817		1770	1849		1770	3515	
Flt Permitted		0.88			0.95		0.17	1.00		0.29	1.00	
Satd. Flow (perm)		1612			1729		311	1849		544	3515	
Volume (vph)	34	453	80	30	574	112	73	455	21	124	897	36
Peak-hour factor, PHF	0.70	0.83	0.75	0.83	0.92	0.85	0.58	0.96	0.88	0.79	0.95	0.80
Adj. Flow (vph)	49	546	107	36	624	132	126	474	24	157	944	45
RTOR Reduction (vph)	0	5	0	0	6	0	0	2	0	0	3	0
Lane Group Flow (vph)	0	697	0	0	786	0	126	496	0	157	986	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		58.0			58.0		54.0	54.0		54.0	54.0	
Effective Green, g (s)		58.0			58.0		54.0	54.0		54.0	54.0	
Actuated g/C Ratio		0.48			0.48		0.45	0.45		0.45	0.45	
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)		779			836		140	832		245	1582	
v/s Ratio Prot								0.27			0.28	
v/s Ratio Perm		0.43			c0.45		c0.40			0.29		
v/c Ratio		0.89			0.94		0.90	0.60		0.64	0.62	
Uniform Delay, d1		28.2			29.4		30.5	24.8		25.5	25.2	
Progression Factor		0.75			1.22		1.00	1.00		1.00	1.00	
Incremental Delay, d2		10.9			13.3		53.1	3.1		12.2	1.9	
Delay (s)		32.0			49.1		83.6	28.0		37.7	27.1	
Level of Service		C			D		F	C		D	C	
Approach Delay (s)		32.0			49.1			39.2			28.5	
Approach LOS		C			D			D			C	

Intersection Summary					
HCM Average Control Delay	36.3	HCM Level of Service		D	
HCM Volume to Capacity ratio	0.92				
Actuated Cycle Length (s)	120.0	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					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBL	SBR
Lane Group Flow (vph)	340	379	11	4	542	753	14	697	530
Act Effct Green (s)	87.9	87.9	87.9	62.4	62.4	62.4	6.3	29.2	33.7
Actuated g/C Ratio	0.67	0.67	0.67	0.47	0.47	0.47	0.05	0.22	0.26
v/c Ratio	0.81	0.31	0.01	0.01	0.62	0.70	0.16	0.92	0.69
Control Delay	42.5	11.8	8.0	26.0	33.1	9.6	47.6	68.3	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.5	11.8	8.0	26.0	33.1	9.6	47.6	68.3	9.3
LOS	D	B	A	C	C	A	D	E	A
Approach Delay		26.1			19.4		47.6		
Approach LOS		C			B		D		
Queue Length 50th (ft)	178	106	1	2	317	54	7	300	23
Queue Length 95th (ft)	318	259	3	3	#623	272	5	#405	123
Internal Link Dist (ft)		4158			602		2286		
Turn Bay Length (ft)	95		100	150				150	55
Base Capacity (vph)	460	1241	1056	520	881	1082	208	780	908
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.31	0.01	0.01	0.62	0.70	0.07	0.89	0.58

Intersection Summary			
Cycle Length: 132			
Actuated Cycle Length: 132			
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 29.8		Intersection LOS: C	
Intersection Capacity Utilization 80.3%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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		1.00		0.97		1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.94		1.00		0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99		0.95		1.00
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583		1730		3433		1583
Flt Permitted	0.22	1.00	1.00	0.54	1.00	1.00		0.90		0.95		1.00
Satd. Flow (perm)	403	1863	1583	1000	1863	1583		1585		3433		1583
Volume (vph)	313	349	4	1	520	693	1	1	3	662	0	498
Peak-hour factor, PHF	0.92	0.92	0.38	0.25	0.96	0.92	0.25	0.25	0.50	0.95	0.92	0.94
Adj. Flow (vph)	340	379	11	4	542	753	4	4	6	697	0	530
RTOR Reduction (vph)	0	0	3	0	0	345	0	6	0	0	0	360
Lane Group Flow (vph)	340	379	8	4	542	408	0	8	0	697	0	170
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			Prot		Perm
Protected Phases	1	6		5	2			4		3	8	
Permitted Phases	6		6	2		2	4					8
Actuated Green, G (s)	82.3	82.3	82.3	60.0	60.0	60.0		2.9		29.2		36.1
Effective Green, g (s)	82.3	82.3	82.3	60.0	60.0	60.0		2.9		29.2		36.1
Actuated g/C Ratio	0.62	0.62	0.62	0.45	0.45	0.45		0.02		0.22		0.27
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)	499	1162	987	464	847	720		35		759		433
v/s Ratio Prot	c0.12	0.20		0.00	c0.29					c0.20		
v/s Ratio Perm	c0.30		0.01	0.00		0.26		0.01				c0.11
v/c Ratio	0.68	0.33	0.01	0.01	0.64	0.57		0.23		0.92		0.39
Uniform Delay, d1	17.6	11.7	9.4	19.7	27.7	26.5		63.5		50.2		39.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00		1.00		1.00
Incremental Delay, d2	3.8	0.7	0.0	0.0	3.7	3.2		3.4		15.9		0.6
Delay (s)	21.4	12.5	9.4	19.7	31.4	29.7		66.8		66.2		39.6
Level of Service	C	B	A	B	C	C		E		E		D
Approach Delay (s)		16.6			30.4			66.8			54.7	
Approach LOS		B			C			E			D	

Intersection Summary					
HCM Average Control Delay	36.6	HCM Level of Service		D	
HCM Volume to Capacity ratio	0.70				
Actuated Cycle Length (s)	132.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	80.3%	ICU Level of Service		D	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	30	941	18	41	1179	393	45	41	273	18
Act Effct Green (s)	79.3	79.3	79.3	79.3	79.3	79.3	32.7	32.7	32.7	32.7
Actuated g/C Ratio	0.66	0.66	0.66	0.66	0.66	0.66	0.27	0.27	0.27	0.27
v/c Ratio	0.18	0.40	0.02	0.15	0.50	0.33	0.12	0.09	0.74	0.04
Control Delay	11.5	10.3	3.3	6.1	6.7	0.7	33.5	9.6	33.8	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.5	10.3	3.3	6.1	6.7	0.7	33.5	9.6	33.8	5.9
LOS	B	B	A	A	A	A	C	A	C	A
Approach Delay		10.2			5.2		22.1		32.1	
Approach LOS		B			A		C		C	
Queue Length 50th (ft)	7	134	0	5	75	1	28	0	213	7
Queue Length 95th (ft)	13	226	3	m11	168	0	22	14	289	m14
Internal Link Dist (ft)		5956			318		2546		3053	
Turn Bay Length (ft)	195		190	210		280		50		50
Base Capacity (vph)	168	2340	1053	266	2340	1180	571	684	565	665
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.40	0.02	0.15	0.50	0.33	0.08	0.06	0.48	0.03

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 101 (84%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 10.0		Intersection LOS: A	
Intersection Capacity Utilization 55.8%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.96	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1795	1583		1770	1583
Flt Permitted	0.19	1.00	1.00	0.26	1.00	1.00		0.67	1.00		0.73	1.00
Satd. Flow (perm)	348	3539	1583	484	3539	1583		1245	1583		1356	1583
Volume (vph)	15	903	9	25	1108	326	24	4	28	213	0	15
Peak-hour factor, PHF	0.50	0.96	0.50	0.61	0.94	0.83	0.70	0.38	0.68	0.78	0.92	0.83
Adj. Flow (vph)	30	941	18	41	1179	393	34	11	41	273	0	18
RTOR Reduction (vph)	0	0	6	0	0	133	0	0	30	0	0	7
Lane Group Flow (vph)	30	941	12	41	1179	260	0	45	11	0	273	11
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		6			2			4			8	
Permitted Phases	6		6	2		2	4		4	8		8
Actuated Green, G (s)	79.3	79.3	79.3	79.3	79.3	79.3		32.7	32.7		32.7	32.7
Effective Green, g (s)	79.3	79.3	79.3	79.3	79.3	79.3		32.7	32.7		32.7	32.7
Actuated g/C Ratio	0.66	0.66	0.66	0.66	0.66	0.66		0.27	0.27		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)	230	2339	1046	320	2339	1046		339	431		370	431
v/s Ratio Prot		0.27			c0.33							
v/s Ratio Perm	0.09		0.01	0.08		0.16		0.04	0.01		c0.20	0.01
v/c Ratio	0.13	0.40	0.01	0.13	0.50	0.25		0.13	0.03		0.74	0.02
Uniform Delay, d1	7.6	9.4	7.0	7.5	10.3	8.3		32.9	32.0		39.7	32.0
Progression Factor	1.00	1.00	1.00	0.60	0.57	0.13		1.00	1.00		0.54	0.28
Incremental Delay, d2	1.2	0.5	0.0	0.6	0.6	0.4		0.2	0.0		7.1	0.0
Delay (s)	8.7	9.9	7.0	5.1	6.5	1.5		33.1	32.0		28.6	9.1
Level of Service	A	A	A	A	A	A		C	C		C	A
Approach Delay (s)		9.8			5.2			32.6			27.4	
Approach LOS		A			A			C			C	

Intersection Summary					
HCM Average Control Delay	9.7	HCM Level of Service		A	
HCM Volume to Capacity ratio	0.57				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	55.8%	ICU Level of Service		B	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	222	275	407	450	458	331	11	42	573	179
Act Effct Green (s)	43.0	43.0	43.0	30.0	69.0	69.0	69.0	38.0	38.0	38.0
Actuated g/C Ratio	0.36	0.36	0.36	0.25	0.58	0.58	0.58	0.32	0.32	0.32
v/c Ratio	0.93	0.41	0.49	0.97	0.99	0.31	0.01	0.16	0.97	0.34
Control Delay	84.1	29.7	5.2	72.4	82.8	14.2	7.5	21.8	54.7	14.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.1	29.7	5.2	72.4	82.8	14.2	7.5	21.8	54.7	14.4
LOS	F	C	A	E	F	B	A	C	D	B
Approach Delay		32.0		72.4		53.4			43.9	
Approach LOS		C		E		D			D	
Queue Length 50th (ft)	128	164	44	357	304	126	1	14	284	40
Queue Length 95th (ft)	105	m205	m73	#428	#429	181	3	m27	m#642	75
Internal Link Dist (ft)		3365		5328		7832			11076	
Turn Bay Length (ft)	150		150		150		50	150		50
Base Capacity (vph)	239	668	828	462	461	1071	913	265	590	529
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.41	0.49	0.97	0.99	0.31	0.01	0.16	0.97	0.34

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 68 (57%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay: 47.2		Intersection LOS: D	
Intersection Capacity Utilization 91.6%		ICU Level of Service F	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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
Frt	1.00	1.00	0.85		0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583		1845		1770	1863	1583	1770	1863	1583
Flt Permitted	0.20	1.00	1.00		1.00		0.10	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	375	1863	1583		1838		177	1863	1583	839	1863	1583
Volume (vph)	111	206	330	3	324	22	371	295	4	30	539	125
Peak-hour factor, PHF	0.50	0.75	0.81	0.50	0.78	0.75	0.81	0.89	0.38	0.71	0.94	0.70
Adj. Flow (vph)	222	275	407	6	415	29	458	331	11	42	573	179
RTOR Reduction (vph)	0	0	261	0	2	0	0	0	3	0	0	28
Lane Group Flow (vph)	222	275	146	0	448	0	458	331	8	42	573	151
Turn Type	pm+pt		Perm	Perm			pm+pt		Perm	Perm		Perm
Protected Phases	3	8			4		1	6			2	
Permitted Phases	8		8	4			6		6	2		2
Actuated Green, G (s)	43.0	43.0	43.0		30.0		69.0	69.0	69.0	38.0	38.0	38.0
Effective Green, g (s)	43.0	43.0	43.0		30.0		69.0	69.0	69.0	38.0	38.0	38.0
Actuated g/C Ratio	0.36	0.36	0.36		0.25		0.57	0.57	0.57	0.32	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
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)	239	668	567		460		460	1071	910	266	590	501
v/s Ratio Prot	c0.07	0.15					c0.22	0.18			0.31	
v/s Ratio Perm	c0.26		0.09		0.24		c0.35		0.01	0.05		0.10
v/c Ratio	0.93	0.41	0.26		0.97		1.00	0.31	0.01	0.16	0.97	0.30
Uniform Delay, d1	48.8	29.0	27.2		44.6		41.6	13.2	10.9	29.5	40.5	31.0
Progression Factor	0.98	0.95	1.23		0.81		1.00	1.00	1.00	0.68	0.60	0.53
Incremental Delay, d2	35.9	0.4	0.2		34.2		40.6	0.7	0.0	1.1	28.3	1.4
Delay (s)	83.9	28.0	33.8		70.3		82.2	13.9	10.9	21.2	52.4	17.9
Level of Service	F	C	C		E		F	B	B	C	D	B
Approach Delay (s)		44.3			70.3			53.0			43.0	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM Average Control Delay	50.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	864	972	40	94
Sign Control	Free	Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	603	19	89	746	10	47
Peak Hour Factor	0.73	0.50	0.50	0.94	0.25	0.50
Hourly flow rate (vph)	826	38	178	794	40	94
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			864		1995	845
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			864		1995	845
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		22	74
cM capacity (veh/h)			779		51	363

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	864	972	134
Volume Left	0	178	40
Volume Right	38	0	94
cSH	1700	779	171
Volume to Capacity	0.51	0.23	0.78
Queue Length 95th (ft)	0	22	128
Control Delay (s)	0.0	5.9	69.9
Lane LOS		A	F
Approach Delay (s)	0.0	5.9	69.9
Approach LOS			F

Intersection Summary				
Average Delay		7.6		
Intersection Capacity Utilization	90.4%	ICU Level of Service		E
Analysis Period (min)	15			

Lane Group	WBL	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	875	55	384	708	494
Act Effct Green (s)	66.9	66.9	45.1	45.1	45.1
Actuated g/C Ratio	0.56	0.56	0.38	0.38	0.38
v/c Ratio	0.89	0.06	0.55	0.71	0.94
Control Delay	22.4	1.5	29.6	7.9	59.4
Queue Delay	0.0	0.0	0.0	0.6	0.0
Total Delay	22.4	1.5	29.6	8.5	59.4
LOS	C	A	C	A	E
Approach Delay	21.1		15.9		59.4
Approach LOS	C		B		E
Queue Length 50th (ft)	456	0	249	151	294
Queue Length 95th (ft)	294	m1	m259	45	m#537
Internal Link Dist (ft)	4006		690		3609
Turn Bay Length (ft)	150			150	
Base Capacity (vph)	986	902	730	1007	550
Starvation Cap Reductn	0	0	0	80	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.89	0.06	0.53	0.76	0.90

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 22 (18%), Referenced to phase 2:SBTL and 6:NBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay: 26.4		Intersection LOS: C	
Intersection Capacity Utilization 82.3%		ICU Level of Service E	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
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	1.00	1.00	1.00	1.00		1.00
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		0.99
Satd. Flow (prot)	1770	1583	1863	1583		1851
Flt Permitted	0.95	1.00	1.00	1.00		0.73
Satd. Flow (perm)	1770	1583	1863	1583		1356
Volume (vph)	586	41	319	531	47	388
Peak-hour factor, PHF	0.67	0.75	0.83	0.75	0.75	0.90
Adj. Flow (vph)	875	55	384	708	63	431
RTOR Reduction (vph)	0	20	0	397	0	0
Lane Group Flow (vph)	875	35	384	311	0	494
Turn Type		Perm		Perm	Perm	
Protected Phases	4		6			2
Permitted Phases		4		6	2	
Actuated Green, G (s)	66.9	66.9	45.1	45.1		45.1
Effective Green, g (s)	66.9	66.9	45.1	45.1		45.1
Actuated g/C Ratio	0.56	0.56	0.38	0.38		0.38
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)	987	883	700	595		510
v/s Ratio Prot	c0.49		0.21			
v/s Ratio Perm		0.02		0.20		c0.36
v/c Ratio	0.89	0.04	0.55	0.52		0.97
Uniform Delay, d1	23.2	12.0	29.4	29.1		36.8
Progression Factor	0.50	0.29	0.94	1.31		1.09
Incremental Delay, d2	7.4	0.0	2.0	2.1		26.2
Delay (s)	19.1	3.5	29.6	40.2		66.2
Level of Service	B	A	C	D		E
Approach Delay (s)	18.2		36.5			66.2
Approach LOS	B		D			E

Intersection Summary			
HCM Average Control Delay	35.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	120.0	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

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	104	61	732	687	198	353	61	11
Act Effct Green (s)	61.5	61.5	92.3	92.3	19.7	50.5	19.7	19.7
Actuated g/C Ratio	0.51	0.51	0.77	0.77	0.16	0.42	0.16	0.16
v/c Ratio	0.11	0.07	0.81	0.48	0.78	0.41	0.20	0.04
Control Delay	24.2	9.3	19.8	4.3	47.3	5.7	42.7	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.2	9.3	19.8	4.3	47.3	5.7	42.7	18.8
LOS	C	A	B	A	D	A	D	B
Approach Delay	18.7			12.3	20.6		39.0	
Approach LOS	B			B	C		D	
Queue Length 50th (ft)	32	0	154	80	151	122	41	0
Queue Length 95th (ft)	110	25	55	102	86	69	62	3
Internal Link Dist (ft)	3224			8677	3609		2278	
Turn Bay Length (ft)		150	150			150		50
Base Capacity (vph)	928	841	1140	1431	373	1215	450	391
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.07	0.64	0.48	0.53	0.29	0.14	0.03

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 70 (58%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 15.7		Intersection LOS: B	
Intersection Capacity Utilization 48.8%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	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		1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00			0.98	1.00		1.00	1.00
Satd. Flow (prot)		1859	1583	1770	1861			1820	1583		1863	1583
Flt Permitted		0.98	1.00	0.65	1.00			0.82	1.00		1.00	1.00
Satd. Flow (perm)		1830	1583	1206	1861			1530	1583		1863	1583
Volume (vph)	1	78	46	322	533	1	82	53	247	0	46	4
Peak-hour factor, PHF	0.25	0.78	0.75	0.44	0.78	0.25	0.89	0.50	0.70	0.92	0.75	0.38
Adj. Flow (vph)	4	100	61	732	683	4	92	106	353	0	61	11
RTOR Reduction (vph)	0	0	30	0	0	0	0	0	216	0	0	9
Lane Group Flow (vph)	0	104	31	732	687	0	0	198	137	0	61	2
Turn Type	Perm		Perm	pm+pt			Perm		pm+ov	Perm		Perm
Protected Phases		6		5	2			4	5		8	
Permitted Phases	6		6	2			4		4	8		8
Actuated Green, G (s)		61.5	61.5	92.3	92.3			19.7	46.5		19.7	19.7
Effective Green, g (s)		61.5	61.5	92.3	92.3			19.7	46.5		19.7	19.7
Actuated g/C Ratio		0.51	0.51	0.77	0.77			0.16	0.39		0.16	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)		938	811	1054	1431			251	666		306	260
v/s Ratio Prot				c0.16	0.37				0.05		0.03	
v/s Ratio Perm		0.06	0.02	c0.38				c0.13	0.04			0.00
v/c Ratio		0.11	0.04	0.69	0.48			0.79	0.21		0.20	0.01
Uniform Delay, d1		15.1	14.5	5.6	5.1			48.2	24.5		43.3	42.0
Progression Factor		1.00	1.00	1.88	0.54			0.58	5.18		1.00	1.00
Incremental Delay, d2		0.2	0.1	2.0	1.1			14.3	0.1		0.3	0.0
Delay (s)		15.4	14.6	12.5	3.9			42.3	126.9		43.7	42.0
Level of Service		B	B	B	A			D	F		D	D
Approach Delay (s)		15.1			8.3			96.5			43.4	
Approach LOS		B			A			F			D	

Intersection Summary					
HCM Average Control Delay	32.0	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.71				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	48.8%	ICU Level of Service		A	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	320	41	11	1007	48	158	26	20
Sign Control	Free			Free		Stop	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	58.5%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	262	31	4	765	40	66	24	0	0	13	18
Peak Hour Factor	0.92	0.82	0.75	0.38	0.76	0.84	0.57	0.57	0.92	0.56	0.50	0.92
Hourly flow rate (vph)	0	320	41	11	1007	48	116	42	0	0	26	20
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1007			320			1360	1347	160	1208	1347	1007
vC1, stage 1 conf vol							320	320		1028	1028	
vC2, stage 2 conf vol							1041	1028		181	320	
vCu, unblocked vol	1007			320			1360	1347	160	1208	1347	1007
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			41	85	100	100	91	92
cM capacity (veh/h)	684			1237			197	289	857	239	288	239

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	0	160	160	41	11	1007	48	158	0	46
Volume Left	0	0	0	0	11	0	0	116	0	0
Volume Right	0	0	0	41	0	0	48	0	0	20
cSH	1700	1700	1700	1700	1237	1700	1700	215	1700	506
Volume to Capacity	0.00	0.09	0.09	0.02	0.01	0.59	0.03	0.73	0.00	0.09
Queue Length 95th (ft)	0	0	0	0	1	0	0	123	0	7
Control Delay (s)	0.0	0.0	0.0	0.0	7.9	0.0	0.0	57.4	0.0	19.9
Lane LOS					A			F	A	C
Approach Delay (s)	0.0				0.1			57.4	19.9	
Approach LOS								F	C	

Intersection Summary					
Average Delay	6.2				
Intersection Capacity Utilization	58.5%	ICU Level of Service		B	
Analysis Period (min)	15				

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	700	1209	169
Act Effct Green (s)	97.0	97.0	15.0
Actuated g/C Ratio	0.81	0.81	0.12
v/c Ratio	0.53	0.83	0.76
Control Delay	3.8	8.1	72.4
Queue Delay	0.0	0.0	0.0
Total Delay	3.8	8.1	72.4
LOS	A	A	E
Approach Delay	3.8	8.1	72.4
Approach LOS	A	A	E
Queue Length 50th (ft)	218	187	126
Queue Length 95th (ft)	66	194	m131
Internal Link Dist (ft)	1690	4737	3802
Turn Bay Length (ft)			
Base Capacity (vph)	1326	1463	252
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.53	0.83	0.67

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 120		
Offset: 40 (33%), Referenced to phase 2:WBT and 6:EBTL, Start of Green		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.83		
Intersection Signal Delay: 11.9	Intersection LOS: B	
Intersection Capacity Utilization 63.2%	ICU Level of Service B	
Analysis Period (min) 15		

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
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		1.00	
Frt		1.00	0.97		0.99	
Flt Protected		1.00	1.00		0.95	
Satd. Flow (prot)		1860	1798		1767	
Flt Permitted		0.93	1.00		0.95	
Satd. Flow (perm)		1729	1798		1767	
Volume (vph)	14	602	744	188	100	6
Peak-hour factor, PHF	0.58	0.89	0.83	0.60	0.62	0.75
Adj. Flow (vph)	24	676	896	313	161	8
RTOR Reduction (vph)	0	0	10	0	2	0
Lane Group Flow (vph)	0	700	1199	0	167	0
Turn Type	Perm					
Protected Phases		6	2		8	
Permitted Phases	6					
Actuated Green, G (s)		97.0	97.0		15.0	
Effective Green, g (s)		97.0	97.0		15.0	
Actuated g/C Ratio		0.81	0.81		0.12	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1398	1453		221	
v/s Ratio Prot			c0.67		c0.09	
v/s Ratio Perm		0.40				
v/c Ratio		0.50	0.83		0.76	
Uniform Delay, d1		3.7	6.6		50.7	
Progression Factor		0.67	0.46		1.02	
Incremental Delay, d2		0.8	4.4		13.7	
Delay (s)		3.3	7.5		65.7	
Level of Service		A	A		E	
Approach Delay (s)		3.3	7.5		65.7	
Approach LOS		A	A		E	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	234	210	704	847
Act Effct Green (s)	39.2	39.2	39.2	72.8
Actuated g/C Ratio	0.33	0.33	0.33	0.61
v/c Ratio	0.55	0.35	0.71	0.79
Control Delay	40.6	30.9	5.5	24.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	40.6	30.9	5.5	24.8
LOS	D	C	A	C
Approach Delay	40.6	11.4		24.8
Approach LOS	D	B		C
Queue Length 50th (ft)	176	130	42	257
Queue Length 95th (ft)	227	m146	51	372
Internal Link Dist (ft)	6577	1690		4527
Turn Bay Length (ft)			150	
Base Capacity (vph)	470	668	1019	1113
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.50	0.31	0.69	0.76

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 96 (80%), Referenced to phase 2:WBT and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 20.5		Intersection LOS: C	
Intersection Capacity Utilization 61.4%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
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	
Frt		1.00	1.00	0.85	0.98	
Flt Protected		0.98	1.00	1.00	0.96	
Satd. Flow (prot)		1824	1863	1583	1755	
Flt Permitted		0.70	1.00	1.00	0.96	
Satd. Flow (perm)		1297	1863	1583	1755	
Volume (vph)	66	115	174	577	504	75
Peak-hour factor, PHF	0.67	0.85	0.83	0.82	0.68	0.71
Adj. Flow (vph)	99	135	210	704	741	106
RTOR Reduction (vph)	0	0	0	474	4	0
Lane Group Flow (vph)	0	234	210	230	843	0
Turn Type	Perm			Perm		
Protected Phases		6	2		8	
Permitted Phases	6			2		
Actuated Green, G (s)		39.2	39.2	39.2	72.8	
Effective Green, g (s)		39.2	39.2	39.2	72.8	
Actuated g/C Ratio		0.33	0.33	0.33	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)		424	609	517	1065	
v/s Ratio Prot			0.11		c0.48	
v/s Ratio Perm		c0.18		0.15		
v/c Ratio		0.55	0.34	0.44	0.79	
Uniform Delay, d1		33.2	30.7	31.8	17.9	
Progression Factor		1.00	0.92	1.21	1.05	
Incremental Delay, d2		5.1	0.9	1.5	4.0	
Delay (s)		38.3	29.0	39.9	22.7	
Level of Service		D	C	D	C	
Approach Delay (s)		38.3	37.4		22.7	
Approach LOS		D	D		C	

Intersection Summary			
HCM Average Control Delay	31.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	112	532	99	682
Act Effct Green (s)	14.4	14.4	97.6	97.6
Actuated g/C Ratio	0.12	0.12	0.81	0.81
v/c Ratio	0.53	0.81	0.07	0.68
Control Delay	56.9	14.2	1.2	10.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	56.9	14.2	1.2	10.6
LOS	E	B	A	B
Approach Delay	21.6		1.2	10.6
Approach LOS	C		A	B
Queue Length 50th (ft)	84	0	2	164
Queue Length 95th (ft)	68	0	3	138
Internal Link Dist (ft)	268		1455	1038
Turn Bay Length (ft)	150			
Base Capacity (vph)	384	760	1370	999
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.29	0.70	0.07	0.68

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 72 (60%), Referenced to phase 2:SBTL and 6:NBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 14.9		Intersection LOS: B	
Intersection Capacity Utilization 27.3%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
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
Frt	1.00	0.85	0.90			1.00
Flt Protected	0.95	1.00	1.00			0.95
Satd. Flow (prot)	1770	1583	1667			1776
Flt Permitted	0.95	1.00	1.00			0.66
Satd. Flow (perm)	1770	1583	1667			1230
Volume (vph)	56	266	11	58	166	9
Peak-hour factor, PHF	0.50	0.50	0.50	0.75	0.25	0.50
Adj. Flow (vph)	112	532	22	77	664	18
RTOR Reduction (vph)	0	468	14	0	0	0
Lane Group Flow (vph)	112	64	85	0	0	682
Turn Type		Perm			Perm	
Protected Phases	4		6			2
Permitted Phases		4			2	
Actuated Green, G (s)	14.4	14.4	97.6			97.6
Effective Green, g (s)	14.4	14.4	97.6			97.6
Actuated g/C Ratio	0.12	0.12	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)	212	190	1356			1000
v/s Ratio Prot	c0.06		0.05			
v/s Ratio Perm		0.04				c0.55
v/c Ratio	0.53	0.34	0.06			0.68
Uniform Delay, d1	49.6	48.4	2.2			4.7
Progression Factor	1.00	1.00	0.90			1.00
Incremental Delay, d2	2.4	1.1	0.1			3.8
Delay (s)	52.0	49.5	2.1			8.5
Level of Service	D	D	A			A
Approach Delay (s)	49.9		2.1			8.5
Approach LOS	D		A			A

Intersection Summary			
HCM Average Control Delay	26.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	27.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	376	33	420	58	48	146	272	755	43	122	752	422
Act Effct Green (s)	36.3	36.3	36.3	36.3	36.3	36.3	12.3	63.9	63.9	59.5	59.5	59.5
Actuated g/C Ratio	0.30	0.30	0.30	0.30	0.30	0.30	0.10	0.53	0.53	0.50	0.50	0.50
v/c Ratio	0.92	0.06	0.61	0.14	0.09	0.25	0.77	0.76	0.05	0.67	0.81	0.47
Control Delay	68.6	28.0	12.7	29.7	28.4	5.6	62.0	23.4	3.6	29.5	25.4	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
Total Delay	68.6	28.0	12.7	29.7	28.4	5.6	62.0	23.4	3.6	29.5	25.9	6.5
LOS	E	C	B	C	C	A	E	C	A	C	C	A
Approach Delay		38.7			15.5			32.4			19.9	
Approach LOS		D			B			C			B	
Queue Length 50th (ft)	268	17	61	31	25	0	109	514	3	40	490	48
Queue Length 95th (ft)	79	41	0	64	54	46	85	484	m11	m49	m559	10
Internal Link Dist (ft)		182			893			756			690	
Turn Bay Length (ft)	150		150	150		150	150		150	150		150
Base Capacity (vph)	451	621	734	457	621	625	355	993	855	185	925	897
Starvation Cap Reductn	0	0	0	0	0	0	0	4	0	0	24	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.05	0.57	0.13	0.08	0.23	0.77	0.76	0.05	0.66	0.83	0.47

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 103 (86%), Referenced to phase 2:SBTL and 6:NBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 28.0		Intersection LOS: C	
Intersection Capacity Utilization 61.1%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	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	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	3433	1863	1583	1770	1863	1583
Flt Permitted	0.73	1.00	1.00	0.74	1.00	1.00	0.95	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	1352	1863	1583	1370	1863	1583	3433	1863	1583	151	1863	1583
Volume (vph)	94	30	105	53	44	134	136	627	40	112	647	211
Peak-hour factor, PHF	0.25	0.92	0.25	0.92	0.92	0.92	0.50	0.83	0.92	0.92	0.86	0.50
Adj. Flow (vph)	376	33	420	58	48	146	272	755	43	122	752	422
RTOR Reduction (vph)	0	0	216	0	0	102	0	0	11	0	0	112
Lane Group Flow (vph)	376	33	204	58	48	44	272	755	32	122	752	310
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	pm+pt		Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4			6	2		2
Actuated Green, G (s)	36.3	36.3	36.3	36.3	36.3	36.3	12.3	63.9	63.9	59.4	59.4	59.4
Effective Green, g (s)	36.3	36.3	36.3	36.3	36.3	36.3	12.3	63.9	63.9	59.4	59.4	59.4
Actuated g/C Ratio	0.30	0.30	0.30	0.30	0.30	0.30	0.10	0.53	0.53	0.50	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	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	3.0
Lane Grp Cap (vph)	409	564	479	414	564	479	352	992	843	180	922	784
v/s Ratio Prot		0.02			0.03		0.08	c0.41		0.04	c0.40	
v/s Ratio Perm	c0.28		0.13	0.04		0.03			0.02	0.29		0.20
v/c Ratio	0.92	0.06	0.43	0.14	0.09	0.09	0.77	0.76	0.04	0.68	0.82	0.40
Uniform Delay, d1	40.4	29.7	33.5	30.5	30.0	30.0	52.5	22.0	13.4	24.7	25.7	19.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.76	0.41	1.05	0.79	0.60
Incremental Delay, d2	25.3	0.0	0.6	0.2	0.1	0.1	9.4	5.1	0.1	4.1	3.4	0.6
Delay (s)	65.7	29.8	34.1	30.6	30.0	30.1	56.4	21.8	5.5	30.1	23.6	11.9
Level of Service	E	C	C	C	C	C	E	C	A	C	C	B
Approach Delay (s)		48.3			30.2			30.0			20.4	
Approach LOS		D			C			C			C	

Intersection Summary					
HCM Average Control Delay	30.8	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.83				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	61.1%	ICU Level of Service		B	
Analysis Period (min)	15				
c Critical Lane Group					

Future Saturday Intersection Analysis (Full Build Out)

Future 2028 Saturday

Lane Group	EBT	WBT	NBL
Lane Group Flow (vph)	725	897	148
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	85.3%	ICU Level of Service E
Analysis Period (min)	15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	589	14	68	670	14	60
Peak Hour Factor	0.88	0.25	0.50	0.88	0.50	0.50
Hourly flow rate (vph)	669	56	136	761	28	120
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			725		1731	697
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			725		1731	697
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			85		66	73
cM capacity (veh/h)			878		82	441

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	725	897	148
Volume Left	0	136	28
Volume Right	56	0	120
cSH	1700	878	241
Volume to Capacity	0.43	0.15	0.61
Queue Length 95th (ft)	0	14	91
Control Delay (s)	0.0	3.8	41.1
Lane LOS		A	E
Approach Delay (s)	0.0	3.8	41.1
Approach LOS			E

Intersection Summary				
Average Delay	5.4			
Intersection Capacity Utilization	85.3%	ICU Level of Service	E	
Analysis Period (min)	15			

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	690	753	10
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	45.6%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	3	602	672	3	1	3
Peak Hour Factor	0.50	0.88	0.90	0.50	0.25	0.50
Hourly flow rate (vph)	6	684	747	6	4	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	753				1446	750
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	753				1446	750
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				97	99
cM capacity (veh/h)	857				144	411

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	690	753	10
Volume Left	6	0	4
Volume Right	0	6	6
cSH	857	1700	236
Volume to Capacity	0.01	0.44	0.04
Queue Length 95th (ft)	1	0	3
Control Delay (s)	0.2	0.0	20.9
Lane LOS	A		C
Approach Delay (s)	0.2	0.0	20.9
Approach LOS			C

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	1025	1227	476
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	91.1%	ICU Level of Service F
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	569	33	358	500	37	384
Peak Hour Factor	0.58	0.75	0.85	0.62	0.75	0.90
Hourly flow rate (vph)	981	44	421	806	49	427
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1350	824			1228	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1350	824			1228	
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	88			91	
cM capacity (veh/h)	152	373			568	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	1025	1228	476
Volume Left	981	0	49
Volume Right	44	806	0
cSH	156	1700	568
Volume to Capacity	6.59	0.72	0.09
Queue Length 95th (ft)	Err	0	7
Control Delay (s)	Err	0.0	2.5
Lane LOS	F		A
Approach Delay (s)	Err	0.0	2.5
Approach LOS	F		

Intersection Summary				
Average Delay	3756.6			
Intersection Capacity Utilization	91.1%	ICU Level of Service	F	
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	105	83	574	4	152	405	106	17
Sign Control	Free		Free		Stop		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	49.9%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	4	90	54	298	129	1	56	66	263	6	74	10
Peak Hour Factor	0.75	0.90	0.65	0.70	0.87	0.25	0.80	0.80	0.65	0.50	0.79	0.58
Hourly flow rate (vph)	5	100	83	426	148	4	70	82	405	12	94	17
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	148			100			1157	1110	100	1152	1110	148
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	148			100			1157	1110	100	1152	1110	148
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			71			0	45	58	73	37	98
cM capacity (veh/h)	1433			1493			68	149	956	45	149	898

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	105	83	574	4	557	123
Volume Left	5	0	426	0	70	12
Volume Right	0	83	0	4	405	17
cSH	1433	1700	1493	1700	298	147
Volume to Capacity	0.00	0.05	0.29	0.00	1.87	0.84
Queue Length 95th (ft)	0	0	30	0	949	136
Control Delay (s)	0.4	0.0	6.9	0.0	434.2	95.3
Lane LOS	A		A		F	F
Approach Delay (s)	0.2		6.8		434.2	95.3
Approach LOS					F	F

Intersection Summary					
Average Delay	178.1				
Intersection Capacity Utilization	49.9%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	674	984	257
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	55.8%	ICU Level of Service B
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	7	574	632	141	124	7
Peak Hour Factor	0.50	0.87	0.90	0.50	0.50	0.75
Hourly flow rate (vph)	14	660	702	282	248	9
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	984				1531	843
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	984				1531	843
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				0	97
cM capacity (veh/h)	702				126	364

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	674	984	257
Volume Left	14	0	248
Volume Right	0	282	9
cSH	702	1700	129
Volume to Capacity	0.02	0.58	1.99
Queue Length 95th (ft)	2	0	517
Control Delay (s)	0.5	0.0	529.9
Lane LOS	A		F
Approach Delay (s)	0.5	0.0	529.9
Approach LOS			F

Intersection Summary			
Average Delay	71.4		
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	221	699	679
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	89.9%	ICU Level of Service E
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	87	99	116	526	475	82
Peak Hour Factor	0.79	0.89	0.91	0.92	0.84	0.72
Hourly flow rate (vph)	110	111	127	572	565	114
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	699				745	413
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	699				745	413
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				0	82
cM capacity (veh/h)	897				335	639

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	221	699	679
Volume Left	110	0	565
Volume Right	0	572	114
cSH	897	1700	364
Volume to Capacity	0.12	0.41	1.87
Queue Length 95th (ft)	10	0	1127
Control Delay (s)	5.4	0.0	425.4
Lane LOS	A		F
Approach Delay (s)	5.4	0.0	425.4
Approach LOS			F

Intersection Summary			
Average Delay	181.4		
Intersection Capacity Utilization	89.9%	ICU Level of Service	E
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	770	128	932
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	45.2%	ICU Level of Service A
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	70	245	10	81	226	7
Peak Hour Factor	0.25	0.50	0.50	0.75	0.25	0.25
Hourly flow rate (vph)	280	490	20	108	904	28
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1910	74			128	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1910	74			128	
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	50			38	
cM capacity (veh/h)	28	988			1458	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	770	128	932
Volume Left	280	0	904
Volume Right	490	108	0
cSH	75	1700	1458
Volume to Capacity	10.33	0.08	0.62
Queue Length 95th (ft)	Err	0	115
Control Delay (s)	Err	0.0	11.3
Lane LOS	F		B
Approach Delay (s)	Err	0.0	11.3
Approach LOS	F		

Intersection Summary				
Average Delay	4213.0			
Intersection Capacity Utilization	45.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	848	191	1381	1216
Sign Control	Stop	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	105.9%	ICU Level of Service G
Analysis Period (min)	15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	123	42	155	29	42	104	150	635	31	117	669	173
Peak Hour Factor	0.25	0.92	0.50	0.92	0.92	0.92	0.25	0.85	0.92	0.92	0.90	0.50
Hourly flow rate (vph)	492	46	310	32	46	113	600	747	34	127	743	346
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	3270	3151	916	3467	3308	764	1089			781		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	3270	3151	916	3467	3308	764	1089			781		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	0	0	6	0	0	72	6			85		
cM capacity (veh/h)	0	1	330	0	0	404	641			837		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	848	190	1381	1217
Volume Left	492	32	600	127
Volume Right	310	113	34	346
cSH	0	0	641	837
Volume to Capacity	Err	Err	0.94	0.15
Queue Length 95th (ft)	Err	Err	317	13
Control Delay (s)	Err	Err	66.6	4.9
Lane LOS	F	F	F	A
Approach Delay (s)	Err	Err	66.6	4.9
Approach LOS	F	F		

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	105.9%	ICU Level of Service	G	
Analysis Period (min)	15			

Future 2028 Saturday Improved

Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	725	897	28	120
Sign Control	Free	Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	84.2%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	589	14	68	670	14	60
Peak Hour Factor	0.88	0.25	0.50	0.88	0.50	0.50
Hourly flow rate (vph)	669	56	136	761	28	120
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			725		1731	697
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			725		1731	697
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			85		66	73
cM capacity (veh/h)			878		82	441

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	725	897	148
Volume Left	0	136	28
Volume Right	56	0	120
cSH	1700	878	433
Volume to Capacity	0.43	0.15	0.34
Queue Length 95th (ft)	0	14	37
Control Delay (s)	0.0	3.8	26.4
Lane LOS		A	D
Approach Delay (s)	0.0	3.8	26.4
Approach LOS			D

Intersection Summary				
Average Delay		4.2		
Intersection Capacity Utilization	84.2%	ICU Level of Service		E
Analysis Period (min)	15			

Lane Group	WBL	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	981	44	421	806	476
Act Effct Green (s)	67.4	67.4	44.6	44.6	44.6
Actuated g/C Ratio	0.56	0.56	0.37	0.37	0.37
v/c Ratio	0.99	0.05	0.61	0.82	0.95
Control Delay	52.0	5.1	31.4	11.8	61.7
Queue Delay	0.0	0.0	0.0	2.0	0.0
Total Delay	52.0	5.1	31.4	13.8	61.7
LOS	D	A	C	B	E
Approach Delay	49.9		19.9		61.7
Approach LOS	D		B		E
Queue Length 50th (ft)	704	3	267	82	366
Queue Length 95th (ft)	400	14	m285	40	#557
Internal Link Dist (ft)	4006		691		3609
Turn Bay Length (ft)	150			150	
Base Capacity (vph)	1003	912	692	988	501
Starvation Cap Reductn	0	0	0	81	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.98	0.05	0.61	0.89	0.95

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 23 (19%), Referenced to phase 2:SBTL and 6:NBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay: 38.5		Intersection LOS: D	
Intersection Capacity Utilization 82.6%		ICU Level of Service E	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
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	1.00	1.00	1.00	1.00		1.00
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		0.99
Satd. Flow (prot)	1770	1583	1863	1583		1853
Flt Permitted	0.95	1.00	1.00	1.00		0.73
Satd. Flow (perm)	1770	1583	1863	1583		1368
Volume (vph)	569	33	358	500	37	384
Peak-hour factor, PHF	0.58	0.75	0.85	0.62	0.75	0.90
Adj. Flow (vph)	981	44	421	806	49	427
RTOR Reduction (vph)	0	15	0	399	0	0
Lane Group Flow (vph)	981	29	421	407	0	476
Turn Type		Perm		Perm	Perm	
Protected Phases	4		6			2
Permitted Phases		4		6	2	
Actuated Green, G (s)	67.4	67.4	44.6	44.6		44.6
Effective Green, g (s)	67.4	67.4	44.6	44.6		44.6
Actuated g/C Ratio	0.56	0.56	0.37	0.37		0.37
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)	994	889	692	588		508
v/s Ratio Prot	c0.55		0.23			
v/s Ratio Perm		0.02		0.26		c0.35
v/c Ratio	0.99	0.03	0.61	0.69		0.94
Uniform Delay, d1	25.9	11.7	30.6	31.9		36.3
Progression Factor	1.00	1.00	0.94	1.07		0.87
Incremental Delay, d2	25.1	0.0	2.0	3.3		25.8
Delay (s)	51.0	11.8	30.7	37.4		57.6
Level of Service	D	B	C	D		E
Approach Delay (s)	49.3		35.1			57.6
Approach LOS	D		D			E

Intersection Summary			
HCM Average Control Delay	44.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	120.0	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

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	105	83	426	152	152	405	106	17
Act Effct Green (s)	72.5	72.5	92.1	92.1	19.9	39.5	19.9	19.9
Actuated g/C Ratio	0.60	0.60	0.77	0.77	0.17	0.33	0.17	0.17
v/c Ratio	0.09	0.08	0.47	0.11	0.60	0.51	0.35	0.06
Control Delay	12.8	3.6	6.8	4.4	34.9	2.9	46.2	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.8	3.6	6.8	4.4	34.9	2.9	46.2	16.2
LOS	B	A	A	A	C	A	D	B
Approach Delay	8.7			6.1	11.6		42.0	
Approach LOS	A			A	B		D	
Queue Length 50th (ft)	32	0	84	25	49	0	74	0
Queue Length 95th (ft)	77	10	116	53	72	0	103	9
Internal Link Dist (ft)	3224			3453	3609		2278	
Turn Bay Length (ft)		150	150			150		50
Base Capacity (vph)	1113	989	1077	1424	448	1081	526	474
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.08	0.40	0.11	0.34	0.37	0.20	0.04

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 64 (53%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 11.6		Intersection LOS: B	
Intersection Capacity Utilization 43.1%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	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		1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00			0.98	1.00		0.99	1.00
Satd. Flow (prot)		1858	1583	1770	1855			1821	1583		1852	1583
Flt Permitted		0.99	1.00	0.65	1.00			0.74	1.00		0.96	1.00
Satd. Flow (perm)		1847	1583	1217	1855			1378	1583		1792	1583
Volume (vph)	4	90	54	298	129	1	56	66	263	6	74	10
Peak-hour factor, PHF	0.75	0.90	0.65	0.70	0.87	0.25	0.80	0.80	0.65	0.50	0.79	0.58
Adj. Flow (vph)	5	100	83	426	148	4	70	82	405	12	94	17
RTOR Reduction (vph)	0	0	33	0	0	0	0	0	285	0	0	14
Lane Group Flow (vph)	0	105	50	426	152	0	0	152	120	0	106	3
Turn Type	Perm		Perm	pm+pt			Perm		pm+ov	Perm		Perm
Protected Phases		6		5	2			4	5		8	
Permitted Phases	6		6	2			4		4	8		8
Actuated Green, G (s)		72.5	72.5	92.1	92.1			19.9	35.5		19.9	19.9
Effective Green, g (s)		72.5	72.5	92.1	92.1			19.9	35.5		19.9	19.9
Actuated g/C Ratio		0.60	0.60	0.77	0.77			0.17	0.30		0.17	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)		1116	956	1006	1424			229	521		297	263
v/s Ratio Prot				c0.06	0.08				0.03			
v/s Ratio Perm		0.06	0.03	c0.27				c0.11	0.05		0.06	0.00
v/c Ratio		0.09	0.05	0.42	0.11			0.66	0.23		0.36	0.01
Uniform Delay, d1		10.0	9.7	4.4	3.5			46.9	31.9		44.4	41.8
Progression Factor		1.00	1.00	1.00	1.00			0.57	0.38		1.00	1.00
Incremental Delay, d2		0.2	0.1	0.3	0.2			6.4	0.2		0.7	0.0
Delay (s)		10.1	9.8	4.7	3.7			33.2	12.4		45.1	41.8
Level of Service		B	A	A	A			C	B		D	D
Approach Delay (s)		10.0			4.4			18.0			44.7	
Approach LOS		A			A			B			D	

Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	674	984	257
Act Effct Green (s)	90.4	90.4	21.6
Actuated g/C Ratio	0.75	0.75	0.18
v/c Ratio	0.49	0.72	0.80
Control Delay	2.5	12.6	65.3
Queue Delay	0.0	0.0	0.0
Total Delay	2.5	12.6	65.3
LOS	A	B	E
Approach Delay	2.5	12.6	65.3
Approach LOS	A	B	E
Queue Length 50th (ft)	22	346	191
Queue Length 95th (ft)	107	628	135
Internal Link Dist (ft)	1690	4737	3802
Turn Bay Length (ft)			
Base Capacity (vph)	1369	1358	413
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.49	0.72	0.62

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 120		
Offset: 86 (72%), Referenced to phase 2:WBT and 6:EBTL, Start of Green		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.80		
Intersection Signal Delay: 16.1	Intersection LOS: B	
Intersection Capacity Utilization 55.8%	ICU Level of Service B	
Analysis Period (min) 15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
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		1.00	
Frt		1.00	0.96		1.00	
Flt Protected		1.00	1.00		0.95	
Satd. Flow (prot)		1861	1791		1769	
Flt Permitted		0.98	1.00		0.95	
Satd. Flow (perm)		1818	1791		1769	
Volume (vph)	7	574	632	141	124	7
Peak-hour factor, PHF	0.50	0.87	0.90	0.50	0.50	0.75
Adj. Flow (vph)	14	660	702	282	248	9
RTOR Reduction (vph)	0	0	10	0	1	0
Lane Group Flow (vph)	0	674	974	0	256	0
Turn Type	Perm					
Protected Phases		6	2		8	
Permitted Phases	6					
Actuated Green, G (s)		90.4	90.4		21.6	
Effective Green, g (s)		90.4	90.4		21.6	
Actuated g/C Ratio		0.75	0.75		0.18	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1370	1349		318	
v/s Ratio Prot			c0.54		c0.14	
v/s Ratio Perm		0.37				
v/c Ratio		0.49	0.72		0.81	
Uniform Delay, d1		5.8	8.0		47.2	
Progression Factor		0.24	1.00		1.00	
Incremental Delay, d2		0.9	3.4		13.8	
Delay (s)		2.2	11.4		61.0	
Level of Service		A	B		E	
Approach Delay (s)		2.2	11.4		61.0	
Approach LOS		A	B		E	

Intersection Summary			
HCM Average Control Delay	14.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	221	127	572	679
Act Effct Green (s)	53.9	53.9	53.9	58.1
Actuated g/C Ratio	0.45	0.45	0.45	0.48
v/c Ratio	0.33	0.15	0.56	0.80
Control Delay	25.6	13.7	4.7	33.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	25.6	13.7	4.7	33.6
LOS	C	B	A	C
Approach Delay	25.6	6.4		33.6
Approach LOS	C	A		C
Queue Length 50th (ft)	114	47	67	366
Queue Length 95th (ft)	202	m72	169	341
Internal Link Dist (ft)	6577	1690		4527
Turn Bay Length (ft)			150	
Base Capacity (vph)	666	844	1030	1003
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.33	0.15	0.56	0.68

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 24 (20%), Referenced to phase 2:WBT and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 20.6		Intersection LOS: C	
Intersection Capacity Utilization 54.7%		ICU Level of Service A	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
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	
Frt		1.00	1.00	0.85	0.98	
Flt Protected		0.98	1.00	1.00	0.96	
Satd. Flow (prot)		1818	1863	1583	1748	
Flt Permitted		0.79	1.00	1.00	0.96	
Satd. Flow (perm)		1477	1863	1583	1748	
Volume (vph)	87	99	116	526	475	82
Peak-hour factor, PHF	0.79	0.89	0.91	0.92	0.84	0.72
Adj. Flow (vph)	110	111	127	572	565	114
RTOR Reduction (vph)	0	0	0	315	7	0
Lane Group Flow (vph)	0	221	127	257	672	0
Turn Type	Perm			Perm		
Protected Phases		6	2		8	
Permitted Phases	6			2		
Actuated Green, G (s)		53.9	53.9	53.9	58.1	
Effective Green, g (s)		53.9	53.9	53.9	58.1	
Actuated g/C Ratio		0.45	0.45	0.45	0.48	
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)		663	837	711	846	
v/s Ratio Prot			0.07		c0.38	
v/s Ratio Perm		0.15		c0.16		
v/c Ratio		0.33	0.15	0.36	0.79	
Uniform Delay, d1		21.4	19.5	21.7	25.9	
Progression Factor		1.00	0.60	1.42	1.06	
Incremental Delay, d2		1.4	0.3	1.0	5.1	
Delay (s)		22.8	12.0	31.8	32.5	
Level of Service		C	B	C	C	
Approach Delay (s)		22.8	28.2		32.5	
Approach LOS		C	C		C	

Intersection Summary			
HCM Average Control Delay	29.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	280	490	128	932
Act Effct Green (s)	19.0	19.0	93.0	93.0
Actuated g/C Ratio	0.16	0.16	0.78	0.78
v/c Ratio	1.00	0.74	0.10	1.01
Control Delay	104.7	11.6	1.0	46.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	104.7	11.6	1.0	46.0
LOS	F	B	A	D
Approach Delay	45.4		1.0	46.0
Approach LOS	D		A	D
Queue Length 50th (ft)	219	0	3	~632
Queue Length 95th (ft)	76	0	1	59
Internal Link Dist (ft)	876		1455	1038
Turn Bay Length (ft)	150			
Base Capacity (vph)	280	663	1303	927
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.00	0.74	0.10	1.01

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay: 42.6		Intersection LOS: D	
Intersection Capacity Utilization 30.1%		ICU Level of Service A	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
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
Frt	1.00	0.85	0.89			1.00
Flt Protected	0.95	1.00	1.00			0.95
Satd. Flow (prot)	1770	1583	1651			1777
Flt Permitted	0.95	1.00	1.00			0.64
Satd. Flow (perm)	1770	1583	1651			1195
Volume (vph)	70	245	10	81	226	7
Peak-hour factor, PHF	0.25	0.50	0.50	0.75	0.25	0.25
Adj. Flow (vph)	280	490	20	108	904	28
RTOR Reduction (vph)	0	412	24	0	0	0
Lane Group Flow (vph)	280	78	104	0	0	932
Turn Type		Perm			Perm	
Protected Phases	4		6			2
Permitted Phases		4			2	
Actuated Green, G (s)	19.0	19.0	93.0			93.0
Effective Green, g (s)	19.0	19.0	93.0			93.0
Actuated g/C Ratio	0.16	0.16	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)	280	251	1280			926
v/s Ratio Prot	c0.16		0.06			
v/s Ratio Perm		0.05				c0.78
v/c Ratio	1.00	0.31	0.08			1.01
Uniform Delay, d1	50.5	44.7	3.2			13.5
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	53.8	0.7	0.1			31.2
Delay (s)	104.3	45.4	3.4			44.7
Level of Service	F	D	A			D
Approach Delay (s)	66.8		3.4			44.7
Approach LOS	E		A			D

Intersection Summary			
HCM Average Control Delay	51.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	30.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	134	46	168	32	46	113	163	747	34	127	743	188
Act Effct Green (s)	16.9	16.9	16.9	16.9	16.9	16.9	89.7	83.8	83.8	92.5	85.2	85.2
Actuated g/C Ratio	0.14	0.14	0.14	0.14	0.14	0.14	0.75	0.70	0.70	0.77	0.71	0.71
v/c Ratio	0.70	0.17	0.46	0.17	0.17	0.35	0.47	0.57	0.03	0.34	0.56	0.16
Control Delay	67.4	44.3	10.3	44.6	44.3	10.7	7.0	5.8	1.0	7.1	9.3	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	1.0	0.0
Total Delay	67.4	44.3	10.3	44.6	44.3	10.7	7.0	5.9	1.0	7.1	10.4	2.1
LOS	E	D	B	D	D	B	A	A	A	A	B	A
Approach Delay		36.8			24.4			5.9			8.5	
Approach LOS		D			C			A			A	
Queue Length 50th (ft)	101	32	0	22	32	0	9	90	0	14	233	7
Queue Length 95th (ft)	157	63	58	49	63	49	18	155	m2	m29	m392	m21
Internal Link Dist (ft)		208			893			756			691	
Turn Bay Length (ft)	150		150	150		150	150		150	150		150
Base Capacity (vph)	282	388	463	282	388	419	497	1301	1113	459	1323	1159
Starvation Cap Reductn	0	0	0	0	0	0	0	42	0	0	325	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.12	0.36	0.11	0.12	0.27	0.33	0.59	0.03	0.28	0.74	0.16

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 5 (4%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 12.6 Intersection LOS: B
Intersection Capacity Utilization 67.0% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	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	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	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.73	1.00	1.00	0.73	1.00	1.00	0.29	1.00	1.00	0.28	1.00	1.00
Satd. Flow (perm)	1354	1863	1583	1354	1863	1583	540	1863	1583	530	1863	1583
Volume (vph)	123	42	155	29	42	104	150	635	31	117	669	173
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.85	0.92	0.92	0.90	0.92
Adj. Flow (vph)	134	46	168	32	46	113	163	747	34	127	743	188
RTOR Reduction (vph)	0	0	144	0	0	97	0	0	7	0	0	35
Lane Group Flow (vph)	134	46	24	32	46	16	163	747	27	127	743	153
Turn Type	Perm		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Actuated Green, G (s)	16.9	16.9	16.9	16.9	16.9	16.9	89.7	83.8	83.8	92.5	85.2	85.2
Effective Green, g (s)	16.9	16.9	16.9	16.9	16.9	16.9	89.7	83.8	83.8	92.5	85.2	85.2
Actuated g/C Ratio	0.14	0.14	0.14	0.14	0.14	0.14	0.75	0.70	0.70	0.77	0.71	0.71
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	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	3.0
Lane Grp Cap (vph)	191	262	223	191	262	223	464	1301	1105	484	1323	1124
v/s Ratio Prot		0.02			0.02		c0.02	c0.40		0.02	0.40	
v/s Ratio Perm	c0.10		0.01	0.02		0.01	0.25		0.02	0.19		0.10
v/c Ratio	0.70	0.18	0.11	0.17	0.18	0.07	0.35	0.57	0.02	0.26	0.56	0.14
Uniform Delay, d1	49.1	45.4	45.0	45.4	45.4	44.7	13.9	9.1	5.6	12.3	8.4	5.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.40	0.40	0.26	1.08	0.92	0.73
Incremental Delay, d2	11.1	0.3	0.2	0.4	0.3	0.1	0.4	1.6	0.0	0.1	0.5	0.1
Delay (s)	60.2	45.7	45.2	45.8	45.7	44.9	5.9	5.3	1.5	13.3	8.2	4.2
Level of Service	E	D	D	D	D	D	A	A	A	B	A	A
Approach Delay (s)		51.0			45.2			5.3			8.1	
Approach LOS		D			D			A			A	

Intersection Summary

HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Future AM Intersection Analysis – Additional (Full Build Out)

Future 2028 AM

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	592	580	848	84	804
Sign Control	Free		Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	472	70	522	789	67	748
Peak Hour Factor	0.93	0.83	0.90	0.93	0.80	0.93
Hourly flow rate (vph)	508	84	580	848	84	804
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			592		2558	550
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			592		2558	550
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			41		0	0
cM capacity (veh/h)			984		12	535

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	592	580	848	888
Volume Left	0	580	0	84
Volume Right	84	0	0	804
cSH	1700	984	1700	106
Volume to Capacity	0.35	0.59	0.50	8.38
Queue Length 95th (ft)	0	100	0	Err
Control Delay (s)	0.0	13.8	0.0	Err
Lane LOS		B		F
Approach Delay (s)	0.0	5.6		Err
Approach LOS				F

Intersection Summary				
Average Delay	3055.9			
Intersection Capacity Utilization	82.1%	ICU Level of Service		E
Analysis Period (min)	15			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	48	575	810	754	477	53
Sign Control	Stop			Free	Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	36	558	745	686	439	41
Peak Hour Factor	0.75	0.97	0.92	0.91	0.92	0.78
Hourly flow rate (vph)	48	575	810	754	477	53
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2474	239	477			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2474	239	477			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	25	25			
cM capacity (veh/h)	6	763	1081			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	48	575	810	377	377	239	239	53
Volume Left	48	0	810	0	0	0	0	0
Volume Right	0	575	0	0	0	0	0	53
cSH	6	763	1081	1700	1700	1700	1700	1700
Volume to Capacity	7.74	0.75	0.75	0.22	0.22	0.14	0.14	0.03
Queue Length 95th (ft)	Err	177	184	0	0	0	0	0
Control Delay (s)	Err	22.7	17.5	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	C	C					
Approach Delay (s)	791.0		9.1			0.0		
Approach LOS	F							

Intersection Summary				
Average Delay	186.7			
Intersection Capacity Utilization	66.7%	ICU Level of Service		C
Analysis Period (min)	15			

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	820	483	425	790	384	255
Act Effct Green (s)	85.0	85.0	29.0	120.0	27.0	60.0
Actuated g/C Ratio	0.71	0.71	0.24	1.00	0.22	0.50
v/c Ratio	0.99	0.19	0.94	0.50	0.96	0.28
Control Delay	36.2	3.2	75.9	1.1	83.7	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	3.2	75.9	1.1	83.7	2.7
LOS	D	A	E	A	F	A
Approach Delay		24.0	27.3			
Approach LOS		C	C			
Queue Length 50th (ft)	438	44	325	0	296	0
Queue Length 95th (ft)	m#650	m45	#524	0	#493	37
Internal Link Dist (ft)		808	1512			
Turn Bay Length (ft)	150					
Base Capacity (vph)	829	2507	450	1583	398	919
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.19	0.94	0.50	0.96	0.28

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 40 (33%), Referenced to phase 2:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 30.8 Intersection LOS: C
Intersection Capacity Utilization 91.9% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	0.95			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	3539			1863	1583	1770		1583			
Flt Permitted	0.12	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	226	3539			1863	1583	1770		1583			
Volume (vph)	754	449	0	0	391	743	353	0	222	0	0	0
Peak-hour factor, PHF	0.92	0.93	0.92	0.92	0.92	0.94	0.92	0.92	0.87	0.92	0.92	0.92
Adj. Flow (vph)	820	483	0	0	425	790	384	0	255	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	128	0	0	0
Lane Group Flow (vph)	820	483	0	0	425	790	384	0	128	0	0	0
Turn Type	pm+pt					Free	Prot		custom			
Protected Phases	1	6			2		7					
Permitted Phases	6					Free			2 7			
Actuated Green, G (s)	85.0	85.0			29.0	120.0	27.0		60.0			
Effective Green, g (s)	85.0	85.0			29.0	120.0	27.0		60.0			
Actuated g/C Ratio	0.71	0.71			0.24	1.00	0.22		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)	829	2507			450	1583	398		792			
v/s Ratio Prot	c0.43	0.14			0.23		c0.22					
v/s Ratio Perm	c0.27					0.50			0.08			
v/c Ratio	0.99	0.19			0.94	0.50	0.96		0.16			
Uniform Delay, d1	28.9	5.9			44.7	0.0	46.0		16.3			
Progression Factor	0.61	0.53			1.00	1.00	1.00		1.00			
Incremental Delay, d2	17.0	0.0			30.6	1.1	35.7		0.1			
Delay (s)	34.6	3.1			75.3	1.1	81.7		16.4			
Level of Service	C	A			E	A	F		B			
Approach Delay (s)		23.0			27.1			55.7			0.0	
Approach LOS		C			C			E			A	

Intersection Summary

HCM Average Control Delay	31.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	1231	308	202	628	106	356
Act Effct Green (s)	82.0	120.0	96.0	96.0	16.0	102.0
Actuated g/C Ratio	0.68	1.00	0.80	0.80	0.13	0.85
v/c Ratio	0.97	0.19	0.96	0.42	0.23	0.25
Control Delay	37.3	0.3	72.4	0.9	48.0	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.3	0.3	72.4	0.9	48.0	0.6
LOS	D	A	E	A	D	A
Approach Delay	29.9			18.3		
Approach LOS	C			B		
Queue Length 50th (ft)	807	0	97	2	38	0
Queue Length 95th (ft)	#1218	0	m#110	m2	59	7
Internal Link Dist (ft)	1279			808		
Turn Bay Length (ft)		150	150			
Base Capacity (vph)	1273	1583	211	1490	458	1399
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.19	0.96	0.42	0.23	0.25

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 70 (58%), Referenced to phase 2:WBTL and 6:EBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 23.5		Intersection LOS: C	
Intersection Capacity Utilization 91.9%		ICU Level of Service F	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00					0.97		1.00
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		1863	1583	1770	1863					3433		1583
Flt Permitted		1.00	1.00	0.05	1.00					0.95		1.00
Satd. Flow (perm)		1863	1583	87	1863					3433		1583
Volume (vph)	0	1169	271	184	590	0	0	0	0	87	0	292
Peak-hour factor, PHF	0.92	0.95	0.88	0.91	0.94	0.92	0.92	0.92	0.92	0.82	0.92	0.82
Adj. Flow (vph)	0	1231	308	202	628	0	0	0	0	106	0	356
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	53
Lane Group Flow (vph)	0	1231	308	202	628	0	0	0	0	106	0	303
Turn Type			Free	pm+pt						Prot		custom
Protected Phases		6		5	2					3		
Permitted Phases			Free	2								3 6
Actuated Green, G (s)		82.0	120.0	96.0	96.0					16.0		102.0
Effective Green, g (s)		82.0	120.0	96.0	96.0					16.0		102.0
Actuated g/C Ratio		0.68	1.00	0.80	0.80					0.13		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)		1273	1583	210	1490					458		1346
v/s Ratio Prot		0.66		c0.08	0.34					0.03		
v/s Ratio Perm			0.19	c0.69								c0.19
v/c Ratio		0.97	0.19	0.96	0.42					0.23		0.22
Uniform Delay, d1		17.7	0.0	45.3	3.6					46.5		1.7
Progression Factor		1.00	1.00	1.45	0.15					1.00		1.00
Incremental Delay, d2		18.5	0.3	27.8	0.3					1.2		0.4
Delay (s)		36.2	0.3	93.5	0.9					47.7		2.1
Level of Service		D	A	F	A					D		A
Approach Delay (s)		29.0			23.4			0.0			12.5	
Approach LOS		C			C			A			B	

Intersection Summary					
HCM Average Control Delay	24.7	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.82				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		4.0	
Intersection Capacity Utilization	91.9%	ICU Level of Service		F	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	566	952	1065
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	127.5%	ICU Level of Service H
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	52	431	147	721	979	6
Peak Hour Factor	0.80	0.86	0.92	0.91	0.93	0.50
Hourly flow rate (vph)	65	501	160	792	1053	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	160				1187	556
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	160				1187	556
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	98
cM capacity (veh/h)	1419				199	531

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	566	952	1065
Volume Left	65	0	1053
Volume Right	0	792	12
cSH	1419	1700	200
Volume to Capacity	0.05	0.56	5.32
Queue Length 95th (ft)	4	0	Err
Control Delay (s)	1.3	0.0	Err
Lane LOS	A		F
Approach Delay (s)	1.3	0.0	Err
Approach LOS			F

Intersection Summary			
Average Delay	4121.9		
Intersection Capacity Utilization	127.5%	ICU Level of Service	H
Analysis Period (min)	15		

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	953	600	650	670
Act Effct Green (s)	56.0	56.0	56.0	56.0
Actuated g/C Ratio	0.47	0.47	0.47	0.47
v/c Ratio	1.14	0.84	0.87	1.16
Control Delay	108.3	22.9	42.4	101.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	108.3	22.9	42.4	101.7
LOS	F	C	D	F
Approach Delay	108.3	22.9	42.4	101.7
Approach LOS	F	C	D	F
Queue Length 50th (ft)	~863	259	438	~627
Queue Length 95th (ft)	#714	243	#672	m#681
Internal Link Dist (ft)	3138	678	2784	4178
Turn Bay Length (ft)				
Base Capacity (vph)	836	718	750	578
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.14	0.84	0.87	1.16

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 87 (73%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.16
Intersection Signal Delay: 74.0 Intersection LOS: E
Intersection Capacity Utilization 101.7% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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			1.00	
Frt		0.99			0.96			0.99			0.99	
Flt Protected		1.00			1.00			1.00			0.99	
Satd. Flow (prot)		1836			1781			1842			1831	
Flt Permitted		0.97			0.85			0.87			0.67	
Satd. Flow (perm)		1786			1513			1604			1235	
Volume (vph)	21	582	69	27	283	112	42	518	18	92	483	23
Peak-hour factor, PHF	0.69	0.70	0.75	0.64	0.75	0.62	0.67	0.93	0.60	0.71	0.96	0.62
Adj. Flow (vph)	30	831	92	42	377	181	63	557	30	130	503	37
RTOR Reduction (vph)	0	3	0	0	13	0	0	2	0	0	2	0
Lane Group Flow (vph)	0	950	0	0	587	0	0	648	0	0	668	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		56.0			56.0			56.0			56.0	
Effective Green, g (s)		56.0			56.0			56.0			56.0	
Actuated g/C Ratio		0.47			0.47			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)		833			706			749			576	
v/s Ratio Prot												
v/s Ratio Perm		c0.53			0.39			0.40			c0.54	
v/c Ratio		1.14			0.83			0.87			1.16	
Uniform Delay, d1		32.0			27.9			28.6			32.0	
Progression Factor		1.00			0.42			1.00			0.41	
Incremental Delay, d2		77.4			8.0			12.8			84.6	
Delay (s)		109.4			19.6			41.4			97.6	
Level of Service		F			B			D			F	
Approach Delay (s)		109.4			19.6			41.4			97.6	
Approach LOS		F			B			D			F	

Intersection Summary

HCM Average Control Delay	72.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	325	449	4	431	476	6	752	281
Act Effct Green (s)	45.6	45.6	27.0	27.0	27.0	64.0	64.0	64.0
Actuated g/C Ratio	0.38	0.38	0.22	0.22	0.22	0.53	0.53	0.53
v/c Ratio	0.94	0.63	0.02	1.03	0.66	0.01	1.05	0.32
Control Delay	52.1	24.5	37.0	97.4	8.7	13.3	69.7	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.1	24.5	37.0	97.4	8.7	13.3	69.7	9.6
LOS	D	C	D	F	A	B	E	A
Approach Delay		36.1		50.8		13.3	53.4	
Approach LOS		D		D		B	D	
Queue Length 50th (ft)	139	153	2	~357	4	2	~633	58
Queue Length 95th (ft)	m#297	m347	4	#558	102	5	91	107
Internal Link Dist (ft)		4178		602		2286	7832	
Turn Bay Length (ft)	95		150					70
Base Capacity (vph)	344	708	244	419	720	994	719	887
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.63	0.02	1.03	0.66	0.01	1.05	0.32

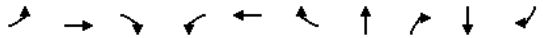
Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 120		
Offset: 104 (87%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 1.05		
Intersection Signal Delay: 47.5	Intersection LOS: D	
Intersection Capacity Utilization 91.7%	ICU Level of Service F	
Analysis Period (min) 15		

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00	1.00		1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85		1.00			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.95	1.00
Satd. Flow (prot)	1770	1863		1770	1863	1583		1863			1774	1583
Flt Permitted	0.16	1.00		0.49	1.00	1.00		1.00			0.72	1.00
Satd. Flow (perm)	293	1863		908	1863	1583		1863			1348	1583
Volume (vph)	296	418	0	1	388	443	0	3	0	688	1	256
Peak-hour factor, PHF	0.91	0.93	0.92	0.25	0.90	0.93	0.92	0.50	0.92	0.92	0.25	0.91
Adj. Flow (vph)	325	449	0	4	431	476	0	6	0	748	4	281
RTOR Reduction (vph)	0	0	0	0	0	364	0	0	0	0	0	42
Lane Group Flow (vph)	325	449	0	4	431	112	0	6	0	0	752	239
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			Perm		Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2		2	4			8		8
Actuated Green, G (s)	42.4	42.4		27.0	27.0	27.0		64.0			64.0	64.0
Effective Green, g (s)	42.4	42.4		27.0	27.0	27.0		64.0			64.0	64.0
Actuated g/C Ratio	0.35	0.35		0.22	0.22	0.22		0.53			0.53	0.53
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)	313	658		216	419	356		994			719	844
v/s Ratio Prot	c0.15	0.24		0.00	c0.23			0.00				
v/s Ratio Perm	c0.22			0.00		0.07					c0.56	0.15
v/c Ratio	1.04	0.68		0.02	1.03	0.31		0.01			1.05	0.28
Uniform Delay, d1	53.7	33.1		36.8	46.5	38.8		13.1			28.0	15.4
Progression Factor	0.93	0.69		1.00	1.00	1.00		1.00			0.78	0.83
Incremental Delay, d2	45.4	2.7		0.0	51.5	2.3		0.0			46.1	0.2
Delay (s)	95.6	25.4		36.8	98.0	41.1		13.1			68.0	12.9
Level of Service	F	C		D	F	D		B			E	B
Approach Delay (s)		54.9			68.0			13.1			53.0	
Approach LOS		D			E			B			D	

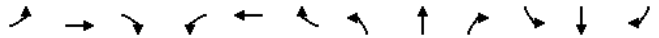
Intersection Summary					
HCM Average Control Delay	58.5	HCM Level of Service	E		
HCM Volume to Capacity ratio	1.02				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0		
Intersection Capacity Utilization	91.7%	ICU Level of Service	F		
Analysis Period (min)	15				

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	36	1121	32	30	842	181	27	41	420	29
Sign Control		Free			Free		Stop		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	62.0%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	30	1076	24	27	783	136	12	3	31	335	7	22
Peak Hour Factor	0.83	0.96	0.75	0.90	0.93	0.75	0.58	0.50	0.75	0.82	0.62	0.75
Hourly flow rate (vph)	36	1121	32	30	842	181	21	6	41	409	11	29
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	842			1121			1680	2095	560	1538	2095	421
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	842			1121			1680	2095	560	1538	2095	421
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			95			54	87	91	0	76	95
cM capacity (veh/h)	789			619			45	47	471	60	47	581

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	36	560	560	32	30	421	421	181	68	449
Volume Left	36	0	0	0	30	0	0	0	21	409
Volume Right	0	0	0	32	0	0	0	181	41	29
cSH	789	1700	1700	1700	619	1700	1700	1700	115	64
Volume to Capacity	0.05	0.33	0.33	0.02	0.05	0.25	0.25	0.11	0.59	7.05
Queue Length 95th (ft)	4	0	0	0	4	0	0	0	73	Err
Control Delay (s)	9.8	0.0	0.0	0.0	11.1	0.0	0.0	0.0	73.1	Err
Lane LOS	A				B				F	F
Approach Delay (s)	0.3				0.3				73.1	Err
Approach LOS									F	F

Intersection Summary				
Average Delay	1629.6			
Intersection Capacity Utilization	62.0%	ICU Level of Service		B
Analysis Period (min)	15			

Lane Group	EBT	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	1105	212	642	12	375	129
Sign Control	Stop	Stop	Free		Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	114.5%	ICU Level of Service	H
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	126	317	358	6	131	27	246	289	6	27	312	89
Peak Hour Factor	0.64	0.68	0.81	0.50	0.80	0.75	0.75	0.92	0.50	0.75	0.92	0.69
Hourly flow rate (vph)	197	466	442	12	164	36	328	314	12	36	339	129
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	1499	1381	339	2056	1381	314	339			314		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1499	1381	339	2056	1381	314	339			314		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	0	0	37	0	0	95	73			97		
cM capacity (veh/h)	0	102	703	0	102	726	1220			1246		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	1105	212	642	12	375	129
Volume Left	197	12	328	0	36	0
Volume Right	442	36	0	12	0	129
cSH	0	0	1220	1700	1246	1700
Volume to Capacity	Err	Err	0.27	0.01	0.03	0.08
Queue Length 95th (ft)	Err	Err	27	0	2	0
Control Delay (s)	Err	Err	6.1	0.0	1.0	0.0
Lane LOS	F	F	A		A	
Approach Delay (s)	Err	Err	6.0		0.8	
Approach LOS	F	F				

Intersection Summary					
Average Delay	Err				
Intersection Capacity Utilization	114.5%	ICU Level of Service	H		
Analysis Period (min)	15				

Lane Group	EBT	WBT	NBL
Lane Group Flow (vph)	899	636	191
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	52.3%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	738	5	21	414	18	89
Peak Hour Factor	0.84	0.25	0.25	0.75	0.25	0.75
Hourly flow rate (vph)	879	20	84	552	72	119
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			899		1609	889
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			899		1609	889
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			89		30	65
cM capacity (veh/h)			756		102	342

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	899	636	191
Volume Left	0	84	72
Volume Right	20	0	119
cSH	1700	756	182
Volume to Capacity	0.53	0.11	1.05
Queue Length 95th (ft)	0	9	226
Control Delay (s)	0.0	2.8	133.3
Lane LOS		A	F
Approach Delay (s)	0.0	2.8	133.3
Approach LOS			F

Intersection Summary				
Average Delay		15.8		
Intersection Capacity Utilization		52.3%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	892	568	10
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	51.1%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	3	735	440	1	3	1
Peak Hour Factor	0.50	0.83	0.78	0.25	0.50	0.25
Hourly flow rate (vph)	6	886	564	4	6	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	568				1464	566
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	568				1464	566
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				96	99
cM capacity (veh/h)	1004				141	524

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	892	568	10
Volume Left	6	0	6
Volume Right	0	4	4
cSH	1004	1700	199
Volume to Capacity	0.01	0.33	0.05
Queue Length 95th (ft)	0	0	4
Control Delay (s)	0.2	0.0	24.1
Lane LOS	A		C
Approach Delay (s)	0.2	0.0	24.1
Approach LOS			C

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	561	1436	328
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	83.1%	ICU Level of Service E
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	376	45	349	563	39	217
Peak Hour Factor	0.75	0.75	0.75	0.58	0.62	0.82
Hourly flow rate (vph)	501	60	465	971	63	265
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1341	951			1436	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1341	951			1436	
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	81			87	
cM capacity (veh/h)	146	315			473	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	561	1436	328
Volume Left	501	0	63
Volume Right	60	971	0
cSH	155	1700	473
Volume to Capacity	3.63	0.84	0.13
Queue Length 95th (ft)	Err	0	11
Control Delay (s)	Err	0.0	4.4
Lane LOS	F		A
Approach Delay (s)	Err	0.0	4.4
Approach LOS	F		

Intersection Summary			
Average Delay	2414.8		
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	694	110	640	151	497	56
Sign Control	Free		Free	Stop		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	3	640	80	169	81	0	42	35	338	0	35	0
Peak Hour Factor	0.50	0.93	0.73	0.32	0.72	0.92	0.46	0.58	0.68	0.92	0.62	0.92
Hourly flow rate (vph)	6	688	110	528	112	0	91	60	497	0	56	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	112			688			1897	1869	688	1899	1869	112
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	112			688			1897	1869	688	1899	1869	112
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			42			0	0	0	0	0	100
cM capacity (veh/h)	1477			906			0	30	446	0	30	940

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	694	110	641	0	649	56
Volume Left	6	0	528	0	91	0
Volume Right	0	110	0	0	497	0
cSH	1477	1700	906	1700	0	30
Volume to Capacity	0.00	0.06	0.58	0.00	1573.43	1.90
Queue Length 95th (ft)	0	0	97	0	Err	164
Control Delay (s)	0.1	0.0	13.4	0.0	Err	711.0
Lane LOS	A		B		F	F
Approach Delay (s)	0.1		13.4		Err	711.0
Approach LOS					F	F

Intersection Summary					
Average Delay	3040.3				
Intersection Capacity Utilization	68.3%	ICU Level of Service		C	
Analysis Period (min)	15				

Lane Group	EBT	EBR	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	996	88	328	12	65	71	47
Sign Control	Free		Free		Stop		Stop

Intersection Summary			
Control Type: Unsignalized			
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												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	847	64	0	233	6	14	4	12	41	34	0
Peak Hour Factor	0.92	0.85	0.73	0.92	0.71	0.50	0.58	0.38	0.40	0.58	0.72	0.92
Hourly flow rate (vph)	0	996	88	0	328	12	24	11	30	71	47	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	328			996			1348	1325	498	832	1325	328
vC1, stage 1 conf vol							996	996		328	328	
vC2, stage 2 conf vol							352	328		503	996	
vCu, unblocked vol	328			996			1348	1325	498	832	1325	328
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			90	96	94	83	84	100
cM capacity (veh/h)	1228			690			243	300	518	424	300	668

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	0	498	498	88	0	328	12	65	71	47
Volume Left	0	0	0	0	0	0	0	24	71	0
Volume Right	0	0	0	88	0	0	12	30	0	0
cSH	1700	1700	1700	1700	1700	1700	1700	336	424	295
Volume to Capacity	0.00	0.29	0.29	0.05	0.00	0.19	0.01	0.19	0.17	0.16
Queue Length 95th (ft)	0	0	0	0	0	0	0	17	15	14
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.2	15.2	19.5
Lane LOS								C	C	C
Approach Delay (s)	0.0				0.0			18.2	16.9	
Approach LOS								C	C	

Intersection Summary					
Average Delay	2.0				
Intersection Capacity Utilization	38.5%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	115	973	11	65	325	4	11	609	12	331
Act Effct Green (s)	13.5	53.8	53.8	8.3	46.6	46.6	48.0	48.0	48.0	48.0
Actuated g/C Ratio	0.11	0.45	0.45	0.07	0.39	0.39	0.40	0.40	0.40	0.40
v/c Ratio	0.58	0.61	0.02	0.53	0.24	0.01	0.03	0.84	0.08	0.45
Control Delay	62.2	29.4	17.0	61.2	16.9	7.0	15.2	35.6	21.0	26.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.2	29.4	17.0	61.2	16.9	7.0	15.2	35.6	21.0	26.9
LOS	E	C	B	E	B	A	B	D	C	C
Approach Delay		32.7			24.1			35.3		26.7
Approach LOS		C			C			D		C
Queue Length 50th (ft)	85	307	2	49	42	0	4	339	6	181
Queue Length 95th (ft)	114	371	5	84	43	0	m4	m301	10	219
Internal Link Dist (ft)		2246			4418			11076		2261
Turn Bay Length (ft)	280		115	290		180	125		105	
Base Capacity (vph)	221	1586	713	133	1374	617	386	833	173	842
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.61	0.02	0.49	0.24	0.01	0.03	0.73	0.07	0.39

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 31.1 Intersection LOS: C
Intersection Capacity Utilization 64.4% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.98	
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)	1770	3539	1583	1770	3539	1583	1770	1799		1770	1827	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.42	1.00		0.14	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	779	1799		256	1827	
Volume (vph)	82	798	4	50	218	1	4	424	110	6	246	16
Peak-hour factor, PHF	0.71	0.82	0.38	0.77	0.67	0.25	0.38	0.90	0.80	0.50	0.85	0.38
Adj. Flow (vph)	115	973	11	65	325	4	11	471	138	12	289	42
RTOR Reduction (vph)	0	0	3	0	0	2	0	10	0	0	5	0
Lane Group Flow (vph)	115	973	8	65	325	2	11	599	0	12	326	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	14.3	52.9	52.9	7.1	45.7	45.7	48.0	48.0		48.0	48.0	
Effective Green, g (s)	14.3	52.9	52.9	7.1	45.7	45.7	48.0	48.0		48.0	48.0	
Actuated g/C Ratio	0.12	0.44	0.44	0.06	0.38	0.38	0.40	0.40		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)	211	1560	698	105	1348	603	312	720		102	731	
v/s Ratio Prot	c0.06	c0.27		0.04	0.09			c0.33			0.18	
v/s Ratio Perm			0.00			0.00	0.01			0.05		
v/c Ratio	0.55	0.62	0.01	0.62	0.24	0.00	0.04	0.83		0.12	0.45	
Uniform Delay, d1	49.8	25.9	18.9	55.1	25.3	23.0	21.9	32.4		22.7	26.3	
Progression Factor	1.00	1.00	1.00	0.84	0.62	0.40	0.80	0.81		1.00	1.00	
Incremental Delay, d2	2.9	1.9	0.0	10.3	0.4	0.0	0.0	7.7		0.5	0.4	
Delay (s)	52.6	27.8	18.9	56.7	16.1	9.3	17.5	33.9		23.2	26.7	
Level of Service	D	C	B	E	B	A	B	C		C	C	
Approach Delay (s)		30.3			22.7			33.6			26.6	
Approach LOS		C			C			C			C	

Intersection Summary
HCM Average Control Delay 29.4 HCM Level of Service C
HCM Volume to Capacity ratio 0.70
Actuated Cycle Length (s) 120.0 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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	39	960	56	165	291	59	27	462	167	239
Act Effct Green (s)	58.4	52.6	52.6	67.4	61.4	61.4	36.5	29.9	44.4	37.9
Actuated g/C Ratio	0.49	0.44	0.44	0.56	0.51	0.51	0.30	0.25	0.37	0.32
v/c Ratio	0.07	0.62	0.08	0.67	0.16	0.07	0.08	0.92	0.68	0.41
Control Delay	3.8	8.3	0.4	31.3	18.3	5.7	21.7	55.7	39.3	33.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.8	8.3	0.4	31.3	18.3	5.7	21.7	55.7	39.3	33.3
LOS	A	A	A	C	B	A	C	E	D	C
Approach Delay		7.8			21.0			53.9		35.8
Approach LOS		A			C			D		D
Queue Length 50th (ft)	4	65	0	61	66	0	13	267	87	146
Queue Length 95th (ft)	m6	76	m1	132	107	20	20	356	126	204
Internal Link Dist (ft)		5533			4590			2266		2361
Turn Bay Length (ft)	300		120	320		145	150		150	
Base Capacity (vph)	587	1552	711	278	1811	839	363	607	248	628
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.62	0.08	0.59	0.16	0.07	0.07	0.76	0.67	0.38

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 4 (3%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 24.3 Intersection LOS: C
Intersection Capacity Utilization 78.5% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.89		1.00	0.98	
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)	1770	3539	1583	1770	3539	1583	1770	1658		1770	1825	
Flt Permitted	0.57	1.00	1.00	0.15	1.00	1.00	0.57	1.00		0.11	1.00	
Satd. Flow (perm)	1069	3539	1583	284	3539	1583	1058	1658		210	1825	
Volume (vph)	29	854	40	145	262	47	17	108	318	150	184	21
Peak-hour factor, PHF	0.75	0.89	0.72	0.88	0.90	0.80	0.62	0.87	0.94	0.90	0.89	0.65
Adj. Flow (vph)	39	960	56	165	291	59	27	124	338	167	207	32
RTOR Reduction (vph)	0	0	17	0	0	30	0	89	0	0	5	0
Lane Group Flow (vph)	39	960	39	165	291	29	27	374	0	167	234	0
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4			8		
Actuated Green, G (s)	54.6	51.0	51.0	65.8	58.2	58.2	35.8	31.5		46.2	37.9	
Effective Green, g (s)	54.6	51.0	51.0	65.8	58.2	58.2	35.8	31.5		46.2	37.9	
Actuated g/C Ratio	0.46	0.42	0.42	0.55	0.49	0.49	0.30	0.26		0.38	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)	507	1504	673	289	1716	768	341	435		220	576	
v/s Ratio Prot	0.00	c0.27		c0.05	0.08		0.00	c0.23		c0.07	0.13	
v/s Ratio Perm	0.03		0.02	0.26		0.02	0.02			0.22		
v/c Ratio	0.08	0.64	0.06	0.57	0.17	0.04	0.08	0.86		0.76	0.41	
Uniform Delay, d1	18.2	27.2	20.3	17.8	17.3	16.2	30.0	42.1		29.4	32.2	
Progression Factor	0.24	0.24	0.02	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	1.6	0.1	2.7	0.2	0.1	0.1	15.4		13.9	0.5	
Delay (s)	4.4	8.3	0.5	20.5	17.6	16.3	30.1	57.5		43.4	32.7	
Level of Service	A	A	A	C	B	B	C	E		D	C	
Approach Delay (s)		7.7			18.4			56.0			37.1	
Approach LOS		A			B			E			D	

Intersection Summary

HCM Average Control Delay	24.3	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.71				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		16.0	
Intersection Capacity Utilization	78.5%	ICU Level of Service		D	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	784	580	308
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	65.2%	ICU Level of Service C
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	13	673	388	59	207	20
Peak Hour Factor	0.67	0.88	0.82	0.55	0.75	0.62
Hourly flow rate (vph)	19	765	473	107	276	32
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	580				1330	527
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	580				1330	527
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				0	94
cM capacity (veh/h)	994				167	551

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	784	580	308
Volume Left	19	0	276
Volume Right	0	107	32
cSH	994	1700	180
Volume to Capacity	0.02	0.34	1.71
Queue Length 95th (ft)	1	0	535
Control Delay (s)	0.5	0.0	386.6
Lane LOS	A		F
Approach Delay (s)	0.5	0.0	386.6
Approach LOS			F

Intersection Summary			
Average Delay	71.5		
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	267	644	823
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	83.3%	ICU Level of Service E
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	98	137	81	333	544	94
Peak Hour Factor	0.88	0.88	0.91	0.60	0.79	0.70
Hourly flow rate (vph)	111	156	89	555	689	134
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	644				745	367
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	644				745	367
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				0	80
cM capacity (veh/h)	941				336	679

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	267	644	823
Volume Left	111	0	689
Volume Right	0	555	134
cSH	941	1700	367
Volume to Capacity	0.12	0.38	2.24
Queue Length 95th (ft)	10	0	1550
Control Delay (s)	4.6	0.0	592.1
Lane LOS	A		F
Approach Delay (s)	4.6	0.0	592.1
Approach LOS			F

Intersection Summary				
Average Delay	281.7			
Intersection Capacity Utilization	83.3%	ICU Level of Service	E	
Analysis Period (min)	15			

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	271	122	120
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	29.0%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	49	145	99	8	16	72
Peak Hour Factor	0.50	0.84	0.93	0.50	0.67	0.75
Hourly flow rate (vph)	98	173	106	16	24	96
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	122				483	114
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	122				483	114
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	93				95	90
cM capacity (veh/h)	1465				506	938

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	271	122	120
Volume Left	98	0	24
Volume Right	0	16	96
cSH	1465	1700	802
Volume to Capacity	0.07	0.07	0.15
Queue Length 95th (ft)	5	0	13
Control Delay (s)	3.1	0.0	10.3
Lane LOS	A		B
Approach Delay (s)	3.1	0.0	10.3
Approach LOS			B

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	29.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	154	218	105
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	22.4%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	6	128	139	23	70	4
Peak Hour Factor	0.50	0.90	0.75	0.69	0.70	0.75
Hourly flow rate (vph)	12	142	185	33	100	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	219				368	202
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	219				368	202
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				84	99
cM capacity (veh/h)	1351				626	839

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	154	219	105
Volume Left	12	0	100
Volume Right	0	33	5
cSH	1351	1700	634
Volume to Capacity	0.01	0.13	0.17
Queue Length 95th (ft)	1	0	15
Control Delay (s)	0.7	0.0	11.8
Lane LOS	A		B
Approach Delay (s)	0.7	0.0	11.8
Approach LOS			B

Intersection Summary				
Average Delay	2.8			
Intersection Capacity Utilization	22.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	288	57	1062
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	36.9%	ICU Level of Service A
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	46	98	7	32	260	11
Peak Hour Factor	0.50	0.50	0.50	0.75	0.25	0.50
Hourly flow rate (vph)	92	196	14	43	1040	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2137	35			57	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2137	35			57	
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	81			33	
cM capacity (veh/h)	18	1037			1548	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	288	57	1062
Volume Left	92	0	1040
Volume Right	196	43	0
cSH	53	1700	1548
Volume to Capacity	5.39	0.03	0.67
Queue Length 95th (ft)	Err	0	141
Control Delay (s)	Err	0.0	11.9
Lane LOS	F		B
Approach Delay (s)	Err	0.0	11.9
Approach LOS	F		

Intersection Summary			
Average Delay	2056.1		
Intersection Capacity Utilization	36.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	622	147	1063	832
Sign Control	Stop	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	83.7%	ICU Level of Service E
Analysis Period (min)	15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	189	17	113	22	30	83	59	644	39	92	432	53
Peak Hour Factor	0.50	0.92	0.50	0.92	0.92	0.92	0.25	0.82	0.92	0.92	0.83	0.25
Hourly flow rate (vph)	378	18	226	24	33	90	236	785	42	100	520	212
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	2212	2126	626	2340	2211	807	732			828		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2212	2126	626	2340	2211	807	732			828		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	0	42	53	0	0	76	73			88		
cM capacity (veh/h)	0	32	484	5	28	382	872			803		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	622	147	1064	832
Volume Left	378	24	236	100
Volume Right	226	90	42	212
cSH	0	25	872	803
Volume to Capacity	Err	5.77	0.27	0.12
Queue Length 95th (ft)	Err	Err	27	11
Control Delay (s)	Err	Err	6.7	3.2
Lane LOS	F	F	A	A
Approach Delay (s)	Err	Err	6.7	3.2
Approach LOS	F	F		

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	83.7%	ICU Level of Service	E	
Analysis Period (min)	15			

Future 2028 AM Improved

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	592	580	848	84	804
Act Effct Green (s)	66.4	103.2	104.0	10.9	120.0
Actuated g/C Ratio	0.55	0.86	0.87	0.09	1.00
v/c Ratio	0.58	0.82	0.53	0.52	0.51
Control Delay	23.4	32.0	4.2	64.2	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	23.4	32.0	4.2	64.2	1.4
LOS	C	C	A	E	A
Approach Delay	23.4		15.5	7.3	
Approach LOS	C		B	A	
Queue Length 50th (ft)	300	220	140	66	2
Queue Length 95th (ft)	519	366	258	m75	m0
Internal Link Dist (ft)	2724		2449	828	
Turn Bay Length (ft)					160
Base Capacity (vph)	1014	817	1615	236	1583
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.58	0.71	0.53	0.36	0.51

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 95 (79%), Referenced to phase 2:WBTL and 6:EBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 14.6		Intersection LOS: B	
Intersection Capacity Utilization 71.7%		ICU Level of Service C	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
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	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	1827		1770	1863	1770	1583
Flt Permitted	1.00		0.30	1.00	0.95	1.00
Satd. Flow (perm)	1827		554	1863	1770	1583
Volume (vph)	472	70	522	789	67	748
Peak-hour factor, PHF	0.93	0.83	0.90	0.93	0.80	0.93
Adj. Flow (vph)	508	84	580	848	84	804
RTOR Reduction (vph)	4	0	0	0	0	0
Lane Group Flow (vph)	588	0	580	848	84	804
Turn Type			pm+pt			Free
Protected Phases	6		5	2	4	
Permitted Phases			2			Free
Actuated Green, G (s)	65.6		102.4	102.4	9.6	120.0
Effective Green, g (s)	65.6		102.4	102.4	9.6	120.0
Actuated g/C Ratio	0.55		0.85	0.85	0.08	1.00
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)	999		805	1590	142	1583
v/s Ratio Prot	0.32		c0.20	0.46	0.05	
v/s Ratio Perm			c0.42			c0.51
v/c Ratio	0.59		0.72	0.53	0.59	0.51
Uniform Delay, d1	18.2		15.7	2.4	53.3	0.0
Progression Factor	1.00		1.00	1.00	1.13	1.00
Incremental Delay, d2	2.5		3.2	1.3	3.5	0.6
Delay (s)	20.7		18.9	3.7	63.8	0.6
Level of Service	C		B	A	E	A
Approach Delay (s)	20.7			9.8	6.6	
Approach LOS	C			A	A	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	71.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	48	575	810	754	477	53
Act Effct Green (s)	15.7	15.7	96.3	96.3	45.1	45.1
Actuated g/C Ratio	0.13	0.13	0.80	0.80	0.38	0.38
v/c Ratio	0.21	0.81	0.91	0.27	0.36	0.09
Control Delay	39.3	9.8	30.7	3.2	34.0	23.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.3	9.8	30.7	3.2	34.0	23.1
LOS	D	A	C	A	C	C
Approach Delay	12.1			17.5	32.9	
Approach LOS	B			B	C	
Queue Length 50th (ft)	31	79	142	39	145	14
Queue Length 95th (ft)	m30	m99	m176	m75	246	45
Internal Link Dist (ft)	828			7187	5706	
Turn Bay Length (ft)	145		170			60
Base Capacity (vph)	404	805	1047	2852	1331	612
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.71	0.77	0.26	0.36	0.09

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 69 (58%), Referenced to phase 2:SBT and 6:NBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 19.3		Intersection LOS: B	
Intersection Capacity Utilization 66.7%		ICU Level of Service C	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
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	0.40	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	745	3539	3539	1583
Volume (vph)	36	558	745	686	439	41
Peak-hour factor, PHF	0.75	0.97	0.92	0.91	0.92	0.78
Adj. Flow (vph)	48	575	810	754	477	53
RTOR Reduction (vph)	0	500	0	0	0	16
Lane Group Flow (vph)	48	75	810	754	477	37
Turn Type		Perm	pm+pt			Perm
Protected Phases	8		1	6	2	
Permitted Phases		8	6			2
Actuated Green, G (s)	15.7	15.7	96.3	96.3	45.1	45.1
Effective Green, g (s)	15.7	15.7	96.3	96.3	45.1	45.1
Actuated g/C Ratio	0.13	0.13	0.80	0.80	0.38	0.38
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)	232	207	1001	2840	1330	595
v/s Ratio Prot	0.03		c0.32	0.21	0.13	
v/s Ratio Perm		c0.05	c0.33			0.02
v/c Ratio	0.21	0.36	0.81	0.27	0.36	0.06
Uniform Delay, d1	46.6	47.6	12.5	3.0	27.0	23.9
Progression Factor	0.91	1.11	0.87	0.75	1.00	1.00
Incremental Delay, d2	0.3	0.6	3.9	0.2	0.8	0.2
Delay (s)	42.5	53.4	14.7	2.4	27.8	24.1
Level of Service	D	D	B	A	C	C
Approach Delay (s)	52.6			8.8	27.4	
Approach LOS	D			A	C	

Intersection Summary			
HCM Average Control Delay	22.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	566	160	792	1065
Act Effct Green (s)	39.0	39.0	120.0	73.0
Actuated g/C Ratio	0.32	0.32	1.00	0.61
v/c Ratio	0.99	0.26	0.50	0.99
Control Delay	76.9	45.5	1.6	25.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	76.9	45.5	1.6	25.4
LOS	E	D	A	C
Approach Delay	76.9	9.0		25.4
Approach LOS	E	A		C
Queue Length 50th (ft)	435	119	0	185
Queue Length 95th (ft)	#622	187	3	m#603
Internal Link Dist (ft)	4085	1265		454
Turn Bay Length (ft)			150	
Base Capacity (vph)	570	605	1583	1078
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.99	0.26	0.50	0.99

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 61 (51%), Referenced to phase 2:WBT and 6:EBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 30.6 Intersection LOS: C
Intersection Capacity Utilization 97.9% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
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	
Frt		1.00	1.00	0.85	1.00	
Flt Protected		0.99	1.00	1.00	0.95	
Satd. Flow (prot)		1852	1863	1583	1772	
Flt Permitted		0.94	1.00	1.00	0.95	
Satd. Flow (perm)		1755	1863	1583	1772	
Volume (vph)	52	431	147	721	979	6
Peak-hour factor, PHF	0.80	0.86	0.92	0.91	0.93	0.50
Adj. Flow (vph)	65	501	160	792	1053	12
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	566	160	792	1065	0
Turn Type	Perm			pm+ov		
Protected Phases		6	2	8	8	
Permitted Phases	6			2		
Actuated Green, G (s)		39.0	39.0	112.0	73.0	
Effective Green, g (s)		39.0	39.0	112.0	73.0	
Actuated g/C Ratio		0.32	0.32	0.93	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)		570	605	1583	1078	
v/s Ratio Prot			0.09	0.30	c0.60	
v/s Ratio Perm		c0.32		0.20		
v/c Ratio		0.99	0.26	0.50	0.99	
Uniform Delay, d1		40.4	29.9	0.5	23.1	
Progression Factor		1.00	1.47	1.00	0.35	
Incremental Delay, d2		36.0	1.0	0.2	14.6	
Delay (s)		76.4	44.9	0.7	22.6	
Level of Service		E	D	A	C	
Approach Delay (s)		76.4	8.2		22.6	
Approach LOS		E	A		C	

Intersection Summary

HCM Average Control Delay	29.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	97.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	953	600	63	587	670
Act Effct Green (s)	65.2	65.2	46.8	46.8	46.8
Actuated g/C Ratio	0.54	0.54	0.39	0.39	0.39
v/c Ratio	0.98	0.68	0.32	0.81	1.26dl
Control Delay	41.5	11.5	31.6	43.4	41.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	41.5	11.5	31.6	43.4	41.8
LOS	D	B	C	D	D
Approach Delay	41.5	11.5		42.2	41.8
Approach LOS	D	B		D	D
Queue Length 50th (ft)	206	114	34	404	273
Queue Length 95th (ft)	354	m140	52	#595	#390
Internal Link Dist (ft)	3138	678		2784	4158
Turn Bay Length (ft)			150		
Base Capacity (vph)	985	890	200	722	705
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.97	0.67	0.32	0.81	0.95

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 116 (97%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 35.5		Intersection LOS: D	
Intersection Capacity Utilization 96.0%		ICU Level of Service F	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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		1.00	1.00			0.95	
Frt		0.99			0.96		1.00	0.99			0.99	
Flt Protected		1.00			1.00		0.95	1.00			0.99	
Satd. Flow (prot)		1836			1781		1770	1848			3476	
Flt Permitted		0.97			0.89		0.28	1.00			0.52	
Satd. Flow (perm)		1784			1592		521	1848			1818	
Volume (vph)	21	582	69	27	283	112	42	518	18	92	483	23
Peak-hour factor, PHF	0.69	0.70	0.75	0.64	0.75	0.62	0.67	0.93	0.60	0.71	0.96	0.62
Adj. Flow (vph)	30	831	92	42	377	181	63	557	30	130	503	37
RTOR Reduction (vph)	0	3	0	0	13	0	0	2	0	0	4	0
Lane Group Flow (vph)	0	950	0	0	587	0	63	585	0	0	666	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		65.2			65.2		46.8	46.8			46.8	
Effective Green, g (s)		65.2			65.2		46.8	46.8			46.8	
Actuated g/C Ratio		0.54			0.54		0.39	0.39			0.39	
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)		969			865		203	721			709	
v/s Ratio Prot								0.32				
v/s Ratio Perm		c0.53			0.37		0.12				c0.37	
v/c Ratio		0.98			0.68		0.31	0.81			1.26dl	
Uniform Delay, d1		26.8			19.8		25.4	32.7			35.2	
Progression Factor		0.75			0.41		1.00	1.00			0.53	
Incremental Delay, d2		20.3			1.8		3.9	9.7			19.2	
Delay (s)		40.5			9.9		29.3	42.3			38.0	
Level of Service		D			A		C	D			D	
Approach Delay (s)		40.5			9.9			41.1			38.0	
Approach LOS		D			A			D			D	

Intersection Summary					
HCM Average Control Delay		33.7	HCM Level of Service		C
HCM Volume to Capacity ratio		0.96			
Actuated Cycle Length (s)		120.0	Sum of lost time (s)		8.0
Intersection Capacity Utilization		96.0%	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

Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	325	449	4	431	476	6	748	4	281
Act Effct Green (s)	69.8	67.8	45.6	40.0	40.0	5.9	42.2	42.2	42.2
Actuated g/C Ratio	0.58	0.56	0.38	0.33	0.33	0.05	0.35	0.35	0.35
v/c Ratio	0.70	0.43	0.02	0.69	0.56	0.07	1.23	0.01	0.38
Control Delay	47.7	8.0	13.0	29.5	8.2	55.7	145.8	19.0	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.7	8.0	13.0	29.5	8.2	55.7	145.8	19.0	3.3
LOS	D	A	B	C	A	E	F	B	A
Approach Delay		24.7		18.3		55.7		106.6	
Approach LOS		C		B		E		F	
Queue Length 50th (ft)	183	72	1	165	10	5	~737	2	0
Queue Length 95th (ft)	m220	m127	1	#498	130	11	#788	m2	m33
Internal Link Dist (ft)		4158		602		2286		7832	
Turn Bay Length (ft)	95		150				150		70
Base Capacity (vph)	462	1053	299	621	845	248	610	932	932
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.43	0.01	0.69	0.56	0.02	1.23	0.00	0.30

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 8 (7%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.23			
Intersection Signal Delay: 53.7		Intersection LOS: D	
Intersection Capacity Utilization 91.6%		ICU Level of Service F	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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		1.00	1.00	1.00
Frt	1.00	1.00		1.00	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		0.95	1.00	1.00
Satd. Flow (prot)	1770	1863		1770	1863	1583		1863		1770	1863	1583
Flt Permitted	0.18	1.00		0.50	1.00	1.00		1.00		0.74	1.00	1.00
Satd. Flow (perm)	341	1863		937	1863	1583		1863		1380	1863	1583
Volume (vph)	296	418	0	1	388	443	0	3	0	688	1	256
Peak-hour factor, PHF	0.91	0.93	0.92	0.25	0.90	0.93	0.92	0.50	0.92	0.92	0.25	0.91
Adj. Flow (vph)	325	449	0	4	431	476	0	6	0	748	4	281
RTOR Reduction (vph)	0	0	0	0	0	330	0	0	0	0	0	175
Lane Group Flow (vph)	325	449	0	4	431	146	0	6	0	748	4	106
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			pm+pt		Perm
Protected Phases	1	6		5	2			4		3	8	
Permitted Phases	6		6	2		2	4			8		8
Actuated Green, G (s)	66.6	61.4		38.0	36.8	36.8		1.4		45.4	45.4	45.4
Effective Green, g (s)	66.6	61.4		38.0	36.8	36.8		1.4		45.4	45.4	45.4
Actuated g/C Ratio	0.55	0.51		0.32	0.31	0.31		0.01		0.38	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
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)	496	953		305	571	485		22		652	705	599
v/s Ratio Prot	c0.14	0.24		0.00	c0.23			0.00		c0.38	0.00	
v/s Ratio Perm	0.22			0.00		0.09				c0.05		0.07
v/c Ratio	0.66	0.47		0.01	0.75	0.30		0.27		1.15	0.01	0.18
Uniform Delay, d1	18.9	18.9		28.1	37.5	31.8		58.8		37.0	23.2	24.9
Progression Factor	1.78	0.43		0.88	0.61	1.72		1.00		0.85	0.82	0.69
Incremental Delay, d2	1.9	1.0		0.0	8.5	1.5		6.6		82.4	0.0	0.1
Delay (s)	35.5	9.1		24.6	31.3	56.2		65.4		114.0	19.1	17.3
Level of Service	D	A		C	C	E		E		F	B	B
Approach Delay (s)		20.2			44.3			65.4			87.3	
Approach LOS		C			D			E			F	

Intersection Summary					
HCM Average Control Delay	53.8	HCM Level of Service		D	
HCM Volume to Capacity ratio	0.89				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	91.6%	ICU Level of Service		F	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	36	1121	32	30	842	181	27	41	420	29
Act Effct Green (s)	69.1	69.1	69.1	69.1	69.1	69.1	42.9	42.9	42.9	42.9
Actuated g/C Ratio	0.58	0.58	0.58	0.58	0.58	0.58	0.36	0.36	0.36	0.36
v/c Ratio	0.15	0.55	0.03	0.25	0.41	0.18	0.05	0.07	0.89	0.05
Control Delay	10.8	10.4	3.2	11.6	7.0	0.4	21.5	8.3	46.4	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.8	10.4	3.2	11.6	7.0	0.4	21.5	8.3	46.4	8.4
LOS	B	B	A	B	A	A	C	A	D	A
Approach Delay		10.2			6.0		13.6		43.9	
Approach LOS		B			A		B		D	
Queue Length 50th (ft)	7	144	0	5	71	0	14	4	347	19
Queue Length 95th (ft)	m15	m213	m3	m11	117	m0	15	17	269	m5
Internal Link Dist (ft)		5956			318		2546		3053	
Turn Bay Length (ft)	195		190	210		280		50		50
Base Capacity (vph)	234	2038	922	120	2038	988	687	808	663	798
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.55	0.03	0.25	0.41	0.18	0.04	0.05	0.63	0.04

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 12 (10%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 14.2		Intersection LOS: B	
Intersection Capacity Utilization 62.0%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.96	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1793	1583		1776	1583
Flt Permitted	0.27	1.00	1.00	0.18	1.00	1.00		0.70	1.00		0.71	1.00
Satd. Flow (perm)	510	3539	1583	331	3539	1583		1306	1583		1326	1583
Volume (vph)	30	1076	24	27	783	136	12	3	31	335	7	22
Peak-hour factor, PHF	0.83	0.96	0.75	0.90	0.93	0.75	0.58	0.50	0.75	0.82	0.62	0.75
Adj. Flow (vph)	36	1121	32	30	842	181	21	6	41	409	11	29
RTOR Reduction (vph)	0	0	11	0	0	77	0	0	21	0	0	8
Lane Group Flow (vph)	36	1121	21	30	842	104	0	27	20	0	420	21
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		6			2			4			8	
Permitted Phases	6		6	2		2	4		4	8		8
Actuated Green, G (s)	69.1	69.1	69.1	69.1	69.1	69.1		42.9	42.9		42.9	42.9
Effective Green, g (s)	69.1	69.1	69.1	69.1	69.1	69.1		42.9	42.9		42.9	42.9
Actuated g/C Ratio	0.58	0.58	0.58	0.58	0.58	0.58		0.36	0.36		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)	294	2038	912	191	2038	912		467	566		474	566
v/s Ratio Prot		c0.32			0.24							
v/s Ratio Perm	0.07		0.01	0.09		0.07		0.02	0.01		c0.32	0.01
v/c Ratio	0.12	0.55	0.02	0.16	0.41	0.11		0.06	0.03		0.89	0.04
Uniform Delay, d1	11.6	15.8	10.9	11.9	14.2	11.6		25.3	25.1		36.3	25.1
Progression Factor	0.63	0.56	0.45	0.40	0.41	0.03		1.00	1.00		0.91	0.59
Incremental Delay, d2	0.3	0.4	0.0	1.4	0.5	0.2		0.1	0.0		12.1	0.0
Delay (s)	7.6	9.3	4.9	6.2	6.3	0.5		25.3	25.1		45.0	14.9
Level of Service	A	A	A	A	A	A		C	C		D	B
Approach Delay (s)		9.1			5.3			25.2			43.1	
Approach LOS		A			A			C			D	

Intersection Summary					
HCM Average Control Delay	13.6	HCM Level of Service		B	
HCM Volume to Capacity ratio	0.68				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	62.0%	ICU Level of Service		B	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	197	466	442	212	328	314	12	36	339	129
Act Effct Green (s)	36.1	36.1	36.1	23.3	75.9	75.9	75.9	62.3	62.3	62.3
Actuated g/C Ratio	0.30	0.30	0.30	0.19	0.63	0.63	0.63	0.52	0.52	0.52
v/c Ratio	0.61	0.83	0.63	0.81	0.67	0.27	0.01	0.08	0.35	0.15
Control Delay	40.7	47.0	9.1	56.7	17.8	4.7	1.8	14.2	14.8	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.7	47.0	9.1	56.7	17.8	4.7	1.8	14.2	14.8	7.1
LOS	D	D	A	E	B	A	A	B	B	A
Approach Delay		30.7		56.7		11.2			12.8	
Approach LOS		C		E		B			B	
Queue Length 50th (ft)	111	334	42	105	19	15	0	7	77	2
Queue Length 95th (ft)	97	258	63	109	124	167	m2	m44	343	75
Internal Link Dist (ft)		247		5328		7832			11076	
Turn Bay Length (ft)	150		150		150		50	150		50
Base Capacity (vph)	402	730	819	336	719	1179	1005	434	967	845
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.64	0.54	0.63	0.46	0.27	0.01	0.08	0.35	0.15

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 102 (85%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 24.1		Intersection LOS: C	
Intersection Capacity Utilization 68.9%		ICU Level of Service C	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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
Frt	1.00	1.00	0.85		0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583		1815		1770	1863	1583	1770	1863	1583
Flt Permitted	0.40	1.00	1.00		0.45		0.48	1.00	1.00	0.52	1.00	1.00
Satd. Flow (perm)	751	1863	1583		810		890	1863	1583	970	1863	1583
Volume (vph)	126	317	358	6	131	27	246	289	6	27	312	89
Peak-hour factor, PHF	0.64	0.68	0.81	0.50	0.80	0.75	0.75	0.92	0.50	0.75	0.92	0.69
Adj. Flow (vph)	197	466	442	12	164	36	328	314	12	36	339	129
RTOR Reduction (vph)	0	0	229	0	6	0	0	0	3	0	0	24
Lane Group Flow (vph)	197	466	213	0	206	0	328	314	9	36	339	105
Turn Type	pm+pt		Perm	Perm			pm+pt		Perm	Perm		Perm
Protected Phases	3	8			4		1	6			2	
Permitted Phases	8		8	4			6		6	2		2
Actuated Green, G (s)	36.1	36.1	36.1		23.3		75.9	75.9	75.9	62.2	62.2	62.2
Effective Green, g (s)	36.1	36.1	36.1		23.3		75.9	75.9	75.9	62.2	62.2	62.2
Actuated g/C Ratio	0.30	0.30	0.30		0.19		0.63	0.63	0.63	0.52	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)	301	560	476		157		634	1178	1001	503	966	821
v/s Ratio Prot	0.05	c0.25					c0.04	0.17			0.18	
v/s Ratio Perm	0.15		0.13		c0.25		c0.29		0.01	0.04		0.07
v/c Ratio	0.65	0.83	0.45		1.31		0.52	0.27	0.01	0.07	0.35	0.13
Uniform Delay, d1	45.2	39.1	33.9		48.3		17.4	9.7	8.2	14.5	17.0	14.9
Progression Factor	0.89	0.90	0.64		0.78		0.60	0.38	0.26	0.68	0.68	0.54
Incremental Delay, d2	4.5	9.3	0.6		177.0		0.6	0.4	0.0	0.3	1.0	0.3
Delay (s)	44.9	44.6	22.2		215.0		11.1	4.2	2.1	10.1	12.6	8.3
Level of Service	D	D	C		F		B	A	A	B	B	A
Approach Delay (s)		35.7			215.0			7.6			11.3	
Approach LOS		D			F			A			B	

Intersection Summary					
HCM Average Control Delay		38.7	HCM Level of Service		D
HCM Volume to Capacity ratio		0.70			
Actuated Cycle Length (s)		120.0	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

Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	899	636	72	119
Sign Control	Free	Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	738	5	21	414	18	89
Peak Hour Factor	0.84	0.25	0.25	0.75	0.25	0.75
Hourly flow rate (vph)	879	20	84	552	72	119
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			899		1609	889
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			899		1609	889
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			89		30	65
cM capacity (veh/h)			756		102	342

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	899	636	191
Volume Left	0	84	72
Volume Right	20	0	119
cSH	1700	756	271
Volume to Capacity	0.53	0.11	0.70
Queue Length 95th (ft)	0	9	120
Control Delay (s)	0.0	2.8	50.1
Lane LOS		A	F
Approach Delay (s)	0.0	2.8	50.1
Approach LOS			F

Intersection Summary				
Average Delay		6.6		
Intersection Capacity Utilization	51.3%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	561	465	971	328
Act Effct Green (s)	44.0	68.0	68.0	68.0
Actuated g/C Ratio	0.37	0.57	0.57	0.57
v/c Ratio	0.86	0.44	0.75	0.39
Control Delay	51.3	15.4	5.4	7.3
Queue Delay	0.0	0.0	0.8	0.0
Total Delay	51.3	15.4	6.3	7.3
LOS	D	B	A	A
Approach Delay	51.3	9.2		7.3
Approach LOS	D	A		A
Queue Length 50th (ft)	391	170	21	58
Queue Length 95th (ft)	441	215	0	m65
Internal Link Dist (ft)	4006	688		3609
Turn Bay Length (ft)			150	
Base Capacity (vph)	744	1064	1293	838
Starvation Cap Reductn	0	0	113	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.75	0.44	0.82	0.39

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 120		
Offset: 59 (49%), Referenced to phase 2:SBTL and 6:NBT, Start of Green		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.86		
Intersection Signal Delay: 19.1	Intersection LOS: B	
Intersection Capacity Utilization 65.5%	ICU Level of Service C	
Analysis Period (min) 15		

m Volume for 95th percentile queue is metered by upstream signal.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
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
Frt	0.99		1.00	0.85		1.00
Flt Protected	0.96		1.00	1.00		0.99
Satd. Flow (prot)	1757		1863	1583		1845
Flt Permitted	0.96		1.00	1.00		0.84
Satd. Flow (perm)	1757		1863	1583		1559
Volume (vph)	376	45	349	563	39	217
Peak-hour factor, PHF	0.75	0.75	0.75	0.58	0.62	0.82
Adj. Flow (vph)	501	60	465	971	63	265
RTOR Reduction (vph)	4	0	0	393	0	0
Lane Group Flow (vph)	557	0	465	578	0	328
Turn Type				Perm	Perm	
Protected Phases	4		6			2
Permitted Phases				6	2	
Actuated Green, G (s)	44.0		68.0	68.0		68.0
Effective Green, g (s)	44.0		68.0	68.0		68.0
Actuated g/C Ratio	0.37		0.57	0.57		0.57
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)	644		1056	897		883
v/s Ratio Prot	c0.32		0.25			
v/s Ratio Perm				c0.37		0.21
v/c Ratio	0.87		0.44	0.64		0.37
Uniform Delay, d1	35.2		15.0	17.7		14.3
Progression Factor	1.11		0.86	1.11		0.39
Incremental Delay, d2	10.9		1.0	2.6		0.8
Delay (s)	49.9		13.9	22.3		6.3
Level of Service	D		B	C		A
Approach Delay (s)	49.9		19.6			6.3
Approach LOS	D		B			A

Intersection Summary			
HCM Average Control Delay	25.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	694	110	528	112	151	497	56
Act Effct Green (s)	54.7	54.7	91.8	91.8	20.2	20.2	20.2
Actuated g/C Ratio	0.46	0.46	0.76	0.76	0.17	0.17	0.17
v/c Ratio	0.82	0.15	0.95	0.08	0.62	0.87	0.18
Control Delay	39.6	11.6	47.7	2.5	47.3	26.7	43.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.6	11.6	47.7	2.5	47.3	26.7	43.2
LOS	D	B	D	A	D	C	D
Approach Delay	35.8			39.8	31.5		43.2
Approach LOS	D			D	C		D
Queue Length 50th (ft)	492	24	167	11	102	172	37
Queue Length 95th (ft)	#726	43	36	16	75	55	51
Internal Link Dist (ft)	3224			8926	3609		2278
Turn Bay Length (ft)		150	150			50	
Base Capacity (vph)	847	752	596	1425	267	587	342
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.15	0.89	0.08	0.57	0.85	0.16

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 60 (50%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.95			
Intersection Signal Delay: 35.9		Intersection LOS: D	
Intersection Capacity Utilization 68.1%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00			1.00	1.00		1.00	
Frt		1.00	0.85	1.00	1.00			1.00	0.85		1.00	
Flt Protected		1.00	1.00	0.95	1.00			0.97	1.00		1.00	
Satd. Flow (prot)		1862	1583	1770	1863			1808	1583		1863	
Flt Permitted		1.00	1.00	0.12	1.00			0.78	1.00		1.00	
Satd. Flow (perm)		1860	1583	226	1863			1458	1583		1863	
Volume (vph)	3	640	80	169	81	0	42	35	338	0	35	0
Peak-hour factor, PHF	0.50	0.93	0.73	0.32	0.72	0.92	0.46	0.58	0.68	0.92	0.62	0.92
Adj. Flow (vph)	6	688	110	528	112	0	91	60	497	0	56	0
RTOR Reduction (vph)	0	0	31	0	0	0	0	0	302	0	0	0
Lane Group Flow (vph)	0	694	79	528	112	0	0	151	195	0	56	0
Turn Type	Perm		Perm	pm+pt			Perm		Perm	Perm		Perm
Protected Phases		6		5	2			4			8	
Permitted Phases	6		6	2			4		4	8		8
Actuated Green, G (s)		54.7	54.7	91.8	91.8			20.2	20.2		20.2	
Effective Green, g (s)		54.7	54.7	91.8	91.8			20.2	20.2		20.2	
Actuated g/C Ratio		0.46	0.46	0.76	0.76			0.17	0.17		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)		848	722	599	1425			245	266		314	
v/s Ratio Prot				c0.24	0.06						0.03	
v/s Ratio Perm		0.37	0.05	c0.43				0.10	c0.12			
v/c Ratio		0.82	0.11	0.88	0.08			0.62	0.73		0.18	
Uniform Delay, d1		28.3	18.7	30.5	3.5			46.3	47.3		42.8	
Progression Factor		1.00	1.00	0.60	0.60			0.80	0.77		1.00	
Incremental Delay, d2		8.7	0.3	14.2	0.1			4.3	9.4		0.3	
Delay (s)		37.0	19.0	32.5	2.2			41.2	45.7		43.1	
Level of Service		D	B	C	A			D	D		D	
Approach Delay (s)		34.5			27.2			44.7			43.1	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	35.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBT	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	996	88	328	12	65	71	47
Sign Control	Free		Free		Stop		Stop

Intersection Summary							
Control Type: Unsignalized							
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												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	847	64	0	233	6	14	4	12	41	34	0
Peak Hour Factor	0.92	0.85	0.73	0.92	0.71	0.50	0.58	0.38	0.40	0.58	0.72	0.92
Hourly flow rate (vph)	0	996	88	0	328	12	24	11	30	71	47	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	328			996			1348	1325	498	832	1325	328
vC1, stage 1 conf vol							996	996		328	328	
vC2, stage 2 conf vol							352	328		503	996	
vCu, unblocked vol	328			996			1348	1325	498	832	1325	328
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			90	96	94	83	84	100
cM capacity (veh/h)	1228			690			243	300	518	424	300	668

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	0	498	498	88	0	328	12	65	71	47
Volume Left	0	0	0	0	0	0	0	24	71	0
Volume Right	0	0	0	88	0	0	12	30	0	0
cSH	1700	1700	1700	1700	1700	1700	1700	336	424	295
Volume to Capacity	0.00	0.29	0.29	0.05	0.00	0.19	0.01	0.19	0.17	0.16
Queue Length 95th (ft)	0	0	0	0	0	0	0	17	15	14
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.2	15.2	19.5
Lane LOS								C	C	C
Approach Delay (s)	0.0				0.0			18.2	16.9	
Approach LOS								C	C	

Intersection Summary										
Average Delay			2.0							
Intersection Capacity Utilization			38.5%		ICU Level of Service				A	
Analysis Period (min)			15							

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	784	580	308
Act Effct Green (s)	86.8	86.8	25.2
Actuated g/C Ratio	0.72	0.72	0.21
v/c Ratio	0.59	0.44	0.83
Control Delay	5.9	7.4	62.1
Queue Delay	0.0	0.0	0.0
Total Delay	5.9	7.4	62.1
LOS	A	A	E
Approach Delay	5.9	7.4	62.1
Approach LOS	A	A	E
Queue Length 50th (ft)	89	148	224
Queue Length 95th (ft)	392	m150	244
Internal Link Dist (ft)	1690	4737	3802
Turn Bay Length (ft)			
Base Capacity (vph)	1323	1318	575
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.59	0.44	0.54

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 120		
Offset: 57 (48%), Referenced to phase 2:WBT and 6:EBTL, Start of Green		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.83		
Intersection Signal Delay: 16.8	Intersection LOS: B	
Intersection Capacity Utilization 65.2%	ICU Level of Service C	
Analysis Period (min) 15		

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
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		1.00	
Frt		1.00	0.98		0.99	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		1860	1816		1758	
Flt Permitted		0.98	1.00		0.96	
Satd. Flow (perm)		1829	1816		1758	
Volume (vph)	13	673	388	59	207	20
Peak-hour factor, PHF	0.67	0.88	0.82	0.55	0.75	0.62
Adj. Flow (vph)	19	765	473	107	276	32
RTOR Reduction (vph)	0	0	5	0	4	0
Lane Group Flow (vph)	0	784	575	0	304	0
Turn Type	Perm					
Protected Phases		6	2		8	
Permitted Phases	6					
Actuated Green, G (s)		86.8	86.8		25.2	
Effective Green, g (s)		86.8	86.8		25.2	
Actuated g/C Ratio		0.72	0.72		0.21	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1323	1314		369	
v/s Ratio Prot			0.32		c0.17	
v/s Ratio Perm		c0.43				
v/c Ratio		0.59	0.44		0.82	
Uniform Delay, d1		8.0	6.7		45.3	
Progression Factor		0.50	0.86		1.00	
Incremental Delay, d2		1.2	0.9		13.8	
Delay (s)		5.2	6.7		59.1	
Level of Service		A	A		E	
Approach Delay (s)		5.2	6.7		59.1	
Approach LOS		A	A		E	

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	267	89	555	823
Act Effct Green (s)	45.8	45.8	45.8	66.2
Actuated g/C Ratio	0.38	0.38	0.38	0.55
v/c Ratio	0.45	0.13	0.59	0.85
Control Delay	32.9	24.8	5.5	23.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	32.9	24.8	5.5	23.7
LOS	C	C	A	C
Approach Delay	32.9	8.1		23.7
Approach LOS	C	A		C
Queue Length 50th (ft)	159	44	53	309
Queue Length 95th (ft)	250	m81	26	299
Internal Link Dist (ft)	6577	1690		4527
Turn Bay Length (ft)			150	
Base Capacity (vph)	590	711	947	1099
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.45	0.13	0.59	0.75

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 96 (80%), Referenced to phase 2:WBT and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 19.3		Intersection LOS: B	
Intersection Capacity Utilization 61.8%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
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	
Frt		1.00	1.00	0.85	0.98	
Flt Protected		0.98	1.00	1.00	0.96	
Satd. Flow (prot)		1825	1863	1583	1749	
Flt Permitted		0.83	1.00	1.00	0.96	
Satd. Flow (perm)		1553	1863	1583	1749	
Volume (vph)	98	137	81	333	544	94
Peak-hour factor, PHF	0.88	0.88	0.91	0.60	0.79	0.70
Adj. Flow (vph)	111	156	89	555	689	134
RTOR Reduction (vph)	0	0	0	343	7	0
Lane Group Flow (vph)	0	267	89	212	816	0
Turn Type	Perm			Perm		
Protected Phases		6	2		8	
Permitted Phases	6			2		
Actuated Green, G (s)		45.8	45.8	45.8	66.2	
Effective Green, g (s)		45.8	45.8	45.8	66.2	
Actuated g/C Ratio		0.38	0.38	0.38	0.55	
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)		593	711	604	965	
v/s Ratio Prot			0.05		c0.47	
v/s Ratio Perm		c0.17		0.13		
v/c Ratio		0.45	0.13	0.35	0.85	
Uniform Delay, d1		27.7	24.1	26.5	22.6	
Progression Factor		1.00	0.91	1.11	0.67	
Incremental Delay, d2		2.5	0.3	1.5	6.9	
Delay (s)		30.2	22.2	30.8	22.1	
Level of Service		C	C	C	C	
Approach Delay (s)		30.2	29.6		22.1	
Approach LOS		C	C		C	

Intersection Summary			
HCM Average Control Delay	26.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	92	196	57	1062
Act Effct Green (s)	11.4	11.4	100.6	100.6
Actuated g/C Ratio	0.10	0.10	0.84	0.84
v/c Ratio	0.54	0.60	0.04	0.99
Control Delay	63.1	14.6	0.9	36.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	63.1	14.6	0.9	36.4
LOS	E	B	A	D
Approach Delay	30.1		0.9	36.4
Approach LOS	C		A	D
Queue Length 50th (ft)	69	0	1	577
Queue Length 95th (ft)	64	0	2	180
Internal Link Dist (ft)	268		1455	1038
Turn Bay Length (ft)	150			
Base Capacity (vph)	236	381	1409	1075
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.39	0.51	0.04	0.99

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay: 33.7		Intersection LOS: C	
Intersection Capacity Utilization 31.6%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
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
Frt	1.00	0.85	0.90			1.00
Flt Protected	0.95	1.00	1.00			0.95
Satd. Flow (prot)	1770	1583	1673			1776
Flt Permitted	0.95	1.00	1.00			0.69
Satd. Flow (perm)	1770	1583	1673			1283
Volume (vph)	46	98	7	32	260	11
Peak-hour factor, PHF	0.50	0.50	0.50	0.75	0.25	0.50
Adj. Flow (vph)	92	196	14	43	1040	22
RTOR Reduction (vph)	0	177	7	0	0	0
Lane Group Flow (vph)	92	19	50	0	0	1062
Turn Type		Perm			Perm	
Protected Phases	4		6			2
Permitted Phases		4			2	
Actuated Green, G (s)	11.4	11.4	100.6			100.6
Effective Green, g (s)	11.4	11.4	100.6			100.6
Actuated g/C Ratio	0.10	0.10	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)	168	150	1403			1076
v/s Ratio Prot	c0.05		0.03			
v/s Ratio Perm		0.01				c0.83
v/c Ratio	0.55	0.12	0.04			0.99
Uniform Delay, d1	51.8	49.7	1.6			9.1
Progression Factor	1.00	1.00	0.94			1.00
Incremental Delay, d2	3.6	0.4	0.0			24.5
Delay (s)	55.5	50.1	1.6			33.6
Level of Service	E	D	A			C
Approach Delay (s)	51.8		1.6			33.6
Approach LOS	D		A			C

Intersection Summary			
HCM Average Control Delay	36.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	31.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	378	244	24	33	90	236	785	42	100	520	212
Act Effct Green (s)	35.9	35.9	35.9	35.9	35.9	23.6	64.0	64.0	48.5	48.5	48.5
Actuated g/C Ratio	0.30	0.30	0.30	0.30	0.30	0.20	0.53	0.53	0.40	0.40	0.40
v/c Ratio	0.92	0.38	0.09	0.06	0.17	0.35	0.79	0.05	0.58	0.69	0.29
Control Delay	69.2	6.7	29.0	28.1	6.5	38.0	24.9	5.5	33.5	23.2	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.2	6.7	29.0	28.1	6.5	38.0	24.9	5.5	33.5	23.2	2.9
LOS	E	A	C	C	A	D	C	A	C	C	A
Approach Delay		44.7		15.0			27.1			19.3	
Approach LOS		D		B			C			B	
Queue Length 50th (ft)	270	9	13	17	0	88	586	3	33	335	7
Queue Length 95th (ft)	178	67	34	41	37	30	397	m14	m58	285	0
Internal Link Dist (ft)		189		893			756			688	
Turn Bay Length (ft)	150		150		150	150		150	150		150
Base Capacity (vph)	457	685	297	621	588	674	997	858	177	854	811
Starvation Cap Reductn	0	0	0	0	0	0	2	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.36	0.08	0.05	0.15	0.35	0.79	0.05	0.56	0.61	0.26

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 28 (23%), Referenced to phase 2:SBTL and 6:NBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 28.1		Intersection LOS: C	
Intersection Capacity Utilization 66.1%		ICU Level of Service C	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	0.97	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.86		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)	1770	1604		1770	1863	1583	3433	1863	1583	1770	1863	1583
Flt Permitted	0.74	1.00		0.45	1.00	1.00	0.95	1.00	1.00	0.10	1.00	1.00
Satd. Flow (perm)	1370	1604		842	1863	1583	3433	1863	1583	184	1863	1583
Volume (vph)	189	17	113	22	30	83	59	644	39	92	432	53
Peak-hour factor, PHF	0.50	0.92	0.50	0.92	0.92	0.92	0.25	0.82	0.92	0.92	0.83	0.25
Adj. Flow (vph)	378	18	226	24	33	90	236	785	42	100	520	212
RTOR Reduction (vph)	0	158	0	0	0	63	0	0	10	0	0	94
Lane Group Flow (vph)	378	86	0	24	33	27	236	785	32	100	520	118
Turn Type	Perm			Perm		Perm	Prot		Perm	pm+pt		Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4		4			6	2		2
Actuated Green, G (s)	35.9	35.9		35.9	35.9	35.9	23.6	64.0	64.0	48.5	48.5	48.5
Effective Green, g (s)	35.9	35.9		35.9	35.9	35.9	23.6	64.0	64.0	48.5	48.5	48.5
Actuated g/C Ratio	0.30	0.30		0.30	0.30	0.30	0.20	0.53	0.53	0.40	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	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)	410	480		252	557	474	675	994	844	181	753	640
v/s Ratio Prot		0.05			0.02		0.07	c0.42		0.04	c0.28	
v/s Ratio Perm	c0.28			0.03		0.02			0.02	0.19		0.07
v/c Ratio	0.92	0.18		0.10	0.06	0.06	0.35	0.79	0.04	0.55	0.69	0.18
Uniform Delay, d1	40.7	31.1		30.3	30.0	30.0	41.6	22.6	13.3	55.3	29.5	23.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.85	0.75	0.59	0.96	0.63	0.31
Incremental Delay, d2	26.0	0.2		0.2	0.0	0.1	0.3	6.0	0.1	2.8	3.9	0.5
Delay (s)	66.7	31.3		30.5	30.0	30.0	35.8	23.0	8.0	55.9	22.6	7.5
Level of Service	E	C		C	C	C	D	C	A	E	C	A
Approach Delay (s)		52.8			30.1			25.3			22.8	
Approach LOS		D			C			C			C	

Intersection Summary					
HCM Average Control Delay	31.2	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.84				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	66.1%	ICU Level of Service		C	
Analysis Period (min)	15				

c Critical Lane Group

Future PM Intersection Analysis – Additional (Full Build Out)

Future 2028 PM

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	985	597	506	83	649
Sign Control	Free		Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	91.7%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	771	126	537	455	68	565
Peak Hour Factor	0.92	0.86	0.90	0.90	0.82	0.87
Hourly flow rate (vph)	838	147	597	506	83	649
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			985		2610	911
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			985		2610	911
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			15		0	0
cM capacity (veh/h)			702		4	332

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	985	597	506	732
Volume Left	0	597	0	83
Volume Right	147	0	0	649
cSH	1700	702	1700	33
Volume to Capacity	0.58	0.85	0.30	22.49
Queue Length 95th (ft)	0	244	0	Err
Control Delay (s)	0.0	32.1	0.0	Err
Lane LOS		D		F
Approach Delay (s)	0.0	17.4		Err
Approach LOS				F

Intersection Summary				
Average Delay	2604.3			
Intersection Capacity Utilization	91.7%	ICU Level of Service		F
Analysis Period (min)	15			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	53	676	651	612	830	47
Sign Control	Stop			Free	Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	44	629	599	569	780	38
Peak Hour Factor	0.83	0.93	0.92	0.93	0.94	0.81
Hourly flow rate (vph)	53	676	651	612	830	47
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2438	415	830			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2438	415	830			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	0	18			
cM capacity (veh/h)	5	586	798			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	53	676	651	306	306	415	415	47
Volume Left	53	0	651	0	0	0	0	0
Volume Right	0	676	0	0	0	0	0	47
cSH	5	586	798	1700	1700	1700	1700	1700
Volume to Capacity	11.02	1.15	0.82	0.18	0.18	0.24	0.24	0.03
Queue Length 95th (ft)	Err	563	224	0	0	0	0	0
Control Delay (s)	Err	111.8	26.2	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	F	D					
Approach Delay (s)	830.4		13.5			0.0		
Approach LOS	F							

Intersection Summary				
Average Delay	217.0			
Intersection Capacity Utilization	68.1%	ICU Level of Service		C
Analysis Period (min)	15			

Lane Group	EBL	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	502	962	578	154	369	266
Act Effct Green (s)	84.2	84.2	50.6	120.0	27.8	82.5
Actuated g/C Ratio	0.70	0.70	0.42	1.00	0.23	0.69
v/c Ratio	0.87	0.39	0.74	0.10	0.90	0.23
Control Delay	22.0	1.0	37.4	0.1	69.7	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.0	1.0	37.4	0.1	69.7	3.2
LOS	C	A	D	A	E	A
Approach Delay		8.2	29.6			
Approach LOS		A	C			
Queue Length 50th (ft)	125	21	389	0	268	22
Queue Length 95th (ft)	m193	m28	#552	0	#412	54
Internal Link Dist (ft)		808	1512			
Turn Bay Length (ft)	150					
Base Capacity (vph)	616	2488	786	1583	446	1140
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.39	0.74	0.10	0.83	0.23

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 79 (66%), Referenced to phase 2:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 21.3 Intersection LOS: C
Intersection Capacity Utilization 89.9% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

A-409

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	0.95			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	3539			1863	1583	1770		1583			
Flt Permitted	0.21	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	393	3539			1863	1583	1770		1583			
Volume (vph)	472	924	0	0	549	139	325	0	247	0	0	0
Peak-hour factor, PHF	0.94	0.96	0.92	0.92	0.95	0.90	0.88	0.92	0.93	0.92	0.92	0.92
Adj. Flow (vph)	502	962	0	0	578	154	369	0	266	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	54	0	0	0
Lane Group Flow (vph)	502	962	0	0	578	154	369	0	212	0	0	0
Turn Type	pm+pt					Free	Prot		custom			
Protected Phases	1	6			2		7					
Permitted Phases	6					Free			2 7			
Actuated Green, G (s)	84.2	84.2			50.6	120.0	27.8		82.4			
Effective Green, g (s)	84.2	84.2			50.6	120.0	27.8		82.4			
Actuated g/C Ratio	0.70	0.70			0.42	1.00	0.23		0.69			
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)	615	2483			786	1583	410		1087			
v/s Ratio Prot	c0.20	0.27			0.31		c0.21					
v/s Ratio Perm	c0.37					0.10			0.13			
v/c Ratio	0.82	0.39			0.74	0.10	0.90		0.20			
Uniform Delay, d1	28.2	7.3			29.1	0.0	44.8		6.8			
Progression Factor	0.41	0.11			1.00	1.00	1.00		1.00			
Incremental Delay, d2	4.0	0.0			6.1	0.1	22.2		0.1			
Delay (s)	15.6	0.8			35.1	0.1	67.0		6.9			
Level of Service	B	A			D	A	E		A			
Approach Delay (s)		5.9			27.8			41.8			0.0	
Approach LOS		A			C			D			A	

Intersection Summary

HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	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

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	815	388	309	703	731	839
Act Effct Green (s)	60.7	120.0	83.0	83.0	29.0	93.7
Actuated g/C Ratio	0.51	1.00	0.69	0.69	0.24	0.78
v/c Ratio	0.87	0.25	0.91	0.55	0.88	0.65
Control Delay	38.0	0.4	70.7	8.5	57.2	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.0	0.4	70.7	8.5	57.2	6.3
LOS	D	A	E	A	E	A
Approach Delay	25.9			27.5		
Approach LOS	C			C		
Queue Length 50th (ft)	554	0	202	134	282	153
Queue Length 95th (ft)	#817	0	m#291	m218	#385	254
Internal Link Dist (ft)	1279			808		
Turn Bay Length (ft)		150	150			
Base Capacity (vph)	942	1583	364	1289	830	1300
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.25	0.85	0.55	0.88	0.65

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 56 (47%), Referenced to phase 2:WBTL and 6:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 28.0 Intersection LOS: C
Intersection Capacity Utilization 89.9% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

A-410

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00					0.97		1.00
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		1863	1583	1770	1863					3433		1583
Flt Permitted		1.00	1.00	0.09	1.00					0.95		1.00
Satd. Flow (perm)		1863	1583	161	1863					3433		1583
Volume (vph)	0	742	345	278	654	0	0	0	0	694	0	789
Peak-hour factor, PHF	0.92	0.91	0.89	0.90	0.93	0.92	0.92	0.92	0.92	0.95	0.92	0.94
Adj. Flow (vph)	0	815	388	309	703	0	0	0	0	731	0	839
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	64
Lane Group Flow (vph)	0	815	388	309	703	0	0	0	0	731	0	775
Turn Type			Free	pm+pt						Prot		custom
Protected Phases		6		5	2					3		
Permitted Phases			Free	2								3 6
Actuated Green, G (s)		60.7	120.0	83.0	83.0					29.0		93.7
Effective Green, g (s)		60.7	120.0	83.0	83.0					29.0		93.7
Actuated g/C Ratio		0.51	1.00	0.69	0.69					0.24		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)		942	1583	357	1289					830		1236
v/s Ratio Prot		0.44		c0.13	0.38					c0.21		
v/s Ratio Perm			0.25	c0.47								0.49
v/c Ratio		0.87	0.25	0.87	0.55					0.88		0.63
Uniform Delay, d1		26.1	0.0	34.5	9.2					43.8		5.6
Progression Factor		1.00	1.00	1.58	0.79					1.00		1.00
Incremental Delay, d2		10.5	0.4	13.3	1.1					12.9		2.4
Delay (s)		36.5	0.4	67.8	8.3					56.7		8.1
Level of Service		D	A	E	A					E		A
Approach Delay (s)		24.9			26.5			0.0			30.7	
Approach LOS		C			C			A			C	

Intersection Summary

HCM Average Control Delay	27.7	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.86			
Actuated Cycle Length (s)	120.0	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

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	261	1606	990
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	139.3%	ICU Level of Service H
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	12	221	410	996	834	59
Peak Hour Factor	0.67	0.91	0.89	0.87	0.92	0.71
Hourly flow rate (vph)	18	243	461	1145	907	83
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	461				1312	1033
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	461				1312	1033
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				0	71
cM capacity (veh/h)	1100				172	282

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	261	1606	990
Volume Left	18	0	907
Volume Right	0	1145	83
cSH	1100	1700	178
Volume to Capacity	0.02	0.94	5.56
Queue Length 95th (ft)	1	0	Err
Control Delay (s)	0.7	0.0	Err
Lane LOS	A		F
Approach Delay (s)	0.7	0.0	Err
Approach LOS			F

Intersection Summary			
Average Delay	3464.9		
Intersection Capacity Utilization	139.3%	ICU Level of Service	H
Analysis Period (min)	15		

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	648	781	620	1135
Act Effct Green (s)	43.0	43.0	69.0	69.0
Actuated g/C Ratio	0.36	0.36	0.58	0.58
v/c Ratio	1.28	1.31	0.97	1.30
Control Delay	172.1	176.8	54.4	161.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	172.1	176.8	54.4	161.7
LOS	F	F	D	F
Approach Delay	172.1	176.8	54.4	161.7
Approach LOS	F	F	D	F
Queue Length 50th (ft)	~634	~771	437	~1120
Queue Length 95th (ft)	#765	#1017	#712m	#1273
Internal Link Dist (ft)	3138	678	2784	4178
Turn Bay Length (ft)				
Base Capacity (vph)	508	596	640	870
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.28	1.31	0.97	1.30

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 89 (74%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.31
Intersection Signal Delay: 146.6 Intersection LOS: F
Intersection Capacity Utilization 123.4% ICU Level of Service H
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

A-412

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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			1.00	
Frt		0.98			0.98			0.99			0.99	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1817			1816			1835			1841	
Flt Permitted		0.77			0.91			0.60			0.81	
Satd. Flow (perm)		1403			1648			1109			1510	
Volume (vph)	33	416	75	30	565	111	71	455	21	117	896	35
Peak-hour factor, PHF	0.70	0.83	0.75	0.83	0.92	0.85	0.58	0.96	0.88	0.79	0.95	0.80
Adj. Flow (vph)	47	501	100	36	614	131	122	474	24	148	943	44
RTOR Reduction (vph)	0	6	0	0	6	0	0	1	0	0	1	0
Lane Group Flow (vph)	0	642	0	0	775	0	0	619	0	0	1134	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		43.0			43.0			69.0			69.0	
Effective Green, g (s)		43.0			43.0			69.0			69.0	
Actuated g/C Ratio		0.36			0.36			0.57			0.57	
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)		503			591			638			868	
v/s Ratio Prot												
v/s Ratio Perm		0.46			c0.47			0.56			c0.75	
v/c Ratio		1.28			1.31			0.97			1.31	
Uniform Delay, d1		38.5			38.5			24.5			25.5	
Progression Factor		1.00			0.74			1.00			0.58	
Incremental Delay, d2		139.3			150.2			28.9			143.0	
Delay (s)		177.8			178.7			53.4			157.7	
Level of Service		F			F			D			F	
Approach Delay (s)		177.8			178.7			53.4			157.7	
Approach LOS		F			F			D			F	

Intersection Summary

HCM Average Control Delay	146.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	123.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	340	378	11	4	541	742	14	667	522
Act Effct Green (s)	54.6	54.6	54.6	35.0	35.0	35.0	55.0	55.0	55.0
Actuated g/C Ratio	0.46	0.46	0.46	0.29	0.29	0.29	0.46	0.46	0.46
v/c Ratio	0.97	0.45	0.02	0.01	1.00	0.81	0.02	1.05	0.64
Control Delay	53.3	19.9	12.2	31.0	80.6	14.2	13.4	73.9	13.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.3	19.9	12.2	31.0	80.6	14.2	13.4	73.9	13.5
LOS	D	B	B	C	F	B	B	E	B
Approach Delay		35.4			42.2		13.4	47.4	
Approach LOS		D			D		B	D	
Queue Length 50th (ft)	181	140	0	2	418	60	3	~567	145
Queue Length 95th (ft)	m#230	m199	m2	3	#652	251	3	m#762	m234
Internal Link Dist (ft)		4178			602		2286	7832	
Turn Bay Length (ft)	95		100	150					70
Base Capacity (vph)	350	848	724	343	543	914	732	638	815
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.45	0.02	0.01	1.00	0.81	0.02	1.05	0.64

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 108 (90%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.05
Intersection Signal Delay: 42.4 Intersection LOS: D
Intersection Capacity Utilization 96.4% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

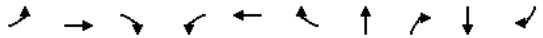
A-413

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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		1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.94			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99			0.95	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583		1730			1770	1583
Flt Permitted	0.12	1.00	1.00	0.54	1.00	1.00		0.91			0.75	1.00
Satd. Flow (perm)	223	1863	1583	1001	1863	1583		1589			1394	1583
Volume (vph)	313	348	4	1	519	683	1	1	3	634	0	491
Peak-hour factor, PHF	0.92	0.92	0.38	0.25	0.96	0.92	0.25	0.25	0.50	0.95	0.92	0.94
Adj. Flow (vph)	340	378	11	4	541	742	4	4	6	667	0	522
RTOR Reduction (vph)	0	0	4	0	0	453	0	3	0	0	0	89
Lane Group Flow (vph)	340	378	7	4	541	289	0	11	0	0	667	433
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			Perm		Perm
Protected Phases	1	6		5	2			4			8	
Permitted Phases	6		6	2		2	4			8		8
Actuated Green, G (s)	51.4	51.4	51.4	35.0	35.0	35.0		55.0			55.0	55.0
Effective Green, g (s)	51.4	51.4	51.4	35.0	35.0	35.0		55.0			55.0	55.0
Actuated g/C Ratio	0.43	0.43	0.43	0.29	0.29	0.29		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	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)	328	798	678	302	543	462		728			639	726
v/s Ratio Prot	c0.16	0.20		0.00	c0.29							
v/s Ratio Perm	c0.29		0.00	0.00		0.18		0.01			c0.48	0.27
v/c Ratio	1.04	0.47	0.01	0.01	1.00	0.63		0.01			1.04	0.60
Uniform Delay, d1	53.2	24.6	19.7	30.2	42.4	36.8		17.7			32.5	24.2
Progression Factor	1.09	0.81	0.87	1.00	1.00	1.00		1.00			0.76	0.58
Incremental Delay, d2	38.3	0.7	0.0	0.0	37.7	6.3		0.0			47.2	1.3
Delay (s)	96.3	20.7	17.1	30.2	80.2	43.1		17.7			71.8	15.4
Level of Service	F	C	B	C	F	D		B			E	B
Approach Delay (s)		55.9			58.7			17.7			47.0	
Approach LOS		E			E			B			D	

Intersection Summary

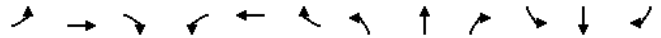
HCM Average Control Delay	53.6	HCM Level of Service		D	
HCM Volume to Capacity ratio	1.01				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	96.4%	ICU Level of Service		F	
Analysis Period (min)	15				

c Critical Lane Group



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	30	910	18	41	1167	387	44	41	250	18
Sign Control		Free			Free		Stop		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	54.5%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	15	874	9	25	1097	321	23	4	28	195	0	15
Peak Hour Factor	0.50	0.96	0.50	0.61	0.94	0.83	0.70	0.38	0.68	0.78	0.92	0.83
Hourly flow rate (vph)	30	910	18	41	1167	387	33	11	41	250	0	18
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1167			910			1636	2219	455	1769	2219	584
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1167			910			1636	2219	455	1769	2219	584
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			94			44	73	93	0	100	96
cM capacity (veh/h)	594			744			59	39	552	36	39	455

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	30	455	455	18	41	584	584	387	85	268
Volume Left	30	0	0	0	41	0	0	0	33	250
Volume Right	0	0	0	18	0	0	0	387	41	18
cSH	594	1700	1700	1700	744	1700	1700	1700	101	38
Volume to Capacity	0.05	0.27	0.27	0.01	0.06	0.34	0.34	0.23	0.83	7.04
Queue Length 95th (ft)	4	0	0	0	4	0	0	0	117	Err
Control Delay (s)	11.4	0.0	0.0	0.0	10.1	0.0	0.0	0.0	124.7	Err
Lane LOS	B				B				F	F
Approach Delay (s)	0.4				0.3				124.7	Err
Approach LOS									F	F

Intersection Summary				
Average Delay	926.3			
Intersection Capacity Utilization	54.5%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	828	441	779	11	615	174
Sign Control	Stop	Stop	Free		Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	131.2%	ICU Level of Service	H
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	103	187	302	3	317	22	363	295	4	30	539	122
Peak Hour Factor	0.50	0.75	0.81	0.50	0.78	0.75	0.81	0.89	0.38	0.71	0.94	0.70
Hourly flow rate (vph)	206	249	373	6	406	29	448	331	11	42	573	174
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	2118	1886	573	2383	1886	331	573			331		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2118	1886	573	2383	1886	331	573			331		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	0	0	28	0	0	96	55			97		
cM capacity (veh/h)	0	38	519	0	38	710	1000			1228		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	828	442	780	11	616	174
Volume Left	206	6	448	0	42	0
Volume Right	373	29	0	11	0	174
cSH	0	0	1000	1700	1228	1700
Volume to Capacity	Err	Err	0.45	0.01	0.03	0.10
Queue Length 95th (ft)	Err	Err	59	0	3	0
Control Delay (s)	Err	Err	9.3	0.0	0.9	0.0
Lane LOS	F	F	A		A	
Approach Delay (s)	Err	Err	9.2		0.7	
Approach LOS	F	F				

Intersection Summary					
Average Delay	Err				
Intersection Capacity Utilization	131.2%	ICU Level of Service	H		
Analysis Period (min)	15				

Lane Group	EBT	WBT	NBL
Lane Group Flow (vph)	794	953	120
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	86.8%	ICU Level of Service E
Analysis Period (min)	15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	553	18	88	730	9	42
Peak Hour Factor	0.73	0.50	0.50	0.94	0.25	0.50
Hourly flow rate (vph)	758	36	176	777	36	84
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			794		1904	776
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			794		1904	776
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			79		39	79
cM capacity (veh/h)			828		60	398

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	794	953	120
Volume Left	0	176	36
Volume Right	36	0	84
cSH	1700	828	147
Volume to Capacity	0.47	0.21	0.82
Queue Length 95th (ft)	0	20	131
Control Delay (s)	0.0	5.3	91.6
Lane LOS		A	F
Approach Delay (s)	0.0	5.3	91.6
Approach LOS			F

Intersection Summary				
Average Delay	8.6			
Intersection Capacity Utilization	86.8%	ICU Level of Service	E	
Analysis Period (min)	15			

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	704	837	10
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	49.5%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	1	574	750	1	3	1
Peak Hour Factor	0.25	0.82	0.90	0.25	0.50	0.25
Hourly flow rate (vph)	4	700	833	4	6	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	837				1543	835
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	837				1543	835
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				95	99
cM capacity (veh/h)	797				126	367

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	704	837	10
Volume Left	4	0	6
Volume Right	0	4	4
cSH	797	1700	171
Volume to Capacity	0.01	0.49	0.06
Queue Length 95th (ft)	0	0	5
Control Delay (s)	0.1	0.0	27.4
Lane LOS	A		D
Approach Delay (s)	0.1	0.0	27.4
Approach LOS			D

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	904	1002	484
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	100.0%	ICU Level of Service G
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	571	39	295	485	47	379
Peak Hour Factor	0.67	0.75	0.83	0.75	0.75	0.90
Hourly flow rate (vph)	852	52	355	647	63	421
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1225	679			1002	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1225	679			1002	
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	88			91	
cM capacity (veh/h)	180	452			691	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	904	1002	484
Volume Left	852	0	63
Volume Right	52	647	0
cSH	186	1700	691
Volume to Capacity	4.86	0.59	0.09
Queue Length 95th (ft)	Err	0	7
Control Delay (s)	Err	0.0	2.5
Lane LOS	F		A
Approach Delay (s)	9999.0	0.0	2.5
Approach LOS	F		

Intersection Summary			
Average Delay	3783.4		
Intersection Capacity Utilization	100.0%	ICU Level of Service	G
Analysis Period (min)	15		

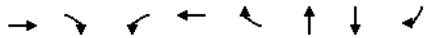
Lane Group	EBT	EBR	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	104	59	1399	4	192	320	59	11
Sign Control	Free		Free		Stop		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	78	44	315	533	1	80	51	224	0	44	4
Peak Hour Factor	0.25	0.78	0.75	0.44	0.78	0.25	0.89	0.50	0.70	0.92	0.75	0.38
Hourly flow rate (vph)	4	100	59	716	683	4	90	102	320	0	59	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	683			100			2252	2223	100	2274	2223	683
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	683			100			2252	2223	100	2274	2223	683
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			52			0	0	67	0	0	98
cM capacity (veh/h)	910			1493			0	22	956	0	22	449

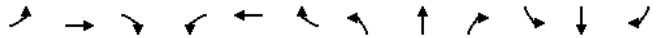
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	104	59	1399	4	512	69
Volume Left	4	0	716	0	90	0
Volume Right	0	59	0	4	320	11
cSH	910	1700	1493	1700	0	26
Volume to Capacity	0.00	0.03	0.48	0.00	3187.83	2.64
Queue Length 95th (ft)	0	0	67	0	Err	211
Control Delay (s)	0.4	0.0	8.7	0.0	Err	1057.1
Lane LOS	A		A		F	F
Approach Delay (s)	0.2		8.7		Err	1057.1
Approach LOS					F	F

Intersection Summary				
Average Delay	2423.7			
Intersection Capacity Utilization	72.6%	ICU Level of Service		C
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	296	40	11	1000	48	158	26	20
Sign Control	Free			Free		Stop	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	58.3%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	243	30	4	760	40	66	24	0	0	13	18
Peak Hour Factor	0.92	0.82	0.75	0.38	0.76	0.84	0.57	0.57	0.92	0.56	0.50	0.92
Hourly flow rate (vph)	0	296	40	11	1000	48	116	42	0	0	26	20
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1000			296			1330	1317	148	1190	1317	1000
vC1, stage 1 conf vol							296	296		1021	1021	
vC2, stage 2 conf vol							1034	1021		169	296	
vCu, unblocked vol	1000			296			1330	1317	148	1190	1317	1000
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			42	86	100	100	91	92
cM capacity (veh/h)	688			1262			199	292	872	241	292	241

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	0	148	148	40	11	1000	48	158	0	46
Volume Left	0	0	0	0	11	0	0	116	0	0
Volume Right	0	0	0	40	0	0	48	0	0	20
cSH	1700	1700	1700	1700	1262	1700	1700	218	1700	511
Volume to Capacity	0.00	0.09	0.09	0.02	0.01	0.59	0.03	0.73	0.00	0.09
Queue Length 95th (ft)	0	0	0	0	1	0	0	120	0	7
Control Delay (s)	0.0	0.0	0.0	0.0	7.9	0.0	0.0	55.7	0.0	19.7
Lane LOS					A			F	A	C
Approach Delay (s)	0.0				0.1			55.7	19.7	
Approach LOS								F	C	

Intersection Summary					
Average Delay	6.1				
Intersection Capacity Utilization	58.3%	ICU Level of Service		B	
Analysis Period (min)	15				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	27	251	1	153	787	10	10	339	7	444
Act Effct Green (s)	7.7	60.2	60.2	15.8	72.3	72.3	32.0	32.0	32.0	32.0
Actuated g/C Ratio	0.06	0.50	0.50	0.13	0.60	0.60	0.27	0.27	0.27	0.27
v/c Ratio	0.24	0.14	0.00	0.65	0.37	0.01	0.06	0.69	0.03	0.90
Control Delay	57.3	18.8	17.0	55.2	5.2	0.6	36.1	50.8	28.5	63.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.3	18.8	17.0	55.2	5.2	0.6	36.1	50.8	28.5	63.1
LOS	E	B	B	E	A	A	D	D	C	E
Approach Delay		22.5			13.2			50.4		62.6
Approach LOS		C			B			D		E
Queue Length 50th (ft)	20	54	0	117	33	0	6	245	4	326
Queue Length 95th (ft)	50	101	4	186	45	m1	m11	m256	14	405
Internal Link Dist (ft)		2246			4418			11076		2261
Turn Bay Length (ft)	280		115	290		180	125		105	
Base Capacity (vph)	236	1776	795	384	2131	957	244	766	326	762
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.14	0.00	0.40	0.37	0.01	0.04	0.44	0.02	0.58

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 110 (92%), Referenced to phase 2:WBT and 6:EBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 31.8 Intersection LOS: C
Intersection Capacity Utilization 55.4% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		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)	1770	3539	1583	1770	3539	1583	1770	1830		1770	1811	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.12	1.00		0.27	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	233	1830		505	1811	
Volume (vph)	25	231	1	141	724	9	9	275	37	6	333	75
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	251	1	153	787	10	10	299	40	7	362	82
RTOR Reduction (vph)	0	0	1	0	0	4	0	5	0	0	9	0
Lane Group Flow (vph)	27	251	0	153	787	6	10	334	0	7	435	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	5.4	58.5	58.5	17.5	70.6	70.6	32.0	32.0		32.0	32.0	
Effective Green, g (s)	5.4	58.5	58.5	17.5	70.6	70.6	32.0	32.0		32.0	32.0	
Actuated g/C Ratio	0.05	0.49	0.49	0.15	0.59	0.59	0.27	0.27		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)	80	1725	772	258	2082	931	62	488		135	483	
v/s Ratio Prot	0.02	0.07		c0.09	c0.22			0.18			c0.24	
v/s Ratio Perm			0.00			0.00	0.04			0.01		
v/c Ratio	0.34	0.15	0.00	0.59	0.38	0.01	0.16	0.68		0.05	0.90	
Uniform Delay, d1	55.6	17.0	15.8	47.9	13.1	10.2	33.7	39.5		32.7	42.5	
Progression Factor	1.00	1.00	1.00	0.88	0.32	0.06	1.23	1.17		1.00	1.00	
Incremental Delay, d2	2.5	0.2	0.0	3.4	0.5	0.0	1.1	3.5		0.2	19.7	
Delay (s)	58.1	17.1	15.8	45.4	4.6	0.6	42.4	49.6		32.9	62.2	
Level of Service	E	B	B	D	A	A	D	D		C	E	
Approach Delay (s)		21.1			11.2			49.4			61.8	
Approach LOS		C			B			D			E	

Intersection Summary

HCM Average Control Delay	30.4	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.57				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	55.4%	ICU Level of Service		B	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	34	279	46	349	889	155	67	344	72	133
Act Effct Green (s)	64.2	58.3	58.3	78.8	72.7	72.7	25.6	25.6	23.3	22.2
Actuated g/C Ratio	0.54	0.49	0.49	0.66	0.61	0.61	0.21	0.21	0.19	0.18
v/c Ratio	0.11	0.16	0.06	0.56	0.41	0.16	0.25	0.86	0.31	0.39
Control Delay	6.1	9.6	1.4	14.2	15.6	6.1	38.5	60.3	45.0	41.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.1	9.6	1.4	14.2	15.6	6.1	38.5	60.3	45.0	41.6
LOS	A	A	A	B	B	A	D	E	D	D
Approach Delay		8.3			14.2			56.8		42.8
Approach LOS		A			B			E		D
Queue Length 50th (ft)	4	26	1	112	203	17	43	233	48	84
Queue Length 95th (ft)	m7	124	1	194	305	58	52	314	81	136
Internal Link Dist (ft)		5533			4590			2266		2361
Turn Bay Length (ft)	300		120	320		145	150		150	
Base Capacity (vph)	411	1719	793	750	2144	1000	284	574	330	580
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.16	0.06	0.47	0.41	0.16	0.24	0.60	0.22	0.23

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 4 (3%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 23.2 Intersection LOS: C
Intersection Capacity Utilization 61.1% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	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)	1770	3539	1583	1770	3539	1583	1770	1733		1770	1808	
Flt Permitted	0.32	1.00	1.00	0.53	1.00	1.00	0.38	1.00		0.35	1.00	
Satd. Flow (perm)	589	3539	1583	983	3539	1583	700	1733		659	1808	
Volume (vph)	24	254	28	304	836	138	43	166	150	61	96	18
Peak-hour factor, PHF	0.70	0.91	0.61	0.87	0.94	0.89	0.64	0.90	0.94	0.85	0.90	0.69
Adj. Flow (vph)	34	279	46	349	889	155	67	184	160	72	107	26
RTOR Reduction (vph)	0	0	24	0	0	43	0	30	0	0	9	0
Lane Group Flow (vph)	34	279	22	349	889	112	67	314	0	72	124	0
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2		2	4			8		
Actuated Green, G (s)	61.1	57.4	57.4	77.9	70.2	70.2	25.6	25.6		22.2	22.2	
Effective Green, g (s)	61.1	57.4	57.4	77.9	70.2	70.2	25.6	25.6		22.2	22.2	
Actuated g/C Ratio	0.51	0.48	0.48	0.65	0.59	0.59	0.21	0.21		0.18	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)	336	1693	757	746	2070	926	220	370		164	334	
v/s Ratio Prot	0.00	0.08		c0.06	0.25		0.02	c0.18		0.02	c0.07	
v/s Ratio Perm	0.05		0.01	c0.24		0.07	0.04			0.06		
v/c Ratio	0.10	0.16	0.03	0.47	0.43	0.12	0.30	0.85		0.44	0.37	
Uniform Delay, d1	14.7	17.7	16.6	9.4	13.8	11.1	38.9	45.3		48.6	42.8	
Progression Factor	0.47	0.46	0.17	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.2	0.1	0.5	0.7	0.3	0.8	16.4		1.9	0.7	
Delay (s)	7.1	8.3	2.9	9.9	14.5	11.4	39.6	61.7		50.5	43.5	
Level of Service	A	A	A	A	B	B	D	E		D	D	
Approach Delay (s)		7.5			13.0			58.1			46.0	
Approach LOS		A			B			E			D	

Intersection Summary

HCM Average Control Delay	22.8	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.54				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	61.1%	ICU Level of Service		B	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	653	1189	152
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	61.7%	ICU Level of Service B
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	14	560	731	185	89	6
Peak Hour Factor	0.58	0.89	0.83	0.60	0.62	0.75
Hourly flow rate (vph)	24	629	881	308	144	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1189				1712	1035
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1189				1712	1035
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	97
cM capacity (veh/h)	587				95	282

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	653	1189	152
Volume Left	24	0	144
Volume Right	0	308	8
cSH	587	1700	99
Volume to Capacity	0.04	0.70	1.53
Queue Length 95th (ft)	3	0	288
Control Delay (s)	1.1	0.0	360.4
Lane LOS	A		F
Approach Delay (s)	1.1	0.0	360.4
Approach LOS			F

Intersection Summary				
Average Delay		27.8		
Intersection Capacity Utilization		61.7%	ICU Level of Service	B
Analysis Period (min)		15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	232	898	779
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	93.4%	ICU Level of Service F
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	65	115	174	564	462	71
Peak Hour Factor	0.67	0.85	0.83	0.82	0.68	0.71
Hourly flow rate (vph)	97	135	210	688	679	100
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	897				883	554
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	897				883	554
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				0	81
cM capacity (veh/h)	757				276	532

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	232	897	779
Volume Left	97	0	679
Volume Right	0	688	100
cSH	757	1700	294
Volume to Capacity	0.13	0.53	2.65
Queue Length 95th (ft)	11	0	1629
Control Delay (s)	5.2	0.0	779.5
Lane LOS	A		F
Approach Delay (s)	5.2	0.0	779.5
Approach LOS			F

Intersection Summary				
Average Delay	318.9			
Intersection Capacity Utilization	93.4%	ICU Level of Service	F	
Analysis Period (min)	15			

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	265	222	172
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	35.9%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	86	113	173	19	12	70
Peak Hour Factor	0.62	0.90	0.89	0.67	0.38	0.50
Hourly flow rate (vph)	139	126	194	28	32	140
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	223				612	209
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	223				612	209
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	90				92	83
cM capacity (veh/h)	1346				410	832

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	264	223	172
Volume Left	139	0	32
Volume Right	0	28	140
cSH	1346	1700	699
Volume to Capacity	0.10	0.13	0.25
Queue Length 95th (ft)	9	0	24
Control Delay (s)	4.6	0.0	11.8
Lane LOS	A		B
Approach Delay (s)	4.6	0.0	11.8
Approach LOS			B

Intersection Summary			
Average Delay	4.9		
Intersection Capacity Utilization	35.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	182	277	49
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	23.4%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	7	142	155	86	33	7
Peak Hour Factor	0.62	0.83	0.90	0.82	0.88	0.62
Hourly flow rate (vph)	11	171	172	105	38	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	277				418	225
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	277				418	225
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				94	99
cM capacity (veh/h)	1286				586	815

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	182	277	49
Volume Left	11	0	38
Volume Right	0	105	11
cSH	1286	1700	627
Volume to Capacity	0.01	0.16	0.08
Queue Length 95th (ft)	1	0	6
Control Delay (s)	0.6	0.0	11.2
Lane LOS	A		B
Approach Delay (s)	0.6	0.0	11.2
Approach LOS			B

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	23.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	636	105	684
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	42.3%	ICU Level of Service A
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	53	265	11	62	167	8
Peak Hour Factor	0.50	0.50	0.50	0.75	0.25	0.50
Hourly flow rate (vph)	106	530	22	83	668	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1415	63			105	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1415	63			105	
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	47			55	
cM capacity (veh/h)	83	1001			1487	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	636	105	684
Volume Left	106	0	668
Volume Right	530	83	0
cSH	353	1700	1487
Volume to Capacity	1.80	0.06	0.45
Queue Length 95th (ft)	1029	0	60
Control Delay (s)	397.2	0.0	9.3
Lane LOS	F		A
Approach Delay (s)	397.2	0.0	9.3
Approach LOS	F		

Intersection Summary				
Average Delay	181.8			
Intersection Capacity Utilization	42.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	774	242	999	1266
Sign Control	Stop	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	90.8%	ICU Level of Service E
Analysis Period (min)	15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	83	53	96	50	50	123	130	579	38	109	631	207
Peak Hour Factor	0.25	0.92	0.25	0.92	0.92	0.92	0.50	0.83	0.92	0.92	0.86	0.50
Hourly flow rate (vph)	332	58	384	54	54	134	260	698	41	118	734	414
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	2577	2437	941	2829	2623	718	1148			739		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2577	2437	941	2829	2623	718	1148			739		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	0	0	0	0	0	69	57			86		
cM capacity (veh/h)	0	16	319	0	12	429	609			867		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	774	242	999	1266
Volume Left	332	54	260	118
Volume Right	384	134	41	414
cSH	0	0	609	867
Volume to Capacity	Err	Err	0.43	0.14
Queue Length 95th (ft)	Err	Err	53	12
Control Delay (s)	Err	Err	12.5	4.7
Lane LOS	F	F	B	A
Approach Delay (s)	Err	Err	12.5	4.7
Approach LOS	F	F		

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	90.8%	ICU Level of Service	E	
Analysis Period (min)	15			

Future 2028 PM Improved

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	985	597	506	83	649
Act Effct Green (s)	66.2	103.2	104.0	11.0	120.0
Actuated g/C Ratio	0.55	0.86	0.87	0.09	1.00
v/c Ratio	0.97	1.08	0.31	0.51	0.41
Control Delay	50.6	96.3	2.7	55.9	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	50.6	96.3	2.7	55.9	1.1
LOS	D	F	A	E	A
Approach Delay	50.6		53.4	7.3	
Approach LOS	D		D	A	
Queue Length 50th (ft)	~744	~462	62	66	3
Queue Length 95th (ft)	#1107	#696	117	m83	m0
Internal Link Dist (ft)	2724		2449	828	
Turn Bay Length (ft)					160
Base Capacity (vph)	1011	555	1614	236	1583
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.97	1.08	0.31	0.35	0.41

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 84 (70%), Referenced to phase 2:WBTL and 6:EBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.08			
Intersection Signal Delay: 40.5		Intersection LOS: D	
Intersection Capacity Utilization 91.7%		ICU Level of Service F	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
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	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	1825		1770	1863	1770	1583
Flt Permitted	1.00		0.06	1.00	0.95	1.00
Satd. Flow (perm)	1825		107	1863	1770	1583
Volume (vph)	771	126	537	455	68	565
Peak-hour factor, PHF	0.92	0.86	0.90	0.90	0.82	0.87
Adj. Flow (vph)	838	147	597	506	83	649
RTOR Reduction (vph)	5	0	0	0	0	0
Lane Group Flow (vph)	980	0	597	506	83	649
Turn Type			pm+pt			Free
Protected Phases	6		5	2	4	
Permitted Phases			2			Free
Actuated Green, G (s)	65.4		102.4	102.4	9.6	120.0
Effective Green, g (s)	65.4		102.4	102.4	9.6	120.0
Actuated g/C Ratio	0.55		0.85	0.85	0.08	1.00
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)	995		549	1590	142	1583
v/s Ratio Prot	0.54		c0.30	0.27	c0.05	
v/s Ratio Perm			c0.63			0.41
v/c Ratio	0.99		1.09	0.32	0.58	0.41
Uniform Delay, d1	26.8		39.0	1.8	53.3	0.0
Progression Factor	1.00		1.00	1.00	0.96	1.00
Incremental Delay, d2	25.2		64.3	0.5	3.7	0.5
Delay (s)	52.1		103.3	2.3	54.8	0.5
Level of Service	D		F	A	D	A
Approach Delay (s)	52.1			57.0	6.6	
Approach LOS	D			E	A	

Intersection Summary			
HCM Average Control Delay	42.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	53	676	651	612	830	47
Act Effct Green (s)	13.3	13.3	98.7	98.7	51.1	51.1
Actuated g/C Ratio	0.11	0.11	0.82	0.82	0.43	0.43
v/c Ratio	0.27	0.90	0.87	0.21	0.55	0.07
Control Delay	42.9	15.1	38.7	2.9	30.6	20.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.9	15.1	38.7	2.9	30.6	20.5
LOS	D	B	D	A	C	C
Approach Delay	17.1			21.4	30.0	
Approach LOS	B			C	C	
Queue Length 50th (ft)	35	189	134	24	250	14
Queue Length 95th (ft)	m18	m50	m#438	m84	397	43
Internal Link Dist (ft)	828			7187	5706	
Turn Bay Length (ft)	145		170			60
Base Capacity (vph)	413	866	800	2911	1508	683
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.78	0.81	0.21	0.55	0.07

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 72 (60%), Referenced to phase 2:SBT and 6:NBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.90			
Intersection Signal Delay: 22.9		Intersection LOS: C	
Intersection Capacity Utilization 68.1%		ICU Level of Service C	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
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	0.23	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	424	3539	3539	1583
Volume (vph)	44	629	599	569	780	38
Peak-hour factor, PHF	0.83	0.93	0.92	0.93	0.94	0.81
Adj. Flow (vph)	53	676	651	612	830	47
RTOR Reduction (vph)	0	576	0	0	0	9
Lane Group Flow (vph)	53	100	651	612	830	38
Turn Type		Perm	pm+pt			Perm
Protected Phases	8		1	6	2	
Permitted Phases		8	6			2
Actuated Green, G (s)	13.3	13.3	98.7	98.7	51.1	51.1
Effective Green, g (s)	13.3	13.3	98.7	98.7	51.1	51.1
Actuated g/C Ratio	0.11	0.11	0.82	0.82	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)	196	175	838	2911	1507	674
v/s Ratio Prot	0.03		c0.28	0.17	0.23	
v/s Ratio Perm		c0.06	c0.36			0.02
v/c Ratio	0.27	0.57	0.78	0.21	0.55	0.06
Uniform Delay, d1	48.9	50.6	16.7	2.3	25.8	20.3
Progression Factor	0.94	2.74	0.93	0.90	1.00	1.00
Incremental Delay, d2	0.1	0.4	4.2	0.2	1.5	0.2
Delay (s)	46.2	139.0	19.8	2.2	27.3	20.4
Level of Service	D	F	B	A	C	C
Approach Delay (s)	132.3			11.3	26.9	
Approach LOS	F			B	C	

Intersection Summary			
HCM Average Control Delay	46.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	261	461	1145	990
Act Effct Green (s)	32.5	32.5	120.0	79.5
Actuated g/C Ratio	0.27	0.27	1.00	0.66
v/c Ratio	0.73	0.91	0.72	0.85
Control Delay	51.9	54.2	4.8	15.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	51.9	54.2	4.8	15.3
LOS	D	D	A	B
Approach Delay	51.9	19.0		15.3
Approach LOS	D	B		B
Queue Length 50th (ft)	178	325	110	273
Queue Length 95th (ft)	274	#495	43	m322
Internal Link Dist (ft)	4085	1265		454
Turn Bay Length (ft)			150	
Base Capacity (vph)	396	559	1583	1169
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.66	0.82	0.72	0.85

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 49 (41%), Referenced to phase 2:WBT and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 20.7		Intersection LOS: C	
Intersection Capacity Utilization 80.6%		ICU Level of Service D	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
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	
Frt		1.00	1.00	0.85	0.99	
Flt Protected		1.00	1.00	1.00	0.96	
Satd. Flow (prot)		1856	1863	1583	1761	
Flt Permitted		0.59	1.00	1.00	0.96	
Satd. Flow (perm)		1106	1863	1583	1761	
Volume (vph)	12	221	410	996	834	59
Peak-hour factor, PHF	0.67	0.91	0.89	0.87	0.92	0.71
Adj. Flow (vph)	18	243	461	1145	907	83
RTOR Reduction (vph)	0	0	0	0	2	0
Lane Group Flow (vph)	0	261	461	1145	988	0
Turn Type	Perm			pm+ov		
Protected Phases		6	2	8	8	
Permitted Phases	6			2		
Actuated Green, G (s)		32.5	32.5	112.0	79.5	
Effective Green, g (s)		32.5	32.5	112.0	79.5	
Actuated g/C Ratio		0.27	0.27	0.93	0.66	
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)		300	505	1583	1167	
v/s Ratio Prot			c0.25	0.48	c0.56	
v/s Ratio Perm		0.24		0.24		
v/c Ratio		0.87	0.91	0.72	0.85	
Uniform Delay, d1		41.7	42.4	0.8	15.6	
Progression Factor		1.00	0.79	1.00	0.49	
Incremental Delay, d2		27.4	20.3	1.4	4.6	
Delay (s)		69.1	53.8	2.2	12.2	
Level of Service		E	D	A	B	
Approach Delay (s)		69.1	17.0		12.2	
Approach LOS		E	B		B	

Intersection Summary			
HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	120.0	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

Lane Group	EBT	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	648	781	122	498	1135
Act Effct Green (s)	54.0	54.0	58.0	58.0	58.0
Actuated g/C Ratio	0.45	0.45	0.48	0.48	0.48
v/c Ratio	0.91	1.00	1.01	0.56	1.01
Control Delay	38.4	64.7	118.4	24.7	47.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	38.4	64.7	118.4	24.7	47.5
LOS	D	E	F	C	D
Approach Delay	38.4	64.7		43.2	47.5
Approach LOS	D	E		D	D
Queue Length 50th (ft)	324	583	~93	263	~477
Queue Length 95th (ft)	#452	#863	#110	369	#610
Internal Link Dist (ft)	3138	678		2784	4158
Turn Bay Length (ft)			150		
Base Capacity (vph)	716	783	121	896	1120
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.91	1.00	1.01	0.56	1.01

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 101 (84%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay: 49.0		Intersection LOS: D	
Intersection Capacity Utilization 109.9%		ICU Level of Service H	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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		1.00	1.00			0.95	
Frt		0.98			0.98		1.00	0.99			0.99	
Flt Protected		1.00			1.00		0.95	1.00			0.99	
Satd. Flow (prot)		1817			1816		1770	1849			3496	
Flt Permitted		0.87			0.95		0.13	1.00			0.66	
Satd. Flow (perm)		1579			1727		251	1849			2310	
Volume (vph)	33	416	75	30	565	111	71	455	21	117	896	35
Peak-hour factor, PHF	0.70	0.83	0.75	0.83	0.92	0.85	0.58	0.96	0.88	0.79	0.95	0.80
Adj. Flow (vph)	47	501	100	36	614	131	122	474	24	148	943	44
RTOR Reduction (vph)	0	6	0	0	6	0	0	2	0	0	3	0
Lane Group Flow (vph)	0	643	0	0	775	0	122	496	0	0	1132	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		54.0			54.0		58.0	58.0			58.0	
Effective Green, g (s)		54.0			54.0		58.0	58.0			58.0	
Actuated g/C Ratio		0.45			0.45		0.48	0.48			0.48	
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)		711			777		121	894			1117	
v/s Ratio Prot								0.27				
v/s Ratio Perm		0.41			c0.45		0.49				c0.49	
v/c Ratio		0.90			1.00		1.01	0.56			1.01	
Uniform Delay, d1		30.6			32.9		31.0	21.9			31.0	
Progression Factor		0.72			1.20		1.00	1.00			0.65	
Incremental Delay, d2		13.2			25.7		84.0	2.5			26.1	
Delay (s)		35.4			65.2		115.0	24.4			46.1	
Level of Service		D			E		F	C			D	
Approach Delay (s)		35.4			65.2			42.2			46.1	
Approach LOS		D			E			D			D	

Intersection Summary					
HCM Average Control Delay	47.9	HCM Level of Service	D		
HCM Volume to Capacity ratio	1.01				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0		
Intersection Capacity Utilization	109.9%	ICU Level of Service	H		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	SBL	SBR
Lane Group Flow (vph)	340	378	11	4	541	742	14	667	522
Act Effct Green (s)	72.4	70.4	70.4	48.0	42.4	42.4	9.3	39.6	39.6
Actuated g/C Ratio	0.60	0.59	0.59	0.40	0.35	0.35	0.08	0.33	0.33
v/c Ratio	0.75	0.35	0.01	0.01	0.82	0.76	0.10	1.20	0.67
Control Delay	27.7	12.7	6.8	15.0	36.9	11.3	36.8	128.4	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.7	12.7	6.8	15.0	36.9	11.3	36.8	128.4	5.0
LOS	C	B	A	B	D	B	D	F	A
Approach Delay		19.6			22.1		36.8		
Approach LOS		B			C		D		
Queue Length 50th (ft)	81	68	0	1	272	25	6	~684	29
Queue Length 95th (ft)	m#353	m327	m2	1	#607	207	4	m#659	m17
Internal Link Dist (ft)		4158			602		2286		
Turn Bay Length (ft)	95		100	150				150	70
Base Capacity (vph)	455	1094	932	432	658	982	229	556	908
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.35	0.01	0.01	0.82	0.76	0.06	1.20	0.57

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 7 (6%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.20			
Intersection Signal Delay: 40.9		Intersection LOS: D	
Intersection Capacity Utilization 96.4%		ICU Level of Service F	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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		1.00		1.00		1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.94		1.00		0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99		0.95		1.00
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583		1730		1770		1583
Flt Permitted	0.10	1.00	1.00	0.54	1.00	1.00		0.91		0.68		1.00
Satd. Flow (perm)	188	1863	1583	1001	1863	1583		1605		1271		1583
Volume (vph)	313	348	4	1	519	683	1	1	3	634	0	491
Peak-hour factor, PHF	0.92	0.92	0.38	0.25	0.96	0.92	0.25	0.25	0.50	0.95	0.92	0.94
Adj. Flow (vph)	340	378	11	4	541	742	4	4	6	667	0	522
RTOR Reduction (vph)	0	0	3	0	0	436	0	6	0	0	0	254
Lane Group Flow (vph)	340	378	8	4	541	306	0	8	0	667	0	268
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			pm+pt		Perm
Protected Phases	1	6		5	2			4		3	8	
Permitted Phases	6		6	2		2	4			8		8
Actuated Green, G (s)	70.0	64.8	64.8	41.2	40.0	40.0		6.0		42.0		42.0
Effective Green, g (s)	70.0	64.8	64.8	41.2	40.0	40.0		6.0		42.0		42.0
Actuated g/C Ratio	0.58	0.54	0.54	0.34	0.33	0.33		0.05		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
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)	452	1006	855	351	621	528		80		578		554
v/s Ratio Prot	c0.16	0.20		0.00	c0.29					c0.31		
v/s Ratio Perm	0.28		0.00	0.00		0.19		0.01		c0.10		0.17
v/c Ratio	0.75	0.38	0.01	0.01	0.87	0.58		0.10		1.15		0.48
Uniform Delay, d1	30.5	15.9	12.8	25.9	37.6	33.1		54.4		38.2		30.5
Progression Factor	0.59	0.76	0.57	0.99	0.68	1.18		1.00		0.64		0.21
Incremental Delay, d2	5.6	0.9	0.0	0.0	14.5	4.2		0.6		84.3		0.5
Delay (s)	23.6	12.9	7.2	25.7	39.9	43.2		55.0		108.8		6.9
Level of Service	C	B	A	C	D	D		E		F		A
Approach Delay (s)		17.8			41.8			55.0			64.1	
Approach LOS		B			D			E			E	

Intersection Summary					
HCM Average Control Delay	44.6	HCM Level of Service		D	
HCM Volume to Capacity ratio	0.95				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	96.4%	ICU Level of Service		F	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	30	910	18	41	1167	387	44	41	250	18
Act Effct Green (s)	85.1	85.1	85.1	85.1	85.1	85.1	26.9	26.9	26.9	26.9
Actuated g/C Ratio	0.71	0.71	0.71	0.71	0.71	0.71	0.22	0.22	0.22	0.22
v/c Ratio	0.16	0.36	0.02	0.13	0.46	0.31	0.14	0.11	0.82	0.05
Control Delay	7.3	6.2	3.0	3.7	3.7	0.5	35.2	9.9	61.3	25.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.3	6.2	3.0	3.7	3.7	0.5	35.2	9.9	61.3	25.9
LOS	A	A	A	A	A	A	D	A	E	C
Approach Delay		6.1			2.9		23.0		58.9	
Approach LOS		A			A		C		E	
Queue Length 50th (ft)	5	76	0	4	67	0	28	0	201	9
Queue Length 95th (ft)	m8	m127	m1	m6	m81	m0	22	14	285	28
Internal Link Dist (ft)		5956			318		2546		3053	
Turn Bay Length (ft)	195		190	210		280		50		50
Base Capacity (vph)	190	2511	1128	304	2511	1235	568	671	554	653
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.36	0.02	0.13	0.46	0.31	0.08	0.06	0.45	0.03

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 19 (16%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 9.7		Intersection LOS: A	
Intersection Capacity Utilization 54.5%		ICU Level of Service A	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.96	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1795	1583		1770	1583
Flt Permitted	0.20	1.00	1.00	0.28	1.00	1.00		0.62	1.00		0.73	1.00
Satd. Flow (perm)	377	3539	1583	524	3539	1583		1162	1583		1357	1583
Volume (vph)	15	874	9	25	1097	321	23	4	28	195	0	15
Peak-hour factor, PHF	0.50	0.96	0.50	0.61	0.94	0.83	0.70	0.38	0.68	0.78	0.92	0.83
Adj. Flow (vph)	30	910	18	41	1167	387	33	11	41	250	0	18
RTOR Reduction (vph)	0	0	5	0	0	113	0	0	32	0	0	9
Lane Group Flow (vph)	30	910	13	41	1167	274	0	44	9	0	250	9
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		6			2			4			8	
Permitted Phases	6		6	2		2	4		4	8		8
Actuated Green, G (s)	85.1	85.1	85.1	85.1	85.1	85.1		26.9	26.9		26.9	26.9
Effective Green, g (s)	85.1	85.1	85.1	85.1	85.1	85.1		26.9	26.9		26.9	26.9
Actuated g/C Ratio	0.71	0.71	0.71	0.71	0.71	0.71		0.22	0.22		0.22	0.22
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)	267	2510	1123	372	2510	1123		260	355		304	355
v/s Ratio Prot		0.26			c0.33							
v/s Ratio Perm	0.08		0.01	0.08		0.17		0.04	0.01		c0.18	0.01
v/c Ratio	0.11	0.36	0.01	0.11	0.46	0.24		0.17	0.03		0.82	0.03
Uniform Delay, d1	5.5	6.8	5.1	5.5	7.6	6.1		37.5	36.3		44.3	36.3
Progression Factor	0.78	0.78	0.93	0.39	0.38	0.00		1.00	1.00		0.93	1.32
Incremental Delay, d2	0.4	0.2	0.0	0.4	0.5	0.4		0.3	0.0		15.7	0.0
Delay (s)	4.7	5.5	4.8	2.6	3.3	0.4		37.8	36.4		56.9	47.9
Level of Service	A	A	A	A	A	A		D	D		E	D
Approach Delay (s)		5.4			2.6			37.1			56.3	
Approach LOS		A			A			D			E	

Intersection Summary					
HCM Average Control Delay	9.5	HCM Level of Service		A	
HCM Volume to Capacity ratio	0.55				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	54.5%	ICU Level of Service		A	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	206	249	373	441	448	331	11	42	573	174
Act Effct Green (s)	43.0	43.0	43.0	29.0	69.0	69.0	69.0	38.0	38.0	38.0
Actuated g/C Ratio	0.36	0.36	0.36	0.24	0.58	0.58	0.58	0.32	0.32	0.32
v/c Ratio	0.95	0.37	0.46	0.99	0.97	0.31	0.01	0.16	0.97	0.33
Control Delay	74.8	25.3	2.5	75.7	59.3	6.2	2.2	17.2	54.0	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.8	25.3	2.5	75.7	59.3	6.2	2.2	17.2	54.0	10.9
LOS	E	C	A	E	E	A	A	B	D	B
Approach Delay		27.3		75.7		36.2			42.5	
Approach LOS		C		E		D			D	
Queue Length 50th (ft)	113	142	14	338	301	63	1	16	462	40
Queue Length 95th (ft)	79	m155	m13	#413	#414	m75	m0	m25	m#602	m62
Internal Link Dist (ft)		247		5328		7832			11076	
Turn Bay Length (ft)	150		150		150		50	150		50
Base Capacity (vph)	216	668	807	447	461	1071	913	265	590	529
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.37	0.46	0.99	0.97	0.31	0.01	0.16	0.97	0.33

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 75 (63%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay: 41.5		Intersection LOS: D	
Intersection Capacity Utilization 89.8%		ICU Level of Service E	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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
Frt	1.00	1.00	0.85		0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583		1845		1770	1863	1583	1770	1863	1583
Flt Permitted	0.13	1.00	1.00		1.00		0.10	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	250	1863	1583		1838		177	1863	1583	839	1863	1583
Volume (vph)	103	187	302	3	317	22	363	295	4	30	539	122
Peak-hour factor, PHF	0.50	0.75	0.81	0.50	0.78	0.75	0.81	0.89	0.38	0.71	0.94	0.70
Adj. Flow (vph)	206	249	373	6	406	29	448	331	11	42	573	174
RTOR Reduction (vph)	0	0	239	0	2	0	0	0	3	0	0	27
Lane Group Flow (vph)	206	249	134	0	439	0	448	331	8	42	573	147
Turn Type	pm+pt		Perm	Perm			pm+pt		Perm	Perm		Perm
Protected Phases	3	8			4		1	6			2	
Permitted Phases	8		8	4			6		6	2		2
Actuated Green, G (s)	43.0	43.0	43.0		29.0		69.0	69.0	69.0	38.0	38.0	38.0
Effective Green, g (s)	43.0	43.0	43.0		29.0		69.0	69.0	69.0	38.0	38.0	38.0
Actuated g/C Ratio	0.36	0.36	0.36		0.24		0.57	0.57	0.57	0.32	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
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)	216	668	567		444		460	1071	910	266	590	501
v/s Ratio Prot	c0.08	0.13					c0.22	0.18			0.31	
v/s Ratio Perm	c0.26		0.08		0.24		c0.34		0.01	0.05		0.09
v/c Ratio	0.95	0.37	0.24		0.99		0.97	0.31	0.01	0.16	0.97	0.29
Uniform Delay, d1	32.1	28.5	27.0		45.3		41.3	13.2	10.9	29.5	40.5	30.9
Progression Factor	0.82	0.82	0.27		0.79		0.73	0.43	0.29	0.53	0.59	0.39
Incremental Delay, d2	45.2	0.3	0.2		38.6		27.0	0.5	0.0	1.1	27.7	1.3
Delay (s)	71.5	23.8	7.5		74.3		57.0	6.1	3.2	16.7	51.7	13.3
Level of Service	E	C	A		E		E	A	A	B	D	B
Approach Delay (s)		28.3			74.3			34.9			41.4	
Approach LOS		C			E			C			D	

Intersection Summary					
HCM Average Control Delay		40.9	HCM Level of Service		D
HCM Volume to Capacity ratio		0.93			
Actuated Cycle Length (s)		120.0	Sum of lost time (s)		8.0
Intersection Capacity Utilization		89.8%	ICU Level of Service		E
Analysis Period (min)		15			

c Critical Lane Group

Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	794	953	36	84
Sign Control	Free	Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	86.8%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	553	18	88	730	9	42
Peak Hour Factor	0.73	0.50	0.50	0.94	0.25	0.50
Hourly flow rate (vph)	758	36	176	777	36	84
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			794		1904	776
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			794		1904	776
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			79		39	79
cM capacity (veh/h)			828		60	398

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	794	953	120
Volume Left	0	176	36
Volume Right	36	0	84
cSH	1700	828	198
Volume to Capacity	0.47	0.21	0.61
Queue Length 95th (ft)	0	20	85
Control Delay (s)	0.0	5.3	51.3
Lane LOS		A	F
Approach Delay (s)	0.0	5.3	51.3
Approach LOS			F

Intersection Summary				
Average Delay		6.0		
Intersection Capacity Utilization		86.8%	ICU Level of Service	E
Analysis Period (min)		15		

Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	904	355	647	484
Act Effct Green (s)	67.4	44.6	44.6	44.6
Actuated g/C Ratio	0.56	0.37	0.37	0.37
v/c Ratio	0.91	0.51	0.66	0.90
Control Delay	30.9	29.2	7.4	51.2
Queue Delay	2.4	0.0	0.4	0.0
Total Delay	33.3	29.2	7.8	51.2
LOS	C	C	A	D
Approach Delay	33.3	15.4		51.2
Approach LOS	C	B		D
Queue Length 50th (ft)	444	214	123	218
Queue Length 95th (ft)	375	m263	54	m#519
Internal Link Dist (ft)	4006	688		3609
Turn Bay Length (ft)			150	
Base Capacity (vph)	996	717	991	559
Starvation Cap Reductn	0	0	81	0
Spillback Cap Reductn	36	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.94	0.50	0.71	0.87

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 51 (43%), Referenced to phase 2:SBTL and 6:NBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 29.4		Intersection LOS: C	
Intersection Capacity Utilization 82.1%		ICU Level of Service E	
Analysis Period (min) 15			

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
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
Frt	0.99		1.00	0.85		1.00
Flt Protected	0.95		1.00	1.00		0.99
Satd. Flow (prot)	1765		1863	1583		1851
Flt Permitted	0.95		1.00	1.00		0.76
Satd. Flow (perm)	1765		1863	1583		1418
Volume (vph)	571	39	295	485	47	379
Peak-hour factor, PHF	0.67	0.75	0.83	0.75	0.75	0.90
Adj. Flow (vph)	852	52	355	647	63	421
RTOR Reduction (vph)	2	0	0	390	0	0
Lane Group Flow (vph)	902	0	355	257	0	484
Turn Type				Perm	Perm	
Protected Phases	4		6			2
Permitted Phases				6	2	
Actuated Green, G (s)	67.4		44.6	44.6		44.6
Effective Green, g (s)	67.4		44.6	44.6		44.6
Actuated g/C Ratio	0.56		0.37	0.37		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)	991		692	588		527
v/s Ratio Prot	c0.51		0.19			
v/s Ratio Perm				0.16		c0.34
v/c Ratio	0.91		0.51	0.44		0.92
Uniform Delay, d1	23.6		29.3	28.3		36.0
Progression Factor	0.79		0.93	1.72		1.00
Incremental Delay, d2	9.5		2.0	1.7		18.0
Delay (s)	28.0		29.2	50.4		54.0
Level of Service	C		C	D		D
Approach Delay (s)	28.0		42.9			54.0
Approach LOS	C		D			D

Intersection Summary			
HCM Average Control Delay	39.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	120.0	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

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	104	59	716	687	192	320	59	11
Act Effct Green (s)	54.8	54.8	89.8	89.8	22.2	22.2	22.2	22.2
Actuated g/C Ratio	0.46	0.46	0.75	0.75	0.18	0.18	0.18	0.18
v/c Ratio	0.13	0.08	0.80	0.49	0.67	0.70	0.17	0.04
Control Delay	29.6	10.5	12.3	5.2	35.7	9.6	39.1	17.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.6	10.5	12.3	5.2	35.7	9.6	39.1	17.0
LOS	C	B	B	A	D	A	D	B
Approach Delay	22.7			8.8	19.4		35.6	
Approach LOS	C			A	B		D	
Queue Length 50th (ft)	45	0	106	100	61	9	38	0
Queue Length 95th (ft)	111	25	65	122	53	9	58	3
Internal Link Dist (ft)	3224			9160	3609		2278	
Turn Bay Length (ft)		150	150			50		50
Base Capacity (vph)	826	755	1101	1393	413	572	497	430
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.08	0.65	0.49	0.46	0.56	0.12	0.03

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 90 (75%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 13.3		Intersection LOS: B	
Intersection Capacity Utilization 48.6%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	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		1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00			0.98	1.00		1.00	1.00
Satd. Flow (prot)		1859	1583	1770	1861			1820	1583		1863	1583
Flt Permitted		0.98	1.00	0.64	1.00			0.82	1.00		1.00	1.00
Satd. Flow (perm)		1829	1583	1198	1861			1530	1583		1863	1583
Volume (vph)	1	78	44	315	533	1	80	51	224	0	44	4
Peak-hour factor, PHF	0.25	0.78	0.75	0.44	0.78	0.25	0.89	0.50	0.70	0.92	0.75	0.38
Adj. Flow (vph)	4	100	59	716	683	4	90	102	320	0	59	11
RTOR Reduction (vph)	0	0	32	0	0	0	0	0	167	0	0	9
Lane Group Flow (vph)	0	104	27	716	687	0	0	192	153	0	59	2
Turn Type	Perm		Perm	pm+pt			Perm		Perm	Perm		Perm
Protected Phases		6		5	2			4			8	
Permitted Phases	6		6	2			4		4	8		8
Actuated Green, G (s)		54.8	54.8	89.8	89.8			22.2	22.2		22.2	22.2
Effective Green, g (s)		54.8	54.8	89.8	89.8			22.2	22.2		22.2	22.2
Actuated g/C Ratio		0.46	0.46	0.75	0.75			0.18	0.18		0.18	0.18
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)		835	723	1044	1393			283	293		345	293
v/s Ratio Prot				c0.18	0.37						0.03	
v/s Ratio Perm		0.06	0.02	c0.34				c0.13	0.10			0.00
v/c Ratio		0.12	0.04	0.69	0.49			0.68	0.52		0.17	0.01
Uniform Delay, d1		18.8	18.0	6.5	6.0			45.6	44.1		41.2	39.9
Progression Factor		1.00	1.00	0.64	0.54			0.56	0.12		1.00	1.00
Incremental Delay, d2		0.3	0.1	1.9	1.2			5.8	1.5		0.2	0.0
Delay (s)		19.1	18.1	6.1	4.5			31.5	7.0		41.4	39.9
Level of Service		B	B	A	A			C	A		D	D
Approach Delay (s)		18.7			5.3			16.2			41.2	
Approach LOS		B			A			B			D	

Intersection Summary					
HCM Average Control Delay	10.1	HCM Level of Service	B		
HCM Volume to Capacity ratio	0.68				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0		
Intersection Capacity Utilization	48.6%	ICU Level of Service	A		
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBT	EBR	WBL	WBT	WBR	NBT	SBT	SBR
Lane Group Flow (vph)	296	40	11	1000	48	158	26	20
Sign Control	Free			Free		Stop	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	58.3%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	243	30	4	760	40	66	24	0	0	13	18
Peak Hour Factor	0.92	0.82	0.75	0.38	0.76	0.84	0.57	0.57	0.92	0.56	0.50	0.92
Hourly flow rate (vph)	0	296	40	11	1000	48	116	42	0	0	26	20
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1000			296			1330	1317	148	1190	1317	1000
vC1, stage 1 conf vol							296	296		1021	1021	
vC2, stage 2 conf vol							1034	1021		169	296	
vCu, unblocked vol	1000			296			1330	1317	148	1190	1317	1000
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			42	86	100	100	91	92
cM capacity (veh/h)	688			1262			199	292	872	241	292	241

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	NB 1	SB 1	SB 2
Volume Total	0	148	148	40	11	1000	48	158	0	46
Volume Left	0	0	0	0	11	0	0	116	0	0
Volume Right	0	0	0	40	0	0	48	0	0	20
cSH	1700	1700	1700	1700	1262	1700	1700	218	1700	511
Volume to Capacity	0.00	0.09	0.09	0.02	0.01	0.59	0.03	0.73	0.00	0.09
Queue Length 95th (ft)	0	0	0	0	1	0	0	120	0	7
Control Delay (s)	0.0	0.0	0.0	0.0	7.9	0.0	0.0	55.7	0.0	19.7
Lane LOS					A			F	A	C
Approach Delay (s)	0.0				0.1			55.7	19.7	
Approach LOS								F	C	

Intersection Summary					
Average Delay	6.1				
Intersection Capacity Utilization	58.3%	ICU Level of Service		B	
Analysis Period (min)	15				

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	653	1189	152
Act Effct Green (s)	97.7	97.7	14.3
Actuated g/C Ratio	0.81	0.81	0.12
v/c Ratio	0.48	0.81	0.72
Control Delay	2.8	7.1	69.3
Queue Delay	0.0	0.0	0.0
Total Delay	2.8	7.1	69.3
LOS	A	A	E
Approach Delay	2.8	7.1	69.3
Approach LOS	A	A	E
Queue Length 50th (ft)	13	145	114
Queue Length 95th (ft)	77	m164	m120
Internal Link Dist (ft)	1690	4737	3802
Turn Bay Length (ft)			
Base Capacity (vph)	1368	1473	252
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.48	0.81	0.60

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 120		
Offset: 47 (39%), Referenced to phase 2:WBT and 6:EBTL, Start of Green		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.81		
Intersection Signal Delay: 10.5	Intersection LOS: B	
Intersection Capacity Utilization 61.7%	ICU Level of Service B	
Analysis Period (min) 15		

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
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		1.00	
Frt		1.00	0.97		0.99	
Flt Protected		1.00	1.00		0.95	
Satd. Flow (prot)		1859	1798		1766	
Flt Permitted		0.94	1.00		0.95	
Satd. Flow (perm)		1743	1798		1766	
Volume (vph)	14	560	731	185	89	6
Peak-hour factor, PHF	0.58	0.89	0.83	0.60	0.62	0.75
Adj. Flow (vph)	24	629	881	308	144	8
RTOR Reduction (vph)	0	0	9	0	2	0
Lane Group Flow (vph)	0	653	1180	0	150	0
Turn Type	Perm					
Protected Phases		6	2		8	
Permitted Phases	6					
Actuated Green, G (s)		97.7	97.7		14.3	
Effective Green, g (s)		97.7	97.7		14.3	
Actuated g/C Ratio		0.81	0.81		0.12	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1419	1464		210	
v/s Ratio Prot			c0.66		c0.09	
v/s Ratio Perm		0.37				
v/c Ratio		0.46	0.81		0.72	
Uniform Delay, d1		3.3	6.0		50.9	
Progression Factor		0.53	0.48		1.01	
Incremental Delay, d2		0.7	3.7		11.0	
Delay (s)		2.5	6.6		62.6	
Level of Service		A	A		E	
Approach Delay (s)		2.5	6.6		62.6	
Approach LOS		A	A		E	

Intersection Summary			
HCM Average Control Delay	9.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	232	210	688	779
Act Effct Green (s)	42.5	42.5	42.5	69.5
Actuated g/C Ratio	0.35	0.35	0.35	0.58
v/c Ratio	0.48	0.32	0.68	0.76
Control Delay	37.2	27.9	5.3	19.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	37.2	27.9	5.3	19.8
LOS	D	C	A	B
Approach Delay	37.2	10.6		19.8
Approach LOS	D	B		B
Queue Length 50th (ft)	142	98	37	307
Queue Length 95th (ft)	218	m146	58	240
Internal Link Dist (ft)	6577	1690		4527
Turn Bay Length (ft)			150	
Base Capacity (vph)	535	731	1039	1079
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.43	0.29	0.66	0.72

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 107 (89%), Referenced to phase 2:WBT and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 17.6		Intersection LOS: B	
Intersection Capacity Utilization 58.7%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
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	
Frt		1.00	1.00	0.85	0.98	
Flt Protected		0.98	1.00	1.00	0.96	
Satd. Flow (prot)		1825	1863	1583	1754	
Flt Permitted		0.73	1.00	1.00	0.96	
Satd. Flow (perm)		1356	1863	1583	1754	
Volume (vph)	65	115	174	564	462	71
Peak-hour factor, PHF	0.67	0.85	0.83	0.82	0.68	0.71
Adj. Flow (vph)	97	135	210	688	679	100
RTOR Reduction (vph)	0	0	0	444	4	0
Lane Group Flow (vph)	0	232	210	244	775	0
Turn Type	Perm			Perm		
Protected Phases		6	2		8	
Permitted Phases	6			2		
Actuated Green, G (s)		42.5	42.5	42.5	69.5	
Effective Green, g (s)		42.5	42.5	42.5	69.5	
Actuated g/C Ratio		0.35	0.35	0.35	0.58	
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)		480	660	561	1016	
v/s Ratio Prot			0.11		c0.44	
v/s Ratio Perm		c0.17		0.15		
v/c Ratio		0.48	0.32	0.43	0.76	
Uniform Delay, d1		30.2	28.2	29.6	19.0	
Progression Factor		1.00	0.87	1.11	0.78	
Incremental Delay, d2		3.5	0.7	1.4	3.4	
Delay (s)		33.7	25.2	34.2	18.3	
Level of Service		C	C	C	B	
Approach Delay (s)		33.7	32.1		18.3	
Approach LOS		C	C		B	

Intersection Summary				
HCM Average Control Delay	26.7	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization	58.7%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group

Lane Group	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	106	530	105	684
Act Effct Green (s)	14.1	14.1	97.9	97.9
Actuated g/C Ratio	0.12	0.12	0.82	0.82
v/c Ratio	0.51	0.81	0.08	0.69
Control Delay	56.5	14.4	1.1	10.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	56.5	14.4	1.1	10.7
LOS	E	B	A	B
Approach Delay	21.4		1.1	10.7
Approach LOS	C		A	B
Queue Length 50th (ft)	79	0	2	162
Queue Length 95th (ft)	65	0	2	138
Internal Link Dist (ft)	268		1455	1038
Turn Bay Length (ft)	150			
Base Capacity (vph)	384	758	1372	997
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.28	0.70	0.08	0.69

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 86 (72%), Referenced to phase 2:SBTL and 6:NBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 14.8		Intersection LOS: B	
Intersection Capacity Utilization 27.5%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
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
Frt	1.00	0.85	0.89			1.00
Flt Protected	0.95	1.00	1.00			0.95
Satd. Flow (prot)	1770	1583	1664			1776
Flt Permitted	0.95	1.00	1.00			0.66
Satd. Flow (perm)	1770	1583	1664			1221
Volume (vph)	53	265	11	62	167	8
Peak-hour factor, PHF	0.50	0.50	0.50	0.75	0.25	0.50
Adj. Flow (vph)	106	530	22	83	668	16
RTOR Reduction (vph)	0	468	15	0	0	0
Lane Group Flow (vph)	106	62	90	0	0	684
Turn Type		Perm			Perm	
Protected Phases	4		6			2
Permitted Phases		4			2	
Actuated Green, G (s)	14.1	14.1	97.9			97.9
Effective Green, g (s)	14.1	14.1	97.9			97.9
Actuated g/C Ratio	0.12	0.12	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)	208	186	1358			996
v/s Ratio Prot	c0.06		0.05			
v/s Ratio Perm		0.04				c0.56
v/c Ratio	0.51	0.33	0.07			0.69
Uniform Delay, d1	49.7	48.6	2.2			4.6
Progression Factor	1.00	1.00	0.87			1.00
Incremental Delay, d2	2.0	1.1	0.1			3.9
Delay (s)	51.7	49.7	2.0			8.5
Level of Service	D	D	A			A
Approach Delay (s)	50.0		2.0			8.5
Approach LOS	D		A			A

Intersection Summary			
HCM Average Control Delay	26.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	27.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	332	442	54	54	134	260	698	41	118	734	414
Act Effct Green (s)	33.2	33.2	33.2	33.2	33.2	13.3	67.1	67.1	61.5	61.5	61.5
Actuated g/C Ratio	0.28	0.28	0.28	0.28	0.28	0.11	0.56	0.56	0.51	0.51	0.51
v/c Ratio	0.89	0.67	0.51	0.10	0.25	0.68	0.67	0.05	0.60	0.77	0.45
Control Delay	67.5	17.2	53.3	30.6	6.1	55.6	19.9	5.2	22.0	22.4	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.4	0.0
Total Delay	67.5	17.2	53.3	30.6	6.1	55.6	19.9	5.2	22.0	22.8	6.1
LOS	E	B	D	C	A	E	B	A	C	C	A
Approach Delay		38.8		22.1			28.6			17.3	
Approach LOS		D		C			C			B	
Queue Length 50th (ft)	238	96	34	30	0	90	366	4	38	400	41
Queue Length 95th (ft)	72	206	80	61	44	75	496	m15	m43	m519	9
Internal Link Dist (ft)		189		893			756			688	
Turn Bay Length (ft)	150		150		150	150		150	150		150
Base Capacity (vph)	426	712	120	590	593	395	1042	897	203	956	923
Starvation Cap Reductn	0	0	0	0	0	0	16	0	0	34	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.62	0.45	0.09	0.23	0.66	0.68	0.05	0.58	0.80	0.45

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 8 (7%), Referenced to phase 2:SBTL and 6:NBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.89			
Intersection Signal Delay: 26.2		Intersection LOS: C	
Intersection Capacity Utilization 62.3%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	0.97	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.87		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)	1770	1620		1770	1863	1583	3433	1863	1583	1770	1863	1583
Flt Permitted	0.72	1.00		0.14	1.00	1.00	0.95	1.00	1.00	0.15	1.00	1.00
Satd. Flow (perm)	1345	1620		254	1863	1583	3433	1863	1583	281	1863	1583
Volume (vph)	83	53	96	50	50	123	130	579	38	109	631	207
Peak-hour factor, PHF	0.25	0.92	0.25	0.92	0.92	0.92	0.50	0.83	0.92	0.92	0.86	0.50
Adj. Flow (vph)	332	58	384	54	54	134	260	698	41	118	734	414
RTOR Reduction (vph)	0	210	0	0	0	97	0	0	11	0	0	110
Lane Group Flow (vph)	332	232	0	54	54	37	260	698	30	118	734	304
Turn Type	Perm			Perm		Perm	Prot		Perm	pm+pt		Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4		4			6	2		2
Actuated Green, G (s)	33.2	33.2		33.2	33.2	33.2	13.3	67.1	67.1	61.5	61.5	61.5
Effective Green, g (s)	33.2	33.2		33.2	33.2	33.2	13.3	67.1	67.1	61.5	61.5	61.5
Actuated g/C Ratio	0.28	0.28		0.28	0.28	0.28	0.11	0.56	0.56	0.51	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	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)	372	448		70	515	438	380	1042	885	240	955	811
v/s Ratio Prot		0.14			0.03		0.08	c0.37		0.03	c0.39	
v/s Ratio Perm	c0.25			0.21		0.02			0.02	0.22		0.19
v/c Ratio	0.89	0.52		0.77	0.10	0.08	0.68	0.67	0.03	0.49	0.77	0.37
Uniform Delay, d1	41.7	36.6		39.9	32.3	32.1	51.3	18.6	11.9	20.8	23.5	17.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.90	0.81	0.68	0.95	0.77	0.62
Incremental Delay, d2	22.6	1.0		39.9	0.1	0.1	4.7	3.2	0.1	0.6	2.5	0.5
Delay (s)	64.3	37.6		79.8	32.4	32.2	51.1	18.3	8.2	20.4	20.5	11.5
Level of Service	E	D		E	C	C	D	B	A	C	C	B
Approach Delay (s)		49.1			42.9			26.4			17.6	
Approach LOS		D			D			C			B	

Intersection Summary					
HCM Average Control Delay	29.5	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.78				
Actuated Cycle Length (s)	120.0	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

Future Saturday Intersection Analysis – Additional (Full Build Out)

Future 2028 Saturday

Lane Group	EBT	WBT	NBL
Lane Group Flow (vph)	672	833	136
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	79.9%	ICU Level of Service D
Analysis Period (min)	15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	546	13	63	622	13	55
Peak Hour Factor	0.88	0.25	0.50	0.88	0.50	0.50
Hourly flow rate (vph)	620	52	126	707	26	110
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			672		1605	646
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			672		1605	646
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			86		74	77
cM capacity (veh/h)			918		100	471

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	672	833	136
Volume Left	0	126	26
Volume Right	52	0	110
cSH	1700	918	276
Volume to Capacity	0.40	0.14	0.49
Queue Length 95th (ft)	0	12	64
Control Delay (s)	0.0	3.3	30.2
Lane LOS		A	D
Approach Delay (s)	0.0	3.3	30.2
Approach LOS			D

Intersection Summary				
Average Delay	4.2			
Intersection Capacity Utilization	79.9%	ICU Level of Service	D	
Analysis Period (min)	15			

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	640	699	10
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	43.0%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	3	558	624	3	1	3
Peak Hour Factor	0.50	0.88	0.90	0.50	0.25	0.50
Hourly flow rate (vph)	6	634	693	6	4	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	699				1342	696
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	699				1342	696
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				98	99
cM capacity (veh/h)	897				167	441

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	640	699	10
Volume Left	6	0	4
Volume Right	0	6	6
cSH	897	1700	266
Volume to Capacity	0.01	0.41	0.04
Queue Length 95th (ft)	1	0	3
Control Delay (s)	0.2	0.0	19.1
Lane LOS	A		C
Approach Delay (s)	0.2	0.0	19.1
Approach LOS			C

Intersection Summary				
Average Delay	0.2			
Intersection Capacity Utilization	43.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	944	1133	441
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	85.4%	ICU Level of Service E
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	524	31	332	460	35	355
Peak Hour Factor	0.58	0.75	0.85	0.62	0.75	0.90
Hourly flow rate (vph)	903	41	391	742	47	394
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1249	762			1133	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1249	762			1133	
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	90			92	
cM capacity (veh/h)	176	405			617	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	945	1133	441
Volume Left	903	0	47
Volume Right	41	742	0
cSH	181	1700	617
Volume to Capacity	5.22	0.67	0.08
Queue Length 95th (ft)	Err	0	6
Control Delay (s)	Err	0.0	2.2
Lane LOS	F		A
Approach Delay (s)	Err	0.0	2.2
Approach LOS	F		

Intersection Summary			
Average Delay	3751.5		
Intersection Capacity Utilization	85.4%	ICU Level of Service	E
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBT	WBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	105	78	541	4	142	374	99	17
Sign Control	Free		Free		Stop		Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	48.2%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	4	90	51	275	129	1	53	61	243	6	69	10
Peak Hour Factor	0.75	0.90	0.65	0.70	0.87	0.25	0.80	0.80	0.65	0.50	0.79	0.58
Hourly flow rate (vph)	5	100	78	393	148	4	66	76	374	12	87	17
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	148			100			1088	1045	100	1083	1045	148
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	148			100			1088	1045	100	1083	1045	148
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			74			27	55	61	81	48	98
cM capacity (veh/h)	1433			1493			91	168	956	62	168	898

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	105	78	541	4	516	117
Volume Left	5	0	393	0	66	12
Volume Right	0	78	0	4	374	17
cSH	1433	1700	1493	1700	366	174
Volume to Capacity	0.00	0.05	0.26	0.00	1.41	0.67
Queue Length 95th (ft)	0	0	27	0	655	98
Control Delay (s)	0.4	0.0	6.7	0.0	229.2	59.5
Lane LOS	A		A		F	F
Approach Delay (s)	0.2		6.6		229.2	59.5
Approach LOS					F	F

Intersection Summary					
Average Delay	94.7				
Intersection Capacity Utilization	48.2%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	630	921	237
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	52.6%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	6	538	593	131	114	7
Peak Hour Factor	0.50	0.87	0.90	0.50	0.50	0.75
Hourly flow rate (vph)	12	618	659	262	228	9
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	921				1432	790
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	921				1432	790
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				0	98
cM capacity (veh/h)	741				145	390

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	630	921	237
Volume Left	12	0	228
Volume Right	0	262	9
cSH	741	1700	149
Volume to Capacity	0.02	0.54	1.59
Queue Length 95th (ft)	1	0	411
Control Delay (s)	0.4	0.0	349.4
Lane LOS	A		F
Approach Delay (s)	0.4	0.0	349.4
Approach LOS			F

Intersection Summary			
Average Delay	46.5		
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	214	656	630
Sign Control	Free	Free	Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	84.8%	ICU Level of Service E
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	82	98	116	487	439	77
Peak Hour Factor	0.79	0.89	0.91	0.92	0.84	0.72
Hourly flow rate (vph)	104	110	127	529	523	107
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	657				710	392
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	657				710	392
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	89				0	84
cM capacity (veh/h)	931				355	657

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	214	657	630
Volume Left	104	0	523
Volume Right	0	529	107
cSH	931	1700	386
Volume to Capacity	0.11	0.39	1.63
Queue Length 95th (ft)	9	0	923
Control Delay (s)	5.1	0.0	321.5
Lane LOS	A		F
Approach Delay (s)	5.1	0.0	321.5
Approach LOS			F

Intersection Summary			
Average Delay	135.6		
Intersection Capacity Utilization	84.8%	ICU Level of Service	E
Analysis Period (min)	15		

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	770	125	916
Sign Control	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	44.9%	ICU Level of Service A
Analysis Period (min)	15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	71	243	9	80	222	7
Peak Hour Factor	0.25	0.50	0.50	0.75	0.25	0.25
Hourly flow rate (vph)	284	486	18	107	888	28
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1875	71			125	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1875	71			125	
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	51			39	
cM capacity (veh/h)	31	991			1462	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	770	125	916
Volume Left	284	0	888
Volume Right	486	107	0
cSH	80	1700	1462
Volume to Capacity	9.67	0.07	0.61
Queue Length 95th (ft)	Err	0	109
Control Delay (s)	Err	0.0	11.1
Lane LOS	F		B
Approach Delay (s)	Err	0.0	11.1
Approach LOS	F		

Intersection Summary			
Average Delay	4257.7		
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	793	197	1269	1118
Sign Control	Stop	Stop	Free	Free

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	100.4%	ICU Level of Service G
Analysis Period (min)	15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	113	60	138	26	61	95	136	589	29	105	616	160
Peak Hour Factor	0.25	0.92	0.50	0.92	0.92	0.92	0.25	0.85	0.92	0.92	0.90	0.50
Hourly flow rate (vph)	452	65	276	28	66	103	544	693	32	114	684	320
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	3006	2885	844	3178	3029	709	1004			724		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	3006	2885	844	3178	3029	709	1004			724		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	0	0	24	0	0	76	21			87		
cM capacity (veh/h)	0	3	363	0	2	434	690			878		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	793	198	1268	1119
Volume Left	452	28	544	114
Volume Right	276	103	32	320
cSH	0	0	690	878
Volume to Capacity	Err	Err	0.79	0.13
Queue Length 95th (ft)	Err	Err	196	11
Control Delay (s)	Err	Err	32.6	3.8
Lane LOS	F	F	D	A
Approach Delay (s)	Err	Err	32.6	3.8
Approach LOS	F	F		

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	100.4%	ICU Level of Service	G	
Analysis Period (min)	15			

Future 2028 Saturday Improved

Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	672	833	26	110
Sign Control	Free	Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	546	13	63	622	13	55
Peak Hour Factor	0.88	0.25	0.50	0.88	0.50	0.50
Hourly flow rate (vph)	620	52	126	707	26	110
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						6
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			672		1605	646
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			672		1605	646
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			86		74	77
cM capacity (veh/h)			918		100	471

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	672	833	136
Volume Left	0	126	26
Volume Right	52	0	110
cSH	1700	918	523
Volume to Capacity	0.40	0.14	0.26
Queue Length 95th (ft)	0	12	26
Control Delay (s)	0.0	3.3	22.3
Lane LOS		A	C
Approach Delay (s)	0.0	3.3	22.3
Approach LOS			C

Intersection Summary				
Average Delay	3.5			
Intersection Capacity Utilization	79.1%	ICU Level of Service	D	
Analysis Period (min)	15			

Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	944	391	742	441
Act Effct Green (s)	66.0	46.0	46.0	46.0
Actuated g/C Ratio	0.55	0.38	0.38	0.38
v/c Ratio	0.97	0.55	0.75	0.81
Control Delay	48.8	28.6	11.2	41.9
Queue Delay	0.0	0.0	0.4	0.0
Total Delay	48.8	28.6	11.7	41.9
LOS	D	C	B	D
Approach Delay	48.8	17.5		41.9
Approach LOS	D	B		D
Queue Length 50th (ft)	632	231	154	231
Queue Length 95th (ft)	367	m280	43	#506
Internal Link Dist (ft)	4006	688		3609
Turn Bay Length (ft)			150	
Base Capacity (vph)	1017	715	990	544
Starvation Cap Reductn	0	0	46	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.93	0.55	0.79	0.81

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 120		
Offset: 43 (36%), Referenced to phase 2:SBTL and 6:NBT, Start of Green		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.97		
Intersection Signal Delay: 33.5	Intersection LOS: C	
Intersection Capacity Utilization 79.0%	ICU Level of Service D	
Analysis Period (min) 15		

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
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
Frt	0.99		1.00	0.85		1.00
Flt Protected	0.95		1.00	1.00		0.99
Satd. Flow (prot)	1767		1863	1583		1853
Flt Permitted	0.95		1.00	1.00		0.81
Satd. Flow (perm)	1767		1863	1583		1505
Volume (vph)	524	31	332	460	35	355
Peak-hour factor, PHF	0.58	0.75	0.85	0.62	0.75	0.90
Adj. Flow (vph)	903	41	391	742	47	394
RTOR Reduction (vph)	1	0	0	383	0	0
Lane Group Flow (vph)	943	0	391	359	0	441
Turn Type				Perm	Perm	
Protected Phases	4		6			2
Permitted Phases				6	2	
Actuated Green, G (s)	66.0		46.0	46.0		46.0
Effective Green, g (s)	66.0		46.0	46.0		46.0
Actuated g/C Ratio	0.55		0.38	0.38		0.38
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)	972		714	607		577
v/s Ratio Prot	c0.53		0.21			
v/s Ratio Perm				0.23		c0.29
v/c Ratio	0.97		0.55	0.59		0.76
Uniform Delay, d1	26.0		28.9	29.5		32.3
Progression Factor	1.00		0.88	1.37		0.85
Incremental Delay, d2	21.5		1.8	2.5		8.8
Delay (s)	47.6		27.2	42.8		36.1
Level of Service	D		C	D		D
Approach Delay (s)	47.6		37.4			36.1
Approach LOS	D		D			D

Intersection Summary			
HCM Average Control Delay	41.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	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

Lane Group	EBT	EBR	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	105	78	393	152	142	374	99	17
Act Effct Green (s)	72.1	72.1	90.5	90.5	21.5	21.5	21.5	21.5
Actuated g/C Ratio	0.60	0.60	0.75	0.75	0.18	0.18	0.18	0.18
v/c Ratio	0.09	0.08	0.45	0.11	0.51	0.64	0.31	0.06
Control Delay	12.5	3.2	7.0	4.7	33.9	6.8	44.0	16.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.5	3.2	7.0	4.7	33.9	6.8	44.0	16.6
LOS	B	A	A	A	C	A	D	B
Approach Delay	8.5			6.4	14.3		40.0	
Approach LOS	A			A	B		D	
Queue Length 50th (ft)	39	0	106	34	39	2	62	0
Queue Length 95th (ft)	73	10	105	52	m56	0	98	9
Internal Link Dist (ft)	3224			3453	3609		2278	
Turn Bay Length (ft)		150	150			50		50
Base Capacity (vph)	1107	983	1026	1400	543	791	631	565
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.08	0.38	0.11	0.26	0.47	0.16	0.03

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 80 (67%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 12.5		Intersection LOS: B	
Intersection Capacity Utilization 41.4%		ICU Level of Service A	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	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		1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00			0.98	1.00		0.99	1.00
Satd. Flow (prot)		1858	1583	1770	1855			1820	1583		1852	1583
Flt Permitted		0.99	1.00	0.65	1.00			0.80	1.00		0.96	1.00
Satd. Flow (perm)		1847	1583	1216	1855			1482	1583		1791	1583
Volume (vph)	4	90	51	275	129	1	53	61	243	6	69	10
Peak-hour factor, PHF	0.75	0.90	0.65	0.70	0.87	0.25	0.80	0.80	0.65	0.50	0.79	0.58
Adj. Flow (vph)	5	100	78	393	148	4	66	76	374	12	87	17
RTOR Reduction (vph)	0	0	31	0	0	0	0	0	300	0	0	14
Lane Group Flow (vph)	0	105	47	393	152	0	0	142	74	0	99	3
Turn Type	Perm		Perm	pm+pt			Perm		Perm	Perm		Perm
Protected Phases		6		5	2			4			8	
Permitted Phases	6		6	2			4		4	8		8
Actuated Green, G (s)		72.1	72.1	90.5	90.5			21.5	21.5		21.5	21.5
Effective Green, g (s)		72.1	72.1	90.5	90.5			21.5	21.5		21.5	21.5
Actuated g/C Ratio		0.60	0.60	0.75	0.75			0.18	0.18		0.18	0.18
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)		1110	951	984	1399			266	284		321	284
v/s Ratio Prot				c0.05	0.08							
v/s Ratio Perm		0.06	0.03	c0.25				c0.10	0.05		0.06	0.00
v/c Ratio		0.09	0.05	0.40	0.11			0.53	0.26		0.31	0.01
Uniform Delay, d1		10.1	9.9	4.8	3.9			44.7	42.4		42.8	40.5
Progression Factor		1.00	1.00	1.00	1.00			0.64	0.43		1.00	1.00
Incremental Delay, d2		0.2	0.1	0.3	0.2			1.8	0.4		0.5	0.0
Delay (s)		10.3	9.9	5.0	4.1			30.5	18.6		43.3	40.5
Level of Service		B	A	A	A			C	B		D	D
Approach Delay (s)		10.2			4.8			21.9			42.9	
Approach LOS		B			A			C			D	

Intersection Summary			
HCM Average Control Delay	15.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBT	SBL
Lane Group Flow (vph)	630	921	237
Act Effct Green (s)	91.5	91.5	20.5
Actuated g/C Ratio	0.76	0.76	0.17
v/c Ratio	0.45	0.67	0.78
Control Delay	1.5	10.5	64.3
Queue Delay	0.0	0.0	0.0
Total Delay	1.5	10.5	64.3
LOS	A	B	E
Approach Delay	1.5	10.5	64.3
Approach LOS	A	B	E
Queue Length 50th (ft)	20	280	176
Queue Length 95th (ft)	31	531	125
Internal Link Dist (ft)	1690	4737	3802
Turn Bay Length (ft)			
Base Capacity (vph)	1393	1376	444
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.45	0.67	0.53

Intersection Summary		
Cycle Length: 120		
Actuated Cycle Length: 120		
Offset: 77 (64%), Referenced to phase 2:WBT and 6:EBTL, Start of Green		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.78		
Intersection Signal Delay: 14.5	Intersection LOS: B	
Intersection Capacity Utilization 52.6%	ICU Level of Service A	
Analysis Period (min) 15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
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		1.00	
Frt		1.00	0.96		0.99	
Flt Protected		1.00	1.00		0.95	
Satd. Flow (prot)		1861	1791		1768	
Flt Permitted		0.98	1.00		0.95	
Satd. Flow (perm)		1827	1791		1768	
Volume (vph)	6	538	593	131	114	7
Peak-hour factor, PHF	0.50	0.87	0.90	0.50	0.50	0.75
Adj. Flow (vph)	12	618	659	262	228	9
RTOR Reduction (vph)	0	0	9	0	2	0
Lane Group Flow (vph)	0	630	912	0	235	0
Turn Type	Perm					
Protected Phases		6	2		8	
Permitted Phases	6					
Actuated Green, G (s)		91.5	91.5		20.5	
Effective Green, g (s)		91.5	91.5		20.5	
Actuated g/C Ratio		0.76	0.76		0.17	
Clearance Time (s)		4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0		3.0	
Lane Grp Cap (vph)		1393	1366		302	
v/s Ratio Prot			c0.51		c0.13	
v/s Ratio Perm		0.34				
v/c Ratio		0.45	0.67		0.78	
Uniform Delay, d1		5.2	6.9		47.6	
Progression Factor		0.14	1.00		1.00	
Incremental Delay, d2		0.7	2.6		12.0	
Delay (s)		1.4	9.5		59.6	
Level of Service		A	A		E	
Approach Delay (s)		1.4	9.5		59.6	
Approach LOS		A	A		E	

Intersection Summary			
HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	214	127	529	630
Act Effct Green (s)	59.4	59.4	59.4	52.6
Actuated g/C Ratio	0.50	0.50	0.50	0.44
v/c Ratio	0.29	0.14	0.50	0.82
Control Delay	21.5	12.4	2.6	34.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	21.5	12.4	2.6	34.7
LOS	C	B	A	C
Approach Delay	21.5	4.5		34.7
Approach LOS	C	A		C
Queue Length 50th (ft)	102	41	39	371
Queue Length 95th (ft)	169	m50	25	440
Internal Link Dist (ft)	6577	1690		4527
Turn Bay Length (ft)			150	
Base Capacity (vph)	734	923	1051	982
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.29	0.14	0.50	0.64

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 6 (5%), Referenced to phase 2:WBT and 6:EBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 19.6		Intersection LOS: B	
Intersection Capacity Utilization 52.0%		ICU Level of Service A	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
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	
Frt		1.00	1.00	0.85	0.98	
Flt Protected		0.98	1.00	1.00	0.96	
Satd. Flow (prot)		1819	1863	1583	1747	
Flt Permitted		0.80	1.00	1.00	0.96	
Satd. Flow (perm)		1491	1863	1583	1747	
Volume (vph)	82	98	116	487	439	77
Peak-hour factor, PHF	0.79	0.89	0.91	0.92	0.84	0.72
Adj. Flow (vph)	104	110	127	529	523	107
RTOR Reduction (vph)	0	0	0	267	8	0
Lane Group Flow (vph)	0	214	127	262	622	0
Turn Type	Perm			Perm		
Protected Phases		6	2		8	
Permitted Phases	6			2		
Actuated Green, G (s)		59.4	59.4	59.4	52.6	
Effective Green, g (s)		59.4	59.4	59.4	52.6	
Actuated g/C Ratio		0.50	0.50	0.50	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)		738	922	784	766	
v/s Ratio Prot			0.07		c0.36	
v/s Ratio Perm		0.14		c0.17		
v/c Ratio		0.29	0.14	0.33	0.81	
Uniform Delay, d1		17.9	16.4	18.3	29.4	
Progression Factor		1.00	0.64	0.66	0.91	
Incremental Delay, d2		1.0	0.2	0.8	6.5	
Delay (s)		18.9	10.8	13.0	33.4	
Level of Service		B	B	B	C	
Approach Delay (s)		18.9	12.5		33.4	
Approach LOS		B	B		C	

Intersection Summary			
HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	284	486	125	916
Act Effct Green (s)	20.0	20.0	92.0	92.0
Actuated g/C Ratio	0.17	0.17	0.77	0.77
v/c Ratio	0.96	0.73	0.10	1.00
Control Delay	93.8	11.0	1.1	44.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	93.8	11.0	1.1	44.0
LOS	F	B	A	D
Approach Delay	41.6		1.1	44.0
Approach LOS	D		A	D
Queue Length 50th (ft)	221	0	3	593
Queue Length 95th (ft)	76	0	1	60
Internal Link Dist (ft)	876		1455	1038
Turn Bay Length (ft)	150			
Base Capacity (vph)	295	669	1288	920
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.96	0.73	0.10	1.00

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 40.0		Intersection LOS: D	
Intersection Capacity Utilization 29.9%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
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
Frt	1.00	0.85	0.88			1.00
Flt Protected	0.95	1.00	1.00			0.95
Satd. Flow (prot)	1770	1583	1647			1777
Flt Permitted	0.95	1.00	1.00			0.64
Satd. Flow (perm)	1770	1583	1647			1199
Volume (vph)	71	243	9	80	222	7
Peak-hour factor, PHF	0.25	0.50	0.50	0.75	0.25	0.25
Adj. Flow (vph)	284	486	18	107	888	28
RTOR Reduction (vph)	0	405	25	0	0	0
Lane Group Flow (vph)	284	81	100	0	0	916
Turn Type		Perm			Perm	
Protected Phases	4		6			2
Permitted Phases		4			2	
Actuated Green, G (s)	20.0	20.0	92.0			92.0
Effective Green, g (s)	20.0	20.0	92.0			92.0
Actuated g/C Ratio	0.17	0.17	0.77			0.77
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)	295	264	1263			919
v/s Ratio Prot	c0.16		0.06			
v/s Ratio Perm		0.05				c0.76
v/c Ratio	0.96	0.31	0.08			1.00
Uniform Delay, d1	49.6	43.9	3.5			13.9
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	42.1	0.7	0.1			28.9
Delay (s)	91.7	44.6	3.6			42.8
Level of Service	F	D	A			D
Approach Delay (s)	62.0		3.6			42.8
Approach LOS	E		A			D

Intersection Summary			
HCM Average Control Delay	48.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	29.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	119	210	28	66	103	143	693	32	114	684	168
Act Effct Green (s)	15.5	15.5	15.5	15.5	15.5	93.8	86.2	86.2	91.2	84.8	84.8
Actuated g/C Ratio	0.13	0.13	0.13	0.13	0.13	0.78	0.72	0.72	0.76	0.71	0.71
v/c Ratio	0.69	0.72	0.26	0.28	0.35	0.36	0.52	0.03	0.31	0.52	0.15
Control Delay	69.5	42.6	51.0	48.2	11.5	5.8	8.9	1.7	7.5	13.0	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.6	0.0
Total Delay	69.5	42.6	51.0	48.2	11.5	5.8	9.0	1.7	7.5	13.6	4.2
LOS	E	D	D	D	B	A	A	A	A	B	A
Approach Delay		52.4		29.4			8.2			11.2	
Approach LOS		D		C			A			B	
Queue Length 50th (ft)	90	92	20	47	0	4	96	0	20	317	21
Queue Length 95th (ft)	146	167	47	85	48	32	407	m1	m28	m375	m29
Internal Link Dist (ft)		181		893			756			688	
Turn Bay Length (ft)	150		150		150	150		150	150		150
Base Capacity (vph)	310	456	193	435	448	524	1338	1142	499	1317	1151
Starvation Cap Reductn	0	0	0	0	0	0	69	0	0	291	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.46	0.15	0.15	0.23	0.27	0.55	0.03	0.23	0.67	0.15

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 47 (39%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 17.4 Intersection LOS: B
Intersection Capacity Utilization 68.3% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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
Frt	1.00	0.90		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)	1770	1670		1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.71	1.00		0.26	1.00	1.00	0.32	1.00	1.00	0.32	1.00	1.00
Satd. Flow (perm)	1330	1670		481	1863	1583	600	1863	1583	596	1863	1583
Volume (vph)	113	60	138	26	61	95	136	589	29	105	616	160
Peak-hour factor, PHF	0.95	0.92	0.95	0.92	0.92	0.92	0.95	0.85	0.92	0.92	0.90	0.95
Adj. Flow (vph)	119	65	145	28	66	103	143	693	32	114	684	168
RTOR Reduction (vph)	0	76	0	0	0	90	0	0	6	0	0	33
Lane Group Flow (vph)	119	134	0	28	66	13	143	693	26	114	684	135
Turn Type	Perm			Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4		4	6		6	2		2
Actuated Green, G (s)	15.5	15.5		15.5	15.5	15.5	93.9	86.1	86.1	91.1	84.7	84.7
Effective Green, g (s)	15.5	15.5		15.5	15.5	15.5	93.9	86.1	86.1	91.1	84.7	84.7
Actuated g/C Ratio	0.13	0.13		0.13	0.13	0.13	0.78	0.72	0.72	0.76	0.71	0.71
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)	172	216		62	241	204	546	1337	1136	515	1315	1117
v/s Ratio Prot		0.08			0.04		c0.02	c0.37		0.01	0.37	
v/s Ratio Perm	c0.09			0.06		0.01	0.19		0.02	0.16		0.09
v/c Ratio	0.69	0.62		0.45	0.27	0.07	0.26	0.52	0.02	0.22	0.52	0.12
Uniform Delay, d1	50.0	49.5		48.3	47.2	45.9	9.8	7.6	4.9	10.5	8.2	5.7
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.68	0.88	0.51	1.39	1.34	1.52
Incremental Delay, d2	11.4	5.5		5.2	0.6	0.1	0.2	1.3	0.0	0.1	0.6	0.1
Delay (s)	61.3	54.9		53.5	47.8	46.0	6.9	8.0	2.5	14.6	11.5	8.7
Level of Service	E	D		D	D	D	A	A	A	B	B	A
Approach Delay (s)		57.3			47.7			7.7			11.4	
Approach LOS		E			D			A			B	

Intersection Summary

HCM Average Control Delay	19.4	HCM Level of Service		B	
HCM Volume to Capacity ratio	0.51				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	68.3%	ICU Level of Service		C	
Analysis Period (min)	15				
c Critical Lane Group					

Future Site Access Analysis (Interim Phase)

Future 2015 AM Site Access Analysis

Lane Group	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	393	14	52	104	328	27	64	329	128
Act Effct Green (s)	34.2	34.2	34.2	77.8	77.8	77.8	77.8	77.8	77.8
Actuated g/C Ratio	0.28	0.28	0.28	0.65	0.65	0.65	0.65	0.65	0.65
v/c Ratio	0.94	0.05	0.11	0.20	0.27	0.03	0.12	0.27	0.12
Control Delay	68.2	26.5	8.4	12.0	11.3	4.3	8.8	8.1	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.2	26.5	8.4	12.0	11.3	4.3	8.8	8.1	1.7
LOS	E	C	A	B	B	A	A	A	A
Approach Delay	68.2		12.2		11.1			6.6	
Approach LOS	E		B		B			A	
Queue Length 50th (ft)	277	8	2	30	99	0	13	69	2
Queue Length 95th (ft)	353	21	27	18	176	14	m22	98	0
Internal Link Dist (ft)	1618		893		756			688	
Turn Bay Length (ft)		150		150		150	150		150
Base Capacity (vph)	708	513	827	532	1208	1036	534	1208	1071
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.03	0.06	0.20	0.27	0.03	0.12	0.27	0.12

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 96 (80%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 25.1 Intersection LOS: C
Intersection Capacity Utilization 45.8% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00	1.00	1.00
Frt		0.95		1.00	0.86		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.97		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1719		1770	1605		1770	1863	1583	1770	1863	1583
Flt Permitted		0.78		0.58	1.00		0.52	1.00	1.00	0.52	1.00	1.00
Satd. Flow (perm)		1382		1089	1605		974	1863	1583	975	1863	1583
Volume (vph)	122	6	71	13	4	44	26	269	25	59	273	32
Peak-hour factor, PHF	0.50	0.92	0.50	0.92	0.92	0.92	0.25	0.82	0.92	0.92	0.83	0.25
Adj. Flow (vph)	244	7	142	14	4	48	104	328	27	64	329	128
RTOR Reduction (vph)	0	24	0	0	34	0	0	0	9	0	0	45
Lane Group Flow (vph)	0	369	0	14	18	0	104	328	18	64	329	83
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6		6	2		2
Actuated Green, G (s)		34.2		34.2	34.2		77.8	77.8	77.8	77.8	77.8	77.8
Effective Green, g (s)		34.2		34.2	34.2		77.8	77.8	77.8	77.8	77.8	77.8
Actuated g/C Ratio		0.29		0.29	0.29		0.65	0.65	0.65	0.65	0.65	0.65
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)		394		310	457		631	1208	1026	632	1208	1026
v/s Ratio Prot					0.01			0.18			c0.18	
v/s Ratio Perm		c0.27		0.01			0.11		0.01	0.07		0.05
v/c Ratio		0.94		0.05	0.04		0.16	0.27	0.02	0.10	0.27	0.08
Uniform Delay, d1		41.8		31.1	31.0		8.3	9.0	7.5	7.9	9.0	7.8
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00	0.77	0.71	0.67
Incremental Delay, d2		29.3		0.1	0.0		0.6	0.6	0.0	0.3	0.5	0.1
Delay (s)		71.2		31.1	31.1		8.9	9.6	7.5	6.4	6.9	5.4
Level of Service		E		C	C		A	A	A	A	A	A
Approach Delay (s)		71.2			31.1			9.3			6.5	
Approach LOS		E			C			A			A	

Intersection Summary

HCM Average Control Delay		26.2	HCM Level of Service		C	
HCM Volume to Capacity ratio		0.48				
Actuated Cycle Length (s)		120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization		45.8%	ICU Level of Service		A	
Analysis Period (min)		15				

c Critical Lane Group

Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	109	55	50	14	253	54	87	232	11
Sign Control	Stop	Stop			Free			Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	39.2%	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			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	37	16	48	38	13	46	13	233	50	80	213	10
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)	40	17	52	41	14	50	14	253	54	87	232	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)											1262	
pX, platoon unblocked												
vC, conflicting volume	744	741	232	748	698	253	242			308		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	744	741	232	748	698	253	242			308		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	86	95	94	85	96	94	99			93		
cM capacity (veh/h)	282	317	808	277	336	785	1324			1253		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	110	55	50	14	253	54	87	232	11
Volume Left	40	41	0	14	0	0	87	0	0
Volume Right	52	0	50	0	0	54	0	0	11
cSH	418	290	785	1324	1700	1700	1253	1700	1700
Volume to Capacity	0.26	0.19	0.06	0.01	0.15	0.03	0.07	0.14	0.01
Queue Length 95th (ft)	26	17	5	1	0	0	6	0	0
Control Delay (s)	16.6	20.3	9.9	7.7	0.0	0.0	8.1	0.0	0.0
Lane LOS	C	C	A	A			A		
Approach Delay (s)	16.6	15.4		0.3			2.1		
Approach LOS	C	C							

Intersection Summary					
Average Delay	4.9				
Intersection Capacity Utilization	39.2%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	81	73	13	252	12	9	253	9
Sign Control	Stop	Stop		Free			Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	24.9%	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			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	30	0	44	40	0	28	12	232	11	8	233	8
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)	33	0	48	43	0	30	13	252	12	9	253	9
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	579	561	253	597	558	252	262			264		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	579	561	253	597	558	252	262			264		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	92	100	94	89	100	96	99			99		
cM capacity (veh/h)	404	429	785	385	431	786	1302			1300		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	80	74	13	252	12	9	253	9
Volume Left	33	43	13	0	0	9	0	0
Volume Right	48	30	0	0	12	0	0	9
cSH	568	487	1302	1700	1700	1300	1700	1700
Volume to Capacity	0.14	0.15	0.01	0.15	0.01	0.01	0.15	0.01
Queue Length 95th (ft)	12	13	1	0	0	1	0	0
Control Delay (s)	12.4	13.7	7.8	0.0	0.0	7.8	0.0	0.0
Lane LOS	B	B	A			A		
Approach Delay (s)	12.4	13.7	0.4			0.3		
Approach LOS	B	B						

Intersection Summary					
Average Delay	3.1				
Intersection Capacity Utilization	24.9%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	27	51	297	50	87	303
Sign Control	Stop		Free			Free

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	32.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	25	47	273	46	80	279
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	51	297	50	87	303
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						836
pX, platoon unblocked						
vC, conflicting volume	774	297			347	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	774	297			347	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	93			93	
cM capacity (veh/h)	341	743			1212	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	27	51	297	50	87	303
Volume Left	27	0	0	0	87	0
Volume Right	0	51	0	50	0	0
cSH	341	743	1700	1700	1212	1700
Volume to Capacity	0.08	0.07	0.17	0.03	0.07	0.18
Queue Length 95th (ft)	6	6	0	0	6	0
Control Delay (s)	16.5	10.2	0.0	0.0	8.2	0.0
Lane LOS	C	B			A	
Approach Delay (s)	12.4		0.0		1.8	
Approach LOS	B					

Intersection Summary				
Average Delay	2.1			
Intersection Capacity Utilization	32.1%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	53	51	3	37	14
Sign Control	Free	Free		Stop	Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	22.5%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	48	0	9	38	3	1	0	33	11	0	2
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)	1	52	0	10	41	3	1	0	36	12	0	2
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	45			52			117	118	52	151	115	41
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	45			52			117	118	52	151	115	41
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			99			100	100	96	98	100	100
cM capacity (veh/h)	1564			1554			852	766	1015	783	770	1030

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	53	0	51	3	37	14
Volume Left	1	0	10	0	1	12
Volume Right	0	0	0	3	36	2
cSH	1564	1700	1554	1700	1010	813
Volume to Capacity	0.00	0.00	0.01	0.00	0.04	0.02
Queue Length 95th (ft)	0	0	0	0	3	1
Control Delay (s)	0.2	0.0	1.4	0.0	8.7	9.5
Lane LOS	A		A		A	A
Approach Delay (s)	0.2		1.4		8.7	9.5
Approach LOS					A	A

Intersection Summary					
Average Delay	3.4				
Intersection Capacity Utilization	22.5%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	100	52	3	13
Sign Control	Free	Free		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	14.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	92	48	3	11	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	100	52	3	12	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	55				152	52
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	55				152	52
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	100
cM capacity (veh/h)	1549				840	1015

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	100	52	3	13
Volume Left	0	0	0	12
Volume Right	0	0	3	1
cSH	1549	1700	1700	852
Volume to Capacity	0.00	0.03	0.00	0.02
Queue Length 95th (ft)	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	9.3
Lane LOS				A
Approach Delay (s)	0.0	0.0		9.3
Approach LOS				A

Intersection Summary				
Average Delay		0.7		
Intersection Capacity Utilization		14.8%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBT	NBL
Lane Group Flow (vph)	105	8	58	44
Sign Control	Free		Free	Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	19.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	97	7	9	44	7	33
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	105	8	10	48	8	36
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			113		173	105
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			113		173	105
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		99	96
cM capacity (veh/h)			1476		812	949

Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	105	8	58	43
Volume Left	0	0	10	8
Volume Right	0	8	0	36
cSH	1700	1700	1476	922
Volume to Capacity	0.06	0.00	0.01	0.05
Queue Length 95th (ft)	0	0	1	4
Control Delay (s)	0.0	0.0	1.3	9.1
Lane LOS			A	A
Approach Delay (s)	0.0		1.3	9.1
Approach LOS				A

Intersection Summary				
Average Delay		2.2		
Intersection Capacity Utilization	19.5%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	152	1	65	4	38	18
Sign Control	Free		Free		Stop	Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	24.3%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	140	1	9	51	4	2	0	33	16	0	1
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	152	1	10	55	4	2	0	36	17	0	1
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	60			153			228	232	152	263	228	55
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	60			153			228	232	152	263	228	55
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			99			100	100	96	97	100	100
cM capacity (veh/h)	1544			1427			722	664	894	659	667	1011

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	152	1	65	4	38	18
Volume Left	0	0	10	0	2	17
Volume Right	0	1	0	4	36	1
cSH	1544	1700	1427	1700	882	672
Volume to Capacity	0.00	0.00	0.01	0.00	0.04	0.03
Queue Length 95th (ft)	0	0	1	0	3	2
Control Delay (s)	0.0	0.0	1.2	0.0	9.3	10.5
Lane LOS			A		A	B
Approach Delay (s)	0.0		1.1		9.3	10.5
Approach LOS					A	B

Intersection Summary					
Average Delay	2.2				
Intersection Capacity Utilization	24.3%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	140	57	3	13
Sign Control	Free	Free		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	16.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	129	52	3	11	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	140	57	3	12	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	60				197	57
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	60				197	57
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	100
cM capacity (veh/h)	1544				792	1010

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	140	57	3	13
Volume Left	0	0	0	12
Volume Right	0	0	3	1
cSH	1544	1700	1700	806
Volume to Capacity	0.00	0.03	0.00	0.02
Queue Length 95th (ft)	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	9.5
Lane LOS				A
Approach Delay (s)	0.0	0.0		9.5
Approach LOS				A

Intersection Summary				
Average Delay		0.6		
Intersection Capacity Utilization	16.8%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	205	68	3	14
Sign Control	Free	Free		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	19.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	189	63	3	11	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	205	68	3	12	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	72				274	68
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	72				274	68
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	100
cM capacity (veh/h)	1528				716	995

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	205	68	3	14
Volume Left	0	0	0	12
Volume Right	0	0	3	2
cSH	1528	1700	1700	748
Volume to Capacity	0.00	0.04	0.00	0.02
Queue Length 95th (ft)	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	9.9
Lane LOS				A
Approach Delay (s)	0.0	0.0		9.9
Approach LOS				A

Intersection Summary				
Average Delay		0.5		
Intersection Capacity Utilization	19.9%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	42	103	265	64	129	238
Sign Control	Stop		Free			Free

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	32.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	39	95	244	59	119	219
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	42	103	265	64	129	238
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	762	265			329	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	762	265			329	
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	87			89	
cM capacity (veh/h)	334	773			1230	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	42	103	265	64	129	238
Volume Left	42	0	0	0	129	0
Volume Right	0	103	0	64	0	0
cSH	334	773	1700	1700	1230	1700
Volume to Capacity	0.13	0.13	0.16	0.04	0.11	0.14
Queue Length 95th (ft)	11	11	0	0	9	0
Control Delay (s)	17.4	10.4	0.0	0.0	8.3	0.0
Lane LOS	C	B			A	
Approach Delay (s)	12.4		0.0		2.9	
Approach LOS	B					

Intersection Summary				
Average Delay	3.4			
Intersection Capacity Utilization	32.8%	ICU Level of Service		A
Analysis Period (min)	15			

Future 2015 PM Site Access Analysis

Lane Group	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	470	35	100	160	366	28	66	329	222
Act Effct Green (s)	40.2	40.2	40.2	71.8	71.8	71.8	71.8	71.8	71.8
Actuated g/C Ratio	0.34	0.34	0.34	0.60	0.60	0.60	0.60	0.60	0.60
v/c Ratio	0.95	0.11	0.17	0.34	0.33	0.03	0.16	0.30	0.21
Control Delay	62.7	24.0	6.8	17.9	15.2	5.8	6.2	5.7	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.7	24.0	6.8	17.9	15.2	5.8	6.2	5.7	0.5
LOS	E	C	A	B	B	A	A	A	A
Approach Delay	62.7		11.3		15.5			3.9	
Approach LOS	E		B		B			A	
Queue Length 50th (ft)	323	19	9	58	132	0	5	28	0
Queue Length 95th (ft)	387	35	38	67	236	17	m17	m82	0
Internal Link Dist (ft)	1618		893		756			688	
Turn Bay Length (ft)				150		150	150		150
Base Capacity (vph)	756	497	909	468	1115	958	424	1115	1037
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.07	0.11	0.34	0.33	0.03	0.16	0.30	0.21

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 66 (55%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 23.6 Intersection LOS: C
Intersection Capacity Utilization 43.2% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00	1.00	1.00
Frt		0.94		1.00	0.88		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.97		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1703		1770	1631		1770	1863	1583	1770	1863	1583
Flt Permitted		0.77		0.51	1.00		0.51	1.00	1.00	0.48	1.00	1.00
Satd. Flow (perm)		1347		946	1631		948	1863	1583	895	1863	1583
Volume (vph)	61	9	54	32	16	76	80	304	26	61	283	111
Peak-hour factor, PHF	0.25	0.92	0.25	0.92	0.92	0.92	0.50	0.83	0.92	0.92	0.86	0.50
Adj. Flow (vph)	244	10	216	35	17	83	160	366	28	66	329	222
RTOR Reduction (vph)	0	37	0	0	55	0	0	0	11	0	0	89
Lane Group Flow (vph)	0	433	0	35	45	0	160	366	17	66	329	133
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6		6	2		2
Actuated Green, G (s)		40.2		40.2	40.2		71.8	71.8	71.8	71.8	71.8	71.8
Effective Green, g (s)		40.2		40.2	40.2		71.8	71.8	71.8	71.8	71.8	71.8
Actuated g/C Ratio		0.34		0.34	0.34		0.60	0.60	0.60	0.60	0.60	0.60
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)		451		317	546		567	1115	947	536	1115	947
v/s Ratio Prot					0.03			c0.20			0.18	
v/s Ratio Perm		c0.32		0.04			0.17		0.01	0.07		0.08
v/c Ratio		0.96		0.11	0.08		0.28	0.33	0.02	0.12	0.30	0.14
Uniform Delay, d1		39.1		27.6	27.3		11.6	12.0	9.8	10.5	11.8	10.6
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00	0.38	0.36	0.06
Incremental Delay, d2		32.4		0.2	0.1		1.2	0.8	0.0	0.4	0.5	0.3
Delay (s)		71.5		27.7	27.3		12.9	12.8	9.8	4.4	4.8	0.9
Level of Service		E		C	C		B	B	A	A	A	A
Approach Delay (s)		71.5			27.4			12.7			3.3	
Approach LOS		E			C			B			A	

Intersection Summary

HCM Average Control Delay	26.1	HCM Level of Service	C		
HCM Volume to Capacity ratio	0.56				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0		
Intersection Capacity Utilization	43.2%	ICU Level of Service	A		
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	49	84	123	49	233	71	96	248	38
Sign Control	Stop	Stop			Free			Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	35.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	19	1	25	76	1	113	45	214	65	88	228	35
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)	21	1	27	83	1	123	49	233	71	96	248	38
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)											1262	
pX, platoon unblocked												
vC, conflicting volume	893	840	248	797	808	233	286			303		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	893	840	248	797	808	233	286			303		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	90	100	97	69	100	85	96			92		
cM capacity (veh/h)	203	268	791	268	280	807	1276			1258		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	49	84	123	49	233	71	96	248	38
Volume Left	21	83	0	49	0	0	96	0	0
Volume Right	27	0	123	0	0	71	0	0	38
cSH	349	268	807	1276	1700	1700	1258	1700	1700
Volume to Capacity	0.14	0.31	0.15	0.04	0.14	0.04	0.08	0.15	0.02
Queue Length 95th (ft)	12	32	13	3	0	0	6	0	0
Control Delay (s)	17.0	24.4	10.3	7.9	0.0	0.0	8.1	0.0	0.0
Lane LOS	C	C	B	A			A		
Approach Delay (s)	17.0	16.0		1.1			2.0		
Approach LOS	C	C							

Intersection Summary					
Average Delay	5.4				
Intersection Capacity Utilization	35.4%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	40	38	45	284	40	29	292	30
Sign Control	Stop	Stop		Free			Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	30.8%	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			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	15	0	22	20	0	15	41	261	37	27	269	28
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)	16	0	24	22	0	16	45	284	40	29	292	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)												
pX, platoon unblocked												
vC, conflicting volume	740	764	292	748	754	284	323			324		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	740	764	292	748	754	284	323			324		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	95	100	97	93	100	98	96			98		
cM capacity (veh/h)	311	314	747	304	318	755	1237			1236		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	40	38	45	284	40	29	292	30
Volume Left	16	22	45	0	0	29	0	0
Volume Right	24	16	0	0	40	0	0	30
cSH	476	408	1237	1700	1700	1236	1700	1700
Volume to Capacity	0.08	0.09	0.04	0.17	0.02	0.02	0.17	0.02
Queue Length 95th (ft)	7	8	3	0	0	2	0	0
Control Delay (s)	13.3	14.7	8.0	0.0	0.0	8.0	0.0	0.0
Lane LOS	B	B	A			A		
Approach Delay (s)	13.3	14.7	1.0			0.7		
Approach LOS	B	B						

Intersection Summary					
Average Delay	2.1				
Intersection Capacity Utilization	30.8%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	75	123	320	57	96	305
Sign Control	Stop		Free			Free

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	69	113	294	52	88	281
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	75	123	320	57	96	305
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						836
pX, platoon unblocked						
vC, conflicting volume	816	320			376	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	816	320			376	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	76	83			92	
cM capacity (veh/h)	318	721			1182	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	75	123	320	57	96	305
Volume Left	75	0	0	0	96	0
Volume Right	0	123	0	57	0	0
cSH	318	721	1700	1700	1182	1700
Volume to Capacity	0.24	0.17	0.19	0.03	0.08	0.18
Queue Length 95th (ft)	22	15	0	0	7	0
Control Delay (s)	19.8	11.0	0.0	0.0	8.3	0.0
Lane LOS	C	B			A	
Approach Delay (s)	14.3		0.0		2.0	
Approach LOS	B					

Intersection Summary				
Average Delay	3.7			
Intersection Capacity Utilization	34.2%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	59	1	95	11	19	8
Sign Control	Free		Free		Stop	Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	21.3%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	2	52	1	31	56	10	1	0	17	6	0	1
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)	2	57	1	34	61	11	1	0	18	7	0	1
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	72			58			190	200	57	208	190	61
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	72			58			190	200	57	208	190	61
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			98			100	100	98	99	100	100
cM capacity (veh/h)	1528			1547			755	680	1010	723	688	1004

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	59	1	95	11	20	8
Volume Left	2	0	34	0	1	7
Volume Right	0	1	0	11	18	1
cSH	1528	1700	1547	1700	991	753
Volume to Capacity	0.00	0.00	0.02	0.01	0.02	0.01
Queue Length 95th (ft)	0	0	2	0	2	1
Control Delay (s)	0.3	0.0	2.7	0.0	8.7	9.8
Lane LOS	A		A		A	A
Approach Delay (s)	0.3		2.5		8.7	9.8
Approach LOS					A	A

Intersection Summary					
Average Delay	2.7				
Intersection Capacity Utilization	21.3%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	80	105	11	8
Sign Control	Free	Free		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	15.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	1	73	97	10	6	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	79	105	11	7	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	116				187	105
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	116				187	105
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	100
cM capacity (veh/h)	1472				802	949

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	80	105	11	8
Volume Left	1	0	0	7
Volume Right	0	0	11	1
cSH	1472	1700	1700	820
Volume to Capacity	0.00	0.06	0.01	0.01
Queue Length 95th (ft)	0	0	0	1
Control Delay (s)	0.1	0.0	0.0	9.4
Lane LOS	A			A
Approach Delay (s)	0.1	0.0		9.4
Approach LOS				A

Intersection Summary				
Average Delay		0.4		
Intersection Capacity Utilization	15.1%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBT	NBL
Lane Group Flow (vph)	84	2	149	19
Sign Control	Free		Free	Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	24.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	77	2	31	106	1	17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	84	2	34	115	1	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			86		266	84
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			86		266	84
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		100	98
cM capacity (veh/h)			1510		707	976

Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	84	2	149	20
Volume Left	0	0	34	1
Volume Right	0	2	0	18
cSH	1700	1700	1510	955
Volume to Capacity	0.05	0.00	0.02	0.02
Queue Length 95th (ft)	0	0	2	2
Control Delay (s)	0.0	0.0	1.8	8.8
Lane LOS			A	A
Approach Delay (s)	0.0		1.8	8.8
Approach LOS				A

Intersection Summary				
Average Delay		1.7		
Intersection Capacity Utilization	24.0%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	104	2	192	16	19	10
Sign Control	Free		Free		Stop	Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	26.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	95	2	31	145	15	1	0	17	8	0	1
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)	1	103	2	34	158	16	1	0	18	9	0	1
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	174			105			332	347	103	349	333	158
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	174			105			332	347	103	349	333	158
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			98			100	100	98	99	100	100
cM capacity (veh/h)	1403			1486			610	563	952	583	573	888

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	104	2	191	16	20	10
Volume Left	1	0	34	0	1	9
Volume Right	0	2	0	16	18	1
cSH	1403	1700	1486	1700	923	606
Volume to Capacity	0.00	0.00	0.02	0.01	0.02	0.02
Queue Length 95th (ft)	0	0	2	0	2	1
Control Delay (s)	0.1	0.0	1.5	0.0	9.0	11.0
Lane LOS	A		A		A	B
Approach Delay (s)	0.1		1.4		9.0	11.0
Approach LOS					A	B

Intersection Summary					
Average Delay	1.7				
Intersection Capacity Utilization	26.4%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	102	149	11	8
Sign Control	Free	Free		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	17.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	1	93	137	10	6	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	101	149	11	7	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	160				252	149
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	160				252	149
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	100
cM capacity (veh/h)	1419				736	898

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	102	149	11	8
Volume Left	1	0	0	7
Volume Right	0	0	11	1
cSH	1419	1700	1700	755
Volume to Capacity	0.00	0.09	0.01	0.01
Queue Length 95th (ft)	0	0	0	1
Control Delay (s)	0.1	0.0	0.0	9.8
Lane LOS	A			A
Approach Delay (s)	0.1	0.0		9.8
Approach LOS				A

Intersection Summary				
Average Delay		0.3		
Intersection Capacity Utilization	17.2%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	131	208	11	8
Sign Control	Free	Free		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	20.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	2	119	191	10	6	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	129	208	11	7	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	218				341	208
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	218				341	208
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	100
cM capacity (veh/h)	1351				654	833

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	132	208	11	8
Volume Left	2	0	0	7
Volume Right	0	0	11	1
cSH	1351	1700	1700	674
Volume to Capacity	0.00	0.12	0.01	0.01
Queue Length 95th (ft)	0	0	0	1
Control Delay (s)	0.1	0.0	0.0	10.4
Lane LOS	A			B
Approach Delay (s)	0.1	0.0		10.4
Approach LOS				B

Intersection Summary				
Average Delay		0.3		
Intersection Capacity Utilization	20.1%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	40	65	290	27	48	311
Sign Control	Stop		Free			Free

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	30.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	37	60	267	25	44	286
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	40	65	290	27	48	311
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	697	290			317	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	697	290			317	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	90	91			96	
cM capacity (veh/h)	392	749			1243	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	40	65	290	27	48	311
Volume Left	40	0	0	0	48	0
Volume Right	0	65	0	27	0	0
cSH	392	749	1700	1700	1243	1700
Volume to Capacity	0.10	0.09	0.17	0.02	0.04	0.18
Queue Length 95th (ft)	9	7	0	0	3	0
Control Delay (s)	15.2	10.3	0.0	0.0	8.0	0.0
Lane LOS	C	B			A	
Approach Delay (s)	12.2		0.0		1.1	
Approach LOS	B					

Intersection Summary				
Average Delay	2.1			
Intersection Capacity Utilization	30.7%	ICU Level of Service		A
Analysis Period (min)	15			

Future 2015 Saturday Site Access Analysis

Lane Group	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	511	20	82	372	348	20	70	350	162
Act Effct Green (s)	45.0	45.0	45.0	67.0	67.0	67.0	67.0	67.0	67.0
Actuated g/C Ratio	0.38	0.38	0.38	0.56	0.56	0.56	0.56	0.56	0.56
v/c Ratio	0.96	0.06	0.12	0.77	0.33	0.02	0.15	0.34	0.17
Control Delay	63.0	21.9	8.2	35.7	16.6	5.7	7.0	6.6	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.0	21.9	8.2	35.7	16.6	5.7	7.0	6.6	0.9
LOS	E	C	A	D	B	A	A	A	A
Approach Delay	63.0		10.9		25.9			5.1	
Approach LOS	E		B		C			A	
Queue Length 50th (ft)	343	9	9	231	151	0	10	49	0
Queue Length 95th (ft)	#547	25	40	59	207	13	m23	m102	2
Internal Link Dist (ft)	1650		893		756			688	
Turn Bay Length (ft)				150		150	150		150
Base Capacity (vph)	591	399	725	481	1040	893	482	1040	955
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.05	0.11	0.77	0.33	0.02	0.15	0.34	0.17

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 55 (46%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 28.7 Intersection LOS: C
Intersection Capacity Utilization 49.5% ICU Level of Service A
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00	1.00	1.00
Frt		0.95		1.00	0.89		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.97		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1716		1770	1651		1770	1863	1583	1770	1863	1583
Flt Permitted		0.78		0.52	1.00		0.48	1.00	1.00	0.48	1.00	1.00
Satd. Flow (perm)		1372		973	1651		892	1863	1583	895	1863	1583
Volume (vph)	73	19	99	18	18	57	93	296	18	64	315	81
Peak-hour factor, PHF	0.25	0.92	0.50	0.92	0.92	0.92	0.25	0.85	0.92	0.92	0.90	0.50
Adj. Flow (vph)	292	21	198	20	20	62	372	348	20	70	350	162
RTOR Reduction (vph)	0	21	0	0	39	0	0	0	9	0	0	72
Lane Group Flow (vph)	0	490	0	20	43	0	372	348	11	70	350	90
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6		6	2		2
Actuated Green, G (s)		45.0		45.0	45.0		67.0	67.0	67.0	67.0	67.0	67.0
Effective Green, g (s)		45.0		45.0	45.0		67.0	67.0	67.0	67.0	67.0	67.0
Actuated g/C Ratio		0.38		0.38	0.38		0.56	0.56	0.56	0.56	0.56	0.56
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)		515		365	619		498	1040	884	500	1040	884
v/s Ratio Prot					0.03			0.19			0.19	
v/s Ratio Perm		c0.36		0.02			c0.42		0.01	0.08		0.06
v/c Ratio		0.95		0.05	0.07		0.75	0.33	0.01	0.14	0.34	0.10
Uniform Delay, d1		36.5		23.9	24.1		20.1	14.4	11.8	12.7	14.4	12.4
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00	0.44	0.38	0.28
Incremental Delay, d2		27.9		0.1	0.0		9.8	0.9	0.0	0.4	0.6	0.2
Delay (s)		64.3		24.0	24.1		29.9	15.3	11.8	6.0	6.1	3.7
Level of Service		E		C	C		C	B	B	A	A	A
Approach Delay (s)		64.3			24.1			22.5			5.4	
Approach LOS		E			C			C			A	

Intersection Summary

HCM Average Control Delay	28.5	HCM Level of Service	C		
HCM Volume to Capacity ratio	0.83				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0		
Intersection Capacity Utilization	49.5%	ICU Level of Service	A		
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	58	59	110	36	251	65	122	246	27
Sign Control	Stop	Stop			Free			Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	38.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	23	0	30	54	0	101	33	231	60	112	226	25
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)	25	0	33	59	0	110	36	251	65	122	246	27
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)											1262	
pX, platoon unblocked												
vC, conflicting volume	922	877	246	845	839	251	273			316		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	922	877	246	845	839	251	273			316		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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	96	76	100	86	97			90		
cM capacity (veh/h)	195	252	793	246	265	788	1290			1244		

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	58	59	110	36	251	65	122	246	27
Volume Left	25	59	0	36	0	0	122	0	0
Volume Right	33	0	110	0	0	65	0	0	27
cSH	341	246	788	1290	1700	1700	1244	1700	1700
Volume to Capacity	0.17	0.24	0.14	0.03	0.15	0.04	0.10	0.14	0.02
Queue Length 95th (ft)	15	23	12	2	0	0	8	0	0
Control Delay (s)	17.7	24.2	10.3	7.9	0.0	0.0	8.2	0.0	0.0
Lane LOS	C	C	B	A			A		
Approach Delay (s)	17.7	15.1		0.8			2.5		
Approach LOS	C	C							

Intersection Summary					
Average Delay	5.0				
Intersection Capacity Utilization	38.1%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	49	47	33	283	29	21	254	22
Sign Control	Stop	Stop		Free			Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	30.8%	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			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	18	0	27	25	0	18	30	260	27	19	234	20
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)	20	0	29	27	0	20	33	283	29	21	254	22
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	663	673	254	673	665	283	276			312		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	663	673	254	673	665	283	276			312		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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	96	92	100	97	97			98		
cM capacity (veh/h)	353	361	784	344	365	756	1287			1248		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	49	47	33	283	29	21	254	22
Volume Left	20	27	33	0	0	21	0	0
Volume Right	29	20	0	0	29	0	0	22
cSH	527	446	1287	1700	1700	1248	1700	1700
Volume to Capacity	0.09	0.10	0.03	0.17	0.02	0.02	0.15	0.01
Queue Length 95th (ft)	8	9	2	0	0	1	0	0
Control Delay (s)	12.5	14.0	7.9	0.0	0.0	7.9	0.0	0.0
Lane LOS	B	B	A			A		
Approach Delay (s)	12.5	14.0	0.7			0.6		
Approach LOS	B	B						

Intersection Summary					
Average Delay	2.3				
Intersection Capacity Utilization	30.8%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	49	110	330	55	122	347
Sign Control	Stop		Free			Free

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	35.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	45	101	304	51	112	319
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	49	110	330	55	122	347
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						836
pX, platoon unblocked						
vC, conflicting volume	921	330			386	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	921	330			386	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	82	85			90	
cM capacity (veh/h)	269	711			1173	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	49	110	330	55	122	347
Volume Left	49	0	0	0	122	0
Volume Right	0	110	0	55	0	0
cSH	269	711	1700	1700	1173	1700
Volume to Capacity	0.18	0.15	0.19	0.03	0.10	0.20
Queue Length 95th (ft)	16	14	0	0	9	0
Control Delay (s)	21.3	11.0	0.0	0.0	8.4	0.0
Lane LOS	C	B			A	
Approach Delay (s)	14.2		0.0		2.2	
Approach LOS	B					

Intersection Summary				
Average Delay	3.2			
Intersection Capacity Utilization	35.5%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	113	1	124	8	24	9
Sign Control	Free		Free		Stop	Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	23.0%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	2	102	1	23	91	7	1	0	21	7	0	1
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)	2	111	1	25	99	8	1	0	23	8	0	1
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	107			112			265	272	111	287	265	99
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	107			112			265	272	111	287	265	99
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			98			100	100	98	99	100	100
cM capacity (veh/h)	1484			1478			677	623	942	640	629	957

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	113	1	124	8	24	9
Volume Left	2	0	25	0	1	8
Volume Right	0	1	0	8	23	1
cSH	1484	1700	1478	1700	926	668
Volume to Capacity	0.00	0.00	0.02	0.00	0.03	0.01
Queue Length 95th (ft)	0	0	1	0	2	1
Control Delay (s)	0.2	0.0	1.6	0.0	9.0	10.5
Lane LOS	A		A		A	B
Approach Delay (s)	0.2		1.5		9.0	10.5
Approach LOS					A	B

Intersection Summary					
Average Delay	1.9				
Intersection Capacity Utilization	23.0%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	140	130	8	9
Sign Control	Free	Free		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	17.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	1	128	120	7	7	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	139	130	8	8	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	138				272	130
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	138				272	130
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	100
cM capacity (veh/h)	1446				717	919

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	140	130	8	9
Volume Left	1	0	0	8
Volume Right	0	0	8	1
cSH	1446	1700	1700	737
Volume to Capacity	0.00	0.08	0.00	0.01
Queue Length 95th (ft)	0	0	0	1
Control Delay (s)	0.1	0.0	0.0	9.9
Lane LOS	A			A
Approach Delay (s)	0.1	0.0		9.9
Approach LOS				A

Intersection Summary				
Average Delay		0.3		
Intersection Capacity Utilization		17.5%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBT	NBL
Lane Group Flow (vph)	145	2	162	24
Sign Control	Free		Free	Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	28.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	133	2	23	126	1	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	145	2	25	137	1	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			147		332	145
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			147		332	145
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		100	97
cM capacity (veh/h)			1435		652	903

Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	145	2	162	24
Volume Left	0	0	25	1
Volume Right	0	2	0	23
cSH	1700	1700	1435	887
Volume to Capacity	0.09	0.00	0.02	0.03
Queue Length 95th (ft)	0	0	1	2
Control Delay (s)	0.0	0.0	1.3	9.2
Lane LOS			A	A
Approach Delay (s)	0.0		1.3	9.2
Approach LOS				A

Intersection Summary				
Average Delay		1.3		
Intersection Capacity Utilization		28.2%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	172	2	191	12	24	12
Sign Control	Free		Free		Stop	Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	32.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	157	2	23	153	11	1	0	21	10	0	1
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)	1	171	2	25	166	12	1	0	23	11	0	1
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	178			173			390	401	171	412	391	166
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	178			173			390	401	171	412	391	166
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			98			100	100	97	98	100	100
cM capacity (veh/h)	1398			1404			560	528	873	528	534	878

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	172	2	191	12	24	12
Volume Left	1	0	25	0	1	11
Volume Right	0	2	0	12	23	1
cSH	1398	1700	1404	1700	852	548
Volume to Capacity	0.00	0.00	0.02	0.01	0.03	0.02
Queue Length 95th (ft)	0	0	1	0	2	2
Control Delay (s)	0.1	0.0	1.1	0.0	9.3	11.7
Lane LOS	A		A		A	B
Approach Delay (s)	0.1		1.1		9.3	11.7
Approach LOS					A	B

Intersection Summary				
Average Delay	1.4			
Intersection Capacity Utilization	32.7%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	167	161	8	9
Sign Control	Free	Free		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	18.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	1	153	148	7	7	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	166	161	8	8	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	168				329	161
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	168				329	161
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	100
cM capacity (veh/h)	1409				665	884

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	167	161	8	9
Volume Left	1	0	0	8
Volume Right	0	0	8	1
cSH	1409	1700	1700	686
Volume to Capacity	0.00	0.09	0.00	0.01
Queue Length 95th (ft)	0	0	0	1
Control Delay (s)	0.1	0.0	0.0	10.3
Lane LOS	A			B
Approach Delay (s)	0.1	0.0		10.3
Approach LOS				B

Intersection Summary				
Average Delay		0.3		
Intersection Capacity Utilization	18.8%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	204	202	8	9
Sign Control	Free	Free		Stop

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	20.6%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	1	187	186	7	7	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	203	202	8	8	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	210				408	202
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	210				408	202
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	100
cM capacity (veh/h)	1361				599	839

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	204	202	8	9
Volume Left	1	0	0	8
Volume Right	0	0	8	1
cSH	1361	1700	1700	621
Volume to Capacity	0.00	0.12	0.00	0.01
Queue Length 95th (ft)	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	10.9
Lane LOS	A			B
Approach Delay (s)	0.0	0.0		10.9
Approach LOS				B

Intersection Summary				
Average Delay		0.2		
Intersection Capacity Utilization		20.6%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	28	61	291	32	70	267
Sign Control	Stop		Free			Free

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	31.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	26	56	268	29	64	246
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	28	61	291	32	70	267
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	698	291			323	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	698	291			323	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	93	92			94	
cM capacity (veh/h)	384	748			1237	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	28	61	291	32	70	267
Volume Left	28	0	0	0	70	0
Volume Right	0	61	0	32	0	0
cSH	384	748	1700	1700	1237	1700
Volume to Capacity	0.07	0.08	0.17	0.02	0.06	0.16
Queue Length 95th (ft)	6	7	0	0	4	0
Control Delay (s)	15.1	10.2	0.0	0.0	8.1	0.0
Lane LOS	C	B			A	
Approach Delay (s)	11.8		0.0		1.7	
Approach LOS	B					

Intersection Summary				
Average Delay	2.2			
Intersection Capacity Utilization	31.0%	ICU Level of Service		A
Analysis Period (min)	15			

Future Site Access Analysis (Full Build Out)

Future 2028 AM Site Access Analysis

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	382	15	240	24	13	93	252	801	47	115	583	248
Act Effct Green (s)	35.7	35.7	35.7	35.7	35.7	35.7	20.8	63.9	63.9	51.5	51.5	51.5
Actuated g/C Ratio	0.30	0.30	0.30	0.30	0.30	0.30	0.17	0.53	0.53	0.43	0.43	0.43
v/c Ratio	0.92	0.03	0.38	0.06	0.02	0.17	0.42	0.81	0.06	0.63	0.73	0.32
Control Delay	68.6	27.5	5.3	28.2	27.4	6.4	40.5	25.0	3.0	36.1	25.8	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.6	27.5	5.3	28.2	27.4	6.4	40.5	25.0	3.0	36.1	25.8	4.2
LOS	E	C	A	C	C	A	D	C	A	D	C	A
Approach Delay		43.8			12.5			27.6			21.4	
Approach LOS		D			B			C			C	
Queue Length 50th (ft)	273	8	0	13	7	0	95	602	5	41	411	16
Queue Length 95th (ft)	179	24	0	33	22	37	32	478	m9	m72	281	0
Internal Link Dist (ft)		182			893			756			690	
Turn Bay Length (ft)	150		150	150		150	150		150	150		150
Base Capacity (vph)	465	621	688	464	621	590	594	997	858	186	856	815
Starvation Cap Reductn	0	0	0	0	0	0	0	2	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	1	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.02	0.35	0.05	0.02	0.16	0.42	0.81	0.05	0.62	0.68	0.30

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 108 (90%), Referenced to phase 2:SBTL and 6:NBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 28.5		Intersection LOS: C	
Intersection Capacity Utilization 67.7%		ICU Level of Service C	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	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	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	3433	1863	1583	1770	1863	1583
Flt Permitted	0.75	1.00	1.00	0.75	1.00	1.00	0.95	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)	1395	1863	1583	1393	1863	1583	3433	1863	1583	173	1863	1583
Volume (vph)	191	14	120	22	12	86	63	657	43	106	484	62
Peak-hour factor, PHF	0.50	0.92	0.50	0.92	0.92	0.92	0.25	0.82	0.92	0.92	0.83	0.25
Adj. Flow (vph)	382	15	240	24	13	93	252	801	47	115	583	248
RTOR Reduction (vph)	0	0	169	0	0	65	0	0	12	0	0	92
Lane Group Flow (vph)	382	15	71	24	13	28	252	801	35	115	583	156
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	pm+pt		Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4			6	2		2
Actuated Green, G (s)	35.7	35.7	35.7	35.7	35.7	35.7	20.8	63.9	63.9	51.5	51.5	51.5
Effective Green, g (s)	35.7	35.7	35.7	35.7	35.7	35.7	20.8	63.9	63.9	51.5	51.5	51.5
Actuated g/C Ratio	0.30	0.30	0.30	0.30	0.30	0.30	0.17	0.53	0.53	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	4.0	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	3.0
Lane Grp Cap (vph)	415	554	471	414	554	471	595	992	843	186	800	679
v/s Ratio Prot		0.01			0.01		0.07	c0.43		0.04	c0.31	
v/s Ratio Perm	c0.27		0.05	0.02		0.02			0.02	0.22		0.10
v/c Ratio	0.92	0.03	0.15	0.06	0.02	0.06	0.42	0.81	0.04	0.62	0.73	0.23
Uniform Delay, d1	40.8	29.9	31.0	30.1	29.8	30.1	44.3	23.0	13.4	55.5	28.4	21.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.84	0.71	0.33	1.03	0.72	0.41
Incremental Delay, d2	25.5	0.0	0.2	0.1	0.0	0.1	0.5	6.7	0.1	4.5	4.4	0.6
Delay (s)	66.3	29.9	31.2	30.2	29.8	30.2	37.8	23.1	4.5	61.8	24.9	9.5
Level of Service	E	C	C	C	C	C	D	C	A	E	C	A
Approach Delay (s)		52.2			30.2			25.7			25.3	
Approach LOS		D			C			C			C	

Intersection Summary					
HCM Average Control Delay	31.8	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.85				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	67.7%	ICU Level of Service		C	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	45	102	728	86	150	530
Act Effct Green (s)	8.3	8.3	93.3	93.3	103.7	103.7
Actuated g/C Ratio	0.07	0.07	0.78	0.78	0.86	0.86
v/c Ratio	0.37	0.50	0.50	0.07	0.34	0.33
Control Delay	60.9	18.6	4.8	0.8	2.8	1.1
Queue Delay	0.0	0.0	0.6	0.0	0.0	0.0
Total Delay	60.9	18.6	5.4	0.8	2.8	1.1
LOS	E	B	A	A	A	A
Approach Delay	31.5		4.9			1.5
Approach LOS	C		A			A
Queue Length 50th (ft)	34	0	189	3	5	18
Queue Length 95th (ft)	72	54	m281	m12	m6	22
Internal Link Dist (ft)	891		346			756
Turn Bay Length (ft)	150			150	150	
Base Capacity (vph)	325	374	1448	1243	592	1609
Starvation Cap Reductn	0	0	361	0	0	0
Spillback Cap Reductn	0	1	32	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.27	0.67	0.07	0.25	0.33

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 119 (99%), Referenced to phase 2:SBTL and 6:NBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.50			
Intersection Signal Delay: 5.9		Intersection LOS: A	
Intersection Capacity Utilization 56.2%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
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	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.95	1.00	1.00	1.00	0.33	1.00
Satd. Flow (perm)	1770	1583	1863	1583	619	1863
Volume (vph)	41	94	670	79	138	488
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	45	102	728	86	150	530
RTOR Reduction (vph)	0	95	0	13	0	0
Lane Group Flow (vph)	45	7	728	73	150	530
Turn Type		custom		Perm	pm+pt	
Protected Phases			6		5	2
Permitted Phases	4	4		6	2	
Actuated Green, G (s)	8.3	8.3	93.3	93.3	103.7	103.7
Effective Green, g (s)	8.3	8.3	93.3	93.3	103.7	103.7
Actuated g/C Ratio	0.07	0.07	0.78	0.78	0.86	0.86
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)	122	109	1448	1231	596	1610
v/s Ratio Prot			c0.39		0.01	c0.28
v/s Ratio Perm	c0.03	0.00		0.05	0.20	
v/c Ratio	0.37	0.06	0.50	0.06	0.25	0.33
Uniform Delay, d1	53.3	52.2	4.9	3.1	4.9	1.5
Progression Factor	1.00	1.00	0.68	0.48	0.46	0.40
Incremental Delay, d2	1.9	0.3	1.1	0.1	0.2	0.4
Delay (s)	55.2	52.5	4.4	1.6	2.4	1.1
Level of Service	E	D	A	A	A	A
Approach Delay (s)	53.3		4.1			1.3
Approach LOS	D		A			A

Intersection Summary			
HCM Average Control Delay	7.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	120.0	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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	324	32	178	68	21	115	49	377	92	146	351	77
Act Effct Green (s)	32.3	32.3	32.3	32.3	32.3	32.3	76.8	69.6	69.6	75.5	70.5	70.5
Actuated g/C Ratio	0.27	0.27	0.27	0.27	0.27	0.27	0.64	0.58	0.58	0.63	0.59	0.59
v/c Ratio	0.87	0.06	0.32	0.18	0.04	0.23	0.10	0.35	0.10	0.33	0.32	0.08
Control Delay	63.7	28.8	5.4	31.8	28.1	5.8	10.4	15.1	3.3	10.1	8.1	1.8
Queue Delay	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
Total Delay	63.9	28.8	5.4	31.8	28.1	5.8	10.4	15.1	3.3	10.1	8.6	1.8
LOS	E	C	A	C	C	A	B	B	A	B	A	A
Approach Delay		42.3			16.8			12.6			8.1	
Approach LOS		D			B			B			A	
Queue Length 50th (ft)	241	19	0	41	12	0	13	150	7	22	60	0
Queue Length 95th (ft)	306	37	46	68	28	38	m35	312	m34	65	195	1
Internal Link Dist (ft)		1147			914			1030			346	
Turn Bay Length (ft)	150		150	150		150	150		150	150		150
Base Capacity (vph)	566	761	752	560	761	714	607	1081	951	622	1094	960
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	364	0
Spillback Cap Reductn	24	0	0	0	0	28	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.04	0.24	0.12	0.03	0.17	0.08	0.35	0.10	0.23	0.48	0.08

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 20 (17%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 20.3		Intersection LOS: C	
Intersection Capacity Utilization 58.9%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	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	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	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.74	1.00	1.00	0.74	1.00	1.00	0.48	1.00	1.00	0.46	1.00	1.00
Satd. Flow (perm)	1385	1863	1583	1372	1863	1583	903	1863	1583	864	1863	1583
Volume (vph)	298	29	164	63	19	106	45	347	85	134	323	71
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	324	32	178	68	21	115	49	377	92	146	351	77
RTOR Reduction (vph)	0	0	130	0	0	84	0	0	33	0	0	31
Lane Group Flow (vph)	324	32	48	68	21	31	49	377	59	146	351	46
Turn Type	Perm		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Actuated Green, G (s)	32.3	32.3	32.3	32.3	32.3	32.3	74.8	68.7	68.7	76.6	69.6	69.6
Effective Green, g (s)	32.3	32.3	32.3	32.3	32.3	32.3	74.8	68.7	68.7	76.6	69.6	69.6
Actuated g/C Ratio	0.27	0.27	0.27	0.27	0.27	0.27	0.62	0.57	0.57	0.64	0.58	0.58
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	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	3.0
Lane Grp Cap (vph)	373	501	426	369	501	426	607	1067	906	604	1081	918
v/s Ratio Prot		0.02			0.01		0.00	c0.20		c0.01	0.19	
v/s Ratio Perm	c0.23		0.03	0.05		0.02	0.05		0.04	0.14		0.03
v/c Ratio	0.87	0.06	0.11	0.18	0.04	0.07	0.08	0.35	0.06	0.24	0.32	0.05
Uniform Delay, d1	41.8	32.6	33.0	33.7	32.4	32.7	12.5	13.7	11.4	13.7	13.0	10.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.92	0.66	0.69	0.48	0.37
Incremental Delay, d2	18.8	0.1	0.1	0.2	0.0	0.1	0.1	0.9	0.1	0.2	0.8	0.1
Delay (s)	60.6	32.7	33.2	34.0	32.4	32.8	12.2	13.5	7.7	9.6	7.0	4.2
Level of Service	E	C	C	C	C	C	B	B	A	A	A	A
Approach Delay (s)		49.8			33.1			12.4			7.3	
Approach LOS		D			C			B			A	

Intersection Summary					
HCM Average Control Delay	24.0	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.48				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	58.9%	ICU Level of Service		B	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	EBT	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	192	96	35	429	17	9	491	18
Sign Control	Stop	Stop		Free			Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	43.9%	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			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	62	0	115	59	0	29	32	395	16	8	452	17
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)	67	0	125	64	0	32	35	429	17	9	491	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)												
pX, platoon unblocked												
vC, conflicting volume	1039	1025	491	1133	1026	429	510			447		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1039	1025	491	1133	1026	429	510			447		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	65	100	78	53	100	95	97			99		
cM capacity (veh/h)	192	225	577	137	225	626	1055			1114		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	192	96	35	429	17	9	491	18
Volume Left	67	64	35	0	0	9	0	0
Volume Right	125	32	0	0	17	0	0	18
cSH	339	184	1055	1700	1700	1114	1700	1700
Volume to Capacity	0.57	0.52	0.03	0.25	0.01	0.01	0.29	0.01
Queue Length 95th (ft)	83	66	3	0	0	1	0	0
Control Delay (s)	28.7	43.9	8.5	0.0	0.0	8.3	0.0	0.0
Lane LOS	D	E	A			A		
Approach Delay (s)	28.7	43.9	0.6			0.1		
Approach LOS	D	E						

Intersection Summary					
Average Delay		7.8			
Intersection Capacity Utilization	43.9%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	743	7	20	517	22	73
Sign Control	Free			Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	46.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	684	6	18	476	20	67
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	743	7	20	517	22	73
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			750		1300	743
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			750		1300	743
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		87	82
cM capacity (veh/h)			859		174	415

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	743	7	20	517	22	73
Volume Left	0	0	20	0	22	0
Volume Right	0	7	0	0	0	73
cSH	1700	1700	859	1700	174	415
Volume to Capacity	0.44	0.00	0.02	0.30	0.13	0.18
Queue Length 95th (ft)	0	0	2	0	10	16
Control Delay (s)	0.0	0.0	9.3	0.0	28.6	15.5
Lane LOS			A		D	C
Approach Delay (s)	0.0		0.3		18.5	
Approach LOS					C	

Intersection Summary				
Average Delay	1.4			
Intersection Capacity Utilization	46.8%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	NBT	SBT	SBR
Lane Group Flow (vph)	111	28	8	26
Sign Control	Stop	Free	Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	17.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	87	15	4	22	7	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	95	16	4	24	8	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	40	8	34			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	40	8	34			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	90	98	100			
cM capacity (veh/h)	969	1075	1578			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	111	28	8	26
Volume Left	95	4	0	0
Volume Right	16	0	0	26
cSH	983	1578	1700	1700
Volume to Capacity	0.11	0.00	0.00	0.02
Queue Length 95th (ft)	10	0	0	0
Control Delay (s)	9.1	1.1	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	9.1	1.1	0.0	
Approach LOS	A			

Intersection Summary				
Average Delay		6.0		
Intersection Capacity Utilization	17.0%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	35	80	15	151	58
Sign Control	Free	Free		Stop	Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	32.6%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	32	0	39	35	14	1	0	138	52	0	1
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	35	0	42	38	15	1	0	150	57	0	1
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	53			35			159	173	35	308	158	38
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	53			35			159	173	35	308	158	38
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			97			100	100	86	90	100	100
cM capacity (veh/h)	1552			1577			790	701	1038	540	715	1034

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	35	0	80	15	151	58
Volume Left	0	0	42	0	1	57
Volume Right	0	0	0	15	150	1
cSH	1552	1700	1577	1700	1036	545
Volume to Capacity	0.00	0.00	0.03	0.01	0.15	0.11
Queue Length 95th (ft)	0	0	2	0	13	9
Control Delay (s)	0.0	0.0	4.0	0.0	9.1	12.4
Lane LOS			A		A	B
Approach Delay (s)	0.0		3.3		9.1	12.4
Approach LOS					A	B

Intersection Summary					
Average Delay	7.1				
Intersection Capacity Utilization	32.6%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	241	96	15	58
Sign Control	Free	Free		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	21.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	222	88	14	52	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	241	96	15	57	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)			1118			
pX, platoon unblocked						
vC, conflicting volume	111				337	96
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	111				337	96
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				91	100
cM capacity (veh/h)	1479				659	961

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	241	96	15	58
Volume Left	0	0	0	57
Volume Right	0	0	15	1
cSH	1479	1700	1700	662
Volume to Capacity	0.00	0.06	0.01	0.09
Queue Length 95th (ft)	0	0	0	7
Control Delay (s)	0.0	0.0	0.0	11.0
Lane LOS				B
Approach Delay (s)	0.0	0.0		11.0
Approach LOS				B

Intersection Summary				
Average Delay		1.5		
Intersection Capacity Utilization		21.7%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	57	58	43	82	57	1
Sign Control	Stop	Stop	Free		Free	

Intersection Summary				
Control Type: Unsignalized				
Intersection Capacity Utilization	21.3%		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			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	50	2	39	14	1	0	40	75	0	52	1
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)	1	54	2	42	15	1	0	43	82	0	57	1
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	109	182	57	129	101	43	58			125		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	109	182	57	129	101	43	58			125		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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	92	100	95	98	100	100			100		
cM capacity (veh/h)	856	712	1010	793	789	1027	1547			1462		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	58	59	43	82	57	1
Volume Left	1	42	0	0	0	0
Volume Right	2	1	0	82	0	1
cSH	723	795	1547	1700	1462	1700
Volume to Capacity	0.08	0.07	0.00	0.05	0.00	0.00
Queue Length 95th (ft)	6	6	0	0	0	0
Control Delay (s)	10.4	9.9	0.0	0.0	0.0	0.0
Lane LOS	B	A				
Approach Delay (s)	10.4	9.9	0.0		0.0	
Approach LOS	B	A				

Intersection Summary					
Average Delay		3.9			
Intersection Capacity Utilization	21.3%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBL	NBT	SBT	SBR
Lane Group Flow (vph)	57	72	86	15
Sign Control	Stop	Free	Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	14.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	51	2	0	66	79	14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	55	2	0	72	86	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	158	86	101			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	158	86	101			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	93	100	100			
cM capacity (veh/h)	834	973	1491			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	58	72	86	15
Volume Left	55	0	0	0
Volume Right	2	0	0	15
cSH	838	1491	1700	1700
Volume to Capacity	0.07	0.00	0.05	0.01
Queue Length 95th (ft)	6	0	0	0
Control Delay (s)	9.6	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		2.4		
Intersection Capacity Utilization	14.2%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	63	61	1	151
Sign Control	Free	Free		Stop

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

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	37	21	56	1	5	134
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	40	23	61	1	5	146
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	62				164	61
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	62				164	61
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				99	85
cM capacity (veh/h)	1541				805	1004

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	63	61	1	151
Volume Left	40	0	0	5
Volume Right	0	0	1	146
cSH	1541	1700	1700	995
Volume to Capacity	0.03	0.04	0.00	0.15
Queue Length 95th (ft)	2	0	0	13
Control Delay (s)	4.8	0.0	0.0	9.3
Lane LOS	A			A
Approach Delay (s)	4.8	0.0		9.3
Approach LOS				A

Intersection Summary				
Average Delay		6.2		
Intersection Capacity Utilization	25.1%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	323	1	150	5	14	19
Sign Control	Free		Free		Stop	Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	32.3%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	297	1	3	135	5	3	0	10	17	0	1
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	323	1	3	147	5	3	0	11	18	0	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)		973										
pX, platoon unblocked												
vC, conflicting volume	152			324			477	482	323	487	477	147
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	152			324			477	482	323	487	477	147
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			99	100	98	96	100	100
cM capacity (veh/h)	1429			1236			497	483	718	482	486	900

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	323	1	150	5	14	20
Volume Left	0	0	3	0	3	18
Volume Right	0	1	0	5	11	1
cSH	1429	1700	1236	1700	651	495
Volume to Capacity	0.00	0.00	0.00	0.00	0.02	0.04
Queue Length 95th (ft)	0	0	0	0	2	3
Control Delay (s)	0.0	0.0	0.2	0.0	10.7	12.6
Lane LOS			A		B	B
Approach Delay (s)	0.0		0.2		10.7	12.6
Approach LOS					B	B

Intersection Summary					
Average Delay	0.8				
Intersection Capacity Utilization	32.3%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	352	154	5	19
Sign Control	Free	Free		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	27.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	324	142	5	17	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	352	154	5	18	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		1228				
pX, platoon unblocked						
vC, conflicting volume	160				507	154
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	160				507	154
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				96	100
cM capacity (veh/h)	1419				526	892

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	352	154	5	20
Volume Left	0	0	0	18
Volume Right	0	0	5	1
cSH	1419	1700	1700	538
Volume to Capacity	0.00	0.09	0.00	0.04
Queue Length 95th (ft)	0	0	0	3
Control Delay (s)	0.0	0.0	0.0	11.9
Lane LOS				B
Approach Delay (s)	0.0	0.0		11.9
Approach LOS				B

Intersection Summary				
Average Delay		0.4		
Intersection Capacity Utilization		27.1%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBT	NBL
Lane Group Flow (vph)	274	97	141	32
Sign Control	Free		Free	Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	23.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	252	89	3	127	19	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	274	97	3	138	21	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			371		418	274
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			371		418	274
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		96	99
cM capacity (veh/h)			1188		590	765

Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	274	97	141	32
Volume Left	0	0	3	21
Volume Right	0	97	0	11
cSH	1700	1700	1188	640
Volume to Capacity	0.16	0.06	0.00	0.05
Queue Length 95th (ft)	0	0	0	4
Control Delay (s)	0.0	0.0	0.2	10.9
Lane LOS			A	B
Approach Delay (s)	0.0		0.2	10.9
Approach LOS				B

Intersection Summary				
Average Delay		0.7		
Intersection Capacity Utilization	23.3%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	302	1	145	5	13	19
Sign Control	Free		Free		Stop	Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	31.3%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	278	1	3	131	5	2	0	10	17	0	1
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	302	1	3	142	5	2	0	11	18	0	1
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	148			303			452	457	302	462	452	142
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	148			303			452	457	302	462	452	142
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	99	96	100	100
cM capacity (veh/h)	1434			1258			516	499	737	501	502	905

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	302	1	146	5	13	20
Volume Left	0	0	3	0	2	18
Volume Right	0	1	0	5	11	1
cSH	1434	1700	1258	1700	688	514
Volume to Capacity	0.00	0.00	0.00	0.00	0.02	0.04
Queue Length 95th (ft)	0	0	0	0	1	3
Control Delay (s)	0.0	0.0	0.2	0.0	10.3	12.3
Lane LOS			A		B	B
Approach Delay (s)	0.0		0.2		10.3	12.3
Approach LOS					B	B

Intersection Summary					
Average Delay	0.8				
Intersection Capacity Utilization	31.3%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	285	141	5	19
Sign Control	Free	Free		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	23.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	262	130	5	17	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	285	141	5	18	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	147				426	141
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	147				426	141
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				97	100
cM capacity (veh/h)	1435				585	907

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	285	141	5	20
Volume Left	0	0	0	18
Volume Right	0	0	5	1
cSH	1435	1700	1700	597
Volume to Capacity	0.00	0.08	0.00	0.03
Queue Length 95th (ft)	0	0	0	3
Control Delay (s)	0.0	0.0	0.0	11.2
Lane LOS				B
Approach Delay (s)	0.0	0.0		11.2
Approach LOS				B

Intersection Summary				
Average Delay		0.5		
Intersection Capacity Utilization		23.8%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	332	150	5	19
Sign Control	Free	Free		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	26.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	305	138	5	17	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	332	150	5	18	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	155				482	150
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	155				482	150
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				97	100
cM capacity (veh/h)	1425				544	896

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	332	150	5	20
Volume Left	0	0	0	18
Volume Right	0	0	5	1
cSH	1425	1700	1700	556
Volume to Capacity	0.00	0.09	0.00	0.04
Queue Length 95th (ft)	0	0	0	3
Control Delay (s)	0.0	0.0	0.0	11.7
Lane LOS				B
Approach Delay (s)	0.0	0.0		11.7
Approach LOS				B

Intersection Summary				
Average Delay		0.5		
Intersection Capacity Utilization		26.1%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	49	111	453	88	160	480
Sign Control	Stop		Free			Free

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	43.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	45	102	417	81	147	442
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	49	111	453	88	160	480
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						1110
pX, platoon unblocked	0.96					
vC, conflicting volume	1253	453			541	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1264	453			541	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	68	82			84	
cM capacity (veh/h)	151	607			1027	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	49	111	453	88	160	480
Volume Left	49	0	0	0	160	0
Volume Right	0	111	0	88	0	0
cSH	151	607	1700	1700	1027	1700
Volume to Capacity	0.32	0.18	0.27	0.05	0.16	0.28
Queue Length 95th (ft)	32	17	0	0	14	0
Control Delay (s)	39.7	12.3	0.0	0.0	9.1	0.0
Lane LOS	E	B			A	
Approach Delay (s)	20.7		0.0		2.3	
Approach LOS	C					

Intersection Summary				
Average Delay		3.6		
Intersection Capacity Utilization		43.4%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBT	NBL
Lane Group Flow (vph)	16	12	25	53
Sign Control	Free		Free	Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	13.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	15	11	3	20	38	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	12	3	22	41	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			28		45	16
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			28		45	16
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		96	99
cM capacity (veh/h)			1585		964	1063

Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	16	12	25	53
Volume Left	0	0	3	41
Volume Right	0	12	0	12
cSH	1700	1700	1585	984
Volume to Capacity	0.01	0.01	0.00	0.05
Queue Length 95th (ft)	0	0	0	4
Control Delay (s)	0.0	0.0	1.0	8.9
Lane LOS			A	A
Approach Delay (s)	0.0		1.0	8.9
Approach LOS				A

Intersection Summary				
Average Delay		4.7		
Intersection Capacity Utilization		13.6%	ICU Level of Service	A
Analysis Period (min)		15		

Future 2028 PM Site Access Analysis

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	376	33	420	58	48	146	272	755	43	122	752	422
Act Effct Green (s)	36.3	36.3	36.3	36.3	36.3	36.3	12.3	63.9	63.9	59.5	59.5	59.5
Actuated g/C Ratio	0.30	0.30	0.30	0.30	0.30	0.30	0.10	0.53	0.53	0.50	0.50	0.50
v/c Ratio	0.92	0.06	0.61	0.14	0.09	0.25	0.77	0.76	0.05	0.67	0.81	0.47
Control Delay	68.6	28.0	12.7	29.7	28.4	5.6	62.0	23.4	3.6	29.5	25.4	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
Total Delay	68.6	28.0	12.7	29.7	28.4	5.6	62.0	23.4	3.6	29.5	25.9	6.5
LOS	E	C	B	C	C	A	E	C	A	C	C	A
Approach Delay		38.7			15.5			32.4			19.9	
Approach LOS		D			B			C			B	
Queue Length 50th (ft)	268	17	61	31	25	0	109	514	3	40	490	48
Queue Length 95th (ft)	79	41	0	64	54	46	85	484	m11	m49	m559	10
Internal Link Dist (ft)		182			893			756			690	
Turn Bay Length (ft)	150		150	150		150	150		150	150		150
Base Capacity (vph)	451	621	734	457	621	625	355	993	855	185	925	897
Starvation Cap Reductn	0	0	0	0	0	0	0	4	0	0	24	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.05	0.57	0.13	0.08	0.23	0.77	0.76	0.05	0.66	0.83	0.47

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 103 (86%), Referenced to phase 2:SBTL and 6:NBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 28.0		Intersection LOS: C	
Intersection Capacity Utilization 61.1%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	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	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	3433	1863	1583	1770	1863	1583
Flt Permitted	0.73	1.00	1.00	0.74	1.00	1.00	0.95	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	1352	1863	1583	1370	1863	1583	3433	1863	1583	151	1863	1583
Volume (vph)	94	30	105	53	44	134	136	627	40	112	647	211
Peak-hour factor, PHF	0.25	0.92	0.25	0.92	0.92	0.92	0.50	0.83	0.92	0.92	0.86	0.50
Adj. Flow (vph)	376	33	420	58	48	146	272	755	43	122	752	422
RTOR Reduction (vph)	0	0	216	0	0	102	0	0	11	0	0	112
Lane Group Flow (vph)	376	33	204	58	48	44	272	755	32	122	752	310
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	pm+pt		Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4			6	2		2
Actuated Green, G (s)	36.3	36.3	36.3	36.3	36.3	36.3	12.3	63.9	63.9	59.4	59.4	59.4
Effective Green, g (s)	36.3	36.3	36.3	36.3	36.3	36.3	12.3	63.9	63.9	59.4	59.4	59.4
Actuated g/C Ratio	0.30	0.30	0.30	0.30	0.30	0.30	0.10	0.53	0.53	0.50	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	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	3.0
Lane Grp Cap (vph)	409	564	479	414	564	479	352	992	843	180	922	784
v/s Ratio Prot		0.02			0.03		0.08	c0.41		0.04	c0.40	
v/s Ratio Perm	c0.28		0.13	0.04		0.03			0.02	0.29		0.20
v/c Ratio	0.92	0.06	0.43	0.14	0.09	0.09	0.77	0.76	0.04	0.68	0.82	0.40
Uniform Delay, d1	40.4	29.7	33.5	30.5	30.0	30.0	52.5	22.0	13.4	24.7	25.7	19.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.76	0.41	1.05	0.79	0.60
Incremental Delay, d2	25.3	0.0	0.6	0.2	0.1	0.1	9.4	5.1	0.1	4.1	3.4	0.6
Delay (s)	65.7	29.8	34.1	30.6	30.0	30.1	56.4	21.8	5.5	30.1	23.6	11.9
Level of Service	E	C	C	C	C	C	E	C	A	C	C	B
Approach Delay (s)		48.3			30.2			30.0			20.4	
Approach LOS		D			C			C			C	

Intersection Summary					
HCM Average Control Delay	30.8	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.83				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		8.0	
Intersection Capacity Utilization	61.1%	ICU Level of Service		B	
Analysis Period (min)	15				

c Critical Lane Group

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	124	215	659	88	173	703
Act Effct Green (s)	13.5	13.5	89.0	89.0	98.5	98.5
Actuated g/C Ratio	0.11	0.11	0.74	0.74	0.82	0.82
v/c Ratio	0.62	0.58	0.48	0.07	0.40	0.46
Control Delay	63.9	12.8	10.3	3.2	5.1	3.5
Queue Delay	0.0	0.0	0.8	0.0	0.0	0.4
Total Delay	63.9	12.8	11.1	3.2	5.1	3.9
LOS	E	B	B	A	A	A
Approach Delay	31.5		10.2			4.1
Approach LOS	C		B			A
Queue Length 50th (ft)	93	0	244	8	20	93
Queue Length 95th (ft)	150	68	481	m32	m28	120
Internal Link Dist (ft)	891		346			756
Turn Bay Length (ft)	150			150	150	
Base Capacity (vph)	384	511	1382	1190	615	1530
Starvation Cap Reductn	0	0	406	0	0	365
Spillback Cap Reductn	0	4	36	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.42	0.68	0.07	0.28	0.60

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 118 (98%), Referenced to phase 2:SBTL and 6:NBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 11.2		Intersection LOS: B	
Intersection Capacity Utilization 57.0%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
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	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.95	1.00	1.00	1.00	0.35	1.00
Satd. Flow (perm)	1770	1583	1863	1583	657	1863
Volume (vph)	114	198	606	81	159	647
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	124	215	659	88	173	703
RTOR Reduction (vph)	0	191	0	16	0	0
Lane Group Flow (vph)	124	24	659	73	173	703
Turn Type		custom		Perm	pm+pt	
Protected Phases			6		5	2
Permitted Phases	4	4		6	2	
Actuated Green, G (s)	13.5	13.5	89.0	89.0	98.5	98.5
Effective Green, g (s)	13.5	13.5	89.0	89.0	98.5	98.5
Actuated g/C Ratio	0.11	0.11	0.74	0.74	0.82	0.82
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)	199	178	1382	1174	590	1529
v/s Ratio Prot			c0.35		0.01	c0.38
v/s Ratio Perm	c0.07	0.02		0.05	0.23	
v/c Ratio	0.62	0.14	0.48	0.06	0.29	0.46
Uniform Delay, d1	50.8	48.0	6.2	4.2	6.7	3.1
Progression Factor	1.00	1.00	1.34	1.46	0.72	0.77
Incremental Delay, d2	6.0	0.3	1.1	0.1	0.2	0.7
Delay (s)	56.8	48.3	9.4	6.2	5.0	3.1
Level of Service	E	D	A	A	A	A
Approach Delay (s)	51.4		9.0			3.5
Approach LOS	D		A			A

Intersection Summary			
HCM Average Control Delay	13.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	165	20	90	136	24	210	165	373	110	176	391	260
Act Effct Green (s)	18.6	18.6	18.6	18.6	18.6	18.6	89.0	82.7	82.7	89.8	83.1	83.1
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16	0.16	0.74	0.69	0.69	0.75	0.69	0.69
v/c Ratio	0.77	0.07	0.28	0.63	0.08	0.50	0.30	0.29	0.10	0.30	0.30	0.22
Control Delay	70.8	40.6	10.3	59.8	41.0	9.6	3.8	5.6	0.6	3.7	4.2	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3
Total Delay	70.9	40.6	10.3	59.8	41.0	9.7	3.8	5.6	0.6	3.7	4.6	1.3
LOS	E	D	B	E	D	A	A	A	A	A	A	A
Approach Delay		48.8			30.1			4.3			3.4	
Approach LOS		D			C			A			A	
Queue Length 50th (ft)	124	13	0	100	16	0	8	47	0	9	61	3
Queue Length 95th (ft)	189	34	43	157	38	63	m35	119	m3	50	104	18
Internal Link Dist (ft)		1147			914			1030			346	
Turn Bay Length (ft)	150		150	150		150	150		150	150		150
Base Capacity (vph)	415	559	538	416	559	622	808	1284	1123	835	1291	1168
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	473	439
Spillback Cap Reductn	2	0	0	0	0	11	0	77	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.04	0.17	0.33	0.04	0.34	0.20	0.31	0.10	0.21	0.48	0.36

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 8 (7%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 14.2		Intersection LOS: B	
Intersection Capacity Utilization 52.5%		ICU Level of Service A	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	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	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	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.74	1.00	1.00	0.74	1.00	1.00	0.49	1.00	1.00	0.50	1.00	1.00
Satd. Flow (perm)	1381	1863	1583	1386	1863	1583	914	1863	1583	936	1863	1583
Volume (vph)	152	18	83	125	22	193	152	343	101	162	360	239
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	165	20	90	136	24	210	165	373	110	176	391	260
RTOR Reduction (vph)	0	0	76	0	0	177	0	0	32	0	0	72
Lane Group Flow (vph)	165	20	14	136	24	33	165	373	78	176	391	188
Turn Type	Perm		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Actuated Green, G (s)	18.6	18.6	18.6	18.6	18.6	18.6	89.0	82.7	82.7	89.8	83.1	83.1
Effective Green, g (s)	18.6	18.6	18.6	18.6	18.6	18.6	89.0	82.7	82.7	89.8	83.1	83.1
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16	0.16	0.74	0.69	0.69	0.75	0.69	0.69
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	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	3.0
Lane Grp Cap (vph)	214	289	245	215	289	245	723	1284	1091	747	1290	1096
v/s Ratio Prot		0.01			0.01		0.01	0.20		c0.01	c0.21	
v/s Ratio Perm	c0.12		0.01	0.10		0.02	0.16		0.05	0.16		0.12
v/c Ratio	0.77	0.07	0.06	0.63	0.08	0.13	0.23	0.29	0.07	0.24	0.30	0.17
Uniform Delay, d1	48.7	43.3	43.2	47.5	43.4	43.7	6.9	7.2	6.1	6.5	7.2	6.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.50	0.62	0.24	0.48	0.45	0.40
Incremental Delay, d2	15.7	0.1	0.1	6.0	0.1	0.2	0.1	0.5	0.1	0.1	0.5	0.3
Delay (s)	64.3	43.4	43.3	53.5	43.5	44.0	3.6	5.0	1.6	3.3	3.8	2.9
Level of Service	E	D	D	D	D	D	A	A	A	A	A	A
Approach Delay (s)		55.9			47.4			4.0			3.4	
Approach LOS		E			D			A			A	

Intersection Summary					
HCM Average Control Delay		18.1	HCM Level of Service		B
HCM Volume to Capacity ratio		0.37			
Actuated Cycle Length (s)		120.0	Sum of lost time (s)		8.0
Intersection Capacity Utilization		52.5%	ICU Level of Service		A
Analysis Period (min)		15			

c Critical Lane Group

Lane Group	EBT	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	98	49	116	539	60	29	527	62
Sign Control	Stop	Stop		Free			Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	46.9%	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			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	31	0	59	30	0	15	107	496	55	27	485	57
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)	34	0	64	33	0	16	116	539	60	29	527	62
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	1374	1417	527	1422	1420	539	589			599		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1374	1417	527	1422	1420	539	589			599		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	68	100	88	64	100	97	88			97		
cM capacity (veh/h)	106	117	551	89	117	542	986			978		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	98	49	116	539	60	29	527	62
Volume Left	34	33	116	0	0	29	0	0
Volume Right	64	16	0	0	60	0	0	62
cSH	225	124	986	1700	1700	978	1700	1700
Volume to Capacity	0.43	0.39	0.12	0.32	0.04	0.03	0.31	0.04
Queue Length 95th (ft)	51	42	10	0	0	2	0	0
Control Delay (s)	32.7	51.8	9.1	0.0	0.0	8.8	0.0	0.0
Lane LOS	D	F	A			A		
Approach Delay (s)	32.7	51.8	1.5			0.4		
Approach LOS	D	F						

Intersection Summary					
Average Delay		4.8			
Intersection Capacity Utilization	46.9%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	643	21	67	766	11	37
Sign Control	Free			Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	592	19	62	705	10	34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	643	21	67	766	11	37
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			664		1545	643
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			664		1545	643
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		91	92
cM capacity (veh/h)			925		117	473

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	643	21	67	766	11	37
Volume Left	0	0	67	0	11	0
Volume Right	0	21	0	0	0	37
cSH	1700	1700	925	1700	117	473
Volume to Capacity	0.38	0.01	0.07	0.45	0.09	0.08
Queue Length 95th (ft)	0	0	6	0	8	6
Control Delay (s)	0.0	0.0	9.2	0.0	38.9	13.3
Lane LOS			A		E	B
Approach Delay (s)	0.0		0.7		19.1	
Approach LOS					C	

Intersection Summary				
Average Delay	1.0			
Intersection Capacity Utilization	47.9%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	NBT	SBT	SBR
Lane Group Flow (vph)	57	28	29	88
Sign Control	Stop	Free	Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	18.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	44	8	14	12	27	81
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	48	9	15	13	29	88
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	73	29	117			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	73	29	117			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	99	99			
cM capacity (veh/h)	921	1045	1471			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	57	28	29	88
Volume Left	48	15	0	0
Volume Right	9	0	0	88
cSH	939	1471	1700	1700
Volume to Capacity	0.06	0.01	0.02	0.05
Queue Length 95th (ft)	5	1	0	0
Control Delay (s)	9.1	4.1	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	9.1	4.1	0.0	
Approach LOS	A			

Intersection Summary				
Average Delay		3.1		
Intersection Capacity Utilization	18.1%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	49	1	193	54	81	29
Sign Control	Free		Free		Stop	Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	31.2%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	45	1	134	43	50	1	0	74	27	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	49	1	146	47	54	1	0	80	29	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)												
pX, platoon unblocked												
vC, conflicting volume	101			50			387	441	49	467	388	47
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	101			50			387	441	49	467	388	47
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			91			100	100	92	93	100	100
cM capacity (veh/h)	1491			1557			531	462	1020	433	496	1023

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	49	1	192	54	82	29
Volume Left	0	0	146	0	1	29
Volume Right	0	1	0	54	80	0
cSH	1491	1700	1557	1700	1007	433
Volume to Capacity	0.00	0.00	0.09	0.03	0.08	0.07
Queue Length 95th (ft)	0	0	8	0	7	5
Control Delay (s)	0.0	0.0	5.9	0.0	8.9	13.9
Lane LOS			A		A	B
Approach Delay (s)	0.0		4.6		8.9	13.9
Approach LOS					A	B

Intersection Summary					
Average Delay	5.6				
Intersection Capacity Utilization	31.2%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	159	247	54	30
Sign Control	Free	Free		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	21.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	146	227	50	28	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	159	247	54	30	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)			1118			
pX, platoon unblocked						
vC, conflicting volume	301				405	247
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	301				405	247
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				95	100
cM capacity (veh/h)	1260				601	792

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	159	247	54	30
Volume Left	0	0	0	30
Volume Right	0	0	54	0
cSH	1260	1700	1700	601
Volume to Capacity	0.00	0.15	0.03	0.05
Queue Length 95th (ft)	0	0	0	4
Control Delay (s)	0.0	0.0	0.0	11.3
Lane LOS				B
Approach Delay (s)	0.0	0.0		11.3
Approach LOS				B

Intersection Summary				
Average Delay		0.7		
Intersection Capacity Utilization		21.9%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	31	131	73	59	66	3
Sign Control	Stop	Stop	Free		Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	24.2%	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			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	2	26	1	74	47	0	1	66	54	1	60	3
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)	2	28	1	80	51	0	1	72	59	1	65	3
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	167	200	65	157	145	72	68			130		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	167	200	65	157	145	72	68			130		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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	96	100	90	93	100	100			100		
cM capacity (veh/h)	755	695	999	783	746	991	1533			1455		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	32	132	73	59	66	3
Volume Left	2	80	1	0	1	0
Volume Right	1	0	0	59	0	3
cSH	706	768	1533	1700	1455	1700
Volume to Capacity	0.04	0.17	0.00	0.03	0.00	0.00
Queue Length 95th (ft)	3	15	0	0	0	0
Control Delay (s)	10.3	10.7	0.1	0.0	0.1	0.0
Lane LOS	B	B	A		A	
Approach Delay (s)	10.3	10.7	0.1		0.1	
Approach LOS	B	B				

Intersection Summary					
Average Delay	4.8				
Intersection Capacity Utilization	24.2%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBL	NBT	SBT	SBR
Lane Group Flow (vph)	30	102	92	53
Sign Control	Stop	Free	Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	15.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	27	1	1	93	85	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	29	1	1	101	92	53
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	196	92	146			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	196	92	146			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	100	100			
cM capacity (veh/h)	793	965	1436			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	30	102	92	53
Volume Left	29	1	0	0
Volume Right	1	0	0	53
cSH	798	1436	1700	1700
Volume to Capacity	0.04	0.00	0.05	0.03
Queue Length 95th (ft)	3	0	0	0
Control Delay (s)	9.7	0.1	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	9.7	0.1	0.0	
Approach LOS	A			

Intersection Summary				
Average Delay		1.1		
Intersection Capacity Utilization	15.7%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	195	42	5	77
Sign Control	Free	Free		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	27.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	125	54	39	5	3	68
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	136	59	42	5	3	74
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	48				373	42
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	48				373	42
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	91				99	93
cM capacity (veh/h)	1559				573	1028

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	195	42	5	77
Volume Left	136	0	0	3
Volume Right	0	0	5	74
cSH	1559	1700	1700	995
Volume to Capacity	0.09	0.02	0.00	0.08
Queue Length 95th (ft)	7	0	0	6
Control Delay (s)	5.5	0.0	0.0	8.9
Lane LOS	A			A
Approach Delay (s)	5.5	0.0		8.9
Approach LOS				A

Intersection Summary				
Average Delay	5.5			
Intersection Capacity Utilization	27.5%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	239	3	360	17	7	10
Sign Control	Free		Free		Stop	Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	35.0%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	219	3	10	321	16	2	0	5	9	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)	1	238	3	11	349	17	2	0	5	10	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)		973										
pX, platoon unblocked												
vC, conflicting volume	366			241			611	628	238	616	614	349
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	366			241			611	628	238	616	614	349
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			99			99	100	99	98	100	100
cM capacity (veh/h)	1192			1325			403	396	801	397	403	694

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	239	3	360	17	8	10
Volume Left	1	0	11	0	2	10
Volume Right	0	3	0	17	5	0
cSH	1192	1700	1325	1700	625	397
Volume to Capacity	0.00	0.00	0.01	0.01	0.01	0.02
Queue Length 95th (ft)	0	0	1	0	1	2
Control Delay (s)	0.0	0.0	0.3	0.0	10.8	14.3
Lane LOS	A		A		B	B
Approach Delay (s)	0.0		0.3		10.8	14.3
Approach LOS					B	B

Intersection Summary					
Average Delay	0.5				
Intersection Capacity Utilization	35.0%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	254	376	17	10
Sign Control	Free	Free		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	28.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	1	233	346	16	9	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	253	376	17	10	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		1228				
pX, platoon unblocked						
vC, conflicting volume	393				632	376
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	393				632	376
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	100
cM capacity (veh/h)	1165				444	670

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	254	376	17	10
Volume Left	1	0	0	10
Volume Right	0	0	17	0
cSH	1165	1700	1700	444
Volume to Capacity	0.00	0.22	0.01	0.02
Queue Length 95th (ft)	0	0	0	2
Control Delay (s)	0.0	0.0	0.0	13.3
Lane LOS	A			B
Approach Delay (s)	0.0	0.0		13.3
Approach LOS				B

Intersection Summary				
Average Delay		0.2		
Intersection Capacity Utilization		28.2%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBT	NBL
Lane Group Flow (vph)	214	48	361	48
Sign Control	Free		Free	Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	35.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	197	44	10	322	40	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	214	48	11	350	43	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			262		586	214
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			262		586	214
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		91	99
cM capacity (veh/h)			1302		469	826

Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	214	48	361	49
Volume Left	0	0	11	43
Volume Right	0	48	0	5
cSH	1700	1700	1302	492
Volume to Capacity	0.13	0.03	0.01	0.10
Queue Length 95th (ft)	0	0	1	8
Control Delay (s)	0.0	0.0	0.3	13.1
Lane LOS			A	B
Approach Delay (s)	0.0		0.3	13.1
Approach LOS				B

Intersection Summary				
Average Delay		1.1		
Intersection Capacity Utilization		35.0%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	226	2	386	17	6	10
Sign Control	Free		Free		Stop	Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	36.2%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	207	2	10	345	16	1	0	5	9	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)	1	225	2	11	375	17	1	0	5	10	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)												
pX, platoon unblocked												
vC, conflicting volume	392			227			624	641	225	629	626	375
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	392			227			624	641	225	629	626	375
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			99			100	100	99	97	100	100
cM capacity (veh/h)	1166			1341			395	389	814	389	397	671

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	226	2	386	17	7	10
Volume Left	1	0	11	0	1	10
Volume Right	0	2	0	17	5	0
cSH	1166	1700	1341	1700	692	389
Volume to Capacity	0.00	0.00	0.01	0.01	0.01	0.03
Queue Length 95th (ft)	0	0	1	0	1	2
Control Delay (s)	0.0	0.0	0.3	0.0	10.3	14.5
Lane LOS	A		A		B	B
Approach Delay (s)	0.0		0.3		10.3	14.5
Approach LOS					B	B

Intersection Summary				
Average Delay	0.5			
Intersection Capacity Utilization	36.2%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	221	360	17	10
Sign Control	Free	Free		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	27.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	1	202	331	16	9	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	220	360	17	10	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	377				582	360
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	377				582	360
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	100
cM capacity (veh/h)	1181				475	685

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	221	360	17	10
Volume Left	1	0	0	10
Volume Right	0	0	17	0
cSH	1181	1700	1700	475
Volume to Capacity	0.00	0.21	0.01	0.02
Queue Length 95th (ft)	0	0	0	2
Control Delay (s)	0.0	0.0	0.0	12.7
Lane LOS	A			B
Approach Delay (s)	0.0	0.0		12.7
Approach LOS				B

Intersection Summary				
Average Delay		0.2		
Intersection Capacity Utilization		27.4%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	240	401	17	10
Sign Control	Free	Free		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization 29.4%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	1	220	369	16	9	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	239	401	17	10	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	418				642	401
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	418				642	401
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	100
cM capacity (veh/h)	1141				438	649

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	240	401	17	10
Volume Left	1	0	0	10
Volume Right	0	0	17	0
cSH	1141	1700	1700	438
Volume to Capacity	0.00	0.24	0.01	0.02
Queue Length 95th (ft)	0	0	0	2
Control Delay (s)	0.0	0.0	0.0	13.4
Lane LOS	A			B
Approach Delay (s)	0.0	0.0		13.4
Approach LOS				B

Intersection Summary				
Average Delay		0.2		
Intersection Capacity Utilization		29.4%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	67	103	551	40	70	551
Sign Control	Stop		Free			Free

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	62	95	507	37	64	507
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	67	103	551	40	70	551
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						1110
pX, platoon unblocked	0.92					
vC, conflicting volume	1241	551			591	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1261	551			591	
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	81			93	
cM capacity (veh/h)	161	534			984	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	67	103	551	40	70	551
Volume Left	67	0	0	0	70	0
Volume Right	0	103	0	40	0	0
cSH	161	534	1700	1700	984	1700
Volume to Capacity	0.42	0.19	0.32	0.02	0.07	0.32
Queue Length 95th (ft)	46	18	0	0	6	0
Control Delay (s)	42.5	13.4	0.0	0.0	8.9	0.0
Lane LOS	E	B			A	
Approach Delay (s)	24.8		0.0		1.0	
Approach LOS	C					

Intersection Summary				
Average Delay	3.5			
Intersection Capacity Utilization	43.7%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBT	NBL
Lane Group Flow (vph)	23	38	38	28
Sign Control	Free		Free	Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	18.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	21	35	10	25	19	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	23	38	11	27	21	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			61		72	23
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			61		72	23
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		98	99
cM capacity (veh/h)			1542		926	1054

Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	23	38	38	27
Volume Left	0	0	11	21
Volume Right	0	38	0	7
cSH	1700	1700	1542	954
Volume to Capacity	0.01	0.02	0.01	0.03
Queue Length 95th (ft)	0	0	1	2
Control Delay (s)	0.0	0.0	2.1	8.9
Lane LOS			A	A
Approach Delay (s)	0.0		2.1	8.9
Approach LOS				A

Intersection Summary				
Average Delay		2.6		
Intersection Capacity Utilization	18.5%	ICU Level of Service		A
Analysis Period (min)	15			

Future 2028 Saturday Site Access Analysis

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	134	46	168	32	46	113	163	747	34	127	743	188
Act Effct Green (s)	16.9	16.9	16.9	16.9	16.9	16.9	89.7	83.8	83.8	92.5	85.2	85.2
Actuated g/C Ratio	0.14	0.14	0.14	0.14	0.14	0.14	0.75	0.70	0.70	0.77	0.71	0.71
v/c Ratio	0.70	0.17	0.46	0.17	0.17	0.35	0.47	0.57	0.03	0.34	0.56	0.16
Control Delay	67.4	44.3	10.3	44.6	44.3	10.7	7.0	5.8	1.0	7.1	9.3	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	1.0	0.0
Total Delay	67.4	44.3	10.3	44.6	44.3	10.7	7.0	5.9	1.0	7.1	10.4	2.1
LOS	E	D	B	D	D	B	A	A	A	A	B	A
Approach Delay		36.8			24.4			5.9			8.5	
Approach LOS		D			C			A			A	
Queue Length 50th (ft)	101	32	0	22	32	0	9	90	0	14	233	7
Queue Length 95th (ft)	157	63	58	49	63	49	18	155	m2	m29	m392	m21
Internal Link Dist (ft)		208			893			756			691	
Turn Bay Length (ft)	150		150	150		150	150		150	150		150
Base Capacity (vph)	282	388	463	282	388	419	497	1301	1113	459	1323	1159
Starvation Cap Reductn	0	0	0	0	0	0	0	42	0	0	325	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.12	0.36	0.11	0.12	0.27	0.33	0.59	0.03	0.28	0.74	0.16

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 5 (4%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 12.6 Intersection LOS: B
Intersection Capacity Utilization 67.0% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	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	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	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.73	1.00	1.00	0.73	1.00	1.00	0.29	1.00	1.00	0.28	1.00	1.00
Satd. Flow (perm)	1354	1863	1583	1354	1863	1583	540	1863	1583	530	1863	1583
Volume (vph)	123	42	155	29	42	104	150	635	31	117	669	173
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.85	0.92	0.92	0.90	0.92
Adj. Flow (vph)	134	46	168	32	46	113	163	747	34	127	743	188
RTOR Reduction (vph)	0	0	144	0	0	97	0	0	7	0	0	35
Lane Group Flow (vph)	134	46	24	32	46	16	163	747	27	127	743	153
Turn Type	Perm		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Actuated Green, G (s)	16.9	16.9	16.9	16.9	16.9	16.9	89.7	83.8	83.8	92.5	85.2	85.2
Effective Green, g (s)	16.9	16.9	16.9	16.9	16.9	16.9	89.7	83.8	83.8	92.5	85.2	85.2
Actuated g/C Ratio	0.14	0.14	0.14	0.14	0.14	0.14	0.75	0.70	0.70	0.77	0.71	0.71
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	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	3.0
Lane Grp Cap (vph)	191	262	223	191	262	223	464	1301	1105	484	1323	1124
v/s Ratio Prot		0.02			0.02		c0.02	c0.40		0.02	0.40	
v/s Ratio Perm	c0.10		0.01	0.02		0.01	0.25		0.02	0.19		0.10
v/c Ratio	0.70	0.18	0.11	0.17	0.18	0.07	0.35	0.57	0.02	0.26	0.56	0.14
Uniform Delay, d1	49.1	45.4	45.0	45.4	45.4	44.7	13.9	9.1	5.6	12.3	8.4	5.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.40	0.40	0.26	1.08	0.92	0.73
Incremental Delay, d2	11.1	0.3	0.2	0.4	0.3	0.1	0.4	1.6	0.0	0.1	0.5	0.1
Delay (s)	60.2	45.7	45.2	45.8	45.7	44.9	5.9	5.3	1.5	13.3	8.2	4.2
Level of Service	E	D	D	D	D	D	A	A	A	B	A	A
Approach Delay (s)		51.0			45.2			5.3			8.1	
Approach LOS		D			D			A			A	

Intersection Summary

HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	79	189	697	90	211	715
Act Effct Green (s)	10.4	10.4	89.9	89.9	101.6	101.6
Actuated g/C Ratio	0.09	0.09	0.75	0.75	0.85	0.85
v/c Ratio	0.51	0.61	0.50	0.08	0.50	0.45
Control Delay	63.4	15.8	6.6	1.5	7.9	1.1
Queue Delay	0.0	0.0	0.6	0.0	0.0	0.6
Total Delay	63.4	15.9	7.1	1.5	7.9	1.7
LOS	E	B	A	A	A	A
Approach Delay	29.9		6.5			3.1
Approach LOS	C		A			A
Queue Length 50th (ft)	60	0	204	5	11	22
Queue Length 95th (ft)	108	69	296	m21	m20	m31
Internal Link Dist (ft)	891		346			756
Turn Bay Length (ft)	150			150	150	
Base Capacity (vph)	339	456	1395	1200	622	1577
Starvation Cap Reductn	0	0	330	0	0	466
Spillback Cap Reductn	0	3	30	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.42	0.65	0.08	0.34	0.64

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 14 (12%), Referenced to phase 2:SBTL and 6:NBT, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 8.1		Intersection LOS: A	
Intersection Capacity Utilization 58.5%		ICU Level of Service B	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
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	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	1583	1863	1583	1770	1863
Flt Permitted	0.95	1.00	1.00	1.00	0.34	1.00
Satd. Flow (perm)	1770	1583	1863	1583	626	1863
Volume (vph)	73	174	641	83	194	658
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	79	189	697	90	211	715
RTOR Reduction (vph)	0	173	0	15	0	0
Lane Group Flow (vph)	79	16	697	75	211	715
Turn Type		custom		Perm	pm+pt	
Protected Phases			6		5	2
Permitted Phases	4	4		6	2	
Actuated Green, G (s)	10.4	10.4	89.9	89.9	101.6	101.6
Effective Green, g (s)	10.4	10.4	89.9	89.9	101.6	101.6
Actuated g/C Ratio	0.09	0.09	0.75	0.75	0.85	0.85
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)	153	137	1396	1186	603	1577
v/s Ratio Prot			c0.37		0.02	c0.38
v/s Ratio Perm	c0.04	0.01		0.05	0.27	
v/c Ratio	0.52	0.12	0.50	0.06	0.35	0.45
Uniform Delay, d1	52.4	50.6	6.0	4.0	6.5	2.3
Progression Factor	1.00	1.00	0.77	0.59	1.15	0.23
Incremental Delay, d2	2.9	0.4	1.1	0.1	0.2	0.5
Delay (s)	55.3	51.0	5.8	2.4	7.7	1.0
Level of Service	E	D	A	A	A	A
Approach Delay (s)	52.3		5.4			2.5
Approach LOS	D		A			A

Intersection Summary			
HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	214	36	117	96	33	179	135	395	109	200	388	211
Act Effct Green (s)	22.9	22.9	22.9	22.9	22.9	22.9	85.7	77.6	77.6	84.5	77.0	77.0
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.19	0.19	0.71	0.65	0.65	0.70	0.64	0.64
v/c Ratio	0.82	0.10	0.29	0.37	0.09	0.40	0.25	0.33	0.10	0.38	0.32	0.19
Control Delay	69.3	37.4	8.2	44.3	37.2	7.8	3.1	5.3	0.3	7.3	6.3	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0
Total Delay	69.3	37.4	8.2	44.3	37.2	7.8	3.1	5.3	0.3	7.3	6.8	1.0
LOS	E	D	A	D	D	A	A	A	A	A	A	A
Approach Delay		46.7			22.3			4.0			5.4	
Approach LOS		D			C			A			A	
Queue Length 50th (ft)	161	23	0	66	21	0	8	50	0	23	54	0
Queue Length 95th (ft)	227	48	45	107	45	55	19	97	2	48	161	5
Internal Link Dist (ft)		1147			914			1110			346	
Turn Bay Length (ft)	150		150	150		150	150		150	150		150
Base Capacity (vph)	446	605	593	444	605	635	704	1204	1056	765	1195	1085
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	413	0
Spillback Cap Reductn	4	0	0	0	0	7	0	29	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.06	0.20	0.22	0.05	0.29	0.19	0.34	0.10	0.26	0.50	0.19

Intersection Summary			
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 32 (27%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 14.6		Intersection LOS: B	
Intersection Capacity Utilization 56.9%		ICU Level of Service B	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	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	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	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.74	1.00	1.00	0.73	1.00	1.00	0.48	1.00	1.00	0.47	1.00	1.00
Satd. Flow (perm)	1370	1863	1583	1367	1863	1583	892	1863	1583	884	1863	1583
Volume (vph)	197	33	108	88	30	165	124	363	100	184	357	194
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	214	36	117	96	33	179	135	395	109	200	388	211
RTOR Reduction (vph)	0	0	95	0	0	145	0	0	33	0	0	70
Lane Group Flow (vph)	214	36	22	96	33	34	135	395	76	200	388	141
Turn Type	Perm		Perm	Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4		4	6		6	2		2
Actuated Green, G (s)	22.9	22.9	22.9	22.9	22.9	22.9	85.7	77.6	77.6	84.5	77.0	77.0
Effective Green, g (s)	22.9	22.9	22.9	22.9	22.9	22.9	85.7	77.6	77.6	84.5	77.0	77.0
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.19	0.19	0.71	0.65	0.65	0.70	0.64	0.64
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	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	3.0
Lane Grp Cap (vph)	261	356	302	261	356	302	696	1205	1024	678	1195	1016
v/s Ratio Prot		0.02			0.02		0.01	c0.21		c0.02	0.21	
v/s Ratio Perm	c0.16		0.01	0.07		0.02	0.13		0.05	0.19		0.09
v/c Ratio	0.82	0.10	0.07	0.37	0.09	0.11	0.19	0.33	0.07	0.29	0.32	0.14
Uniform Delay, d1	46.6	40.1	39.8	42.3	40.0	40.2	8.6	9.5	7.9	9.9	9.7	8.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.30	0.42	0.05	0.69	0.50	0.31
Incremental Delay, d2	17.9	0.1	0.1	0.9	0.1	0.2	0.1	0.7	0.1	0.2	0.7	0.3
Delay (s)	64.5	40.2	40.0	43.1	40.1	40.3	2.7	4.6	0.5	7.0	5.5	2.8
Level of Service	E	D	D	D	D	D	A	A	A	A	A	A
Approach Delay (s)		54.3			41.2			3.5			5.2	
Approach LOS		D			D			A			A	

Intersection Summary					
HCM Average Control Delay	18.5	HCM Level of Service		B	
HCM Volume to Capacity ratio	0.43				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)		12.0	
Intersection Capacity Utilization	56.9%	ICU Level of Service		B	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBT	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	129	63	95	533	49	24	472	51
Sign Control	Stop	Stop		Free			Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	46.2%	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			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	41	0	77	39	0	19	87	490	45	22	434	47
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)	45	0	84	42	0	21	95	533	49	24	472	51
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	1262	1290	472	1325	1292	533	523			582		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1262	1290	472	1325	1292	533	523			582		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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 %	65	100	86	59	100	96	91			98		
cM capacity (veh/h)	129	145	592	104	145	547	1044			993		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	128	63	95	533	49	24	472	51
Volume Left	45	42	95	0	0	24	0	0
Volume Right	84	21	0	0	49	0	0	51
cSH	264	142	1044	1700	1700	993	1700	1700
Volume to Capacity	0.49	0.44	0.09	0.31	0.03	0.02	0.28	0.03
Queue Length 95th (ft)	62	50	7	0	0	2	0	0
Control Delay (s)	31.0	49.3	8.8	0.0	0.0	8.7	0.0	0.0
Lane LOS	D	E	A			A		
Approach Delay (s)	31.0	49.3	1.2			0.4		
Approach LOS	D	E						

Intersection Summary					
Average Delay		5.7			
Intersection Capacity Utilization	46.2%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	610	16	54	679	14	48
Sign Control	Free			Free	Stop	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	561	15	50	625	13	44
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	610	16	54	679	14	48
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			626		1398	610
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			626		1398	610
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		90	90
cM capacity (veh/h)			956		146	495

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	610	16	54	679	14	48
Volume Left	0	0	54	0	14	0
Volume Right	0	16	0	0	0	48
cSH	1700	1700	956	1700	146	495
Volume to Capacity	0.36	0.01	0.06	0.40	0.10	0.10
Queue Length 95th (ft)	0	0	5	0	8	8
Control Delay (s)	0.0	0.0	9.0	0.0	32.2	13.1
Lane LOS			A		D	B
Approach Delay (s)	0.0		0.7		17.4	
Approach LOS					C	

Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	46.2%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	NBT	SBT	SBR
Lane Group Flow (vph)	73	31	17	72
Sign Control	Stop	Free	Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	18.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	57	10	12	17	16	66
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	62	11	13	18	17	72
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	62	17	89			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	62	17	89			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	93	99	99			
cM capacity (veh/h)	936	1061	1506			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	73	32	17	72
Volume Left	62	13	0	0
Volume Right	11	0	0	72
cSH	953	1506	1700	1700
Volume to Capacity	0.08	0.01	0.01	0.04
Queue Length 95th (ft)	6	1	0	0
Control Delay (s)	9.1	3.1	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	9.1	3.1	0.0	
Approach LOS	A			

Intersection Summary				
Average Delay		3.9		
Intersection Capacity Utilization	18.7%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	76	1	189	43	103	38
Sign Control	Free		Free		Stop	Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	31.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	70	1	109	65	40	1	0	94	35	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	76	1	118	71	43	1	0	102	38	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)												
pX, platoon unblocked												
vC, conflicting volume	114			77			384	427	76	486	385	71
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	114			77			384	427	76	486	385	71
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			92			100	100	90	91	100	100
cM capacity (veh/h)	1475			1521			540	479	985	414	506	992

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	76	1	189	43	103	38
Volume Left	0	0	118	0	1	38
Volume Right	0	1	0	43	102	0
cSH	1475	1700	1521	1700	977	414
Volume to Capacity	0.00	0.00	0.08	0.03	0.11	0.09
Queue Length 95th (ft)	0	0	6	0	9	8
Control Delay (s)	0.0	0.0	5.0	0.0	9.1	14.6
Lane LOS			A		A	B
Approach Delay (s)	0.0		4.0		9.1	14.6
Approach LOS					A	B

Intersection Summary					
Average Delay	5.4				
Intersection Capacity Utilization	31.4%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	216	233	45	38
Sign Control	Free	Free		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	21.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	199	214	41	35	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	216	233	45	38	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)			1118			
pX, platoon unblocked						
vC, conflicting volume	277				449	233
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	277				449	233
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				93	100
cM capacity (veh/h)	1286				568	807

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	216	233	45	38
Volume Left	0	0	0	38
Volume Right	0	0	45	0
cSH	1286	1700	1700	568
Volume to Capacity	0.00	0.14	0.03	0.07
Queue Length 95th (ft)	0	0	0	5
Control Delay (s)	0.0	0.0	0.0	11.8
Lane LOS				B
Approach Delay (s)	0.0	0.0		11.8
Approach LOS				B

Intersection Summary				
Average Delay		0.8		
Intersection Capacity Utilization		21.3%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	39	124	97	82	84	2
Sign Control	Stop	Stop	Free		Free	

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	25.0%	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			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	2	33	1	75	38	1	1	88	75	1	76	2
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)	2	36	1	82	41	1	1	96	82	1	83	2
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	204	264	83	202	185	96	85			177		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	204	264	83	202	185	96	85			177		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	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	94	100	89	94	100	100			100		
cM capacity (veh/h)	718	640	977	723	708	961	1512			1399		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	39	124	97	82	84	2
Volume Left	2	82	1	0	1	0
Volume Right	1	1	0	82	0	2
cSH	650	719	1512	1700	1399	1700
Volume to Capacity	0.06	0.17	0.00	0.05	0.00	0.00
Queue Length 95th (ft)	5	15	0	0	0	0
Control Delay (s)	10.9	11.0	0.1	0.0	0.1	0.0
Lane LOS	B	B	A		A	
Approach Delay (s)	10.9	11.0	0.0		0.1	
Approach LOS	B	B				

Intersection Summary					
Average Delay	4.2				
Intersection Capacity Utilization	25.0%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBL	NBT	SBT	SBR
Lane Group Flow (vph)	39	141	122	43
Sign Control	Stop	Free	Free	

Intersection Summary		
Control Type: Unsignalized		
Intersection Capacity Utilization	17.6%	ICU Level of Service A
Analysis Period (min)	15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	35	1	1	129	112	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	38	1	1	140	122	43
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	264	122	165			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	264	122	165			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	100	100			
cM capacity (veh/h)	724	929	1413			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	39	141	122	43
Volume Left	38	1	0	0
Volume Right	1	0	0	43
cSH	729	1413	1700	1700
Volume to Capacity	0.05	0.00	0.07	0.03
Queue Length 95th (ft)	4	0	0	0
Control Delay (s)	10.2	0.1	0.0	0.0
Lane LOS	B	A		
Approach Delay (s)	10.2	0.1	0.0	
Approach LOS	B			

Intersection Summary				
Average Delay		1.2		
Intersection Capacity Utilization	17.6%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	160	42	4	100
Sign Control	Free	Free		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	27.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	101	46	39	4	3	89
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	110	50	42	4	3	97
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	47				312	42
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	47				312	42
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	93				99	91
cM capacity (veh/h)	1561				633	1028

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	160	42	4	100
Volume Left	110	0	0	3
Volume Right	0	0	4	97
cSH	1561	1700	1700	1008
Volume to Capacity	0.07	0.02	0.00	0.10
Queue Length 95th (ft)	6	0	0	8
Control Delay (s)	5.3	0.0	0.0	9.0
Lane LOS	A			A
Approach Delay (s)	5.3	0.0		9.0
Approach LOS				A

Intersection Summary				
Average Delay	5.7			
Intersection Capacity Utilization	27.0%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	333	2	350	14	10	12
Sign Control	Free		Free		Stop	Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	33.6%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	305	2	8	314	13	2	0	7	11	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)	1	332	2	9	341	14	2	0	8	12	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)		956										
pX, platoon unblocked												
vC, conflicting volume	355			334			692	707	332	700	695	341
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	355			334			692	707	332	700	695	341
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			99			99	100	99	97	100	100
cM capacity (veh/h)	1203			1226			356	357	710	348	363	701

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	333	2	350	14	10	12
Volume Left	1	0	9	0	2	12
Volume Right	0	2	0	14	8	0
cSH	1203	1700	1226	1700	581	348
Volume to Capacity	0.00	0.00	0.01	0.01	0.02	0.03
Queue Length 95th (ft)	0	0	1	0	1	3
Control Delay (s)	0.0	0.0	0.3	0.0	11.3	15.7
Lane LOS	A		A		B	C
Approach Delay (s)	0.0		0.3		11.3	15.7
Approach LOS					B	C

Intersection Summary					
Average Delay	0.6				
Intersection Capacity Utilization	33.6%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	352	363	14	12
Sign Control	Free	Free		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	27.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	1	323	334	13	11	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	351	363	14	12	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)		1252				
pX, platoon unblocked						
vC, conflicting volume	377				716	363
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	377				716	363
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				97	100
cM capacity (veh/h)	1181				396	682

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	352	363	14	12
Volume Left	1	0	0	12
Volume Right	0	0	14	0
cSH	1181	1700	1700	396
Volume to Capacity	0.00	0.21	0.01	0.03
Queue Length 95th (ft)	0	0	0	2
Control Delay (s)	0.0	0.0	0.0	14.4
Lane LOS	A			B
Approach Delay (s)	0.0	0.0		14.4
Approach LOS				B

Intersection Summary				
Average Delay		0.2		
Intersection Capacity Utilization		27.8%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	EBR	WBT	NBL
Lane Group Flow (vph)	302	61	350	44
Sign Control	Free		Free	Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	278	56	8	314	33	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	302	61	9	341	36	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			363		661	302
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			363		661	302
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		92	99
cM capacity (veh/h)			1196		424	737

Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	302	61	350	43
Volume Left	0	0	9	36
Volume Right	0	61	0	8
cSH	1700	1700	1196	458
Volume to Capacity	0.18	0.04	0.01	0.09
Queue Length 95th (ft)	0	0	1	8
Control Delay (s)	0.0	0.0	0.3	13.7
Lane LOS			A	B
Approach Delay (s)	0.0		0.3	13.7
Approach LOS				B

Intersection Summary				
Average Delay		0.9		
Intersection Capacity Utilization	33.0%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	319	2	370	14	10	12
Sign Control	Free		Free		Stop	Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	34.6%	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		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	1	293	2	8	332	13	2	0	7	11	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)	1	318	2	9	361	14	2	0	8	12	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)												
pX, platoon unblocked												
vC, conflicting volume	375			321			699	713	318	707	701	361
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	375			321			699	713	318	707	701	361
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			99			99	100	99	97	100	100
cM capacity (veh/h)	1183			1239			352	354	722	345	360	684

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	320	2	370	14	10	12
Volume Left	1	0	9	0	2	12
Volume Right	0	2	0	14	8	0
cSH	1183	1700	1239	1700	586	345
Volume to Capacity	0.00	0.00	0.01	0.01	0.02	0.03
Queue Length 95th (ft)	0	0	1	0	1	3
Control Delay (s)	0.0	0.0	0.3	0.0	11.3	15.8
Lane LOS	A		A		B	C
Approach Delay (s)	0.0		0.2		11.3	15.8
Approach LOS					B	C

Intersection Summary					
Average Delay	0.6				
Intersection Capacity Utilization	34.6%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	310	350	14	12
Sign Control	Free	Free		Stop

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

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	1	284	322	13	11	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	309	350	14	12	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	364				661	350
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	364				661	350
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				97	100
cM capacity (veh/h)	1194				427	693

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	310	350	14	12
Volume Left	1	0	0	12
Volume Right	0	0	14	0
cSH	1194	1700	1700	427
Volume to Capacity	0.00	0.21	0.01	0.03
Queue Length 95th (ft)	0	0	0	2
Control Delay (s)	0.0	0.0	0.0	13.7
Lane LOS	A			B
Approach Delay (s)	0.0	0.0		13.7
Approach LOS				B

Intersection Summary				
Average Delay		0.3		
Intersection Capacity Utilization		26.9%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	338	383	14	12
Sign Control	Free	Free		Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	28.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	1	310	352	13	11	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	337	383	14	12	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	397				722	383
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	397				722	383
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				97	100
cM capacity (veh/h)	1162				393	665

Direction, Lane #	EB 1	WB 1	WB 2	SB 1
Volume Total	338	383	14	12
Volume Left	1	0	0	12
Volume Right	0	0	14	0
cSH	1162	1700	1700	393
Volume to Capacity	0.00	0.23	0.01	0.03
Queue Length 95th (ft)	0	0	0	2
Control Delay (s)	0.0	0.0	0.0	14.4
Lane LOS	A			B
Approach Delay (s)	0.0	0.0		14.4
Approach LOS				B

Intersection Summary				
Average Delay		0.2		
Intersection Capacity Utilization		28.5%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	43	104	549	49	101	502
Sign Control	Stop		Free			Free

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	40	96	505	45	93	462
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	43	104	549	49	101	502
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						1190
pX, platoon unblocked	0.95					
vC, conflicting volume	1253	549			598	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1267	549			598	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	72	81			90	
cM capacity (veh/h)	158	536			979	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	43	104	549	49	101	502
Volume Left	43	0	0	0	101	0
Volume Right	0	104	0	49	0	0
cSH	158	536	1700	1700	979	1700
Volume to Capacity	0.28	0.19	0.32	0.03	0.10	0.30
Queue Length 95th (ft)	26	18	0	0	9	0
Control Delay (s)	36.2	13.3	0.0	0.0	9.1	0.0
Lane LOS	E	B			A	
Approach Delay (s)	20.1		0.0		1.5	
Approach LOS	C					

Intersection Summary				
Average Delay	2.9			
Intersection Capacity Utilization	45.1%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBT	NBL
Lane Group Flow (vph)	23	32	29	35
Sign Control	Free		Free	Stop

Intersection Summary			
Control Type: Unsignalized			
Intersection Capacity Utilization	18.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	21	29	8	18	25	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	23	32	9	20	27	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			54		60	23
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			54		60	23
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		97	99
cM capacity (veh/h)			1551		942	1054

Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	23	32	28	35
Volume Left	0	0	9	27
Volume Right	0	32	0	8
cSH	1700	1700	1551	964
Volume to Capacity	0.01	0.02	0.01	0.04
Queue Length 95th (ft)	0	0	0	3
Control Delay (s)	0.0	0.0	2.3	8.9
Lane LOS			A	A
Approach Delay (s)	0.0		2.3	8.9
Approach LOS				A

Intersection Summary				
Average Delay		3.2		
Intersection Capacity Utilization	18.0%	ICU Level of Service		A
Analysis Period (min)	15			

Traffic Volume Worksheets

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

Fairburn Industrial Boulevard / US 29 - Fairburn Industrial Boulevard Ramp

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	32	0	263	295	0	0	0	0	0	319	40	359	246	533	0	779
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	38	0	309	347	0	0	0	0	0	375	47	422	289	626	0	915
Base Condition Phase II - 2028:	47	0	389	437	0	0	0	0	0	472	59	531	364	789	0	1153
Total New Trips 2015:	7	0	122	129	0	0	0	0	0	0	6	6	78	0	0	78
Total New Trips 2028:	19	0	361	380	0	0	0	0	0	0	11	11	179	0	0	179
External Elementary School Trips	1	0	2	3	0	0	0	0	0	0	1	1	2	0	0	2
Future Traffic Volumes Phase I - 2015:	46	0	433	479	0	0	0	0	0	375	54	429	369	626	0	995
Future Traffic Volumes Phase II - 2028:	67	0	752	820	0	0	0	0	0	472	71	543	545	789	0	1334

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	36	0	227	263	0	0	0	0	0	521	72	593	134	307	0	441
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	42	0	267	309	0	0	0	0	0	612	85	697	157	361	0	518
Base Condition Phase II - 2028:	53	0	336	389	0	0	0	0	0	771	107	878	198	455	0	653
Total New Trips 2015:	7	0	102	109	0	0	0	0	0	0	6	6	120	0	0	120
Total New Trips 2028:	16	0	254	270	0	0	0	0	0	0	20	20	346	0	0	346
External Elementary School Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	49	0	369	418	0	0	0	0	0	612	91	703	277	361	0	638
Future Traffic Volumes Phase II - 2028:	69	0	590	659	0	0	0	0	0	771	127	898	544	455	0	999

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

US 29 (SR 14) / US 29 - Fairburn Industrial Boulevard Ramp

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	248	272	0	520	0	207	28	235	24	0	263	287	0	0	0	0
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	291	320	0	611	0	243	33	276	28	0	309	337	0	0	0	0
Base Condition Phase II - 2028:	367	403	0	770	0	306	41	348	36	0	389	425	0	0	0	0
Total New Trips 2015:	129	98	0	227	0	65	0	65	0	0	84	84	0	0	0	0
Total New Trips 2028:	381	280	0	661	0	144	0	144	0	0	191	191	0	0	0	0
External Elementary School Trips	3	8	0	11	0	9	0	9	0	0	3	3	0	0	0	0
Future Traffic Volumes Phase I - 2015:	423	426	0	849	0	317	33	350	28	0	396	424	0	0	0	0
Future Traffic Volumes Phase II - 2028:	751	691	0	1442	0	459	41	501	36	0	583	619	0	0	0	0

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	240	250	0	490	0	336	26	362	30	0	183	213	0	0	0	0
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	282	294	0	576	0	395	31	425	35	0	215	250	0	0	0	0
Base Condition Phase II - 2028:	355	370	0	725	0	497	38	536	44	0	271	315	0	0	0	0
Total New Trips 2015:	109	92	0	201	0	106	0	106	0	0	126	126	0	0	0	0
Total New Trips 2028:	270	218	0	488	0	291	0	291	0	0	366	366	0	0	0	0
External Elementary School Trips	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	391	387	0	778	0	502	31	532	35	0	341	376	0	0	0	0
Future Traffic Volumes Phase II - 2028:	625	589	0	1214	0	789	38	828	44	0	637	681	0	0	0	0

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

Collingsworth Road / I-85 (SR 403) Northbound Ramps

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	144	0	150	294	0	0	0	0	211	290	0	501	0	253	502	755
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	169	0	176	345	0	0	0	0	248	341	0	589	0	297	590	887
Base Condition Phase II - 2028:	213	0	222	435	0	0	0	0	312	429	0	742	0	375	743	1118
Total New Trips 2015:	84	0	0	84	0	0	0	0	151	8	0	159	0	10	0	10
Total New Trips 2028:	158	0	0	158	0	0	0	0	447	20	0	467	0	18	0	18
External Elementary School Trips	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1
Future Traffic Volumes Phase I - 2015:	253	0	176	429	0	0	0	0	399	350	0	749	0	308	590	898
Future Traffic Volumes Phase II - 2028:	371	0	222	593	0	0	0	0	759	450	0	1210	0	394	743	1137

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	147	0	167	314	0	0	0	0	139	610	0	749	0	355	94	449
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	173	0	196	369	0	0	0	0	163	717	0	880	0	417	110	528
Base Condition Phase II - 2028:	218	0	247	465	0	0	0	0	206	903	0	1109	0	526	139	665
Total New Trips 2015:	42	0	0	42	0	0	0	0	116	11	0	127	0	9	0	9
Total New Trips 2028:	109	0	0	109	0	0	0	0	296	23	0	319	0	23	0	23
External Elementary School Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	215	0	196	411	0	0	0	0	279	728	0	1007	0	426	110	537
Future Traffic Volumes Phase II - 2028:	327	0	247	574	0	0	0	0	502	926	0	1428	0	549	139	688

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

Collingsworth Road / I-85 (SR 403) Southbound Ramps

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	59	0	79	138	0	477	113	590	124	293	0	417
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	69	0	93	162	0	560	133	693	146	344	0	490
Base Condition Phase II - 2028:	0	0	0	0	87	0	117	204	0	706	167	873	184	434	0	617
Total New Trips 2015:	0	0	0	0	0	0	86	86	0	158	41	199	0	92	0	92
Total New Trips 2028:	0	0	0	0	0	0	202	202	0	469	106	575	0	176	0	176
External Elementary School Trips	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1
Future Traffic Volumes Phase I - 2015:	0	0	0	0	69	0	179	248	0	719	174	893	146	437	0	583
Future Traffic Volumes Phase II - 2028:	0	0	0	0	87	0	319	406	0	1176	273	1449	184	611	0	794

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	469	0	251	720	0	307	132	439	188	354	0	542
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	551	0	295	846	0	361	155	516	221	416	0	637
Base Condition Phase II - 2028:	0	0	0	0	694	0	372	1066	0	455	195	650	278	524	0	802
Total New Trips 2015:	0	0	0	0	0	0	145	145	0	126	81	207	0	51	0	51
Total New Trips 2028:	0	0	0	0	0	0	424	424	0	318	162	480	0	131	0	131
External Elementary School Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	0	0	0	0	551	0	440	991	0	487	236	723	221	467	0	688
Future Traffic Volumes Phase II - 2028:	0	0	0	0	694	0	796	1490	0	773	357	1130	278	655	0	933

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

Collingsworth Road / Weldon Road

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	278	0	4	282	35	291	0	326	0	99	262	361
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	327	0	5	331	41	342	0	383	0	116	308	424
Base Condition Phase II - 2028:	0	0	0	0	412	0	6	418	52	431	0	483	0	147	388	534
Total New Trips 2015:	0	0	0	0	197	0	0	197	0	0	0	0	0	0	178	178
Total New Trips 2028:	0	0	0	0	575	0	0	575	0	0	0	0	0	0	378	378
External Elementary School Trips	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	1
Future Traffic Volumes Phase I - 2015:	0	0	0	0	525	0	5	529	41	342	0	383	0	116	487	603
Future Traffic Volumes Phase II - 2028:	0	0	0	0	988	0	6	994	52	431	0	483	0	147	767	913

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	269	0	40	309	8	149	0	157	0	277	304	581
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	316	0	47	363	9	175	0	184	0	325	357	683
Base Condition Phase II - 2028:	0	0	0	0	398	0	59	457	12	221	0	232	0	410	450	860
Total New Trips 2015:	0	0	0	0	206	0	0	206	0	0	0	0	0	0	196	196
Total New Trips 2028:	0	0	0	0	481	0	0	481	0	0	0	0	0	0	555	555
External Elementary School Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	0	0	0	0	522	0	47	569	9	175	0	184	0	325	553	879
Future Traffic Volumes Phase II - 2028:	0	0	0	0	879	0	59	938	12	221	0	232	0	410	1005	1415

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

US 29 (SR 14) / Toombs Street

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	8	347	12	367	20	323	10	353	11	53	9	73	18	21	20	59
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	9	408	14	431	24	380	12	415	13	62	11	86	21	25	24	69
Base Condition Phase II - 2028:	12	514	18	543	30	478	15	523	16	78	13	108	27	31	30	87
Total New Trips 2015:	14	2	0	16	24	2	4	30	2	174	20	196	0	131	48	179
Total New Trips 2028:	29	5	0	34	64	5	6	75	4	511	54	569	0	287	91	378
External Elementary School Trips	5	0	0	5	0	0	3	3	2	1	4	7	0	1	0	1
Future Traffic Volumes Phase I - 2015:	28	410	14	452	48	382	19	448	17	237	35	289	21	157	72	249
Future Traffic Volumes Phase II - 2028:	46	519	18	582	94	483	24	601	22	590	71	684	27	319	121	466

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	7	303	14	324	22	602	16	640	14	43	21	78	20	55	34	109
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	8	356	16	381	26	707	19	752	16	51	25	92	24	65	40	128
Base Condition Phase II - 2028:	10	449	21	480	33	891	24	948	21	64	31	115	30	81	50	161
Total New Trips 2015:	25	2	0	27	45	3	7	55	7	161	22	190	0	173	23	196
Total New Trips 2028:	63	6	0	69	91	6	12	109	13	389	49	451	0	493	62	555
External Elementary School Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	33	358	16	408	71	710	26	807	23	212	47	282	24	238	63	324
Future Traffic Volumes Phase II - 2028:	73	455	21	549	124	897	36	1057	34	453	80	566	30	574	112	716

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

US 29 (SR 14) / SR 154 (Cascade Palmetto Highway) / Ramah Baptist Church Driveway

A.M. Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	2	0	2	211	1	127	339	142	279	0	421	1	257	160	418
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	2	0	2	248	1	149	398	167	328	0	495	1	302	188	491
Base Condition Phase II - 2028:	0	3	0	3	312	1	188	502	210	413	0	623	1	380	237	619
Total New Trips 2015:	0	0	0	0	131	0	25	156	50	2	0	52	0	4	105	109
Total New Trips 2028:	0	0	0	0	374	0	70	444	96	4	0	100	0	6	222	228
External Elementary School Trips	0	0	0	0	10	0	0	10	0	2	0	2	0	3	13	16
Future Traffic Volumes Phase I - 2015:	0	2	0	2	389	1	174	564	217	332	0	549	1	309	306	616
Future Traffic Volumes Phase II - 2028:	0	3	0	3	696	1	258	956	306	419	0	725	1	389	472	863

P.M. Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	1	1	2	4	235	0	271	506	166	227	3	396	1	343	207	551
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	1	1	2	5	276	0	318	595	195	267	4	465	1	403	243	647
Base Condition Phase II - 2028:	1	1	3	6	348	0	401	749	246	336	4	586	1	508	306	816
Total New Trips 2015:	0	0	0	0	136	0	48	184	25	7	0	32	0	7	144	151
Total New Trips 2028:	0	0	0	0	313	0	97	410	67	13	0	80	0	12	386	398
External Elementary School Trips	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	1
Future Traffic Volumes Phase I - 2015:	1	1	2	5	413	0	366	780	220	274	4	497	1	410	388	799
Future Traffic Volumes Phase II - 2028:	1	1	3	6	662	0	498	1160	313	349	4	666	1	520	693	1215

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

US 29 (SR 14) / Wilkerson Mill Road / Tatum Road

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	7	2	21	30	36	5	15	56	20	470	15	505	18	386	27	431
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	8	2	25	35	42	6	18	66	24	552	18	593	21	454	32	506
Base Condition Phase II - 2028:	10	3	31	44	53	7	22	83	30	696	22	748	27	571	40	638
Total New Trips 2015:	1	0	0	1	95	0	0	95	0	133	1	134	0	108	44	152
Total New Trips 2028:	1	0	0	1	286	0	0	286	0	377	1	378	0	226	112	338
External Elementary School Trips	1	0	0	1	0	0	0	0	0	12	1	13	0	15	0	15
Future Traffic Volumes Phase I - 2015:	10	2	25	37	137	6	18	161	24	697	20	740	21	577	76	673
Future Traffic Volumes Phase II - 2028:	12	3	31	46	339	7	22	369	30	1085	24	1139	27	812	152	991

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	14	3	19	36	28	0	10	38	10	391	4	405	17	480	40	537
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	16	4	22	42	33	0	12	45	12	459	5	476	20	564	47	631
Base Condition Phase II - 2028:	21	4	28	53	41	0	15	56	15	579	6	600	25	711	59	795
Total New Trips 2015:	1	0	0	1	64	0	0	64	0	141	2	143	0	149	90	239
Total New Trips 2028:	3	0	0	3	172	0	0	172	0	323	3	326	0	396	267	663
External Elementary School Trips	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1
Future Traffic Volumes Phase I - 2015:	17	4	22	43	97	0	12	109	12	601	7	620	20	714	137	871
Future Traffic Volumes Phase II - 2028:	24	4	28	56	213	0	15	228	15	903	9	927	25	1108	326	1459

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

SR 154 (Cascade Palmetto Highway) / Wilkerson Mill Road

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	15	195	4	214	18	211	11	240	18	19	29	66	4	16	18	38
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	18	229	5	251	21	248	13	282	21	22	34	78	5	19	21	45
Base Condition Phase II - 2028:	22	289	6	317	27	312	16	355	27	28	43	98	6	24	27	56
Total New Trips 2015:	119	0	0	119	0	0	25	25	32	98	111	241	0	49	0	49
Total New Trips 2028:	242	0	0	242	0	0	79	79	98	291	312	701	0	120	0	120
External Elementary School Trips	12	0	0	12	0	0	4	4	3	3	10	16	0	4	0	4
Future Traffic Volumes Phase I - 2015:	149	229	5	382	21	248	42	311	56	123	155	335	5	72	21	98
Future Traffic Volumes Phase II - 2028:	276	289	6	571	27	312	99	438	128	322	365	815	6	148	27	180

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	29	199	3	231	20	364	14	398	8	12	13	33	2	28	15	45
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	34	234	4	271	24	428	16	468	9	14	15	39	2	33	18	53
Base Condition Phase II - 2028:	43	295	4	342	30	539	21	589	12	18	19	49	3	41	22	67
Total New Trips 2015:	123	0	0	123	0	0	32	32	30	73	140	243	0	99	0	99
Total New Trips 2028:	327	0	0	327	0	0	104	104	99	188	310	597	0	283	0	283
External Elementary School Trips	1	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0
Future Traffic Volumes Phase I - 2015:	158	234	4	395	24	428	48	500	39	87	156	283	2	132	18	152
Future Traffic Volumes Phase II - 2028:	371	295	4	670	30	539	125	693	111	206	330	647	3	324	22	350

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

Wilkerson Mill Road / Phillips Road

A.M. Peak Hour

Condition	Northbound L	T	R	Tot	Southbound L	T	R	Tot	Eastbound L	T	R	Tot	Westbound L	T	R	Tot
Existing:	1	0	3	4	0	0	0	0	0	81	1	82	1	21	0	22
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	1	0	4	5	0	0	0	0	0	95	1	96	1	25	0	26
Base Condition Phase II - 2028:	1	0	4	6	0	0	0	0	0	120	1	121	1	31	0	33
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	241	0	241	0	193	0	193
Total New Trips 2028:	17	0	86	103	0	0	0	0	0	614	5	619	24	416	0	440
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	16	0	16	0	19	0	19
Future Traffic Volumes Phase I - 2015:	1	0	4	5	0	0	0	0	0	352	1	353	1	237	0	238
Future Traffic Volumes Phase II - 2028:	18	0	90	109	0	0	0	0	0	750	6	756	25	466	0	492

P.M. Peak Hour

Condition	Northbound L	T	R	Tot	Southbound L	T	R	Tot	Eastbound L	T	R	Tot	Westbound L	T	R	Tot
Existing:	1	0	2	3	0	0	0	0	0	32	2	34	6	75	0	81
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	1	0	2	4	0	0	0	0	0	38	2	40	7	88	0	95
Base Condition Phase II - 2028:	1	0	3	4	0	0	0	0	0	47	3	50	9	111	0	120
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	244	0	244	0	254	0	254
Total New Trips 2028:	9	0	44	53	0	0	0	0	0	555	16	571	80	634	0	714
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1
Future Traffic Volumes Phase I - 2015:	1	0	2	4	0	0	0	0	0	283	2	285	7	343	0	350
Future Traffic Volumes Phase II - 2028:	10	0	47	57	0	0	0	0	0	603	19	622	89	746	0	835

SAT Peak Hour

Condition	Northbound L	T	R	Tot	Southbound L	T	R	Tot	Eastbound L	T	R	Tot	Westbound L	T	R	Tot
Existing:	2	0	2	4	0	0	0	0	0	35	1	36	2	42	0	44
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	2	0	2	5	0	0	0	0	0	41	1	42	2	49	0	52
Base Condition Phase II - 2028:	3	0	3	6	0	0	0	0	0	52	1	53	3	62	0	65
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	220	0	220	0	244	0	244
Total New Trips 2028:	11	0	57	68	0	0	0	0	0	537	13	550	65	608	0	673
Future Traffic Volumes Phase I - 2015:	2	0	2	5	0	0	0	0	0	261	1	262	2	293	0	296
Future Traffic Volumes Phase II - 2028:	14	0	60	74	0	0	0	0	0	589	14	603	68	670	0	738

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

Wilkerson Mill Road / Jenkins Road

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	2	0	1	3	2	76	0	78	0	28	1	29
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	2	0	1	4	2	89	0	92	0	33	1	34
Base Condition Phase II - 2028:	0	0	0	0	3	0	1	4	3	113	0	115	0	41	1	43
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	241	0	241	0	193	0	193
Total New Trips 2028:	0	0	0	0	0	0	0	0	0	619	0	596	0	433	0	343
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	16	0	16	0	19	0	19
Future Traffic Volumes Phase I - 2015:	0	0	0	0	2	0	1	4	2	346	0	349	0	245	1	246
Future Traffic Volumes Phase II - 2028:	0	0	0	0	3	0	1	4	3	748	0	750	0	493	1	495

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	2	0	1	3	1	36	0	37	0	83	1	84
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	2	0	1	4	1	42	0	43	0	98	1	99
Base Condition Phase II - 2028:	0	0	0	0	3	0	1	4	1	53	0	55	0	123	1	124
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	244	0	248	0	254	0	258
Total New Trips 2028:	0	0	0	0	0	0	0	0	0	570	0	496	0	642	0	624
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1
Future Traffic Volumes Phase I - 2015:	0	0	0	0	2	0	1	4	1	287	0	288	0	353	1	354
Future Traffic Volumes Phase II - 2028:	0	0	0	0	3	0	1	4	1	624	0	626	0	766	1	767

SAT Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	1	0	2	3	2	35	0	37	0	36	2	38
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	1	0	2	4	2	41	0	43	0	42	2	45
Base Condition Phase II - 2028:	0	0	0	0	1	0	3	4	3	52	0	55	0	53	3	56
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	220	0	220	0	244	0	244
Total New Trips 2028:	0	0	0	0	0	0	0	0	0	550	0	552	0	619	0	618
Future Traffic Volumes Phase I - 2015:	0	0	0	0	1	0	2	4	2	261	0	263	0	286	2	289
Future Traffic Volumes Phase II - 2028:	0	0	0	0	1	0	3	4	3	602	0	605	0	672	3	675

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

Cochran Mill Road / Wilkerson Mill Road

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	27	7	34	20	33	0	53	0	0	0	0	6	0	6	12
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	32	8	40	24	39	0	62	0	0	0	0	7	0	7	14
Base Condition Phase II - 2028:	0	40	10	50	30	49	0	78	0	0	0	0	9	0	9	18
Total New Trips 2015:	0	123	241	364	0	103	0	103	0	0	0	0	193	0	0	193
Total New Trips 2028:	0	303	548	851	10	177	0	187	0	0	0	0	398	0	37	435
External Elementary School Trips:	0	12	16	28	0	14	0	14	0	0	0	0	19	0	0	19
Future Traffic Volumes Phase I - 2015:	0	167	265	432	24	156	0	179	0	0	0	0	219	0	7	226
Future Traffic Volumes Phase II - 2028:	0	355	574	929	40	240	0	279	0	0	0	0	426	0	46	472

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	40	6	46	9	43	0	52	0	0	0	0	8	0	15	23
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	47	7	54	11	51	0	61	0	0	0	0	9	0	18	27
Base Condition Phase II - 2028:	0	59	9	68	13	64	0	77	0	0	0	0	12	0	22	34
Total New Trips 2015:	0	135	244	379	0	141	0	141	0	0	0	0	254	0	0	254
Total New Trips 2028:	0	259	521	780	34	323	0	357	0	0	0	0	573	0	19	592
External Elementary School Trips:	0	1	1	2	0	1	0	1	0	0	0	0	1	0	0	1
Future Traffic Volumes Phase I - 2015:	0	183	252	435	11	193	0	203	0	0	0	0	264	0	18	282
Future Traffic Volumes Phase II - 2028:	0	319	531	850	47	388	0	435	0	0	0	0	586	0	41	627

SAT Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	44	5	49	6	36	0	42	0	0	0	0	7	0	6	13
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	52	6	58	7	42	0	49	0	0	0	0	8	0	7	15
Base Condition Phase II - 2028:	0	65	7	73	9	53	0	62	0	0	0	0	10	0	9	19
Total New Trips 2015:	0	146	220	366	0	162	0	162	0	0	0	0	244	0	0	244
Total New Trips 2028:	0	293	493	786	28	331	0	359	0	0	0	0	559	0	24	583
Future Traffic Volumes Phase I - 2015:	0	198	226	424	7	204	0	211	0	0	0	0	252	0	7	259
Future Traffic Volumes Phase II - 2028:	0	358	500	859	37	384	0	421	0	0	0	0	569	0	33	602

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

S. Fulton Highway / Cochran Mill Road

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	13	7	27	47	0	10	0	10	2	432	44	478	19	55	0	74
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	15	8	32	55	0	12	0	12	2	508	52	562	22	65	0	87
Base Condition Phase II - 2028:	19	10	40	70	0	15	0	15	3	640	65	708	28	81	0	110
Total New Trips 2015:	8	9	105	122	0	10	0	10	0	0	8	8	85	0	0	85
Total New Trips 2028:	21	23	296	340	0	18	0	18	0	0	15	15	154	0	0	154
External Elementary School Trips:	2	3	7	12	0	4	0	4	0	0	2	2	8	0	0	8
Future Traffic Volumes Phase I - 2015:	25	20	144	189	0	26	0	26	2	508	62	572	115	65	0	180
Future Traffic Volumes Phase II - 2028:	42	36	343	422	0	37	0	37	3	640	82	725	190	81	0	272

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	39	16	14	69	0	9	3	12	1	53	12	66	16	360	1	377
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	46	19	16	81	0	11	4	14	1	62	14	78	19	423	1	443
Base Condition Phase II - 2028:	58	24	21	102	0	13	4	18	1	78	18	98	24	533	1	558
Total New Trips 2015:	11	14	109	134	0	14	0	14	0	0	11	11	114	0	0	114
Total New Trips 2028:	24	29	225	278	0	33	0	33	0	0	28	28	297	0	0	297
External Elementary School Trips:	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1
Future Traffic Volumes Phase I - 2015:	57	33	126	216	0	25	4	28	1	62	25	89	134	423	1	558
Future Traffic Volumes Phase II - 2028:	82	53	247	381	0	46	4	51	1	78	46	126	322	533	1	856

SAT Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	16	16	13	45	4	19	7	30	3	61	13	77	14	87	1	102
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	19	19	15	53	5	22	8	35	4	72	15	90	16	102	1	120
Base Condition Phase II - 2028:	24	24	19	67	6	28	10	44	4	90	19	114	21	129	1	151
Total New Trips 2015:	16	23	107	146	0	25	0	25	0	0	18	18	118	0	0	118
Total New Trips 2028:	32	42	244	318	0	46	0	46	0	0	35	35	277	0	0	277
Future Traffic Volumes Phase I - 2015:	35	42	122	199	5	47	8	60	4	72	33	108	134	102	1	238
Future Traffic Volumes Phase II - 2028:	56	66	263	385	6	74	10	90	4	90	54	149	298	129	1	428

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

S. Fulton Highway / Rivertown Road

A.M. Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	7	3	8	18	28	23	0	51	0	389	32	421	0	74	4	78
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	8	4	9	21	33	27	0	60	0	457	38	495	0	87	5	92
Base Condition Phase II - 2028:	10	4	12	27	41	34	0	76	0	576	47	623	0	110	6	115
Total New Trips 2015:	6	0	0	6	0	0	0	0	0	95	7	102	0	72	0	72
Total New Trips 2028:	5	0	0	5	0	0	0	0	0	271	17	288	0	138	0	138
External Elementary School Trips	0	0	0	0	0	0	0	0	0	3	0	3	0	3	0	3
Future Traffic Volumes Phase I - 2015:	14	4	9	27	33	27	0	60	0	555	45	600	0	162	5	167
Future Traffic Volumes Phase II - 2028:	15	4	12	32	41	34	0	76	0	850	64	914	0	251	6	256

P.M. Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	34	16	0	50	0	9	12	21	0	46	15	61	3	341	27	371
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	40	19	0	59	0	11	14	25	0	54	18	72	4	401	32	436
Base Condition Phase II - 2028:	50	24	0	74	0	13	18	31	0	68	22	90	4	505	40	549
Total New Trips 2015:	6	0	0	6	0	0	0	0	0	90	7	97	0	96	0	96
Total New Trips 2028:	16	0	0	16	0	0	0	0	0	194	9	203	0	260	0	260
External Elementary School Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	46	19	0	65	0	11	14	25	0	144	25	169	4	497	32	532
Future Traffic Volumes Phase II - 2028:	66	24	0	90	0	13	18	31	0	262	31	293	4	765	40	809

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

S. Fulton Highway / SR 154 (Cascade Palmetto Highway)

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	3	282	74	359	4	153	3	160	20	391	3	414	34	72	1	107
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	4	331	87	422	5	180	4	188	24	459	4	486	40	85	1	126
Base Condition Phase II - 2028:	4	418	110	531	6	227	4	237	30	579	4	613	50	107	1	158
Total New Trips 2015:	0	0	0	0	0	0	17	17	20	75	0	95	0	57	0	57
Total New Trips 2028:	0	4	0	4	0	20	14	34	52	219	0	271	0	124	0	124
External Elementary School Trips	0	2	0	2	0	2	0	2	0	3	0	3	0	3	0	3
Future Traffic Volumes Phase I - 2015:	4	333	87	424	5	182	21	207	44	537	4	584	40	145	1	186
Future Traffic Volumes Phase II - 2028:	4	424	110	537	6	249	18	273	82	801	4	887	50	234	1	285

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	6	172	25	203	4	218	18	240	1	54	1	56	95	349	6	450
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	7	202	29	239	5	256	21	282	1	63	1	66	112	410	7	529
Base Condition Phase II - 2028:	9	255	37	301	6	323	27	355	1	80	1	83	141	517	9	666
Total New Trips 2015:	0	0	0	0	0	0	21	21	21	69	0	90	0	73	0	73
Total New Trips 2028:	0	21	0	21	0	10	49	59	27	167	0	194	0	211	0	211
External Elementary School Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	7	202	29	239	5	256	42	303	22	132	1	156	112	483	7	602
Future Traffic Volumes Phase II - 2028:	9	276	37	322	6	333	76	414	28	247	1	277	141	728	9	877

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

S. Fulton Highway / Cedar Grove Road

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	10	73	215	298	101	124	13	238	18	431	26	475	98	105	32	235
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	12	86	253	350	119	146	15	280	21	506	31	558	115	123	38	276
Base Condition Phase II - 2028:	15	108	318	441	150	184	19	352	27	638	38	703	145	155	47	348
Total New Trips 2015:	1	0	0	1	0	0	1	1	1	74	1	76	0	55	0	55
Total New Trips 2028:	1	0	0	1	0	0	1	1	1	218	1	220	0	121	0	121
External Elementary School Trips	1	0	0	1	0	0	1	1	1	1	1	3	0	1	0	1
Future Traffic Volumes Phase I - 2015:	14	86	253	352	119	146	17	282	23	581	33	637	115	179	38	332
Future Traffic Volumes Phase II - 2028:	17	108	318	443	150	184	21	354	29	857	40	926	145	277	47	470

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	28	112	101	241	41	65	11	117	14	73	17	104	205	428	93	726
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	33	132	119	283	48	76	13	137	16	86	20	122	241	503	109	853
Base Condition Phase II - 2028:	41	166	150	357	61	96	16	173	21	108	25	154	304	634	138	1075
Total New Trips 2015:	1	0	0	1	0	0	1	1	2	66	2	70	0	70	0	70
Total New Trips 2028:	3	0	0	3	0	0	3	3	3	162	3	168	0	206	0	206
External Elementary School Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	34	132	119	284	48	76	14	138	18	152	22	192	241	573	109	923
Future Traffic Volumes Phase II - 2028:	44	166	150	360	61	96	19	176	24	270	28	322	304	840	138	1281

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

Hutcheson Ferry Road / Phillips Road

A.M. Peak Hour

Condition	Northbound L	T	R	Tot	Southbound L	T	R	Tot	Eastbound L	T	R	Tot	Westbound L	T	R	Tot
Existing:	0	0	0	0	18	0	10	28	8	106	0	114	0	49	11	60
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	21	0	12	33	9	125	0	134	0	58	13	71
Base Condition Phase II - 2028:	0	0	0	0	27	0	15	41	12	157	0	169	0	73	16	89
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	240	0	240	0	184	0	184
Total New Trips 2028:	0	0	0	0	183	0	5	188	1	517	0	518	0	348	51	399
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	9	0	9	0	11	0	11
Future Traffic Volumes Phase I - 2015:	0	0	0	0	21	0	12	33	9	374	0	383	0	253	13	266
Future Traffic Volumes Phase II - 2028:	0	0	0	0	210	0	20	229	13	683	0	696	0	432	67	499

P.M. Peak Hour

Condition	Northbound L	T	R	Tot	Southbound L	T	R	Tot	Eastbound L	T	R	Tot	Westbound L	T	R	Tot
Existing:	0	0	0	0	5	0	3	8	7	96	0	103	0	146	12	158
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	6	0	4	9	8	113	0	121	0	172	14	186
Base Condition Phase II - 2028:	0	0	0	0	7	0	4	12	10	142	0	152	0	216	18	234
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	232	0	235	0	249	0	252
Total New Trips 2028:	0	0	0	0	93	0	2	95	4	459	0	463	0	527	170	697
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1
Future Traffic Volumes Phase I - 2015:	0	0	0	0	6	0	4	9	8	346	0	354	0	422	14	436
Future Traffic Volumes Phase II - 2028:	0	0	0	0	100	0	6	107	14	602	0	616	0	744	188	932

SAT Peak Hour

Condition	Northbound L	T	R	Tot	Southbound L	T	R	Tot	Eastbound L	T	R	Tot	Westbound L	T	R	Tot
Existing:	0	0	0	0	2	0	3	5	2	94	0	96	0	94	2	96
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	2	0	4	6	2	110	0	113	0	110	2	113
Base Condition Phase II - 2028:	0	0	0	0	3	0	4	7	3	139	0	142	0	139	3	142
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	207	0	207	0	230	0	230
Total New Trips 2028:	0	0	0	0	121	0	3	124	4	435	0	439	0	493	138	631
Future Traffic Volumes Phase I - 2015:	0	0	0	0	2	0	4	6	2	317	0	320	0	340	2	343
Future Traffic Volumes Phase II - 2028:	0	0	0	0	124	0	7	131	7	574	0	581	0	632	141	773

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

Hutcheson Ferry Road / Cochran Mill Road

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	19	0	28	47	46	92	0	138	0	51	12	63
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	22	0	33	55	54	108	0	162	0	60	14	74
Base Condition Phase II - 2028:	0	0	0	0	28	0	41	70	68	136	0	204	0	76	18	93
Total New Trips 2015:	0	0	0	0	240	0	27	267	19	0	0	19	0	0	184	184
Total New Trips 2028:	0	0	0	0	517	0	52	569	33	1	0	34	0	5	348	353
External Elementary School Trips:	0	0	0	0	9	0	2	11	2	0	0	2	0	0	11	11
Future Traffic Volumes Phase I - 2015:	0	0	0	0	271	0	62	333	75	108	0	183	0	60	209	269
Future Traffic Volumes Phase II - 2028:	0	0	0	0	554	0	95	650	103	137	0	240	0	81	377	457

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	30	0	20	50	8	75	0	83	0	116	33	149
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	35	0	24	59	9	88	0	98	0	136	39	175
Base Condition Phase II - 2028:	0	0	0	0	44	0	30	74	12	111	0	123	0	172	49	221
Total New Trips 2015:	0	0	0	0	232	0	24	259	27	0	0	28	0	0	249	252
Total New Trips 2028:	0	0	0	0	459	0	45	504	54	4	0	58	0	2	527	529
External Elementary School Trips:	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	1
Future Traffic Volumes Phase I - 2015:	0	0	0	0	268	0	48	316	36	88	0	125	0	136	289	425
Future Traffic Volumes Phase II - 2028:	0	0	0	0	504	0	75	579	66	115	0	181	0	174	577	751

SAT Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	27	0	23	50	22	64	0	86	0	76	22	98
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	32	0	27	59	26	75	0	101	0	89	26	115
Base Condition Phase II - 2028:	0	0	0	0	40	0	34	74	33	95	0	127	0	113	33	145
Total New Trips 2015:	0	0	0	0	207	0	25	232	27	0	0	27	0	0	230	230
Total New Trips 2028:	0	0	0	0	435	0	48	483	54	4	0	58	0	3	493	496
Future Traffic Volumes Phase I - 2015:	0	0	0	0	239	0	52	291	53	75	0	128	0	89	256	345
Future Traffic Volumes Phase II - 2028:	0	0	0	0	475	0	82	557	87	99	0	185	0	116	526	641

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Traffic Volumes
Future Conditions

A&R Engineering
August-08

Hutcheson Ferry Road / Atlanta Newnan Road

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	8	0	3	11	2	98	0	100	0	67	2	69
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	9	0	4	13	2	115	0	118	0	79	2	81
Base Condition Phase II - 2028:	0	0	0	0	12	0	4	16	3	145	0	148	0	99	3	102
Total New Trips 2015:	0	0	0	0	2	0	17	19	22	2	0	24	0	7	3	10
Total New Trips 2028:	0	0	0	0	2	0	64	66	46	0	0	46	0	0	4	4
External Elementary School Trips	0	0	0	0	2	0	6	8	7	0	0	7	0	0	2	2
Future Traffic Volumes Phase I - 2015:	0	0	0	0	13	0	27	40	31	117	0	149	0	86	7	93
Future Traffic Volumes Phase II - 2028:	0	0	0	0	16	0	74	90	56	145	0	201	0	99	9	108

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	3	0	2	5	5	76	0	81	0	117	8	125
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	4	0	2	6	6	89	0	95	0	137	9	147
Base Condition Phase II - 2028:	0	0	0	0	4	0	3	7	7	113	0	120	0	173	12	185
Total New Trips 2015:	0	0	0	0	5	0	30	35	29	6	0	35	0	4	4	8
Total New Trips 2028:	0	0	0	0	8	0	73	81	83	0	0	83	0	0	8	8
External Elementary School Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	0	0	0	0	9	0	32	41	35	95	0	130	0	141	13	155
Future Traffic Volumes Phase II - 2028:	0	0	0	0	12	0	76	88	90	113	0	203	0	173	20	193

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

Hutcheson Ferry Road / Rico Road

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	42	0	3	45	4	61	0	65	0	51	11	62
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	49	0	4	53	5	72	0	76	0	60	13	73
Base Condition Phase II - 2028:	0	0	0	0	62	0	4	67	6	90	0	96	0	76	16	92
Total New Trips 2015:	0	0	0	0	4	0	0	4	0	20	0	20	0	22	3	25
Total New Trips 2028:	0	0	0	0	7	0	0	7	0	39	0	39	0	60	4	64
External Elementary School Trips	0	0	0	0	3	0	0	3	0	4	0	4	0	4	3	7
Future Traffic Volumes Phase I - 2015:	0	0	0	0	56	0	4	60	5	96	0	100	0	86	19	105
Future Traffic Volumes Phase II - 2028:	0	0	0	0	72	0	4	77	6	133	0	139	0	140	23	163

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	14	0	5	19	5	50	0	55	0	68	49	117
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	16	0	6	22	6	59	0	65	0	80	58	137
Base Condition Phase II - 2028:	0	0	0	0	21	0	7	28	7	74	0	81	0	101	73	173
Total New Trips 2015:	0	0	0	0	7	0	0	7	0	27	0	27	0	27	8	35
Total New Trips 2028:	0	0	0	0	16	0	0	16	0	69	0	69	0	59	14	73
External Elementary School Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	0	0	0	0	23	0	6	29	6	86	0	92	0	107	66	172
Future Traffic Volumes Phase II - 2028:	0	0	0	0	37	0	7	44	7	143	0	150	0	160	87	246

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Traffic Volumes
Future Conditions

A&R Engineering
August-08

Atlanta Newnan Road / Rico Tatum Road

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	2	3	5	1	2	0	3	0	0	0	0	2	0	2	4
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	2	4	6	1	2	0	4	0	0	0	0	2	0	2	5
Base Condition Phase II - 2028:	0	3	4	7	1	3	0	4	0	0	0	0	3	0	3	6
Total New Trips 2015:	0	0	25	25	14	0	0	14	0	0	0	0	19	0	11	30
Total New Trips 2028:	0	4	31	35	256	8	0	264	0	0	0	0	39	0	87	126
Residential Mixed-use Trips:	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
External Elementary School Trips:	0	0	0	0	6	0	0	6	0	0	0	0	0	0	5	5
Future Traffic Volumes Phase I - 2015:	0	2	29	31	21	2	0	24	0	0	0	0	21	0	18	40
Future Traffic Volumes Phase II - 2028:	0	7	35	42	263	11	0	274	0	0	0	0	43	0	96	139

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	2	0	2	1	2	0	3	0	0	0	0	1	0	1	2
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	2	0	2	1	2	0	4	0	0	0	0	1	0	1	2
Base Condition Phase II - 2028:	0	3	0	3	1	3	0	4	0	0	0	0	1	0	1	3
Total New Trips 2015:	0	0	33	33	20	0	0	20	0	0	0	0	35	0	20	55
Total New Trips 2028:	0	8	55	63	158	6	0	164	0	0	0	0	50	0	255	305
Residential Mixed-use Trips:	0	0	3	3	7	0	0	7	0	0	0	0	5	0	10	15
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	0	2	33	35	21	2	0	24	0	0	0	0	36	0	21	57
Future Traffic Volumes Phase II - 2028:	0	11	58	69	166	9	0	175	0	0	0	0	56	0	266	323

SAT Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	2	3	5	1	1	0	2	0	0	0	0	1	0	2	3
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	2	4	6	1	1	0	2	0	0	0	0	1	0	2	4
Base Condition Phase II - 2028:	0	3	4	7	1	1	0	3	0	0	0	0	1	0	3	4
Total New Trips 2015:	0	0	60	60	39	0	0	39	0	0	0	0	54	0	35	89
Total New Trips 2028:	0	7	74	81	220	6	0	226	0	0	0	0	65	0	234	299
Residential Mixed-use Trips:	0	0	3	3	5	0	0	5	0	0	0	0	4	0	8	12
Future Traffic Volumes Phase I - 2015:	0	2	64	66	40	1	0	41	0	0	0	0	55	0	37	93
Future Traffic Volumes Phase II - 2028:	0	10	81	91	226	7	0	234	0	0	0	0	70	0	245	315

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

Cochran Mill Road / Rico Tatum Road / Retail & Office Driveway 1

A.M. Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	1	33	0	34	0	30	0	30	4	0	2	6	0	0	0	0
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	1	39	0	40	0	35	0	35	5	0	2	7	0	0	0	0
Base Condition Phase II - 2028:	1	49	0	50	0	44	0	44	6	0	3	9	0	0	0	0
Total New Trips 2015:	25	203	25	253	59	205	32	296	117	6	69	192	13	4	44	61
Total New Trips 2028:	62	581	43	686	106	407	62	575	185	14	117	316	22	10	86	118
Residential Mixed-use Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
External Elementary School Trips:	0	27	0	27	0	33	0	33	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	26	269	25	320	59	273	32	364	122	6	71	199	13	4	44	61
Future Traffic Volumes Phase II - 2028:	63	657	43	763	106	484	62	652	191	14	120	325	22	12	86	120

P.M. Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	2	50	0	52	0	45	4	49	0	0	1	1	0	0	0	0
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	2	59	0	61	0	53	5	58	0	0	1	1	0	0	0	0
Base Condition Phase II - 2028:	3	74	0	77	0	67	6	73	0	0	1	1	0	0	0	0
Total New Trips 2015:	80	252	15	347	51	234	110	395	61	8	54	123	25	10	67	102
Total New Trips 2028:	136	563	26	725	99	586	210	895	94	19	105	218	44	21	122	187
Pass By Adjustments - 2015:	-2	-9	11	0	10	-6	-4	0	0	1	-1	0	7	6	9	22
Pass By Adjustments - 2028:	-3	-12	15	0	13	-8	-5	0	0	1	-1	0	9	8	12	29
Residential Mixed-use Trips:	0	0	0	0	0	0	0	0	0	10	0	10	0	15	0	15
External Elementary School Trips:	0	2	0	2	0	2	0	2	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	80	304	26	410	61	283	111	455	61	9	54	124	32	16	76	124
Future Traffic Volumes Phase II - 2028:	136	627	41	804	112	647	211	970	94	30	105	229	53	44	134	231

SAT Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	51	0	51	0	43	2	45	0	0	2	2	0	0	0	0
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	60	0	60	0	51	2	53	0	0	2	2	0	0	0	0
Base Condition Phase II - 2028:	0	76	0	76	0	64	3	67	0	0	3	3	0	0	0	0
Total New Trips 2015:	93	240	14	347	60	267	80	407	73	18	98	189	14	17	53	84
Total New Trips 2028:	150	566	25	741	111	610	171	892	123	33	153	309	23	29	98	150
Pass By Adjustments - 2015:	0	-4	4	0	4	-3	-1	0	0	1	-1	0	4	1	4	9
Pass By Adjustments - 2028:	0	-6	6	0	6	-5	-1	0	0	1	-1	0	6	1	6	13
Residential Mixed-use Trips:	0	0	0	0	0	0	0	0	0	8	0	8	0	12	0	12
Future Traffic Volumes Phase I - 2015:	93	296	18	407	64	315	81	460	73	19	99	191	18	18	57	93
Future Traffic Volumes Phase II - 2028:	150	636	31	817	117	669	173	959	123	42	155	320	29	42	104	175

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

Cochran Mill Road / Retail & Office Driveway 2

A.M. Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	34	0	34	0	32	0	32	0	0	0	0	0	0	0	0
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	40	0	40	0	38	0	38	0	0	0	0	0	0	0	0
Base Condition Phase II - 2028:	0	50	0	50	0	47	0	47	0	0	0	0	0	0	0	0
Total New Trips 2015:	0	206	46	252	80	208	0	288	0	0	0	0	25	0	47	72
Total New Trips 2028:	0	593	79	672	138	408	0	546	0	0	0	0	41	0	94	135
External Elementary School Trips:	0	27	0	27	0	33	0	33	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	0	273	46	319	80	279	0	359	0	0	0	0	25	0	47	72
Future Traffic Volumes Phase II - 2028:	0	670	79	749	138	488	0	626	0	0	0	0	41	0	94	135

P.M. Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	52	0	52	0	46	0	46	0	0	0	0	0	0	0	0
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	61	0	61	0	54	0	54	0	0	0	0	0	0	0	0
Base Condition Phase II - 2028:	0	77	0	77	0	68	0	68	0	0	0	0	0	0	0	0
Total New Trips 2015:	0	251	32	283	69	244	0	313	0	0	0	0	50	0	93	143
Total New Trips 2028:	0	553	55	608	134	602	0	736	0	0	0	0	88	0	171	259
Pass By Adjustments - 2015:	0	-20	20	0	19	-19	0	0	0	0	0	0	19	0	20	39
Pass By Adjustments - 2028:	0	-26	26	0	25	-25	0	0	0	0	0	0	26	0	27	53
External Elementary School Trips:	0	2	0	2	0	2	0	2	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	0	294	52	346	88	281	0	369	0	0	0	0	69	0	113	182
Future Traffic Volumes Phase II - 2028:	0	606	81	687	159	647	0	806	0	0	0	0	114	0	198	312

SAT Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	51	0	51	0	45	0	45	0	0	0	0	0	0	0	0
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	60	0	60	0	53	0	53	0	0	0	0	0	0	0	0
Base Condition Phase II - 2028:	0	76	0	76	0	67	0	67	0	0	0	0	0	0	0	0
Total New Trips 2015:	0	252	43	295	105	273	0	378	0	0	0	0	39	0	94	133
Total New Trips 2028:	0	579	70	649	183	603	0	786	0	0	0	0	63	0	162	225
Pass By Adjustments - 2015:	0	-8	8	0	7	-7	0	0	0	0	0	0	6	0	7	14
Pass By Adjustments - 2028:	0	-13	13	0	11	-11	0	0	0	0	0	0	10	0	12	22
Future Traffic Volumes Phase I - 2015:	0	304	51	355	112	319	0	431	0	0	0	0	45	0	101	147
Future Traffic Volumes Phase II - 2028:	0	642	83	725	194	659	0	853	0	0	0	0	73	0	174	247

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

Cochran Mill Road / Retail & Office Driveway 3

A.M. Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	34	0	34	0	32	0	32	0	0	0	0	0	0	0	0
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	40	0	40	0	38	0	38	0	0	0	0	0	0	0	0
Base Condition Phase II - 2028:	0	50	0	50	0	47	0	47	0	0	0	0	0	0	0	0
Total New Trips 2015:	13	166	50	229	80	142	10	232	37	0	48	85	38	0	46	84
Total New Trips 2028:	45	270	85	400	134	243	71	448	298	13	164	475	63	6	106	175
External Elementary School Trips:	0	27	0	27	0	33	0	33	0	16	0	16	0	13	0	13
Future Traffic Volumes Phase I - 2015:	13	233	50	296	80	213	10	303	37	16	48	101	38	13	46	97
Future Traffic Volumes Phase II - 2028:	45	347	85	477	134	323	71	528	298	29	164	491	63	19	106	188

P.M. Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	52	0	52	0	46	0	46	0	0	0	0	0	0	0	0
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	61	0	61	0	54	0	54	0	0	0	0	0	0	0	0
Base Condition Phase II - 2028:	0	77	0	77	0	68	0	68	0	0	0	0	0	0	0	0
Total New Trips 2015:	45	171	45	261	69	191	35	295	19	0	25	44	57	0	93	150
Total New Trips 2028:	152	290	75	517	137	315	239	691	152	17	83	252	99	21	166	286
Pass By Adjustments - 2015:	0	-20	20	0	19	-19	0	0	0	0	0	0	19	0	20	39
Pass By Adjustments - 2028:	0	-26	26	0	25	-25	0	0	0	0	0	0	26	0	27	53
External Elementary School Trips:	0	2	0	2	0	2	0	2	0	1	0	1	0	1	0	1
Future Traffic Volumes Phase I - 2015:	45	214	65	324	88	228	35	351	19	1	25	45	76	1	113	190
Future Traffic Volumes Phase II - 2028:	152	343	101	596	162	360	239	761	152	18	83	253	125	22	193	340

SAT Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	51	0	51	0	45	0	45	0	0	0	0	0	0	0	0
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	60	0	60	0	53	0	53	0	0	0	0	0	0	0	0
Base Condition Phase II - 2028:	0	76	0	76	0	67	0	67	0	0	0	0	0	0	0	0
Total New Trips 2015:	33	179	52	264	105	180	25	310	23	0	30	53	48	0	94	142
Total New Trips 2028:	124	300	87	511	173	301	194	668	197	33	108	338	78	30	153	261
Pass By Adjustments - 2015:	0	-8	8	0	7	-7	0	0	0	0	0	0	6	0	7	14
Pass By Adjustments - 2028:	0	-13	13	0	11	-11	0	0	0	0	0	0	10	0	12	21
Future Traffic Volumes Phase I - 2015:	33	231	60	324	112	226	25	363	23	0	30	53	54	0	101	156
Future Traffic Volumes Phase II - 2028:	124	363	100	587	184	357	194	735	197	33	108	338	88	30	165	283

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

Cochran Mill Road / Residential Driveway 1

A.M. Peak Hour

Condition	Northbound L	T	R	Tot	Southbound L	T	R	Tot	Eastbound L	T	R	Tot	Westbound L	T	R	Tot
Existing:	0	34	0	34	0	32	0	32	0	0	0	0	0	0	0	0
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	40	0	40	0	38	0	38	0	0	0	0	0	0	0	0
Base Condition Phase II - 2028:	0	50	0	50	0	47	0	47	0	0	0	0	0	0	0	0
Total New Trips 2015:	12	179	11	202	8	184	8	200	30	0	44	74	40	0	28	68
Total New Trips 2028:	32	332	16	380	8	394	17	419	62	0	115	177	59	0	29	88
External Elementary School Trips:	0	13	0	13	0	11	0	11	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	12	232	11	255	8	233	8	249	30	0	44	74	40	0	28	68
Future Traffic Volumes Phase II - 2028:	32	395	16	443	8	452	17	477	62	0	115	177	59	0	29	88

P.M. Peak Hour

Condition	Northbound L	T	R	Tot	Southbound L	T	R	Tot	Eastbound L	T	R	Tot	Westbound L	T	R	Tot
Existing:	0	52	0	52	0	46	0	46	0	0	0	0	0	0	0	0
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	61	0	61	0	54	0	54	0	0	0	0	0	0	0	0
Base Condition Phase II - 2028:	0	77	0	77	0	68	0	68	0	0	0	0	0	0	0	0
Total New Trips 2015:	41	199	37	277	27	214	28	269	15	0	22	37	20	0	15	35
Total New Trips 2028:	107	418	55	580	27	416	57	500	31	0	59	90	30	0	15	45
External Elementary School Trips:	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	41	261	37	339	27	269	28	324	15	0	22	37	20	0	15	35
Future Traffic Volumes Phase II - 2028:	107	496	55	658	27	485	57	569	31	0	59	90	30	0	15	45

SAT Peak Hour

Condition	Northbound L	T	R	Tot	Southbound L	T	R	Tot	Eastbound L	T	R	Tot	Westbound L	T	R	Tot
Existing:	0	51	0	51	0	45	0	45	0	0	0	0	0	0	0	0
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	60	0	60	0	53	0	53	0	0	0	0	0	0	0	0
Base Condition Phase II - 2028:	0	76	0	76	0	67	0	67	0	0	0	0	0	0	0	0
Total New Trips 2015:	30	200	27	257	19	181	20	220	18	0	27	45	25	0	18	43
Total New Trips 2028:	87	414	45	546	22	367	47	436	41	0	77	118	39	0	19	58
Future Traffic Volumes Phase I - 2015:	30	260	27	317	19	234	20	273	18	0	27	45	25	0	18	43
Future Traffic Volumes Phase II - 2028:	87	490	45	622	22	434	47	503	41	0	77	118	39	0	19	58

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

Wilkerson Mill Road / Residential Driveway 2

A.M. Peak Hour

Condition	Northbound L	T	R	Tot	Southbound L	T	R	Tot	Eastbound L	T	R	Tot	Westbound L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	78	0	78	0	29	0	29
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	92	0	92	0	34	0	34
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	115	0	115	0	43	0	43
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips 2028:	20	0	67	87	0	0	0	0	0	553	6	559	18	414	0	432
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	16	0	16	0	19	0	19
Future Traffic Volumes Phase I - 2015:	0	0	0	0	0	0	0	0	0	108	0	108	0	53	0	53
Future Traffic Volumes Phase II - 2028:	20	0	67	87	0	0	0	0	0	684	6	690	18	476	0	494

P.M. Peak Hour

Condition	Northbound L	T	R	Tot	Southbound L	T	R	Tot	Eastbound L	T	R	Tot	Westbound L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	37	0	37	0	84	0	84
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	43	0	43	0	99	0	99
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	55	0	55	0	124	0	124
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips 2028:	10	0	34	44	0	0	0	0	0	536	19	555	62	580	0	642
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1
Future Traffic Volumes Phase I - 2015:	0	0	0	0	0	0	0	0	0	44	0	44	0	100	0	100
Future Traffic Volumes Phase II - 2028:	10	0	34	44	0	0	0	0	0	592	19	611	62	705	0	767

SAT Peak Hour

Condition	Northbound L	T	R	Tot	Southbound L	T	R	Tot	Eastbound L	T	R	Tot	Westbound L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	37	0	37	0	38	0	38
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	43	0	43	0	45	0	45
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	55	0	55	0	56	0	56
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips 2028:	13	0	44	57	0	0	0	0	0	506	15	521	50	569	0	619
Future Traffic Volumes Phase I - 2015:	0	0	0	0	0	0	0	0	0	43	0	43	0	45	0	45
Future Traffic Volumes Phase II - 2028:	13	0	44	57	0	0	0	0	0	561	15	576	50	625	0	675

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
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Phillips Road / Residential Driveway 3

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	4	0	4	0	2	0	2	0	0	0	0	0	0	0	0
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	5	0	5	0	2	0	2	0	0	0	0	0	0	0	0
Base Condition Phase II - 2028:	0	6	0	6	0	3	0	3	0	0	0	0	0	0	0	0
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips 2028:	4	16	0	20	0	4	24	28	87	0	15	102	0	0	0	0
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	0	5	0	5	0	2	0	2	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase II - 2028:	4	22	0	26	0	7	24	31	87	0	15	102	0	0	0	0

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	3	0	3	0	8	0	8	0	0	0	0	0	0	0	0
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	4	0	4	0	9	0	9	0	0	0	0	0	0	0	0
Base Condition Phase II - 2028:	0	4	0	4	0	12	0	12	0	0	0	0	0	0	0	0
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips 2028:	14	8	0	22	0	15	81	96	44	0	8	52	0	0	0	0
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	0	4	0	4	0	9	0	9	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase II - 2028:	14	12	0	26	0	27	81	108	44	0	8	52	0	0	0	0

SAT Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	4	0	4	0	3	0	3	0	0	0	0	0	0	0	0
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	5	0	5	0	4	0	4	0	0	0	0	0	0	0	0
Base Condition Phase II - 2028:	0	6	0	6	0	4	0	4	0	0	0	0	0	0	0	0
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips 2028:	12	11	0	23	0	12	66	78	57	0	10	67	0	0	0	0
Future Traffic Volumes Phase I - 2015:	0	5	0	5	0	4	0	4	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase II - 2028:	12	17	0	29	0	16	66	82	57	0	10	67	0	0	0	0

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Traffic Volumes
Future Conditions

A&R Engineering
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Rico Tatum Road / Residential Driveway 4

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	3	0	3	0	4	0	4
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	4	0	4	0	5	0	5
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	4	0	4	0	6	0	6
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips 2028:	1	0	138	139	52	0	1	53	0	22	0	22	38	24	14	76
Residential Mixed-use Trips:	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	6	0	6	0	5	0	5
Future Traffic Volumes Phase I - 2015:	0	0	0	0	0	0	0	0	0	10	0	10	0	10	0	10
Future Traffic Volumes Phase II - 2028:	1	0	138	139	52	0	1	53	0	32	0	32	39	35	14	88

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	3	0	3	0	3	0	3
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	4	0	4	0	4	0	4
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	4	0	4	0	4	0	4
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips 2028:	1	0	70	71	26	0	0	26	1	41	1	42	128	39	48	215
Residential Mixed-use Trips:	0	0	4	4	1	0	0	1	0	0	0	0	6	0	2	8
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	0	0	0	0	0	0	0	0	0	4	0	4	0	4	0	4
Future Traffic Volumes Phase II - 2028:	1	0	74	75	27	0	0	27	1	45	1	47	134	43	50	227

SAT Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	2	0	2	0	4	0	4
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	2	0	2	0	5	0	5
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	3	0	3	0	6	0	6
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips 2028:	1	0	91	92	34	0	0	34	0	67	1	68	104	59	39	202
Residential Mixed-use Trips:	0	0	3	3	1	0	0	1	0	0	0	0	5	0	1	6
Future Traffic Volumes Phase I - 2015:	0	0	0	0	0	0	0	0	0	2	0	2	0	5	0	5
Future Traffic Volumes Phase II - 2028:	1	0	94	95	35	0	0	35	0	70	1	71	109	65	40	214

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
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Rico Tatum Road / Residential Driveway 5

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	3	0	3	0	4	0	4
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	4	0	4	0	5	0	5
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	4	0	4	0	6	0	6
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips 2028:	0	0	0	0	52	0	1	53	0	212	0	212	0	76	14	90
Residential Mixed-use Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	6	0	6	0	5	0	5
Future Traffic Volumes Phase I - 2015:	0	0	0	0	0	0	0	0	0	10	0	10	0	10	0	10
Future Traffic Volumes Phase II - 2028:	0	0	0	0	52	0	1	53	0	222	0	222	0	88	14	102

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	3	0	3	0	3	0	3
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	4	0	4	0	4	0	4
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	4	0	4	0	4	0	4
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips 2028:	0	0	0	0	26	0	0	26	1	137	0	137	0	215	48	263
Residential Mixed-use Trips:	0	0	0	0	2	0	0	2	0	5	0	5	0	8	2	10
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	0	0	0	0	0	0	0	0	0	4	0	4	0	4	0	4
Future Traffic Volumes Phase II - 2028:	0	0	0	0	28	0	0	28	1	146	0	147	0	227	50	277

SAT Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	2	0	2	0	4	0	4
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	2	0	2	0	5	0	5
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	3	0	3	0	6	0	6
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips 2028:	0	0	0	0	34	0	0	34	0	192	0	192	0	202	39	241
Residential Mixed-use Trips:	0	0	0	0	1	0	0	1	0	4	0	4	0	6	2	8
Future Traffic Volumes Phase I - 2015:	0	0	0	0	0	0	0	0	0	2	0	2	0	5	0	5
Future Traffic Volumes Phase II - 2028:	0	0	0	0	35	0	0	35	0	199	0	199	0	214	41	255

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
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Atlanta Newnan Road / Residential Driveway 6

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	5	0	5	0	4	0	4	0	0	0	0	0	0	0	0
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	6	0	6	0	5	0	5	0	0	0	0	0	0	0	0
Base Condition Phase II - 2028:	0	7	0	7	0	6	0	6	0	0	0	0	0	0	0	0
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips 2028:	0	33	66	99	0	46	0	46	1	50	2	53	31	14	1	46
Residential Mixed-use Trips:	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
External Elementary School Trips:	0	0	9	9	0	0	0	0	0	0	0	0	8	0	0	8
Future Traffic Volumes Phase I - 2015:	0	6	9	15	0	5	0	5	0	0	0	0	8	0	0	8
Future Traffic Volumes Phase II - 2028:	0	40	75	115	0	52	1	53	1	50	2	53	39	14	1	54

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	2	0	2	0	3	0	3	0	0	0	0	0	0	0	0
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	2	0	2	0	4	0	4	0	0	0	0	0	0	0	0
Base Condition Phase II - 2028:	0	3	0	3	0	4	0	4	0	0	0	0	0	0	0	0
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips 2028:	1	62	53	116	1	54	0	55	0	26	1	27	73	47	0	120
Residential Mixed-use Trips:	0	1	0	1	0	2	3	5	2	0	0	2	0	0	0	0
External Elementary School Trips:	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1
Future Traffic Volumes Phase I - 2015:	0	2	1	3	0	4	0	4	0	0	0	0	1	0	0	1
Future Traffic Volumes Phase II - 2028:	1	66	54	121	1	60	3	64	2	26	1	29	74	47	0	121

SAT Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	5	0	5	0	2	0	2	0	0	0	0	0	0	0	0
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	6	0	6	0	2	0	2	0	0	0	0	0	0	0	0
Base Condition Phase II - 2028:	0	7	0	7	0	3	0	3	0	0	0	0	0	0	0	0
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips 2028:	1	80	75	156	1	71	0	72	0	33	1	34	75	38	1	114
Residential Mixed-use Trips:	0	1	0	1	0	2	2	4	2	0	0	2	0	0	0	0
Future Traffic Volumes Phase I - 2015:	0	6	0	6	0	2	0	2	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase II - 2028:	1	88	75	164	1	76	2	79	2	33	1	36	75	38	1	114

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Atlanta Newnan Road / Residential Driveway 7

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	5	0	5	0	4	0	4	0	0	0	0	0	0	0	0
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	6	0	6	0	5	0	5	0	0	0	0	0	0	0	0
Base Condition Phase II - 2028:	0	7	0	7	0	6	0	6	0	0	0	0	0	0	0	0
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips 2028:	0	50	0	50	0	65	14	79	51	0	2	53	0	0	0	0
Residential Mixed-use Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
External Elementary School Trips:	0	9	0	9	0	8	0	8	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	0	15	0	15	0	13	0	13	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase II - 2028:	0	66	0	66	0	79	14	93	51	0	2	53	0	0	0	0

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	2	0	2	0	3	0	3	0	0	0	0	0	0	0	0
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	2	0	2	0	4	0	4	0	0	0	0	0	0	0	0
Base Condition Phase II - 2028:	0	3	0	3	0	4	0	4	0	0	0	0	0	0	0	0
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips 2028:	1	89	0	90	0	80	47	127	26	0	1	27	0	0	0	0
Residential Mixed-use Trips:	0	0	0	0	0	0	2	2	1	0	0	1	0	0	0	0
External Elementary School Trips:	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	0	3	0	3	0	5	0	5	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase II - 2028:	1	93	0	94	0	85	49	134	27	0	1	28	0	0	0	0

SAT Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	5	0	5	0	2	0	2	0	0	0	0	0	0	0	0
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	6	0	6	0	2	0	2	0	0	0	0	0	0	0	0
Base Condition Phase II - 2028:	0	7	0	7	0	3	0	3	0	0	0	0	0	0	0	0
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips 2028:	1	122	0	123	0	109	38	147	34	0	1	35	0	0	0	0
Residential Mixed-use Trips:	0	0	0	0	0	0	2	2	1	0	0	1	0	0	0	0
Future Traffic Volumes Phase I - 2015:	0	6	0	6	0	2	0	2	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase II - 2028:	1	129	0	130	0	112	40	152	35	0	1	36	0	0	0	0

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Phillips Road / Residential Driveway 8

A.M. Peak Hour

Condition	Northbound L	T	R	Tot	Southbound L	T	R	Tot	Eastbound L	T	R	Tot	Westbound L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	4	0	4	0	2	0	2
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	5	0	5	0	2	0	2
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	6	0	6	0	3	0	3
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips 2028:	0	0	0	0	5	0	134	139	37	15	0	52	0	53	1	54
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	0	0	0	0	0	0	0	0	0	5	0	5	0	2	0	2
Future Traffic Volumes Phase II - 2028:	0	0	0	0	5	0	134	139	37	21	0	58	0	56	1	57

P.M. Peak Hour

Condition	Northbound L	T	R	Tot	Southbound L	T	R	Tot	Eastbound L	T	R	Tot	Westbound L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	3	0	3	0	8	0	8
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	4	0	4	0	9	0	9
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	4	0	4	0	12	0	12
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips 2028:	0	0	0	0	3	0	68	71	125	50	0	175	0	27	5	32
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	0	0	0	0	0	0	0	0	0	4	0	4	0	9	0	9
Future Traffic Volumes Phase II - 2028:	0	0	0	0	3	0	68	71	125	54	0	179	0	39	5	44

SAT Peak Hour

Condition	Northbound L	T	R	Tot	Southbound L	T	R	Tot	Eastbound L	T	R	Tot	Westbound L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	4	0	4	0	3	0	3
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	5	0	5	0	4	0	4
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	6	0	6	0	4	0	4
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips 2028:	0	0	0	0	3	0	89	92	101	40	0	141	0	35	4	39
Future Traffic Volumes Phase I - 2015:	0	0	0	0	0	0	0	0	0	5	0	5	0	4	0	4
Future Traffic Volumes Phase II - 2028:	0	0	0	0	3	0	89	92	101	46	0	147	0	39	4	43

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Traffic Volumes
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A&R Engineering
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Rico Tatum Road / Residential Driveway 9

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	4	0	4	0	4	0	4
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	5	0	5	0	5	0	5
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	6	0	6	0	6	0	6
Total New Trips 2015:	1	0	33	34	11	0	2	13	1	37	0	38	9	28	3	40
Total New Trips 2028:	3	0	10	13	17	0	1	18	0	285	1	286	3	122	5	130
Residential Mixed-use Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	6	0	6	0	5	0	5
Future Traffic Volumes Phase I - 2015:	1	0	33	34	11	0	2	13	1	48	0	49	9	38	3	50
Future Traffic Volumes Phase II - 2028:	3	0	10	13	17	0	1	18	0	297	1	298	3	135	5	143

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	1	0	1	0	3	0	3
Total New Trips 2015:	1	0	17	18	6	0	1	7	2	51	1	54	31	54	10	95
Total New Trips 2028:	2	0	5	7	9	0	0	9	1	208	3	212	10	303	16	329
Residential Mixed-use Trips:	0	0	0	0	0	0	0	0	0	10	0	10	0	15	0	15
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	1	0	17	18	6	0	1	7	2	52	1	55	31	56	10	97
Future Traffic Volumes Phase II - 2028:	2	0	5	7	9	0	0	9	1	219	3	223	10	321	16	347

SAT Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	4	0	4	0	3	0	3
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	5	0	5	0	4	0	4
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	6	0	6	0	4	0	4
Total New Trips 2015:	1	0	21	22	7	0	1	8	2	97	1	100	23	87	7	117
Total New Trips 2028:	2	0	7	9	11	0	0	11	1	291	2	294	8	298	13	319
Residential Mixed-use Trips:	0	0	0	0	0	0	0	0	0	8	0	8	0	12	0	12
Future Traffic Volumes Phase I - 2015:	1	0	21	22	7	0	1	8	2	102	1	105	23	91	7	121
Future Traffic Volumes Phase II - 2028:	2	0	7	9	11	0	0	11	1	305	2	308	8	314	13	335

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Traffic Volumes
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Rico Tatum Road / Residential Driveway 10

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	4	0	4	0	4	0	4
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	5	0	5	0	5	0	5
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	6	0	6	0	6	0	6
Total New Trips 2015:	0	0	0	0	11	0	1	12	0	81	0	81	0	38	3	41
Total New Trips 2028:	0	0	0	0	17	0	1	18	0	312	0	312	0	129	5	134
Residential Mixed-use Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	6	0	6	0	5	0	5
Future Traffic Volumes Phase I - 2015:	0	0	0	0	11	0	1	12	0	92	0	92	0	48	3	51
Future Traffic Volumes Phase II - 2028:	0	0	0	0	17	0	1	18	0	324	0	324	0	142	5	147

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	1	0	1	0	3	0	3
Total New Trips 2015:	0	0	0	0	6	0	1	7	1	72	0	73	0	95	10	105
Total New Trips 2028:	0	0	0	0	9	0	0	9	1	222	0	223	0	328	16	344
Residential Mixed-use Trips:	0	0	0	0	0	0	0	0	0	10	0	10	0	15	0	15
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	0	0	0	0	6	0	1	7	1	73	0	74	0	97	10	107
Future Traffic Volumes Phase II - 2028:	0	0	0	0	9	0	0	9	1	233	0	234	0	346	16	362

SAT Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	4	0	4	0	3	0	3
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	5	0	5	0	4	0	4
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	6	0	6	0	4	0	4
Total New Trips 2015:	0	0	0	0	7	0	1	8	1	123	0	124	0	116	7	123
Total New Trips 2028:	0	0	0	0	11	0	0	11	1	309	0	310	0	318	13	331
Residential Mixed-use Trips:	0	0	0	0	0	0	0	0	0	8	0	8	0	12	0	12
Future Traffic Volumes Phase I - 2015:	0	0	0	0	7	0	1	8	1	128	0	129	0	120	7	127
Future Traffic Volumes Phase II - 2028:	0	0	0	0	11	0	0	11	1	323	0	324	0	334	13	347

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

Rico Tatum Road / Residential Driveway 11

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	4	0	4	0	4	0	4
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	5	0	5	0	5	0	5
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	6	0	6	0	6	0	6
Total New Trips 2015:	2	0	33	35	0	0	0	0	0	92	1	93	9	39	0	48
Total New Trips 2028:	14	0	10	24	0	0	0	0	0	246	83	329	3	119	0	122
Residential Mixed-use Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
External Elementary School Trips:	5	0	0	5	0	0	0	0	0	0	6	6	0	0	0	0
Future Traffic Volumes Phase I - 2015:	7	0	33	40	0	0	0	0	0	97	7	104	9	44	0	53
Future Traffic Volumes Phase II - 2028:	19	0	10	29	0	0	0	0	0	252	89	341	3	127	0	130

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	1	0	1	0	3	0	3
Total New Trips 2015:	1	0	17	18	0	0	0	0	0	76	2	78	31	104	0	135
Total New Trips 2028:	40	0	5	45	0	0	0	0	0	186	44	230	10	304	0	314
Residential Mixed-use Trips:	0	0	0	0	0	0	0	0	0	10	0	10	0	15	0	15
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	1	0	17	18	0	0	0	0	0	77	2	79	31	106	0	137
Future Traffic Volumes Phase II - 2028:	40	0	5	45	0	0	0	0	0	197	44	241	10	322	0	332

SAT Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	4	0	4	0	3	0	3
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	5	0	5	0	4	0	4
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	6	0	6	0	4	0	4
Total New Trips 2015:	1	0	21	22	0	0	0	0	0	128	2	130	23	122	0	145
Total New Trips 2028:	33	0	7	40	0	0	0	0	0	264	56	320	8	298	0	306
Residential Mixed-use Trips:	0	0	0	0	0	0	0	0	0	8	0	8	0	12	0	12
Future Traffic Volumes Phase I - 2015:	1	0	21	22	0	0	0	0	0	133	2	135	23	126	0	149
Future Traffic Volumes Phase II - 2028:	33	0	7	40	0	0	0	0	0	278	56	334	8	314	0	322

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

Rico Tatum Road / Residential Driveway 12

A.M. Peak Hour

Condition	Northbound L	T	R	Tot	Southbound L	T	R	Tot	Eastbound L	T	R	Tot	Westbound L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	4	0	4	0	4	0	4
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	5	0	5	0	5	0	5
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	6	0	6	0	6	0	6
Total New Trips 2015:	2	0	33	35	16	0	1	17	0	135	1	136	9	46	4	59
Total New Trips 2028:	2	0	10	12	17	0	1	18	0	272	1	273	3	123	5	131
Residential Mixed-use Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	2	0	33	35	16	0	1	17	0	140	1	141	9	51	4	64
Future Traffic Volumes Phase II - 2028:	2	0	10	12	17	0	1	18	0	278	1	279	3	131	5	139

P.M. Peak Hour

Condition	Northbound L	T	R	Tot	Southbound L	T	R	Tot	Eastbound L	T	R	Tot	Westbound L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	1	0	1	0	3	0	3
Total New Trips 2015:	1	0	17	18	8	0	1	9	1	94	2	97	31	143	15	189
Total New Trips 2028:	1	0	5	6	9	0	0	9	1	196	2	199	10	327	16	353
Residential Mixed-use Trips:	0	0	0	0	0	0	0	0	0	10	0	10	0	15	0	15
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	1	0	17	18	8	0	1	9	1	95	2	98	31	145	15	191
Future Traffic Volumes Phase II - 2028:	1	0	5	6	9	0	0	9	1	207	2	210	10	345	16	371

SAT Peak Hour

Condition	Northbound L	T	R	Tot	Southbound L	T	R	Tot	Eastbound L	T	R	Tot	Westbound L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	4	0	4	0	3	0	3
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	5	0	5	0	4	0	4
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	6	0	6	0	4	0	4
Total New Trips 2015:	1	0	21	22	10	0	1	11	1	152	2	155	23	149	11	183
Total New Trips 2028:	2	0	7	9	11	0	0	11	1	279	2	282	8	316	13	337
Residential Mixed-use Trips:	0	0	0	0	0	0	0	0	0	8	0	8	0	12	0	12
Future Traffic Volumes Phase I - 2015:	1	0	21	22	10	0	1	11	1	157	2	160	23	153	11	187
Future Traffic Volumes Phase II - 2028:	2	0	7	9	11	0	0	11	1	293	2	296	8	332	13	353

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

Rico Tatum Road / Residential Driveway 13

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	4	0	4	0	4	0	4
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	5	0	5	0	5	0	5
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	6	0	6	0	6	0	6
Total New Trips 2015:	0	0	0	0	11	0	1	12	0	124	0	124	0	47	3	50
Total New Trips 2028:	0	0	0	0	17	0	1	18	0	256	0	256	0	122	5	127
Residential Mixed-use Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	0	0	0	0	11	0	1	12	0	129	0	129	0	52	3	55
Future Traffic Volumes Phase II - 2028:	0	0	0	0	17	0	1	18	0	262	0	262	0	130	5	135

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	1	0	1	0	3	0	3
Total New Trips 2015:	0	0	0	0	6	0	1	7	1	92	0	93	0	135	10	145
Total New Trips 2028:	0	0	0	0	9	0	0	9	1	191	0	192	0	313	16	329
Residential Mixed-use Trips:	0	0	0	0	0	0	0	0	0	10	0	10	0	15	0	15
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	0	0	0	0	6	0	1	7	1	93	0	94	0	137	10	147
Future Traffic Volumes Phase II - 2028:	0	0	0	0	9	0	0	9	1	202	0	203	0	331	16	347

SAT Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	4	0	4	0	3	0	3
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	5	0	5	0	4	0	4
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	6	0	6	0	4	0	4
Total New Trips 2015:	0	0	0	0	7	0	1	8	1	148	0	149	0	144	7	151
Total New Trips 2028:	0	0	0	0	11	0	0	11	1	270	0	271	0	306	13	319
Residential Mixed-use Trips:	0	0	0	0	0	0	0	0	0	8	0	8	0	12	0	12
Future Traffic Volumes Phase I - 2015:	0	0	0	0	7	0	1	8	1	153	0	154	0	148	7	155
Future Traffic Volumes Phase II - 2028:	0	0	0	0	11	0	0	11	1	284	0	285	0	322	13	335

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

Rico Tatum Road / Residential Driveway 14

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	4	0	4	0	4	0	4
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	5	0	5	0	5	0	5
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	6	0	6	0	6	0	6
Total New Trips 2015:	0	0	0	0	11	0	2	13	0	184	0	184	0	58	3	61
Total New Trips 2028:	0	0	0	0	17	0	1	18	0	299	0	299	0	130	5	135
Residential Mixed-use Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	0	0	0	0	11	0	2	13	0	189	0	189	0	63	3	66
Future Traffic Volumes Phase II - 2028:	0	0	0	0	17	0	1	18	0	305	0	305	0	138	5	143

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	1	0	1	0	3	0	3
Total New Trips 2015:	0	0	0	0	6	0	1	7	2	118	0	120	0	189	10	199
Total New Trips 2028:	0	0	0	0	9	0	0	9	1	209	0	210	0	351	16	367
Residential Mixed-use Trips:	0	0	0	0	0	0	0	0	0	10	0	10	0	15	0	15
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	0	0	0	0	6	0	1	7	2	119	0	121	0	191	10	201
Future Traffic Volumes Phase II - 2028:	0	0	0	0	9	0	0	9	1	220	0	221	0	369	16	385

SAT Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	4	0	4	0	3	0	3
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	5	0	5	0	4	0	4
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	6	0	6	0	4	0	4
Total New Trips 2015:	0	0	0	0	7	0	1	8	1	182	0	183	0	182	7	189
Total New Trips 2028:	0	0	0	0	11	0	0	11	1	296	0	297	0	336	13	349
Residential Mixed-use Trips:	0	0	0	0	0	0	0	0	0	8	0	8	0	12	0	12
Future Traffic Volumes Phase I - 2015:	0	0	0	0	7	0	1	8	1	187	0	188	0	186	7	193
Future Traffic Volumes Phase II - 2028:	0	0	0	0	11	0	0	11	1	310	0	311	0	352	13	365

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

Cochran Mill Road / Retail & Office Driveway 4

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	34	0	34	0	32	0	32	0	0	0	0	0	0	0	0
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	40	0	40	0	38	0	38	0	0	0	0	0	0	0	0
Base Condition Phase II - 2028:	0	50	0	50	0	47	0	47	0	0	0	0	0	0	0	0
Total New Trips 2015:	0	204	34	238	46	181	0	227	0	0	0	0	18	0	27	45
Total New Trips 2028:	0	367	56	423	74	395	0	469	0	0	0	0	24	0	34	58
External Elementary School Trips:	0	0	13	13	33	0	0	33	0	0	0	0	11	0	27	38
Internal Elementary School Trips:	0	0	12	12	40	0	0	40	0	0	0	0	10	0	41	51
Future Traffic Volumes Phase I - 2015:	0	244	59	303	119	219	0	338	0	0	0	0	39	0	95	134
Future Traffic Volumes Phase II - 2028:	0	417	81	498	147	442	0	589	0	0	0	0	45	0	102	147

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	52	0	52	0	46	0	46	0	0	0	0	0	0	0	0
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	61	0	61	0	54	0	54	0	0	0	0	0	0	0	0
Base Condition Phase II - 2028:	0	77	0	77	0	68	0	68	0	0	0	0	0	0	0	0
Total New Trips 2015:	0	206	23	229	39	232	0	271	0	0	0	0	35	0	55	90
Total New Trips 2028:	0	430	35	465	59	439	0	498	0	0	0	0	60	0	90	150
Pass By Adjustments - 2015:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass By Adjustments - 2028:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
External Elementary School Trips:	0	0	1	1	2	0	0	2	0	0	0	0	1	0	2	3
Internal Elementary School Trips:	0	0	1	1	3	0	0	3	0	0	0	0	1	0	3	4
Future Traffic Volumes Phase I - 2015:	0	267	25	292	44	286	0	330	0	0	0	0	37	0	60	97
Future Traffic Volumes Phase II - 2028:	0	507	37	544	64	507	0	571	0	0	0	0	62	0	95	157

SAT Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	51	0	51	0	45	0	45	0	0	0	0	0	0	0	0
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	60	0	60	0	53	0	53	0	0	0	0	0	0	0	0
Base Condition Phase II - 2028:	0	76	0	76	0	67	0	67	0	0	0	0	0	0	0	0
Total New Trips 2015:	0	208	29	237	64	193	0	257	0	0	0	0	26	0	56	82
Total New Trips 2028:	0	429	45	474	93	395	0	488	0	0	0	0	40	0	83	123
Pass By Adjustments - 2015:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass By Adjustments - 2028:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	13
Future Traffic Volumes Phase I - 2015:	0	268	29	297	64	246	0	310	0	0	0	0	26	0	56	82
Future Traffic Volumes Phase II - 2028:	0	505	45	550	93	462	0	555	0	0	0	0	40	0	96	136

08-035 Fox Hall DRI
Traffic Volumes
Future Conditions

A&R Engineering
August-08

Phillips Road / Residential Driveway 15

A.M. Peak Hour

Condition	Northbound L	T	R	Tot	Southbound L	T	R	Tot	Eastbound L	T	R	Tot	Westbound L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	4	0	4	0	2	0	2
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	5	0	5	0	2	0	2
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	6	0	6	0	3	0	3
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips 2028:	38	0	11	49	0	0	0	0	0	9	11	20	3	17	0	20
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	0	0	0	0	0	0	0	0	0	5	0	5	0	2	0	2
Future Traffic Volumes Phase II - 2028:	38	0	11	49	0	0	0	0	0	15	11	26	3	20	0	23

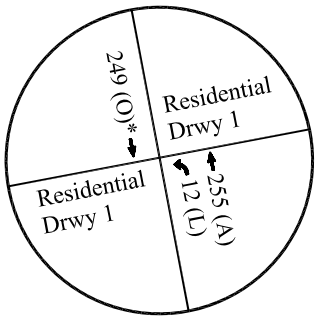
P.M. Peak Hour

Condition	Northbound L	T	R	Tot	Southbound L	T	R	Tot	Eastbound L	T	R	Tot	Westbound L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	3	0	3	0	8	0	8
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	4	0	4	0	9	0	9
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	4	0	4	0	12	0	12
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips 2028:	19	0	6	25	0	0	0	0	0	17	35	52	10	13	0	23
External Elementary School Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes Phase I - 2015:	0	0	0	0	0	0	0	0	0	4	0	4	0	9	0	9
Future Traffic Volumes Phase II - 2028:	19	0	6	25	0	0	0	0	0	21	35	56	10	25	0	35

SAT Peak Hour

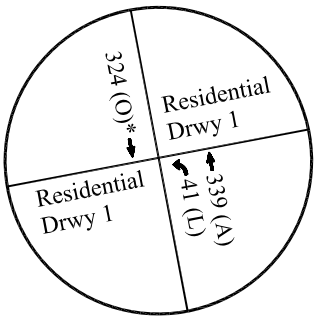
Condition	Northbound L	T	R	Tot	Southbound L	T	R	Tot	Eastbound L	T	R	Tot	Westbound L	T	R	Tot
Existing:	0	0	0	0	0	0	0	0	0	4	0	4	0	3	0	3
Growth Factor 2015 (%):	2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5		2.5	2.5	2.5	
Growth Factor 2016-2028 (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition Phase I - 2015:	0	0	0	0	0	0	0	0	0	5	0	5	0	4	0	4
Base Condition Phase II - 2028:	0	0	0	0	0	0	0	0	0	6	0	6	0	4	0	4
Total New Trips 2015:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total New Trips 2028:	25	0	7	32	0	0	0	0	0	15	29	44	8	14	0	22
Future Traffic Volumes Phase I - 2015:	0	0	0	0	0	0	0	0	0	5	0	5	0	4	0	4
Future Traffic Volumes Phase II - 2028:	25	0	7	32	0	0	0	0	0	21	29	50	8	18	0	26

Left Turn Lane Analysis Graphics per AASHTO



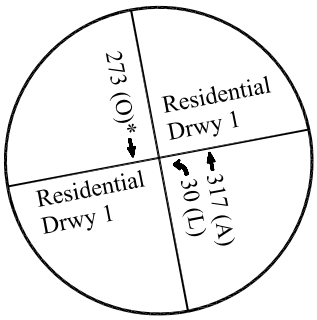
*800 Vehicle are required to warrant a left turn lane

AM Peak hour



*400 Vehicle are required to warrant a left turn lane

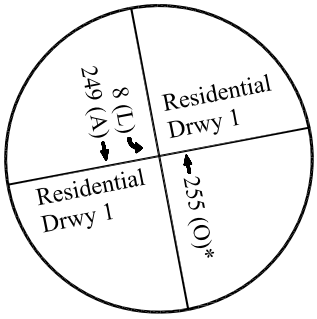
PM Peak hour



*400 Vehicle are required to warrant a left turn lane

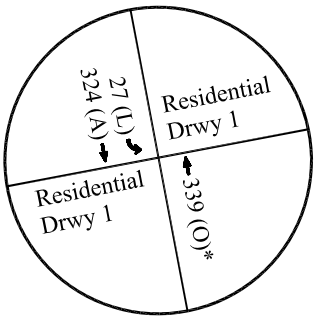
SAT Peak hour

Interim Phase 2015 Northbound Left



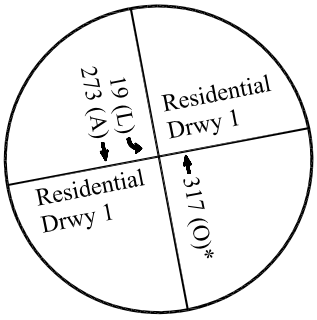
*800 Vehicle are required to warrant a left turn lane

AM Peak hour



*400 Vehicle are required to warrant a left turn lane

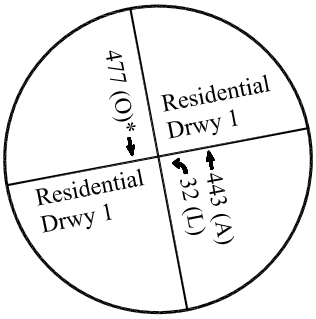
PM Peak hour



*800 Vehicle are required to warrant a left turn lane

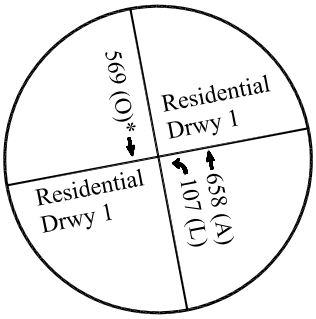
SAT Peak hour

Interim Phase 2015 Southbound Left



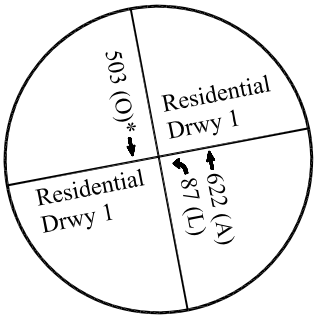
*400 Vehicle are required to warrant a left turn lane

AM Peak hour



*100 Vehicle are required to warrant a left turn lane

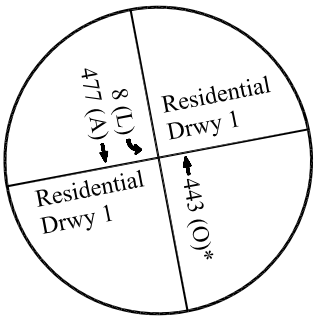
PM Peak hour



*100 Vehicle are required to warrant a left turn lane

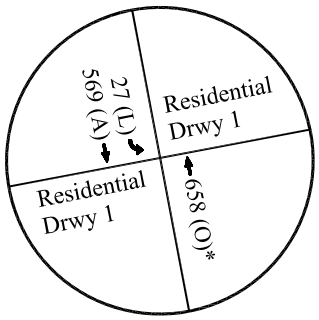
SAT Peak hour

Full Build-out 2028 Northbound Left



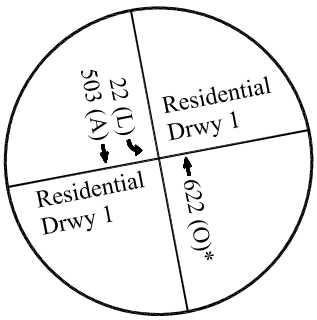
*400 Vehicle are required to warrant a left turn lane

AM Peak hour



*200 Vehicle are required to warrant a left turn lane

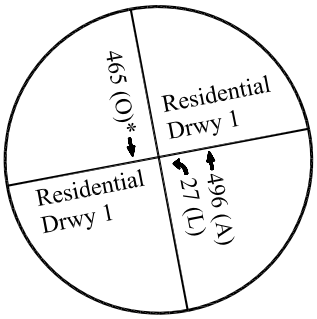
PM Peak hour



*400 Vehicle are required to warrant a left turn lane

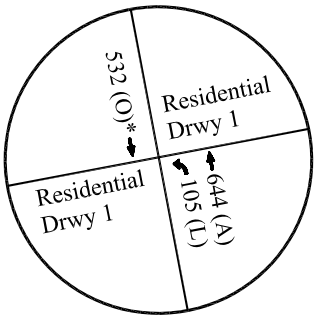
SAT Peak hour

Full Buid-out 2028 Southbound Left



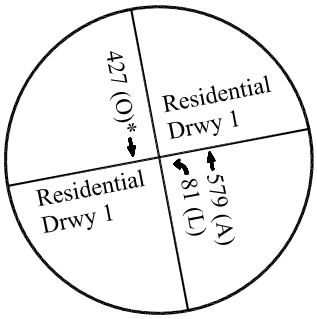
*600 Vehicle are required to warrant a left turn lane

AM Peak hour



*100 Vehicle are required to warrant a left turn lane

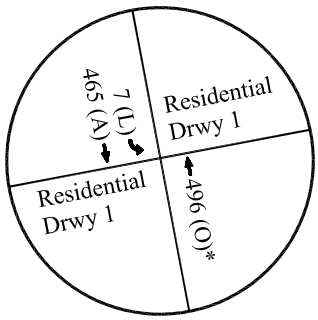
PM Peak hour



*100 Vehicle are required to warrant a left turn lane

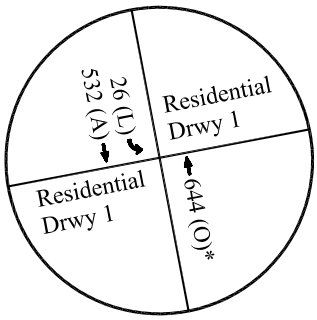
SAT Peak hour

Full Build-out 2028 Additional Analysis Northbound Left



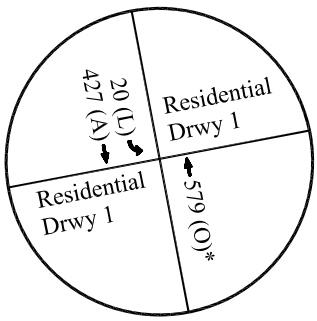
*400 Vehicle are required to warrant a left turn lane

AM Peak hour



*200 Vehicle are required to warrant a left turn lane

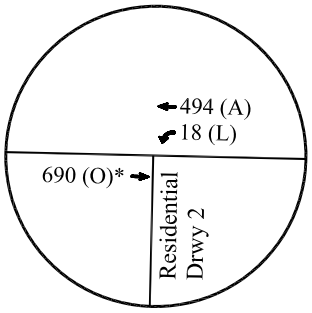
PM Peak hour



*400 Vehicle are required to warrant a left turn lane

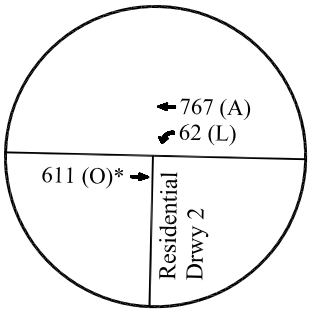
SAT Peak hour

Full Buid-out 2028 Additional Analysis Southbound Left



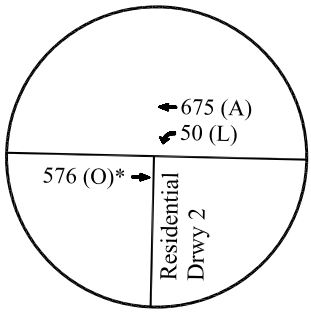
*400 Vehicle are required to warrant a left turn lane

AM Peak hour



*100 Vehicle are required to warrant a left turn lane

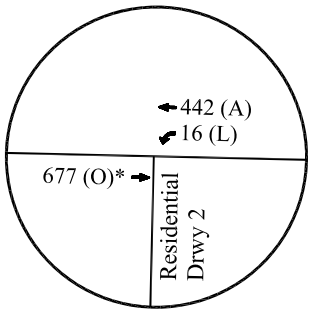
PM Peak hour



*100 Vehicle are required to warrant a left turn lane

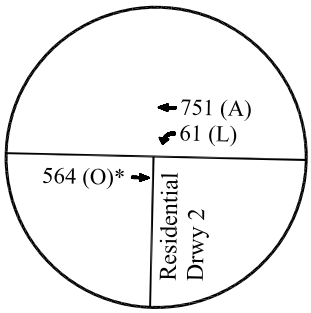
SAT Peak hour

Full Built-out 2028



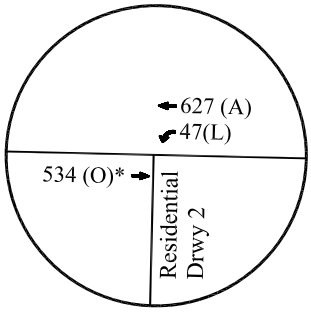
*400 Vehicle are required to warrant a left turn lane

AM Peak hour



*100 Vehicle are required to warrant a left turn lane

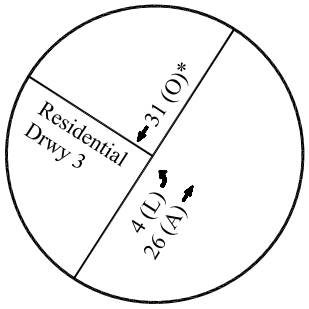
PM Peak hour



*200 Vehicle are required to warrant a left turn lane

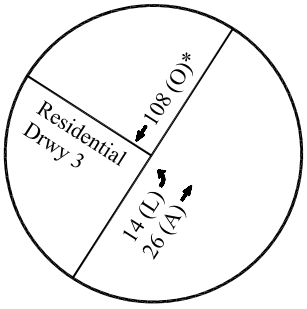
SAT Peak hour

Full Build-out 2028 Additional Analysis



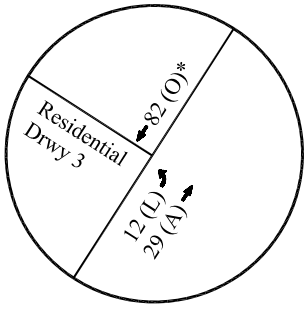
*800 Vehicle are required to warrant a left turn lane

AM Peak hour



*800 Vehicle are required to warrant a left turn lane

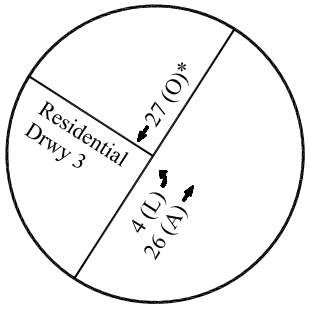
PM Peak hour



*800 Vehicle are required to warrant a left turn lane

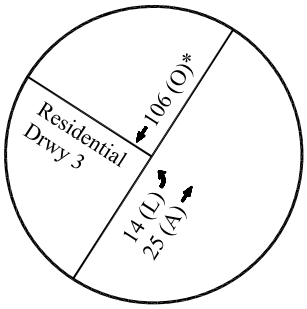
SAT Peak hour

Full Built-out 2028



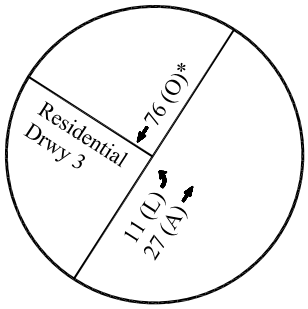
*800 Vehicle are required to warrant a left turn lane

AM Peak hour



*800 Vehicle are required to warrant a left turn lane

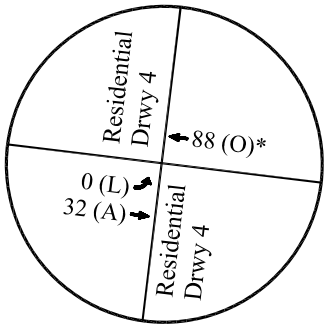
PM Peak hour



*800 Vehicle are required to warrant a left turn lane

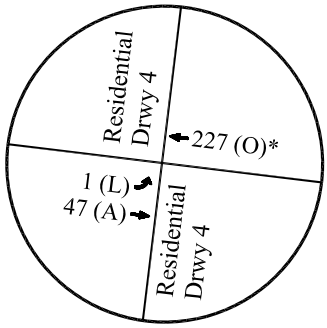
SAT Peak hour

Full Build-out 2028 Additional Analysis



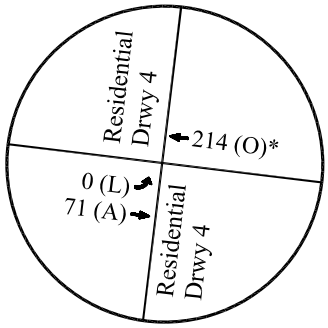
*800 Vehicle are required to warrant a left turn lane

AM Peak hour



*800 Vehicle are required to warrant a left turn lane

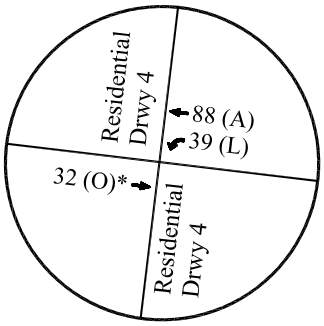
PM Peak hour



*800 Vehicle are required to warrant a left turn lane

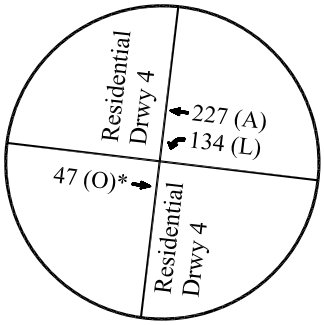
SAT Peak hour

Full Build-out 2028 Eastbound Left



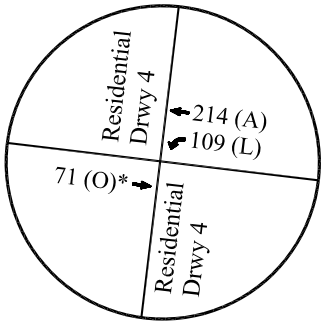
*800 Vehicle are required to warrant a left turn lane

AM Peak hour



*600 Vehicle are required to warrant a left turn lane

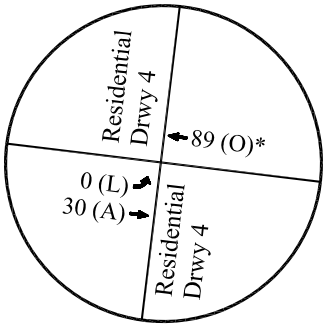
PM Peak hour



*800 Vehicle are required to warrant a left turn lane

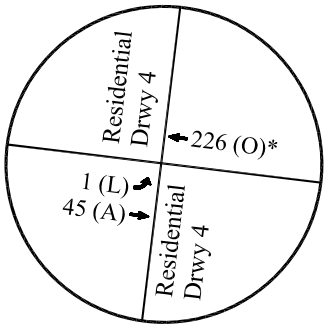
SAT Peak hour

Full Build-out 2028 Westbound Left



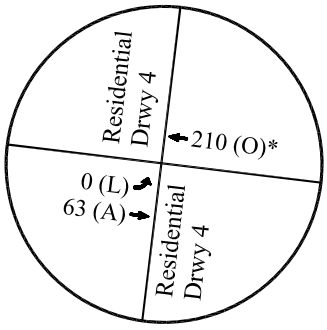
*800 Vehicle are required to warrant a left turn lane

AM Peak hour



*800 Vehicle are required to warrant a left turn lane

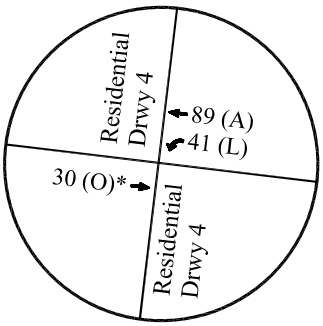
PM Peak hour



*800 Vehicle are required to warrant a left turn lane

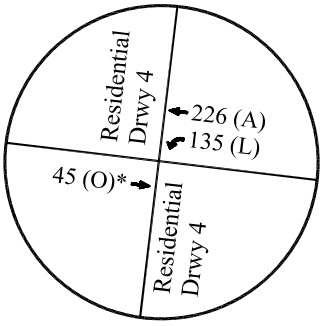
SAT Peak hour

Full Build-out 2028 Additional Analysis Eastbound Left



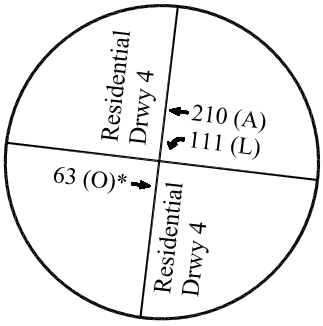
*800 Vehicle are required to warrant a left turn lane

AM Peak hour



*600 Vehicle are required to warrant a left turn lane

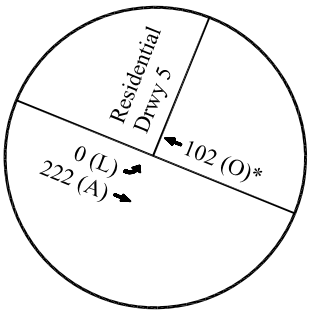
PM Peak hour



*800 Vehicle are required to warrant a left turn lane

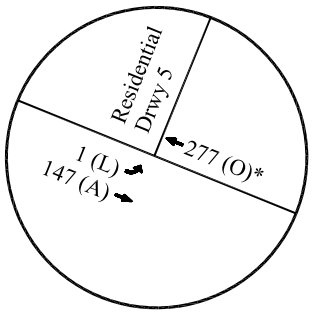
SAT Peak hour

Full Buid-out 2028 Additional Analysis Westbound Left



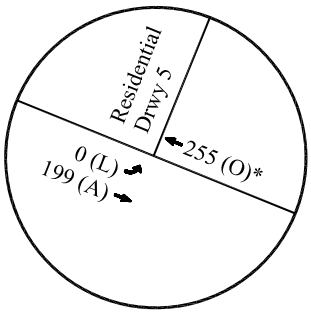
*800 Vehicle are required
to warrant a left turn lane

AM Peak hour



*800 Vehicle are required
to warrant a left turn lane

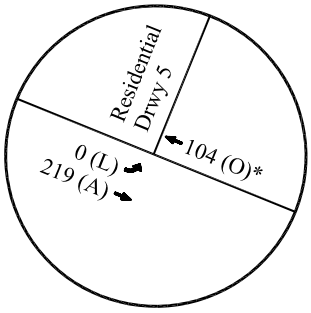
PM Peak hour



*800 Vehicle are required
to warrant a left turn lane

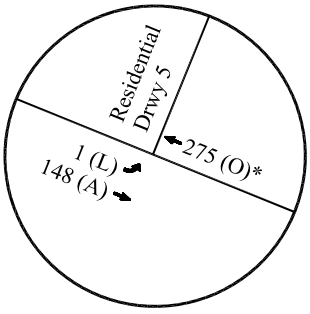
SAT Peak hour

Full Built-out 2028



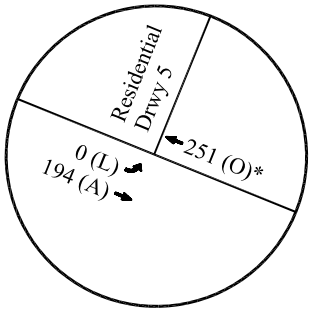
*800 Vehicle are required
to warrant a left turn lane

AM Peak hour



*800 Vehicle are required
to warrant a left turn lane

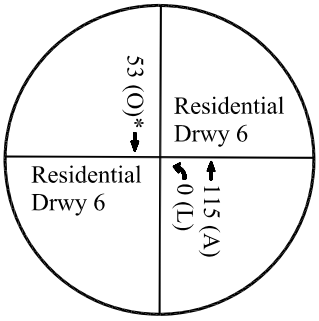
PM Peak hour



*800 Vehicle are required
to warrant a left turn lane

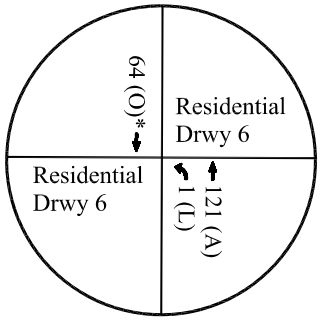
SAT Peak hour

Full Build-out 2028 Additional Analysis



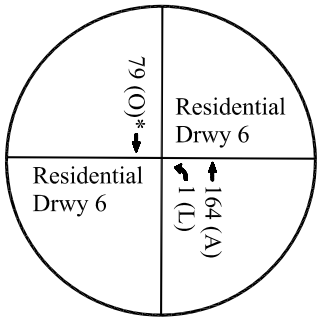
*800 Vehicle are required
to warrant a left turn lane

AM Peak hour



*800 Vehicle are required
to warrant a left turn lane

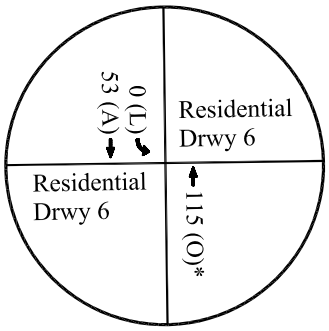
PM Peak hour



*800 Vehicle are required
to warrant a left turn lane

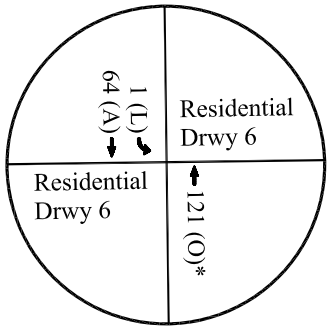
SAT Peak hour

Full Build-out 2028 Northbound Left



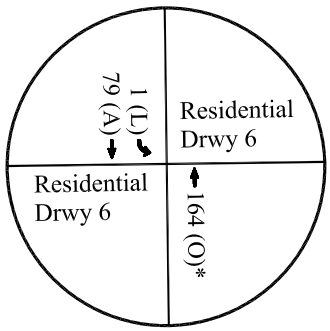
*800 Vehicle are required
to warrant a left turn lane

AM Peak hour



*800 Vehicle are required
to warrant a left turn lane

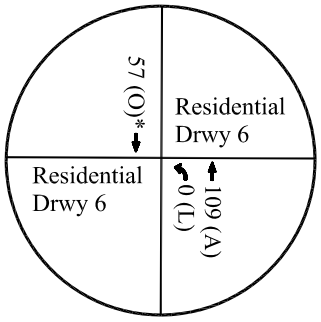
PM Peak hour



*800 Vehicle are required
to warrant a left turn lane

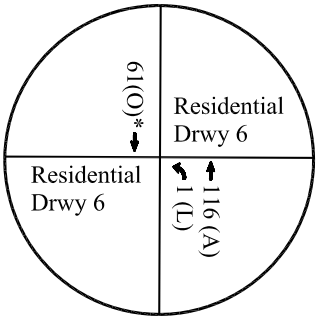
SAT Peak hour

Full Build-out 2028 Southbound Left



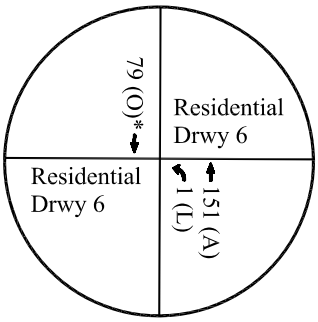
*800 Vehicle are required to warrant a left turn lane

AM Peak hour



*800 Vehicle are required to warrant a left turn lane

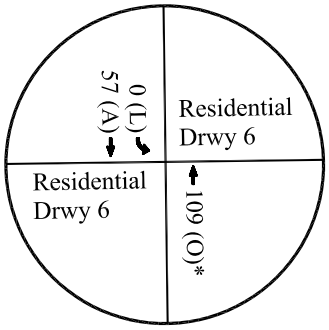
PM Peak hour



*800 Vehicle are required to warrant a left turn lane

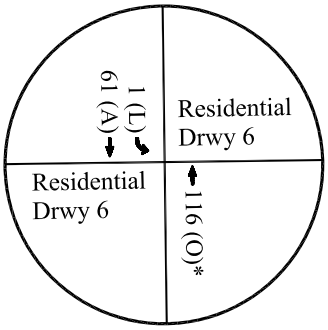
SAT Peak hour

Full Build-out 2028 Additional Analysis Northbound Left



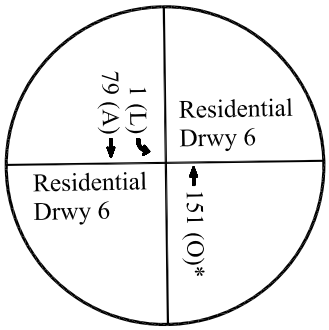
*800 Vehicle are required to warrant a left turn lane

AM Peak hour



*800 Vehicle are required to warrant a left turn lane

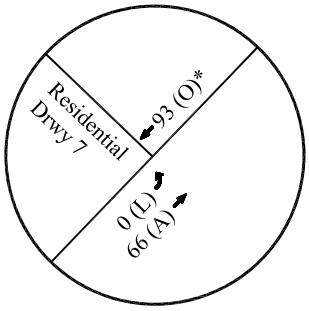
PM Peak hour



*800 Vehicle are required to warrant a left turn lane

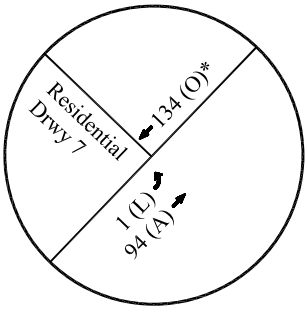
SAT Peak hour

Full Buid-out 2028 Additional Analysis Southbound Left



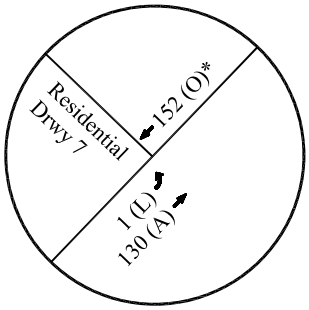
*800 Vehicle are required
to warrant a left turn lane

AM Peak hour



*800 Vehicle are required
to warrant a left turn lane

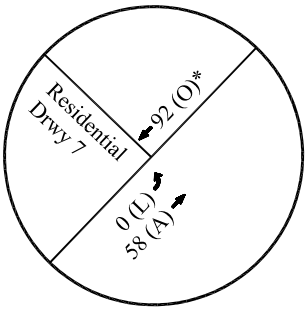
PM Peak hour



*800 Vehicle are required
to warrant a left turn lane

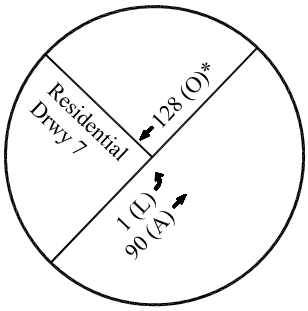
SAT Peak hour

Full Built-out 2028



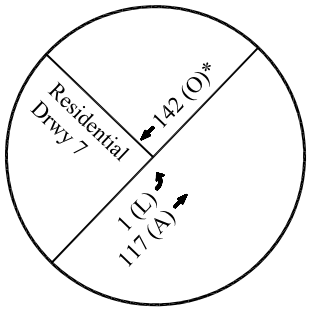
*800 Vehicle are required
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AM Peak hour



*800 Vehicle are required
to warrant a left turn lane

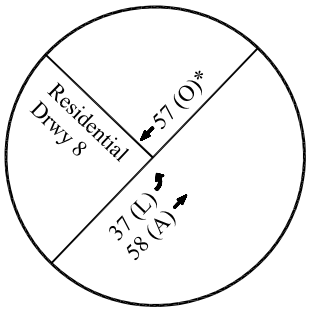
PM Peak hour



*800 Vehicle are required
to warrant a left turn lane

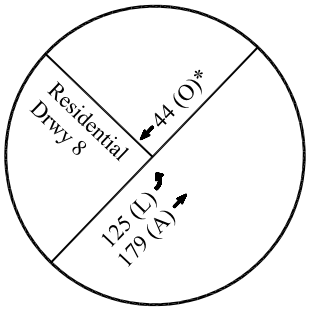
SAT Peak hour

Full Build-out 2028 Additional Analysis



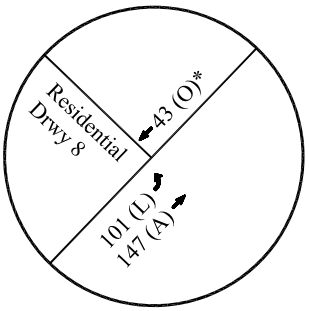
*800 Vehicle are required
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AM Peak hour



*800 Vehicle are required
to warrant a left turn lane

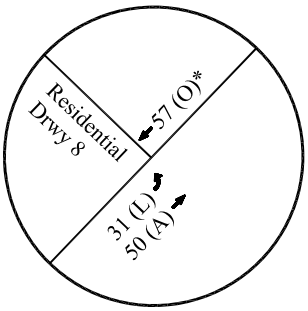
PM Peak hour



*800 Vehicle are required
to warrant a left turn lane

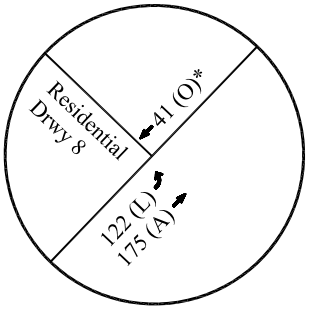
SAT Peak hour

Full Built-out 2028



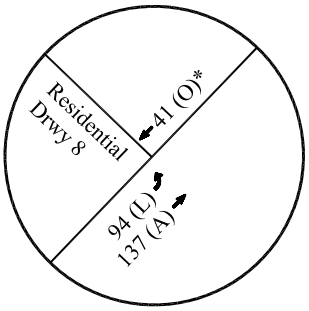
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AM Peak hour



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to warrant a left turn lane

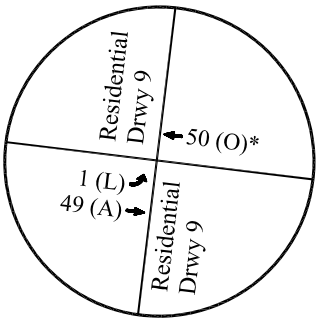
PM Peak hour



*800 Vehicle are required
to warrant a left turn lane

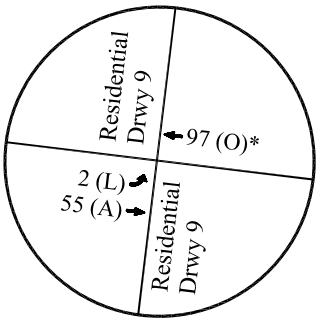
SAT Peak hour

Full Build-out 2028 Additional Analysis



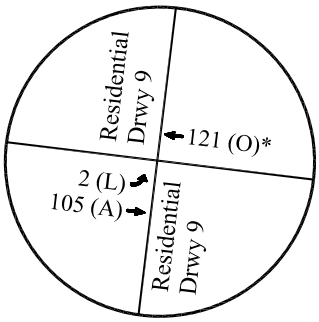
*800 Vehicle are required to warrant a left turn lane

AM Peak hour



*800 Vehicle are required to warrant a left turn lane

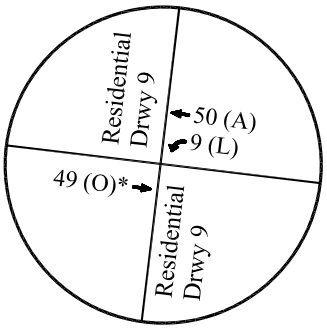
PM Peak hour



*800 Vehicle are required to warrant a left turn lane

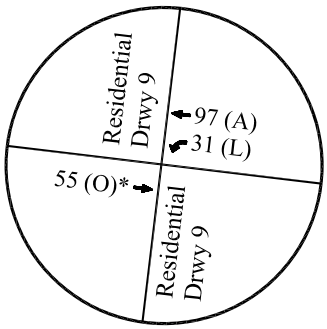
SAT Peak hour

Interim Phase 2015 Eastbound Left



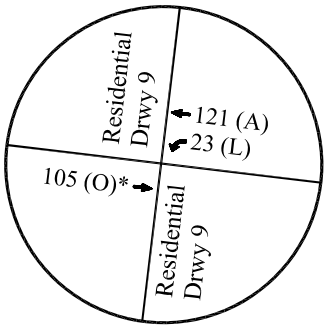
*800 Vehicle are required to warrant a left turn lane

AM Peak hour



*800 Vehicle are required to warrant a left turn lane

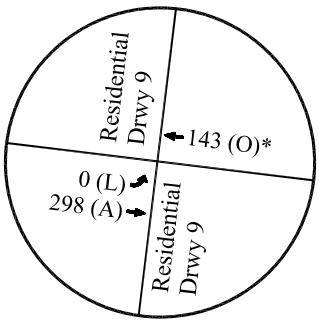
PM Peak hour



*800 Vehicle are required to warrant a left turn lane

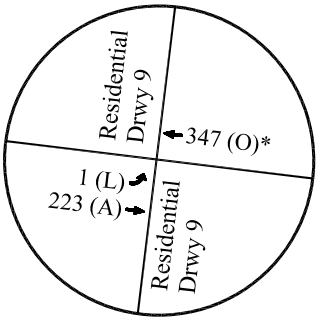
SAT Peak hour

Interim Phase 2015 Westbound Left



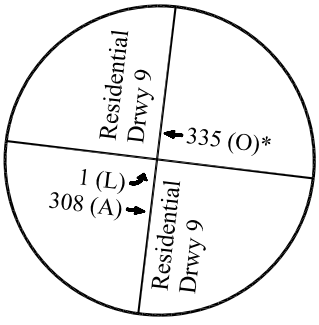
*800 Vehicle are required to warrant a left turn lane

AM Peak hour



*800 Vehicle are required to warrant a left turn lane

PM Peak hour



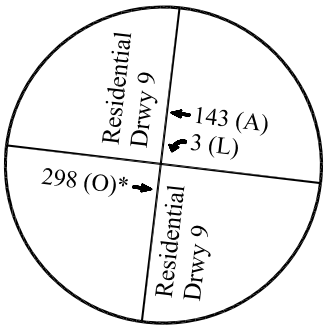
*800 Vehicle are required to warrant a left turn lane

SAT Peak hour

Full Build-out 2028 Eastbound Left

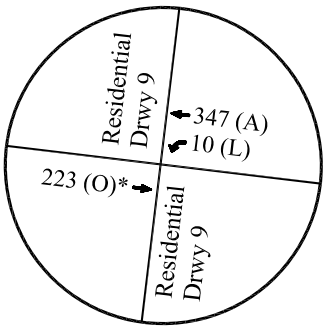
RICO TATUM ROAD / RESIDENTIAL DRIVEWAY 9 - 1 of 2

A&R Engineering Inc.



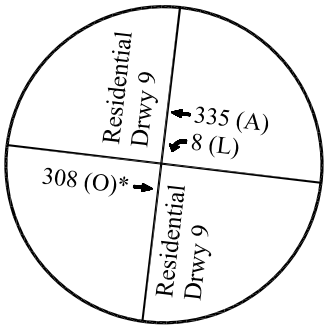
*800 Vehicle are required to warrant a left turn lane

AM Peak hour



*800 Vehicle are required to warrant a left turn lane

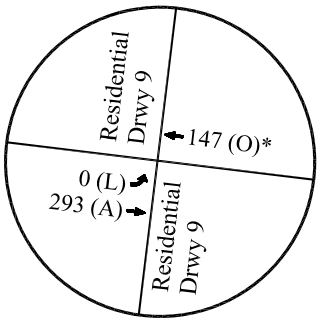
PM Peak hour



*800 Vehicle are required to warrant a left turn lane

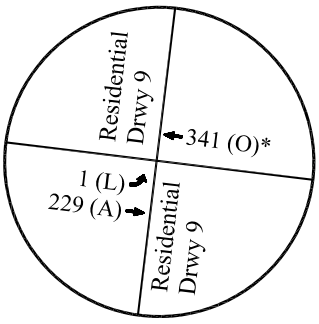
SAT Peak hour

Full Buid-out 2028 Westbound Left



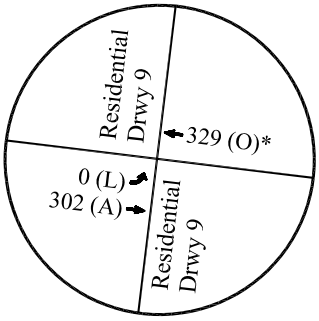
*800 Vehicle are required to warrant a left turn lane

AM Peak hour



*800 Vehicle are required to warrant a left turn lane

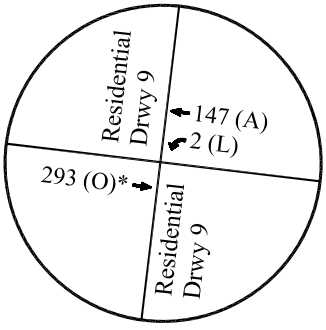
PM Peak hour



*800 Vehicle are required to warrant a left turn lane

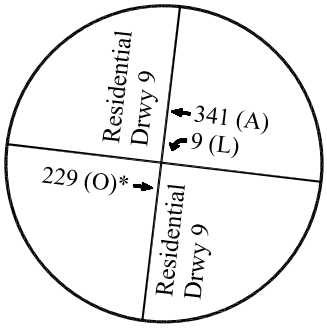
SAT Peak hour

Full Build-out 2028 Additional Analysis Eastbound Left



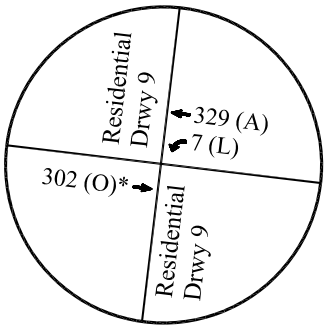
*800 Vehicle are required to warrant a left turn lane

AM Peak hour



*800 Vehicle are required to warrant a left turn lane

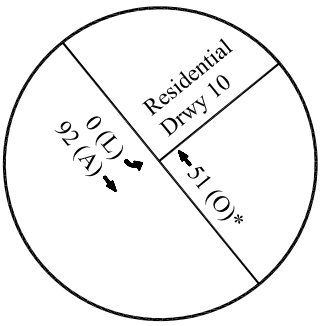
PM Peak hour



*800 Vehicle are required to warrant a left turn lane

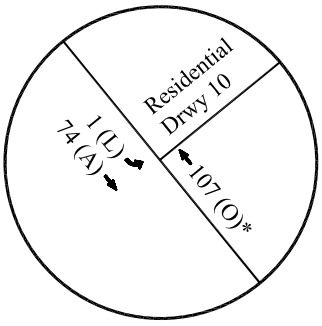
SAT Peak hour

Full Buid-out 2028 Additional Analysis Westbound Left



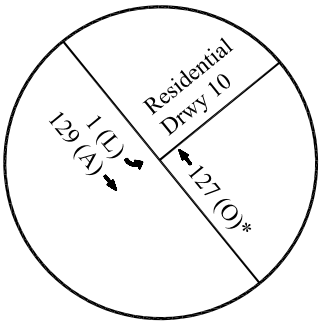
*800 Vehicle are required
to warrant a left turn lane

AM Peak hour



*800 Vehicle are required
to warrant a left turn lane

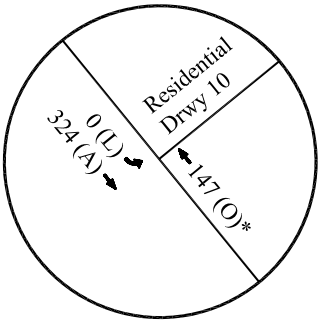
PM Peak hour



*800 Vehicle are required
to warrant a left turn lane

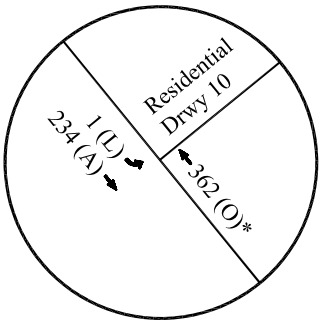
SAT Peak hour

Interim Phase 2015



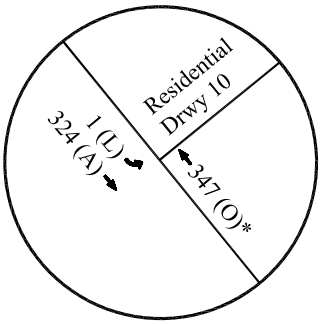
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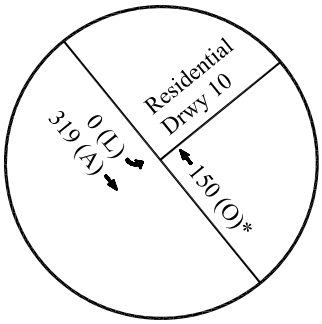
PM Peak hour



*800 Vehicle are required
to warrant a left turn lane

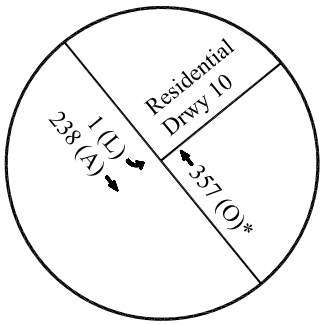
SAT Peak hour

Full Build-out 2028



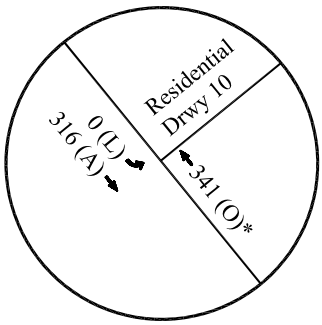
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AM Peak hour



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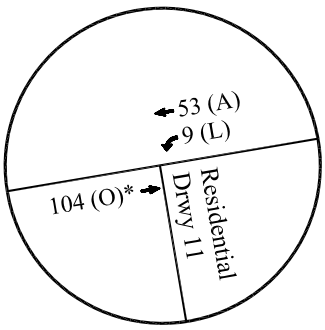
PM Peak hour



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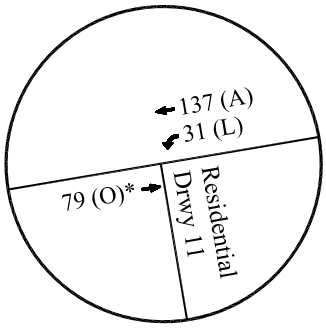
SAT Peak hour

Full Build-out 2028 Additional Analysis



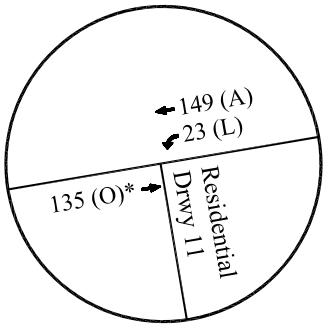
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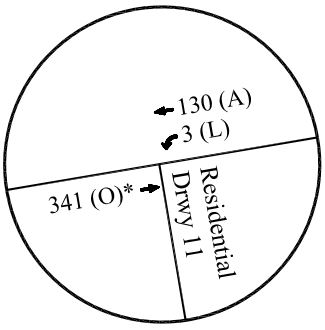
PM Peak hour



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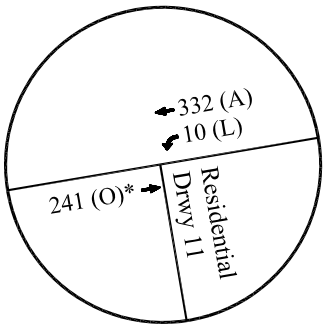
SAT Peak hour

Interim Phase 2015



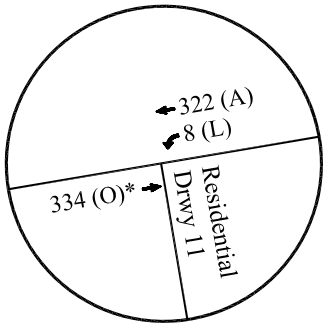
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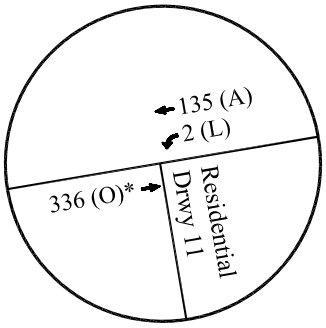
PM Peak hour



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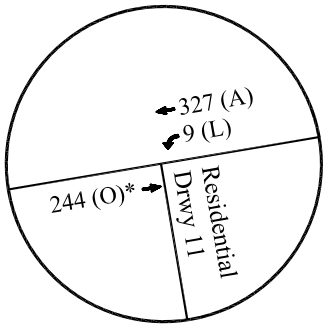
SAT Peak hour

Full Build-out 2028



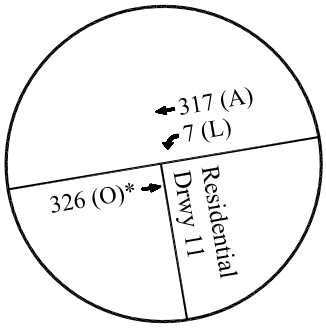
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AM Peak hour



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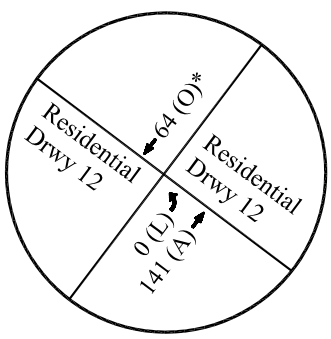
PM Peak hour



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to warrant a left turn lane

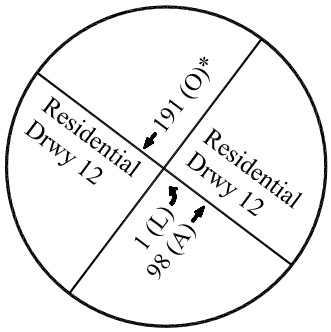
SAT Peak hour

Full Build-out 2028 Additional Analysis



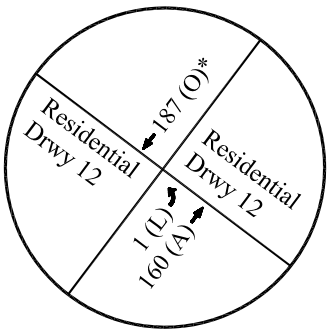
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AM Peak hour



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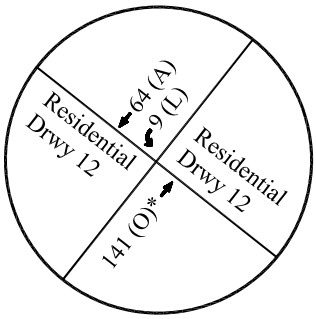
PM Peak hour



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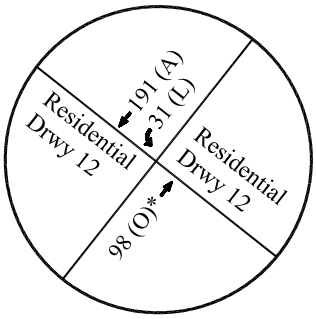
SAT Peak hour

Interim Phase 2015 Eastbound Left



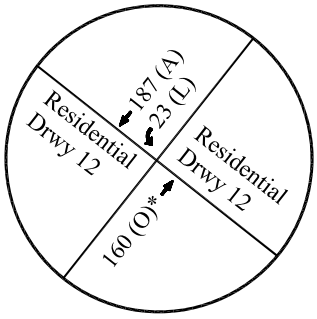
*800 Vehicle are required to warrant a left turn lane

AM Peak hour



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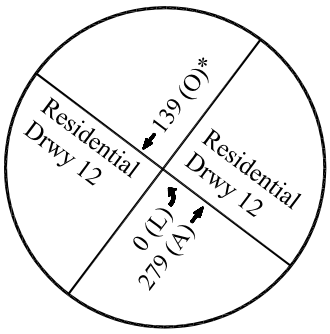
PM Peak hour



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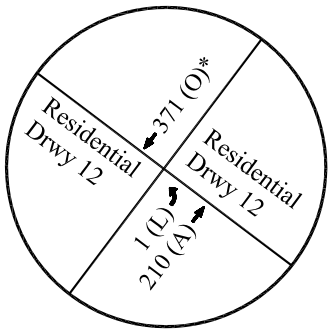
SAT Peak hour

Interim Phase 2015 Westbound Left



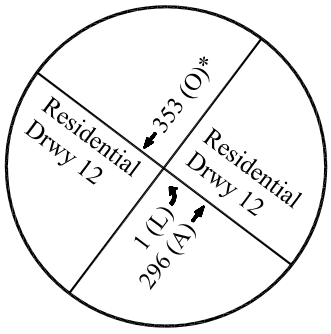
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AM Peak hour



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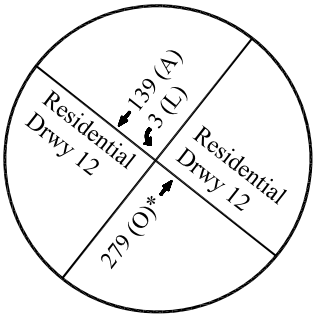
PM Peak hour



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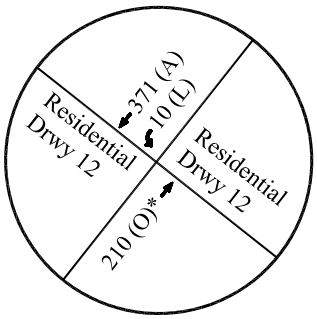
SAT Peak hour

Full Build-out 2028 Eastbound Left



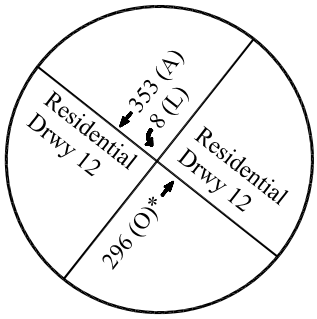
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AM Peak hour



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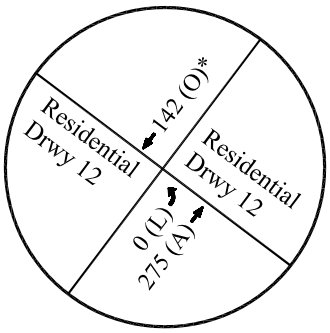
PM Peak hour



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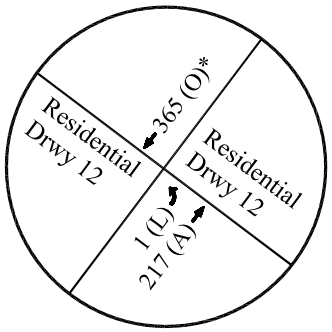
SAT Peak hour

Full Buid-out 2028 Westbound Left



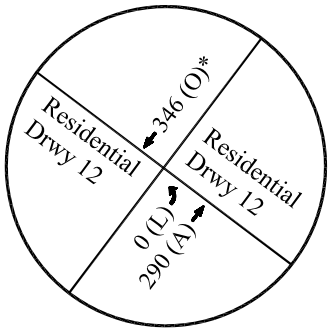
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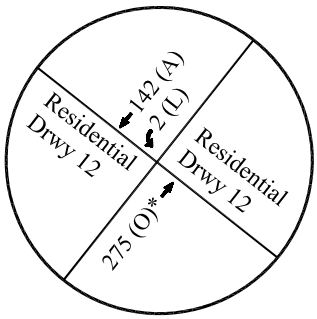
PM Peak hour



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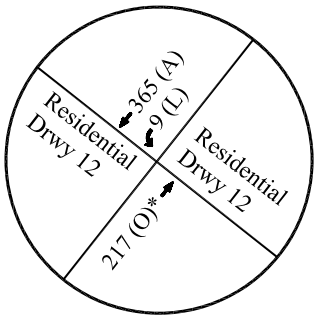
SAT Peak hour

Full Build-out 2028 Additional Analysis Eastbound Left



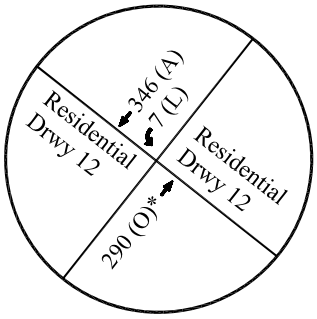
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AM Peak hour



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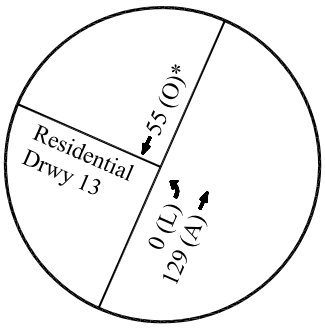
PM Peak hour



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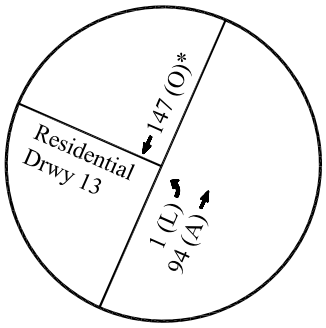
SAT Peak hour

Full Buid-out 2028 Additional Analysis Westbound Left



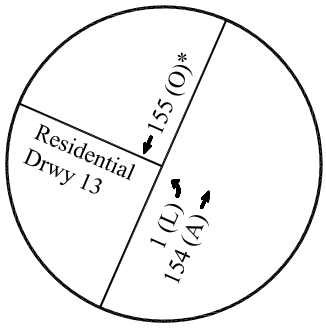
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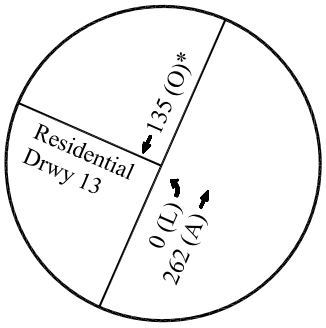
PM Peak hour



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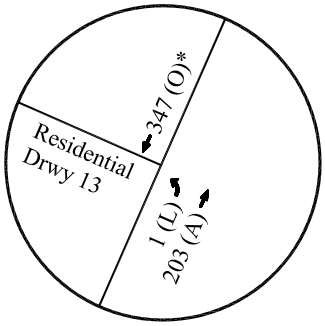
SAT Peak hour

Interim Phase 2015



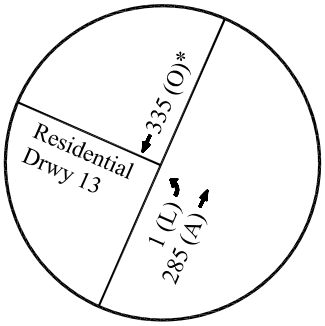
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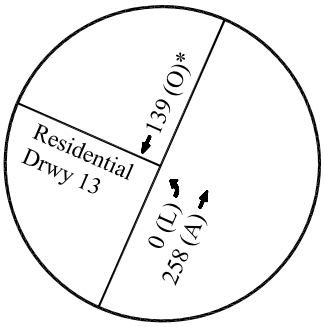
PM Peak hour



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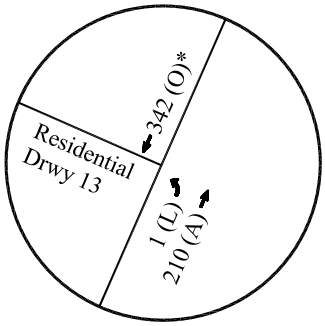
SAT Peak hour

Full Build-out 2028



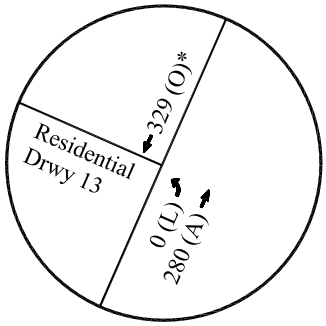
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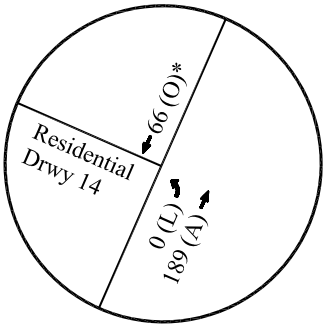
PM Peak hour



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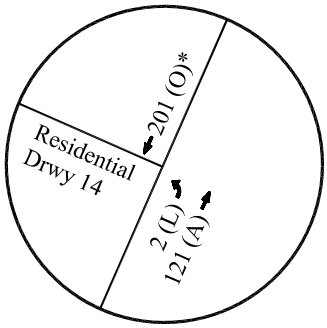
SAT Peak hour

Full Build-out 2028 Additional Analysis



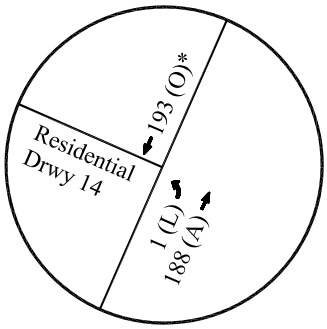
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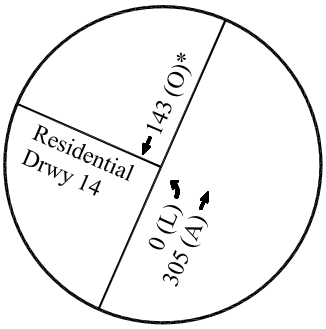
PM Peak hour



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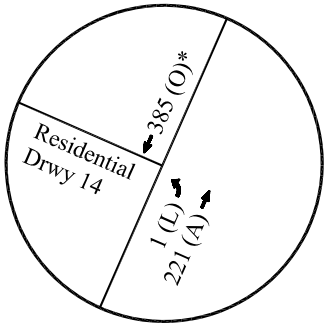
SAT Peak hour

Interim Phase 2015



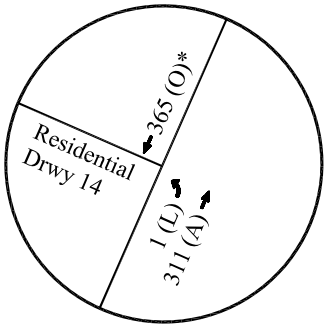
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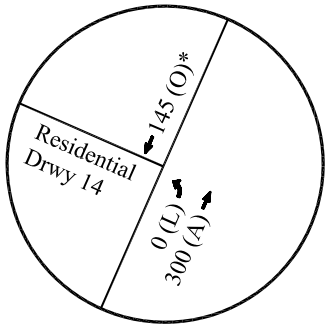
PM Peak hour



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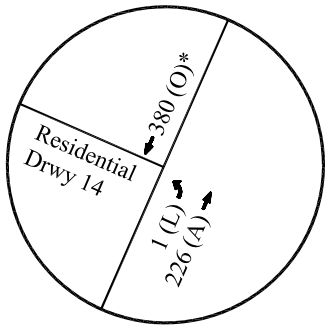
SAT Peak hour

Full Build-out 2028



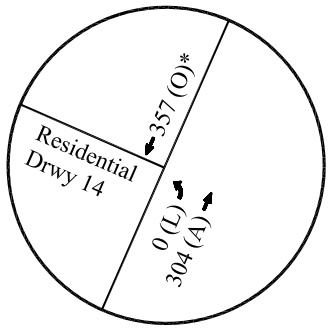
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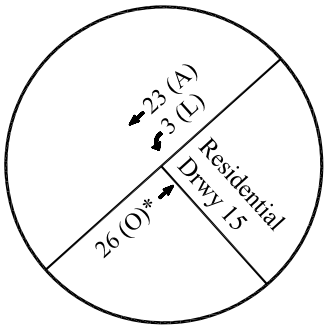
PM Peak hour



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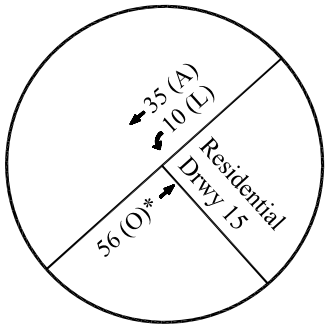
SAT Peak hour

Full Build-out 2028 Additional Analysis



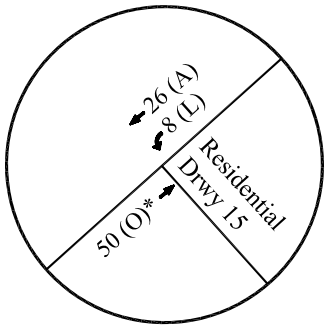
*800 Vehicle are required
to warrant a left turn lane

AM Peak hour



*800 Vehicle are required
to warrant a left turn lane

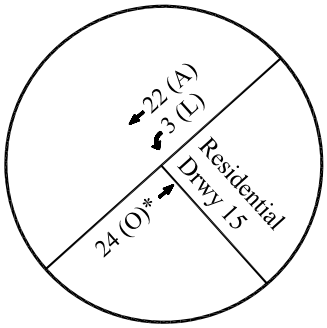
PM Peak hour



*800 Vehicle are required
to warrant a left turn lane

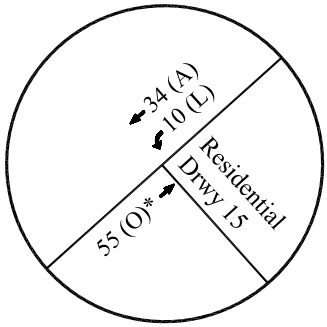
SAT Peak hour

Full Build-out 2028



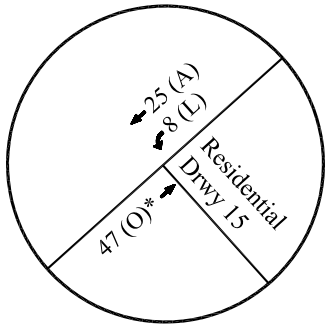
*800 Vehicle are required
to warrant a left turn lane

AM Peak hour



*800 Vehicle are required
to warrant a left turn lane

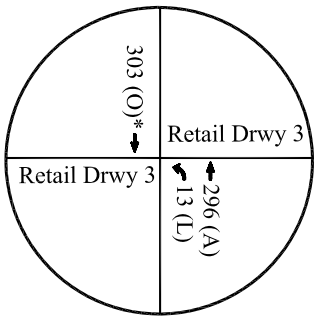
PM Peak hour



*800 Vehicle are required
to warrant a left turn lane

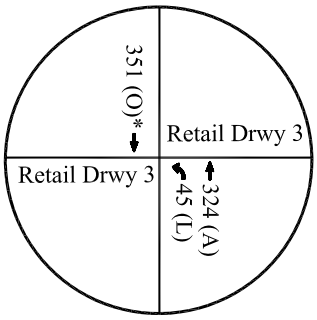
SAT Peak hour

Full Build-out 2028 Additional Analysis



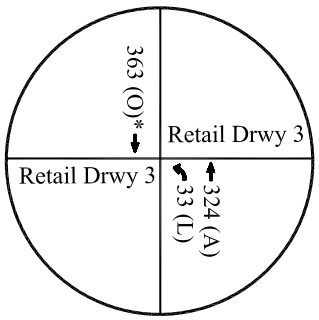
*800 Vehicle are required to warrant a left turn lane

AM Peak hour



*400 Vehicle are required to warrant a left turn lane

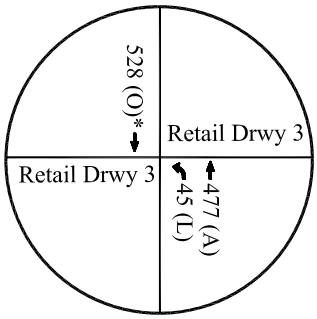
PM Peak hour



*400 Vehicle are required to warrant a left turn lane

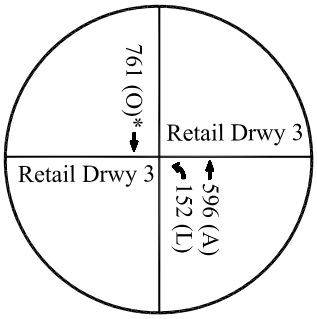
SAT Peak hour

Interim Phase 2015 Northbound Left



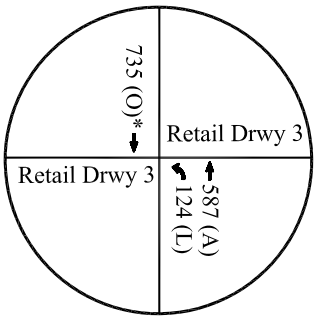
*100 Vehicle are required to warrant a left turn lane

AM Peak hour



*100 Vehicle are required to warrant a left turn lane

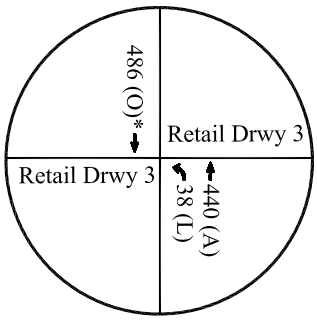
PM Peak hour



*100 Vehicle are required to warrant a left turn lane

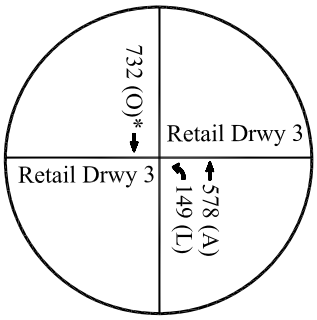
SAT Peak hour

Full Build-out 2028 Northbound Left



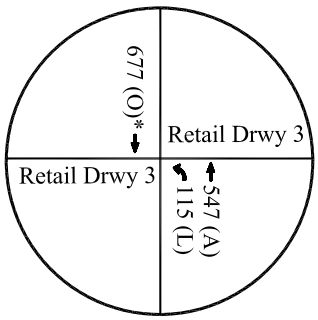
*200 Vehicle are required to warrant a left turn lane

AM Peak hour



*100 Vehicle are required to warrant a left turn lane

PM Peak hour



*100 Vehicle are required to warrant a left turn lane

SAT Peak hour

Full Build-out 2028 Additional Analysis Northbound Left

Planned and Programmed Improvements

Preconstruction Status Report

Proj ID	County	Description
730753-	Fulton	SOUTH FULTON PKWY FM COCHRAN MILL RD TO SR 154 - GRTA
PRP00-2043-00(121)		This project consists of construction of a 2 lane rural partial limited access highway on new location as part of South Fulton Parkway. The project will connect existing 4-lane South Fulton Parkway, which currently ends at Rivertown Road on the east to the New Wooten Road at Cochran Mill Road on the west. The proposed roadway will transition from a 4 lane divided section to a 2 lane undivided roadway just west of Rivertown Road. The project will include construction of a new bridge over Bear Creek, and also a Bridge Culvert over Little Bear Creek.

MPO TIP #:	FS-036A
MPO:	Atlanta TMA
Proj Length (miles):	2.41
Program Type:	New Construction
Type Work:	Roadway Project
Let Responsibility:	GDOT Let
Bike Provisions Included?	Yes

Phase	Fiscal Year Approved	Estimated Phase Cost	Fund	Phase Status
Engineering	LOCL	$450,000.00	LOC	AUTHORIZED
Right of Way	LOCL	$450,000.00	LOC	AUTHORIZED
Construction	2003	$436,472.49	42210	AUTHORIZED
Construction	2003	$5,654,345.23	CFTS	AUTHORIZED

Activity	Actual Start	Actual/Estimated Finish	Percent Complete
Define Project Concept	8/5/1985	12/3/1985	100
Management Concept Approval Complete	4/28/1986	4/28/1986	100
Environmental Approval	10/1/1984	3/26/1985	100
Public Hearing Held	6/30/1986	6/30/1986	100
Field Surveys/SDE	5/2/2000	5/30/2000	100
Preliminary Plans	1/7/1985	5/30/2000	100
Preliminary Bridge Design	5/23/2000	5/30/2000	100
PFPR Inspection	7/15/1993	7/15/1993	100
R/W Acquisition	5/20/2002	6/30/2002	100
Bridge Foundation Investigation	5/30/2000	5/30/2000	100
Final Design	9/10/1992	11/5/1999	100
Final Bridge Plans Preparation	3/3/1997	6/20/1997	100
FFPR Inspection	4/29/1999	4/29/1999	100

Right of Way Acquisition Information

Preliminary Parcel Count:	12	**Total Parcel Count:**	12	**Acquired By:**	LOC
Right of Way Certification Date:	11/7/1996	**Acquired Count:**	0		

FS-050

Atlanta Region - Envision6 Transportation Plan

PROJECT FACT SHEET

Short Title	US 29 (MAIN STREET) ONE-WAY PAIR FROM SOUTH OF PALMETTO CITY LIMITS TO SR 154 (CASCADE PALMETTO HIGHWAY)
GDOT Project No.	721570-
Federal ID No.	STP-010-1(25)
Status	Long Range
Detailed Description and Justification	This project involves the creation of a one-way pair comprised of two two-lane roadways from south of the Palmetto city limits to SR 154 (Cascade Palmetto Highway).
Service Type	General Purpose Roadway Capacity
Sponsor	GDOT
Jurisdiction	Fulton (South)
Existing Thru Lane	2 *(applicable for road projects only)*
Planned Thru Lane	4 *(applicable for road projects only)*
Corridor Length	1.6 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





Phase Status & Funding Information		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
PE	General Federal Aid - 2014-2030	LR 2014-2020	**$500,000**	$400,000	$100,000	$0,000	$0,000
ROW	General Federal Aid - 2014-2030	LR 2014-2020	**$3,152,000**	$2,521,600	$630,400	$0,000	$0,000
CST	General Federal Aid - 2014-2030	LR 2014-2020	**$3,478,000**	$2,782,400	$695,600	$0,000	$0,000
				$5,704,000	**$1,426,000**	**$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: 5/9/2008

FS-209

Atlanta Region - Envision6 Transportation Plan

PROJECT FACT SHEET

Short Title	SOUTH FULTON SCENIC BYWAY MULTI-USE TRAIL - PHASE I FROM COCHRAN MILL PARK TO PHILLIPS ROAD
GDOT Project No.	0002308
Federal ID No.	
Status	Programmed
Detailed Description and Justification	This project consists of the design of a bicycle/pedestrian trail from Cochran Mill Park following the Little Bear Creek corridor approximately 2.2 miles, then shifting southward towards Phillips Road approximately 0.5 miles, ending at an existing gravel path just north of Phillips Road. The typical section is 10' wide concrete with 4' wide graded shoulders. A bridge will be required to cross a tributary to Little Bear Creek approximately 0.25 miles south of the creek. Funding shown for this line item is supplemental to an existing Transportation Enhancement project.
Service Type	Multi-Use Bike / Ped Facility
Sponsor	Fulton County
Jurisdiction	Fulton (South)
Existing Thru Lane	N/A *(applicable for road projects only)*
Planned Thru Lane	N/A *(applicable for road projects only)*
Corridor Length	3.1 miles *(not applicable for all project types)*
Network Year	2010 *(required if modeled for conformity)*
Completion Date	2010
Analysis Level	Not modeled





Phase Status & Funding Information		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
CST	SAFETEA-LU Earmark	2008	**$625,000**	$500,000	$0,000	$0,000	$125,000
				$500,000	**$0,000**	**$0,000**	**$125,000**

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: 5/9/2008

FS-AR-183

Atlanta Region - Envision6 Transportation Plan

PROJECT FACT SHEET

Short Title	I-85 SOUTH AT SR 138 (JONESBORO ROAD)
GDOT Project No.	0007842
Federal ID No.	CSNHS-0007-00(842)
Status	Long Range
Detailed Description and Justification	This project involves adding turn lanes at the ends of the exit ramps and widening the SR 138 bridge to include turn lanes.
Service Type	Interchange Upgrade
Sponsor	GDOT
Jurisdiction	Fulton (South)
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	2020 *(required if modeled for conformity)*
Completion Date	2020
Analysis Level	Exempt from Air Quality Analysis (40 CFR 93)



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Phase Status & Funding Information		FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
				FEDERAL	STATE	BONDS	LOCAL/OTHER
PE	General Federal Aid - 2014-2030	LR 2014-2020	**$1,000,000**	$800,000	$200,000	$0,000	$0,000
CST	General Federal Aid - 2014-2030	LR 2014-2020	**$20,000,000**	$16,000,000	$4,000,000	$0,000	$0,000
				$16,800,000	**$4,200,000**	**$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: 5/9/2008

Correspondence

Proposed Facility Site Plan