DEVELOPMENTS OF REGIONAL IMPACT
Traffic Impact Study
for
Corner Market Development
Conyers, Georgia

DRI 1970 – MIXED-USE DEVELOPMENT

Prepared for:

The Verde Group

April 30, 2009

Prepared by:

ITERIS®

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Executive Summary

This report summarizes the results of a traffic impact study conducted by Iteris, Inc. for the Corner Market mixed-use development in Conyers, Georgia. This traffic analysis evaluated the impact of the site traffic on the area roadways and determined the roadway improvements necessary to accommodate the site traffic.

The Corner Market mixed-use development is located in Conyers, GA. The 100.5-acre site is bounded by Flat Shoals Road on the north and Parker Road on the east. The development currently contains 68,000 square feet of retail and office uses plus 236 apartments. An additional 84 lofts in a four-story building, 203 apartments, and 100 Townhouses are proposed for the site. Build-out is estimated to be the end of 2013.

At build-out, the site will be served by two full access drives and one right-in/right-out only driveway on Flat Shoals Road and one drive on Parker Road. Currently, the site is served by one drive on Flat Shoals Road and one drive on Parker Road.

By 2013, the site will generate 353 new A.M. peak hour trips and 408 new P.M. peak hour trips.

Based on the results of this traffic analysis, it was determined that by 2013, some of the study intersections will require roadway improvements. Mitigation measures were recommended to accommodate the *2013 Future No-Build traffic conditions* and *the 2013 Future Build traffic conditions* where needed.

At the site drives, the required left and right turn auxiliary lanes were recommended.

Based on the results of this analysis and the roadway improvements recommended in this study, the area roadways will be able to adequately accommodate the Corner Market mixed-use development site traffic.

1.
Introduction

The Corner Market mixed-use development is located in Conyers, GA. The 100.5-acre site is bounded by Flat Shoals Road on the north and Parker Road on the east. The development currently contains 68,000 square feet of retail and office uses plus 236 apartments. An additional 84 lofts in a four-story building, 203 apartments, and 100 Townhouses are proposed for the site. This study was conducted to assess the impact of the site on the adjacent street system and to satisfy the requirements of a Developments of Regional Impact (DRI) submittal.

As part of the DRI process, Iteris initially submitted a Traffic Methodology Report for the site dated November 13, 2008 to GRTA. In response, GRTA issued a Letter of Understanding dated January 12, 2009 which contained the methodology outline for completing this traffic impact study.

The following sections detail the traffic impact analysis and completely assess the impact of the Corner Market mixed-use development on the area roadways and intersections.

2.
Site Description

Project Description

As stated in Section 1, the Corner Market mixed-use development is located in Conyers, GA. The 100.5-acre site is bounded by Flat Shoals Road on the north and Parker Road on the east. The development currently contains 68,000 square feet of retail and office uses plus 236 apartments. An additional 84 lofts in a four-story building, 203 apartments, and 100 Townhouses are proposed for the site. Figures 1 and 2 illustrate the site location.

An application has been filed to rezone the site to a Mixed-Use Development District consisting of the following zoning: Residential Multi-family (RM), Neighborhood Business (BN) and Office-Institutional (OI). Currently the residential portions of the site are zoned TH/C, (townhouses with conditions) and the Corner Market portion of the site is zoned BG, Business General.

Phase I (Village Apartments) has 543 parking spaces while the Corner Market has 329 spaces. For Phase II, 370 spaces are proposed and for Phase III, 262 spaces are proposed.

Project Phasing

The build-out time frame for the site is estimated to be 5 years. The 84 market lofts are expected to be constructed by mid-2009. The 203 Village Apartments (Phase II) are expected to be built by mid-2010. Finally, the 100 Village Townhouses (Phase III) are expected to be constructed somewhere between Years 4 and 5 (by the end of 2013). Figure 3 illustrates the site plan.

Site Access

Site access is currently provided for the Corner Market retail/office portion of the site via two drives on Flat Shoals Road and a drive on Parker Road. Phase 1 of the Village Apartments is also served by these access points. In the future, the 84 lofts and Phase II of the Village Apartments will also be served by these access points. Phase III, the Village Townhouses, will be served by its own separate access drive onto Flat Shoals Road and will not be internally connected to the rest of the development.

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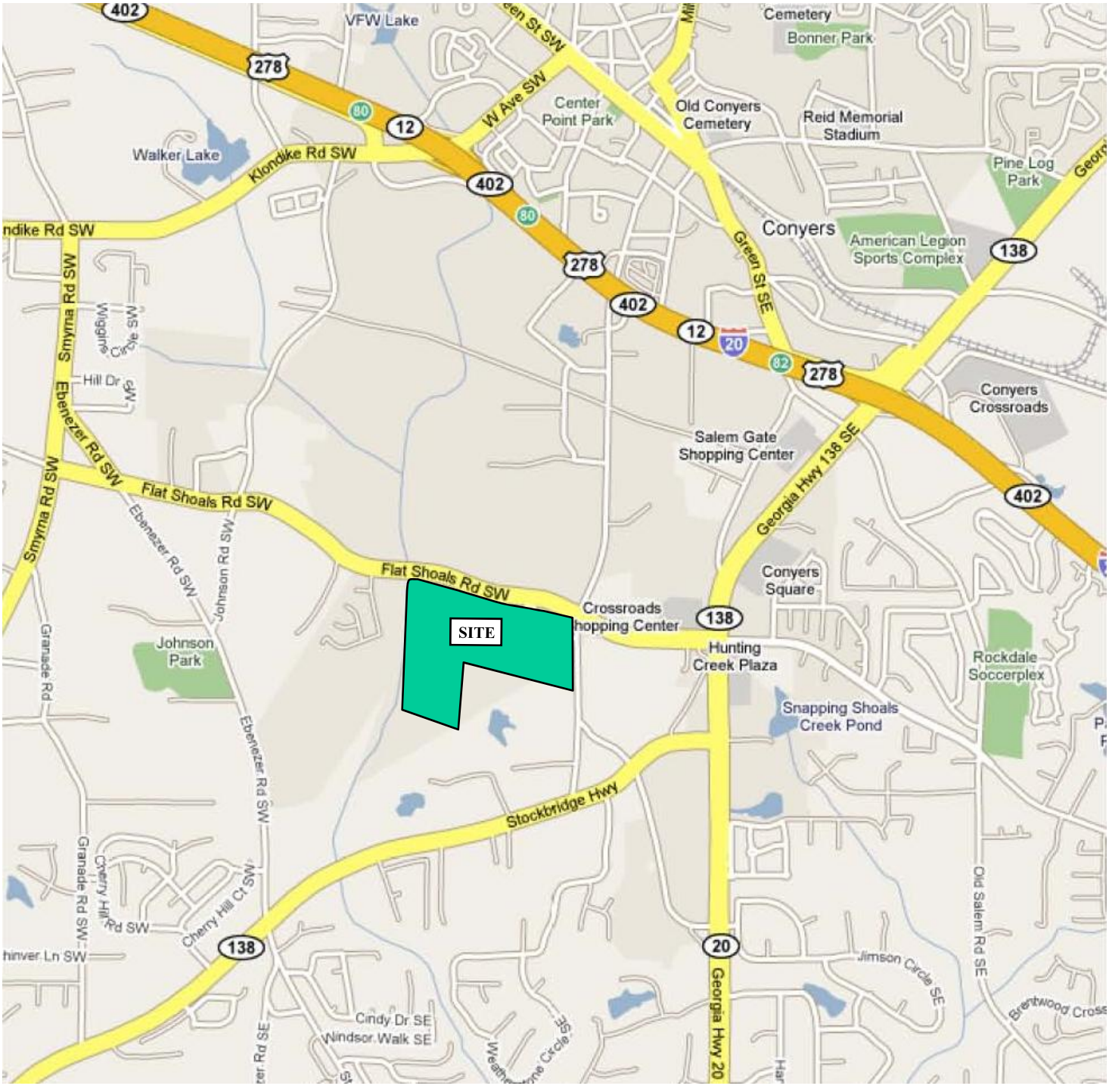

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SITE LOCATION

Corner Market Development: Conyers, GA

Figure 1

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SITE AERIAL MAP

Corner Market Development: Conyers, GA

Figure 2

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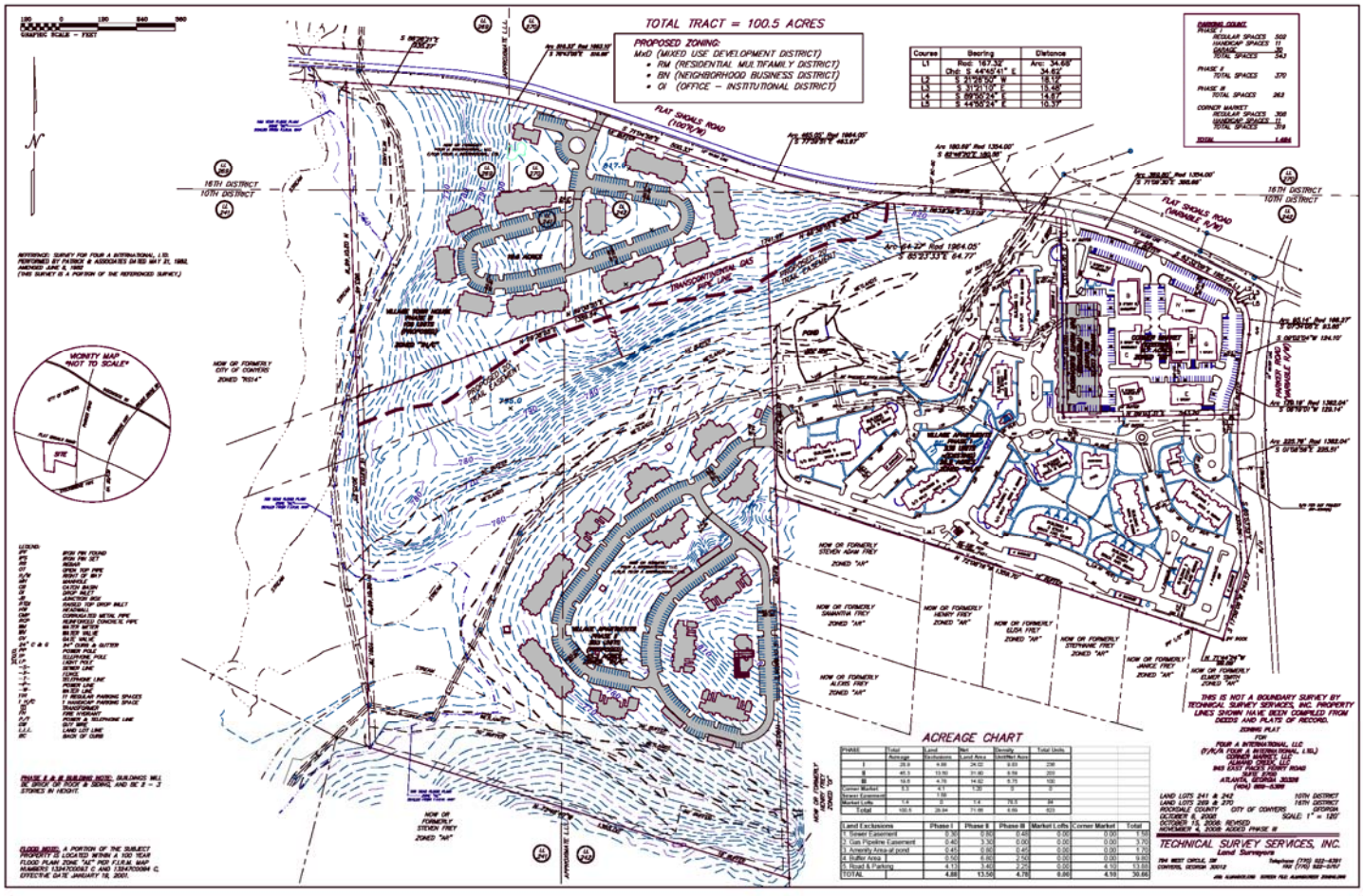


SITE PLAN

Corner Market Development: Conyers, GA

Figure 3

3.
Existing Traffic Conditions

Study Area Road Network

Based on the traffic methodology letter and the GRTA LOU, the study area road network was determined. The major roadways providing access to the site and considered in this study are as follows:

- Flat Shoals Road (SR 155)
- Parker Road
- Old Parker Road
- Johnson Road
- Stockbridge Highway (SR 138)
- McDonough Highway (SR 20)

Other roadways that may be impacted by the site are as follows:

- Ebenezer Road
- Miller Chapel Road
- Culpepper Road
- Klondike Road

These roadways are described in the following paragraphs:

Flat Shoals Road is primarily an east-west two-lane roadway in the site vicinity. The posted speed limit on Flat Shoals near the site is 45 mph. The roadway is under the jurisdiction of the City of Conyers. A 2009 average daily traffic (ADT) count showed that Flat Shoals Road in the vicinity of the site was carrying about 5,980 vehicles per day (vpd). As will be described later in this report, Flat Shoals Road is currently being widened to a four-lane divided roadway in the site vicinity (Project ID: 752380, under construction now) and will be completed in Jan 2010 or at the latest July 2010.

Parker Road is a north-south two-lane roadway in the site vicinity which widens as it approaches I-20. The posted speed limit on Parker Road is 25 mph south of Flat Shoals and 45 mph north of Flat Shoals. The roadway is under the jurisdiction of the City of Conyers or Rockdale County depending upon location. The intersection of Parker Road and Flat Shoals is signalized. A 2007 ADT count provided by GDOT showed that Parker

Road south of Flat Shoals was carrying about 9,610 vpd while north of Flat Shoals it was carrying about 10,420 vpd. As will be described later in this report, Parker Road is currently being widened to a four-lane divided roadway in the site vicinity (Project ID: 752380, under construction now) and will be completed in Jan 2010 or at the latest July 2010.

Old Parker Road is a minor north-south, two-lane roadway that extends from Parker Road to SR 138. The roadway is under the jurisdiction of Rockdale County. There is a 35 mph speed limit posted on Old Parker Road. Currently, to proceed northbound on Old Parker Road, one must stop at Parker Road and then turn left. Southbound Parker Road drivers have a choice to either take Old Parker Road all the way to SR 138 or stay on Parker Road to SR 138/Miller Chapel Road. The Old Parker Road/SR 138 intersection is unsignalized and restricted to right turns in and out only.

Johnson Road is a north-south two-lane roadway which extends from Klondike Road south to Ebenezer Road. The posted speed limit on Johnson Road is 45 mph. The roadway is under the jurisdiction of the City of Conyers. The intersection of Johnson Road and Klondike Road is signalized while the intersection of Johnson Road and Flat Shoals Road is a four-way stop.

Stockbridge Highway (SR 138) is primarily an east-west two-lane roadway that widens to accommodate turn lanes at major intersections. SR 138 widens to a four-lane divided roadway as it approaches Millers Chapel Road and SR 20. The posted speed limit on SR 138 is 50 mph and the roadway is under the jurisdiction of Georgia Department of Transportation (GDOT). Its intersections with Ebenezer Road and Parker Road are signalized. A 2009 average daily traffic (ADT) count showed that SR 138, west of Parker Road was carrying about 17,270 vehicles per day (vpd).

McDonough Highway (SR 20) is a north-south multi-lane roadway in the site vicinity. At Flat Shoals Road, SR 20 is a six-lane divided roadway. The posted speed limit on SR 20 is 45 mph and the roadway is under the jurisdiction of GDOT. The intersection of SR 20 and Flat Shoals is signalized. A 2007 ADT count provided by GDOT showed that SR 20 was carrying about 45,460 vpd north of Flat Shoals.

Ebenezer Road is a north-south two-lane roadway in the site vicinity. The posted speed limit on Ebenezer Road is 45 mph. The roadway is under the jurisdiction of Rockdale County. The intersection of Johnson Road and Ebenezer Road is signalized.

Miller Chapel Road is a minor north-south two-lane roadway. The posted speed limit on Miller Chapel Road is 35 mph. The roadway is under the jurisdiction of the City of Conyers. Miller Chapel Road makes up the south approach to the signalized intersection of Parker Road and SR 138.

Culpepper Road is an east-west two-lane roadway which serves a business park. There is no speed limit posted on Culpepper Road. The roadway is under the jurisdiction of the

City of Conyers. The intersection of Culpepper Road and Parker Road is controlled by a stop sign on Culpepper.

Klondike Road is primarily an east-west two-lane roadway that widens to a four-lane divided roadway at its interchange with I-20. The posted speed limit on Klondike Road, west of I-20, is 40 mph and the roadway is under the jurisdiction of City of Conyers. Its intersection with Johnson Road is the first signalized intersection west of the I-20 interchange.

The existing lane configurations at each intersection are illustrated on Figures 4a and 4b.

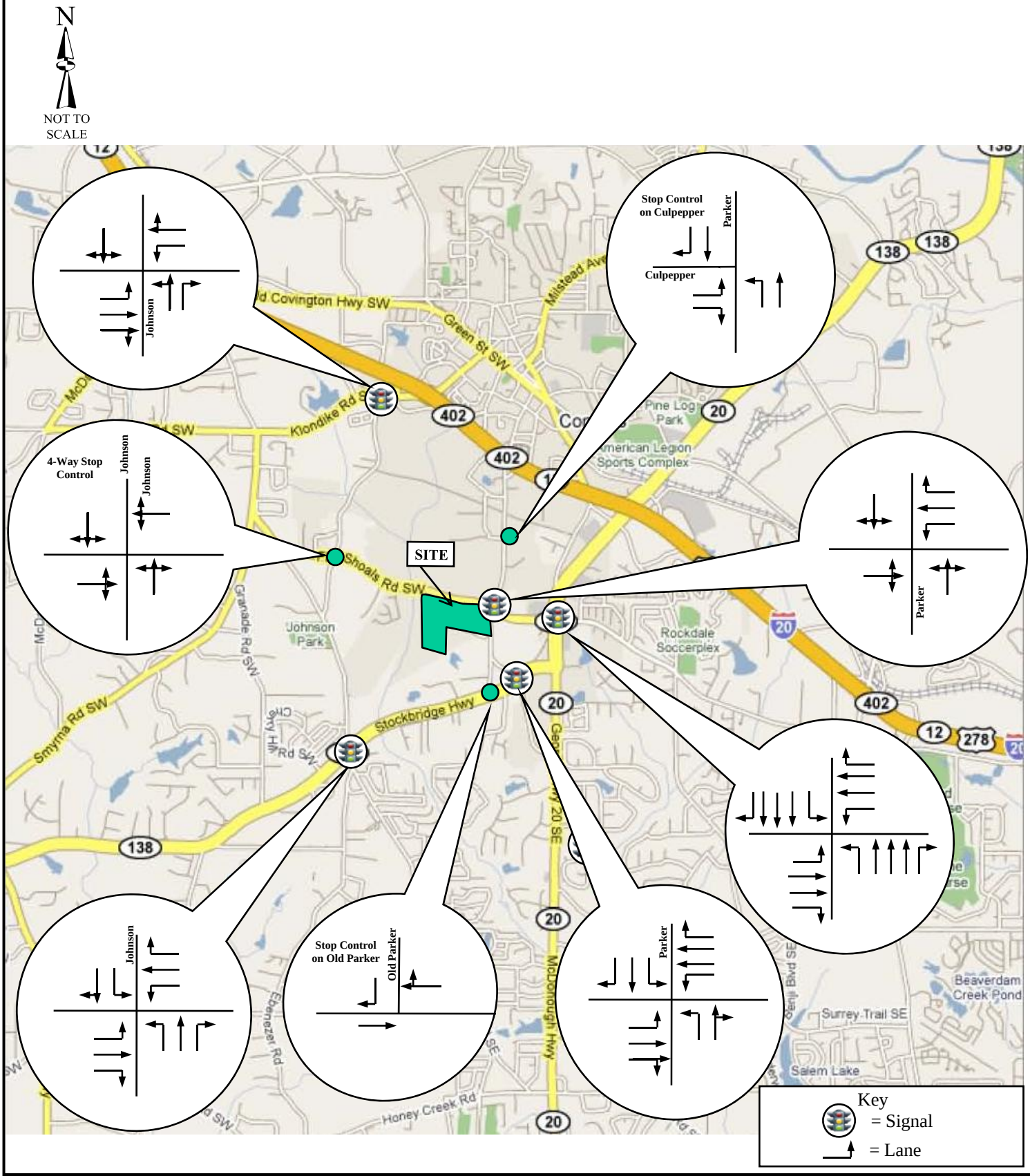
Existing Traffic Volumes

A field reconnaissance was conducted of the site and its environs to obtain a database of existing conditions. The peak periods for the proposed use would typically occur during weekday mornings and afternoons. Based on the traffic methodology report and the GRTA LOU, ten intersections were identified to be studied:

- Flat Shoals and SR 20
- Flat Shoals and Johnson Road
- Flat Shoals and Parker Road
- Klondike Road and Johnson Road
- Parker Road and Culpepper
- Parker Road and SR 138
- Ebenezer Road and SR 138
- Miller Chapel Road and SR 138
- Flat Shoals and Existing Site Drive
- Parker Road and Existing Site Drive

Traffic turning movement counts were conducted at the major study intersections on Tuesday-Thursday, February 3-5, 2009 and at the site drives on March 18, 2009 between 7:00-9:00 A.M. and 4:00-6:00 P.M. These hours represent the peak periods for traffic during an average weekday.

In addition, 24-hour directional counts were conducted on Flat Shoals, west of Parker Road and on SR 138, west of Parker Road. The peak hours of traffic were found to occur from 7:30 A.M.-8:30 A.M. and 5:00 P.M.-6:00 P.M. The existing traffic volumes are illustrated on Figures 5a and 5b. The traffic count data sheets can be found in Appendix A.



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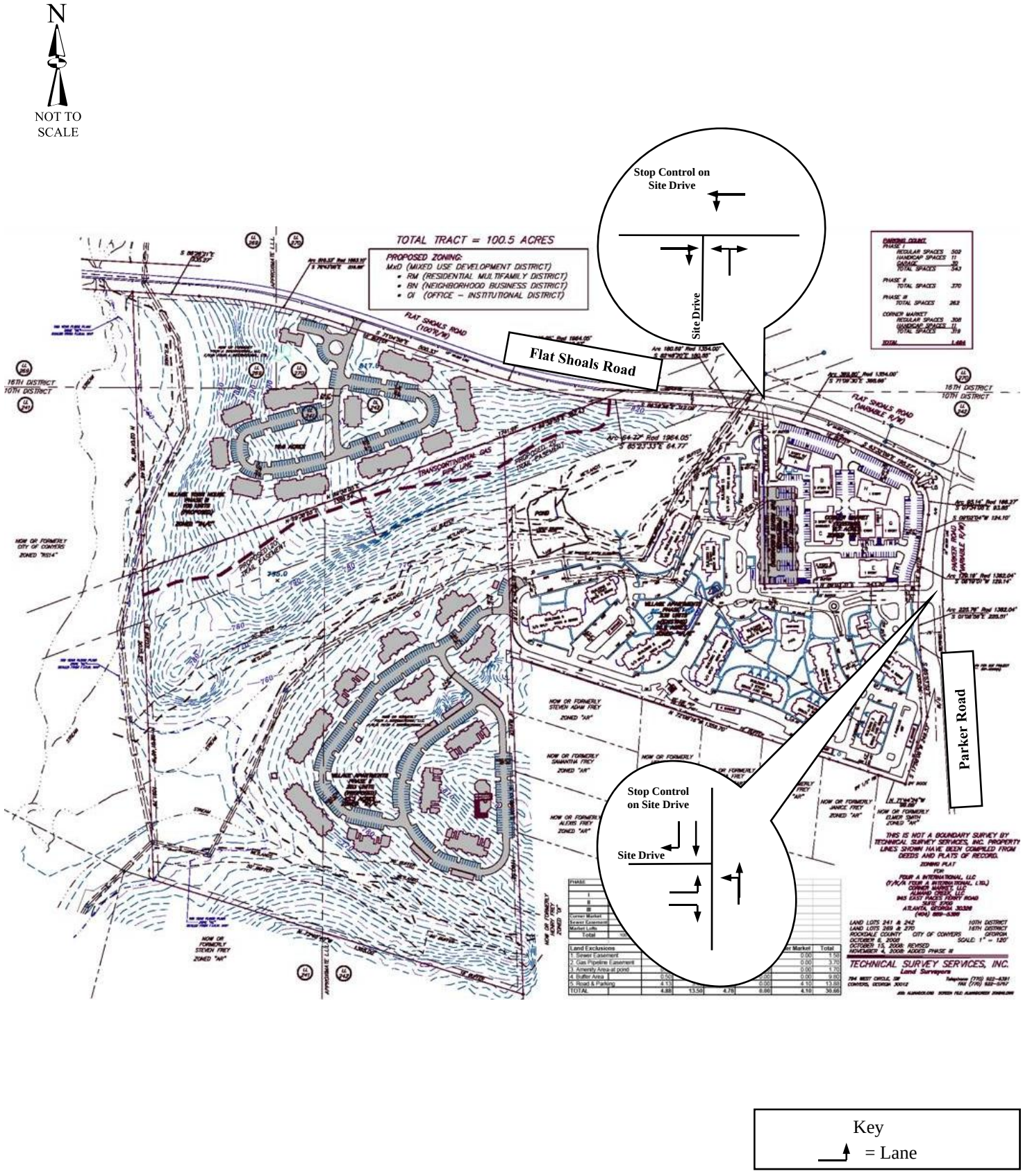
EXISTING LANE CONFIGURATION

Corner Market Development: Conyers, GA

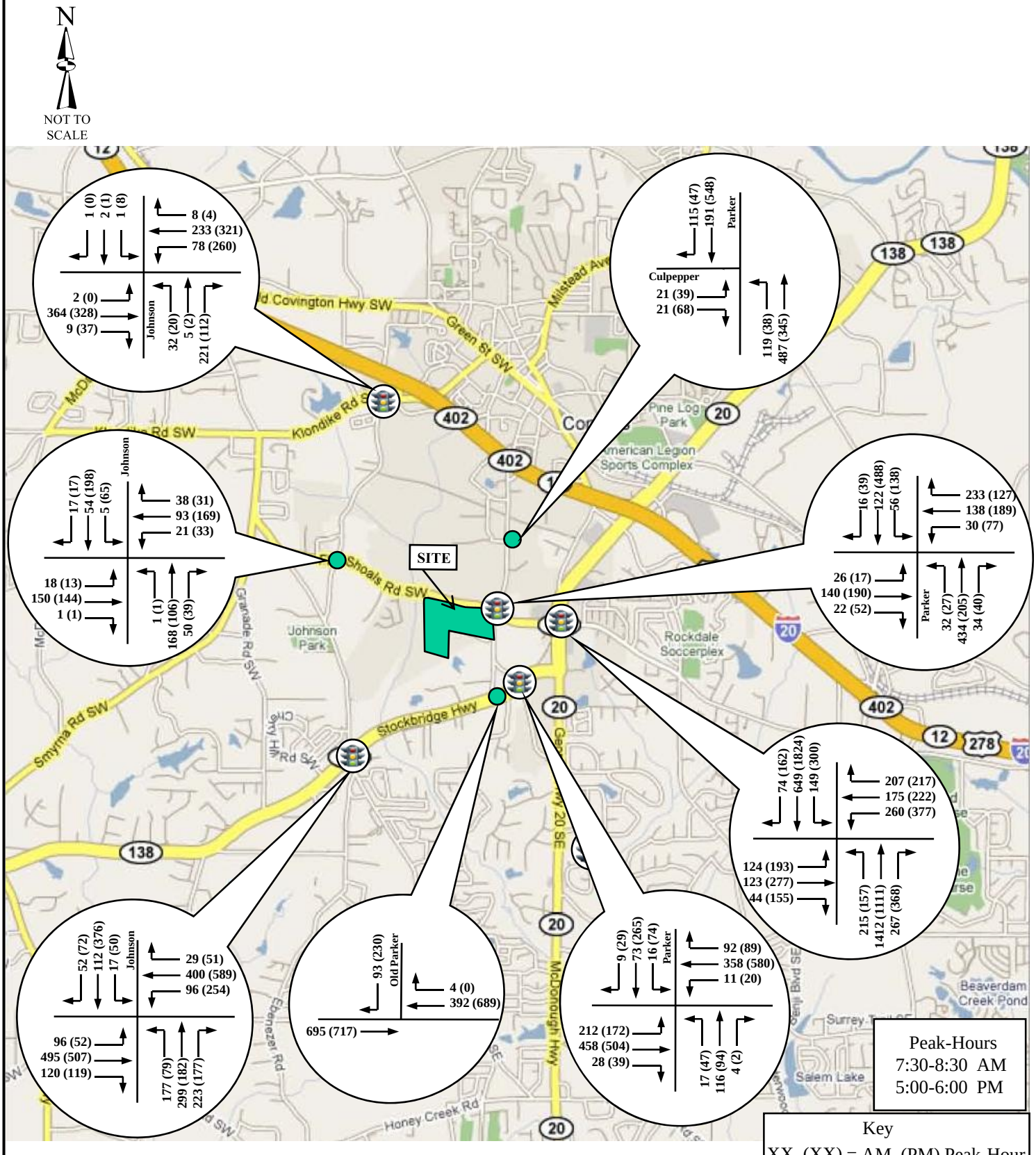
Figure 4a



EXISTING SITE DRIVE LANE CONFIGURATION

Corner Market Development: Conyers, GA

Figure 4b



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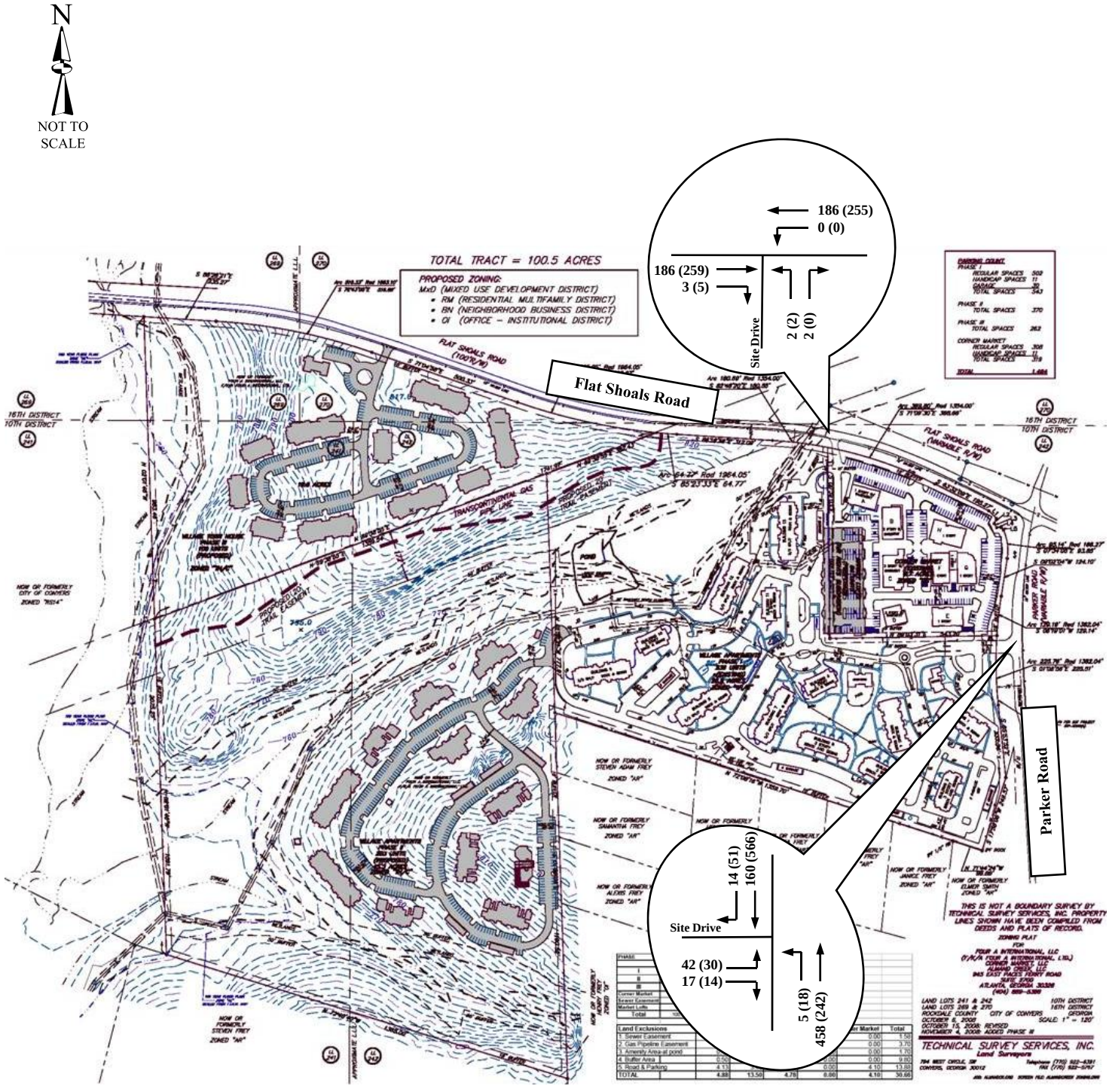
EXISTING TRAFFIC VOLUMES

Corner Market Development: Conyers, GA

Figure 5a



Peak-Hours
7:30-8:30 AM
5:00-6:00 PM

Key
XX (XX) = AM (PM) Peak-Hour

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EXISTING SITE TRAFFIC VOLUMES

Corner Market Development: Conyers, GA

Figure 5b

4.
Future No-Build Traffic Conditions

The build-out timeframe for the development is expected to be completed by late 2013. Therefore, it was necessary to establish the future no-build traffic conditions for the year 2013. This was accomplished by applying growth factor to the existing 2009 traffic volumes.

The growth factor was determined based on historical traffic volumes obtained from GDOT count stations in the site vicinity. The years 2003 through 2007 were used in this analysis. The count data is summarized below in Tables 1a-1d. As can be seen, at three of the count stations little or no growth has occurred. At count station No. 320, traffic has grown at a rate of three percent per year over the last four years on Parker Road, south of Flat Shoals Road. Therefore, to provide a conservative analysis, the existing traffic volumes were increased by a rate of three percent per year. GRTA has concurred with the use of this growth factor to establish the 2013 No-Build traffic conditions, as stated in the methodology section of the LOU.

Table 1a
GDOT Station No. 118 - SR 138 west of Parker Road

Year	EB	WB	2-Way AADT	Growth
2007			16870	0%
2006	8130	7740	15870	
2005			17410	
2004			17240	
2003			16990	

Table 1b
GDOT Station No. 121 - SR 138 north of Flat Shoals

Year	NB	SB	2-Way AADT	Growth
2007	22460	23000	45460	0.40%
2006	20640	20560	41200	
2005	21010	22440	43450	
2004			46550	
2003			44730	

Table 1c
GDOT Station No. 320 - Parker Road south of Flat Shoals

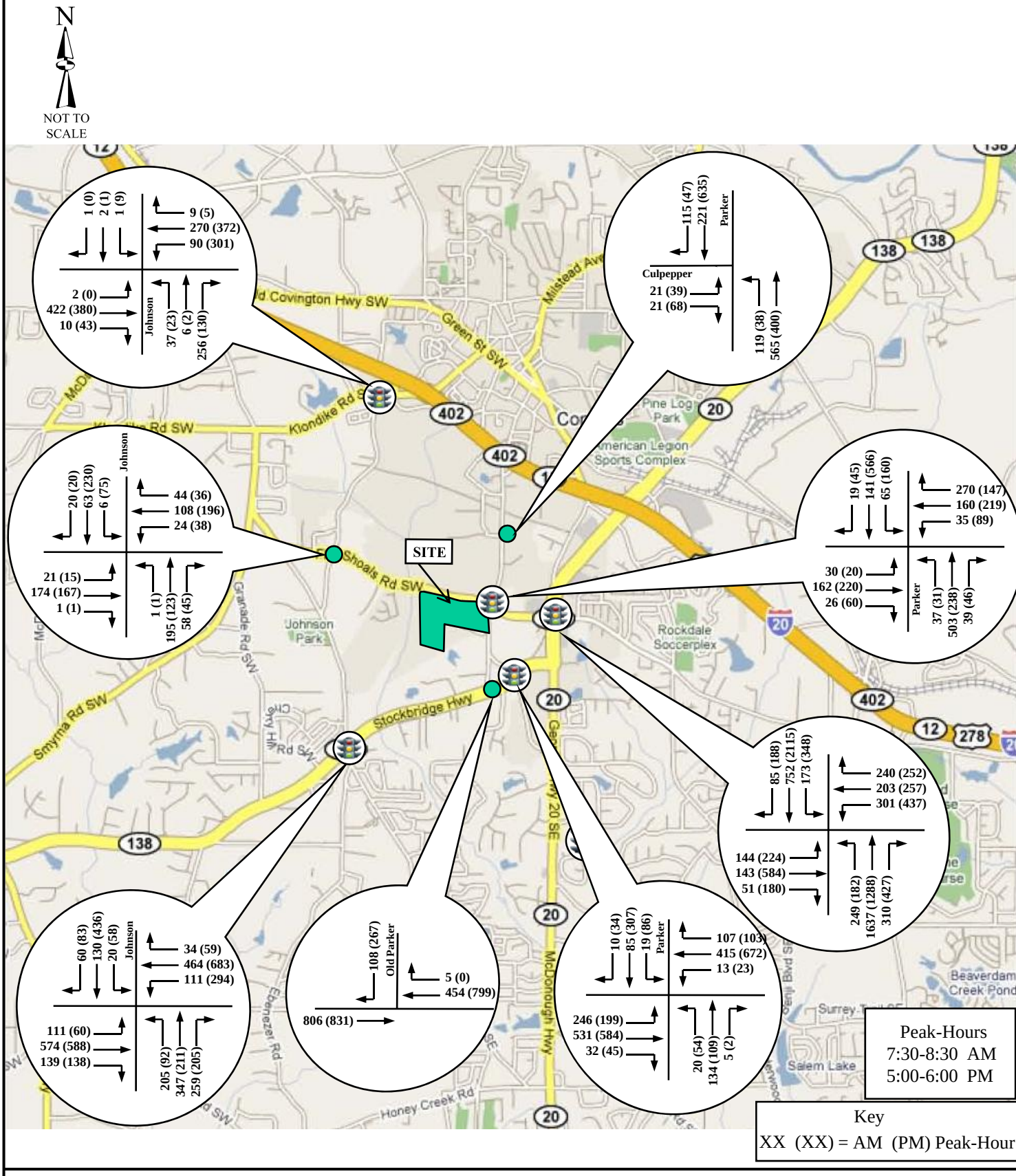
Year	NB	SB	2-Way AADT	Growth
2007			9610	3.00%
2006			8590	
2005			7880	
2004			7960	
2003			8510	

Table 1d
GDOT Station No. 322 - Parker Road north of Flat Shoals

Year	NB	SB	2-Way AADT	Growth
2007	5210	5210	10420	0%
2006				
2005			5980	
2004			12070	
2003			11830	

The growth factor will account for any additional traffic on the roadway system in 2013 resulting from traffic generated by other developments not known at this time as well as the inherent growth in traffic. Since site build-out is expected to occur in late 2013, the three-percent growth factor was applied to the existing 2009 volumes for five years.

The 2013 Future No-Build traffic volumes are illustrated on Figures 6a and 6b.



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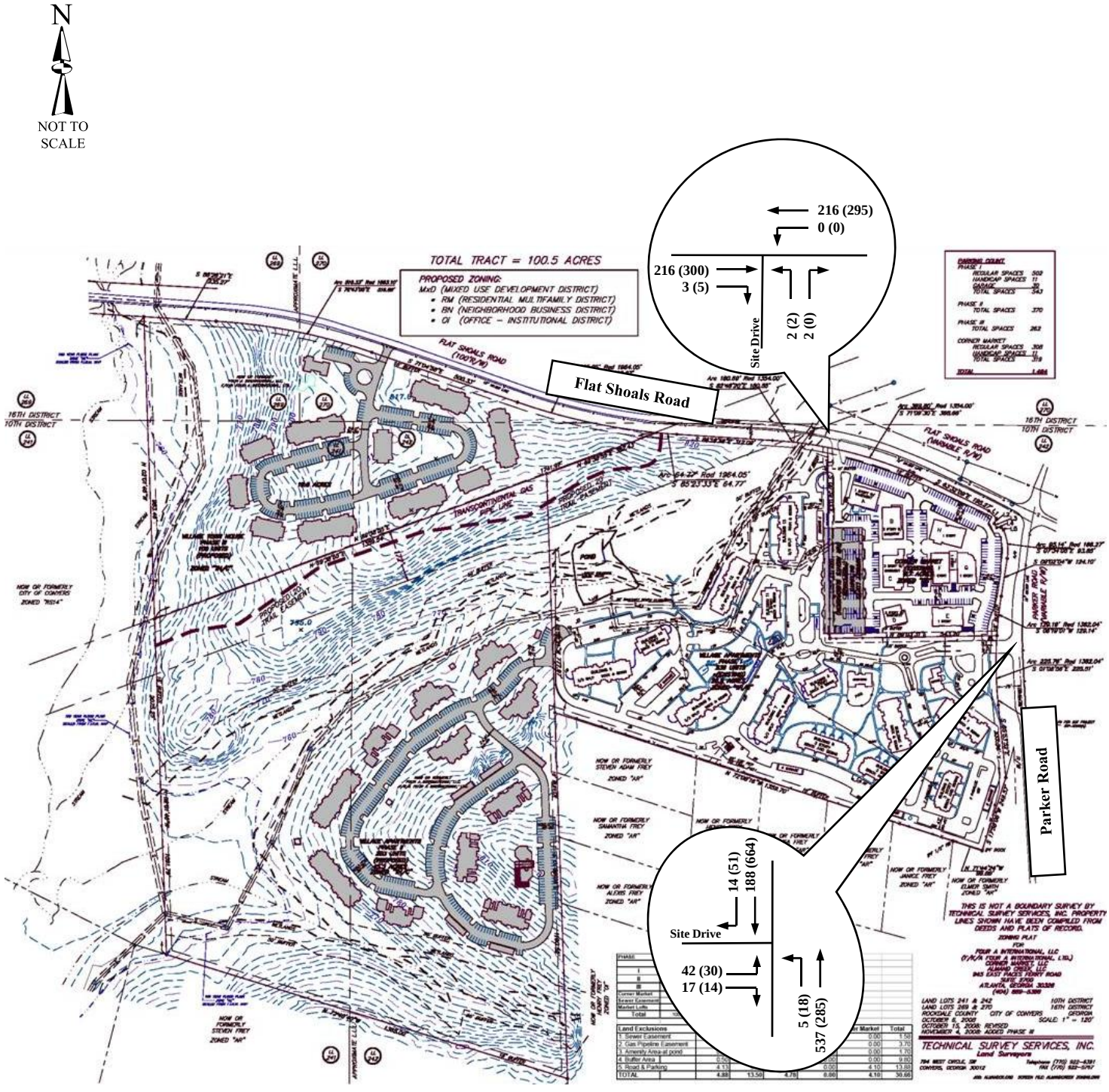
2013 FUTURE NO-BUILD TRAFFIC VOLUMES

Corner Market Development: Conyers, GA

Figure 6a



Peak-Hours
7:30-8:30 AM
5:00-6:00 PM

Key
XX (XX) = AM (PM) Peak-Hour

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2013 FUTURE NO-BUILD SITE TRAFFIC VOLUMES

Corner Market Development: Conyers, GA

Figure 6b

5.
Site-Generated Traffic

Trip Generation

The development currently contains 68,000 square feet of retail and office uses plus 236 apartments. An additional 84 lofts in a four-story building, 203 apartments, and 100 Townhouses are proposed for the site.

The number of trips that will be generated by the development was estimated based on data contained in **Trip Generation, 7th Edition**, a reference manual published by the Institute of Transportation Engineers (ITE). The Specialty Retail land use (ITE #814) was found to best represent the retail/commercial space, the Single-Tenet office land use (ITE #715) was found to best represent the office use, High-Turnover Restaurant (ITE #932) was found to best represent the restaurant use, the Apartment land use (ITE #220) was found to best represent the apartment uses, and the Residential Condominium/Townhouse land use (ITE #230) was found to best represent the lofts and townhouse uses.

Site-generated trips obtained using ITE trip generation rates represent trips attracted to a particular land use. However, not all of these are new trips added to the roadway network. For instance, some developments such as retail establishments, restaurants, banks, and service stations attract a portion of their trips from traffic passing the site on adjacent roadways on the way from one location to another. These “pass-by trips” are defined as "trips made as intermediate stops on the way from an origin to a primary trip destination. Pass-by trips are attracted from traffic passing the site on an adjacent street that contains direct access to the generator" (*ITE’s Trip Generation*). It is important to note that pass-by trips are not new trips.

The pass-by trip rates provided by ITE publication **Trip Generation Handbook** were used as a guideline to estimate rates applicable for the study area taking into consideration the characteristic of roadway users. Based on the data in the handbook, a 34% pass-by reduction was applied to the specialty retail trips and a 43% pass-by reduction was applied to the sit-down restaurant.

In addition, internal capture trips are trips that occur within a multi-use development, either by vehicle or alternate modes such as bicycling or walking. To account for internal capture trips, a reduction is applied to the trip generation. Again, based on information

contained in the **Trip Generation Handbook,** the internal capture rate was calculated between the office, residential and the other retail/commercial uses. This internal capture percentage was found to be about 9-percent for the site during the A.M. peak hour, 12-percent during the P.M. peak hour and about 10-percent for the day. Other than the transportation modes used for internal interaction between uses demonstrated by the capture trip analysis, there are no other expected reductions in site trips due to alternative modes of transportation.

The projected peak-hour site-generated traffic volumes including pass-by and captured trips are shown in Table 2.

Table 2
PEAK HOUR SITE-GENERATED TRAFFIC VOLUMES

PHASE	LAND USE	ITE CODE	SIZE	Trip Type	DAILY	AM PEAK HOUR			PM PEAK HOUR		
						TOTAL	IN	OUT	TOTAL	IN	OUT
EXISTING	Single Tenant Office	715	10,531 sf	Total	122	40	36	4	51	8	43
				Capture	23	3	2	1	6	3	3
				Net New	**99**	**37**	**34**	**3**	**45**	**5**	**40**
	Specialty Retail Center[(1)]	814	49,196 sf	Total	2,142	102	62	40	140	62	78
				Capture	230	12	6	6	18	8	10
				Pass-by (34%)	650	31	19	12	41	18	23
				Net New	**1,262**	**59**	**37**	**22**	**81**	**36**	**45**
	Sit Down Restaurant	932	7,015 sf	Total	892	81	42	39	77	47	30
				Capture	96	9	4	5	10	4	6
				Pass-by (43%)	342	31	16	15	29	19	10
				Net New	**454**	**41**	**22**	**19**	**38**	**24**	**14**
	Village Apartments	220	236 units	Total	1,569	119	24	95	147	96	51
				Capture	137	8	4	4	11	6	5
				Net New	**1,432**	**111**	**20**	**91**	**136**	**90**	**46**
PHASE I	Market Lofts	230	84 units	Total	553	45	8	37	52	35	17
				Capture	48	2	1	1	3	2	1
				Net New	**505**	**43**	**7**	**36**	**49**	**33**	**16**
PHASE II	Village Apartments	220	203 units	Total	1,370	103	21	82	129	84	45
				Capture	120	8	4	4	10	6	4
				Net New	**1,250**	**95**	**17**	**78**	**119**	**78**	**41**
PHASE III	Village Townhouses	230	100 units	**Net New**	**641**	**52**	**9**	**43**	**60**	**40**	**20**
				TOTAL NEW TRIPS	**5,643**	**438**	**146**	**292**	**528**	**306**	**222**

[(1)] Since ITE's *Trip Generation* contains no A.M. peak hour trip generation data for Specialty Retail, it was necessary to use Shopping Center (ITE 820) to account for the A.M. peak hour trips.

Since a portion of the site already exists and is generating traffic, the existing site drives were counted to determine how much traffic is being generated by the site today. It was determined that during the A.M. peak hour, there were 22 trips in and 63 trips out. During the P.M. peak hour, there were 74 trips in and 46 trips out (see the existing site driveway volumes shown on Figure 5b).

Currently, the retail portion of the site, although constructed, is generating a very small amount of traffic. Therefore, most of the existing traffic is being generated by the Village Apartments. This being the case, it was appropriate to account for these existing trips in the trip generation analysis by directly deducting these trips from the "Total New Trips" shown in Table 2. This resulted in the Total New Trips to be used in this analysis, as shown below in Table 3:

Table 3
TOTAL NEW SITE TRIPS (ADJUSTED FOR EXISTING TRAFFIC)

	AM PEAK HOUR			**PM PEAK HOUR**		
	TOTAL	IN	OUT	TOTAL	IN	OUT
Total New Trips (Table X)	438	146	292	528	306	222
Existing Trip Reduction	(-85)	(-22)	(-63)	(-120)	(-74)	(-46)
Total New Trips	**353**	**124**	**229**	**408**	**232**	**176**

The Total New Trips shown in Table 3 were distributed and assigned to the area roadway system.

Trip Distribution

The direction from which traffic will approach and depart the site was determined by an analysis of GIS and census data, knowledge of the area, the logical routes drivers will take, and counts at the existing driveways. This analysis resulted in the directions of approach shown in Table 4.

Table 4
ESTIMATED DIRECTIONAL DISTRIBUTION OF SITE TRIPS

Direction To/from	**Residential Trip %**	**Commercial Trip %**
East on Flat Shoals	17	23
West on Flat Shoals	57	24
South on Parker	26	29
North on Parker	Negligible	24
Total	**100%**	**100%**

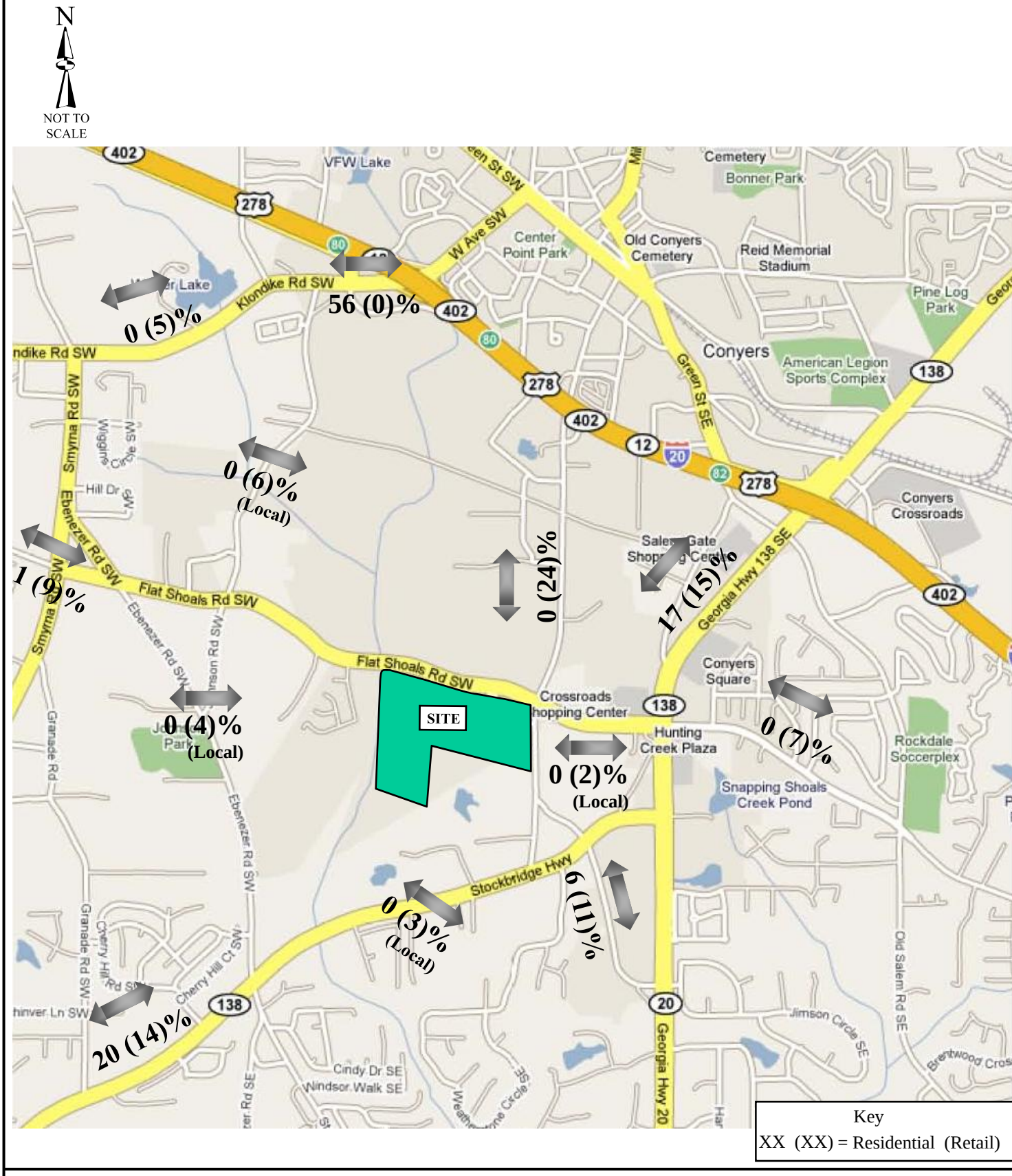
Figure 7 illustrates the directional distribution for both the retail and commercial uses in more detail.

Trip Assignment

The projected peak hour traffic volumes were assigned to the adjacent street system based on the estimated directional distribution discussed above and the logical routes drivers would take (and are taking) based on the site layout. The site-generated trips are illustrated on Figures 8a and 8b. It should be noted that no traffic was assigned to the right-in/right-out drive on Flat Shoals since the volumes are projected to be low at this location; this also provides a more conservative analysis.

It should be noted that all new trips were assigned in full since there are no transportation facilities within walking distance of the site nor does the site create/promote any transportation options or improved regional mobility. The development is not located in an urban core, town center, rail/transit station development or part of a publicly sponsored redevelopment or infill initiative. The development is not located within an established Transportation Management Area.

The site-generated peak hour traffic volumes on Figures 8a and 8b were then added to the Future No-Build peak hour traffic volumes on Figures 6a and 6b to determine the Total 2013 Future peak hour traffic volumes shown on Figures 9a and 9b.



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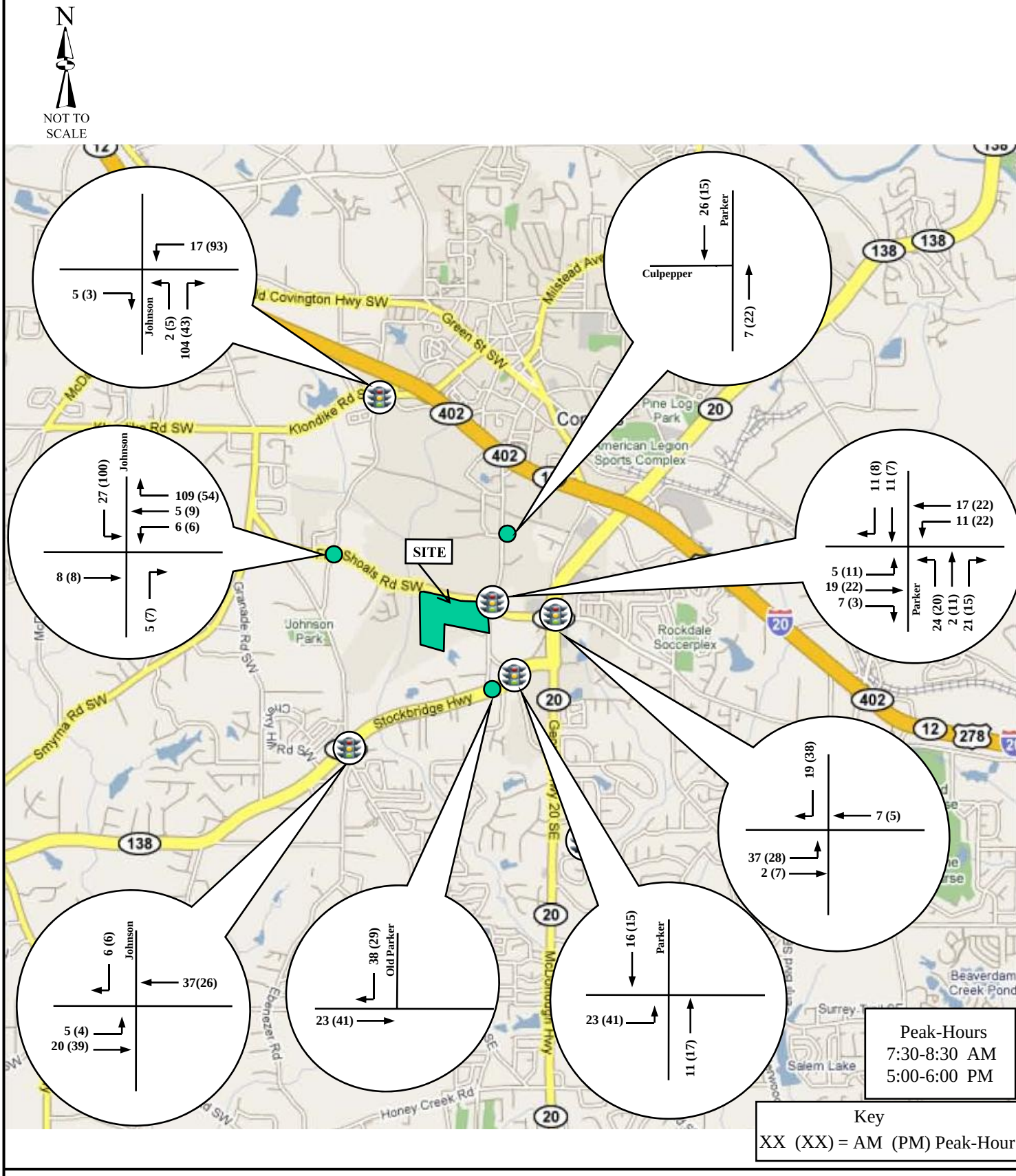
DIRECTIONAL DISTRIBUTION

Corner Market Development: Conyers, GA

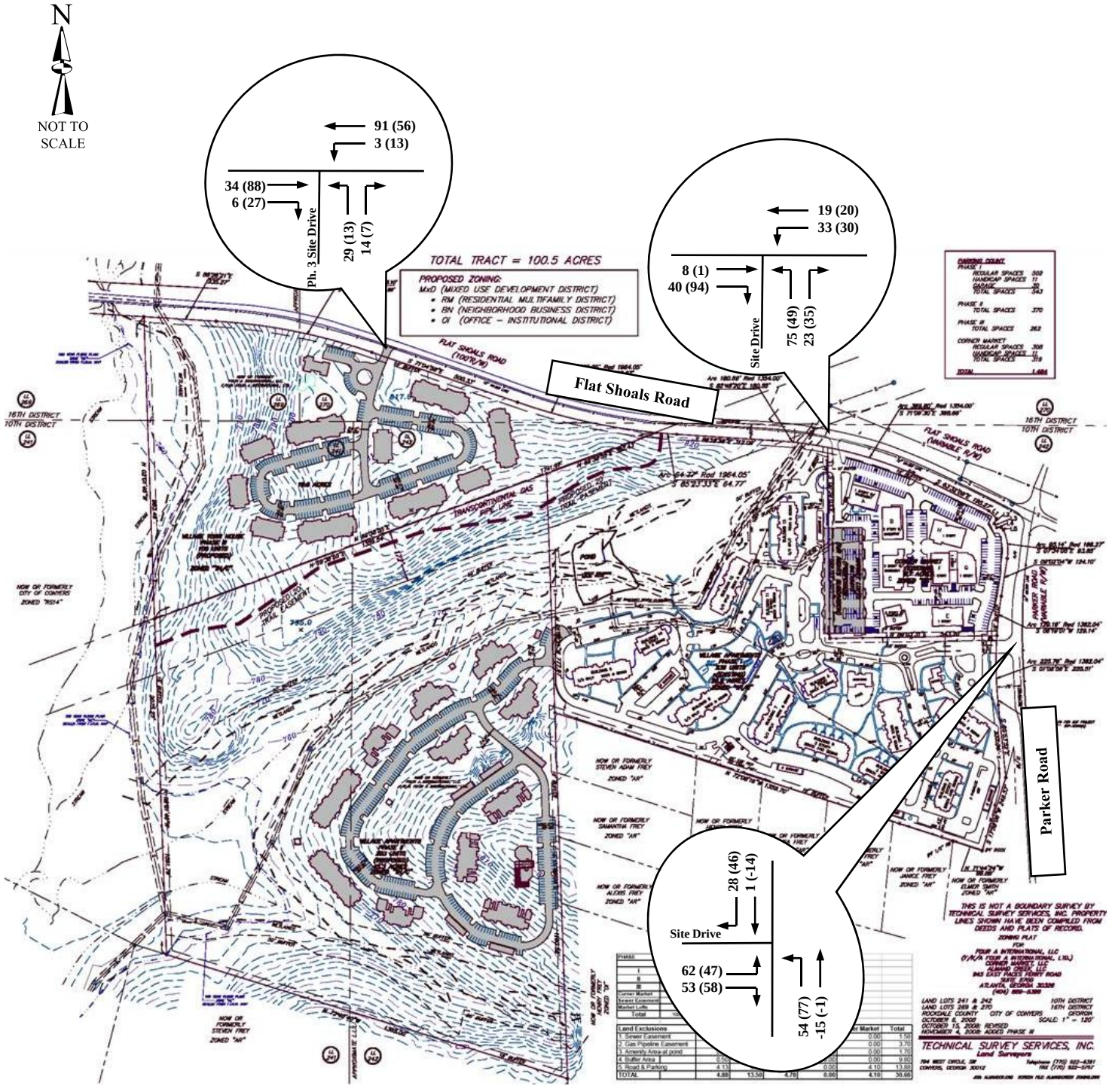
Figure 7



2013 SITE-GENERATED TRAFFIC VOLUMES

Corner Market Development: Conyers, GA

Figure 8a



Peak-Hours
7:30-8:30 AM
5:00-6:00 PM

Key
XX (XX) = AM (PM) Peak-Hour
-XX (-XX) = Pass-by Trips

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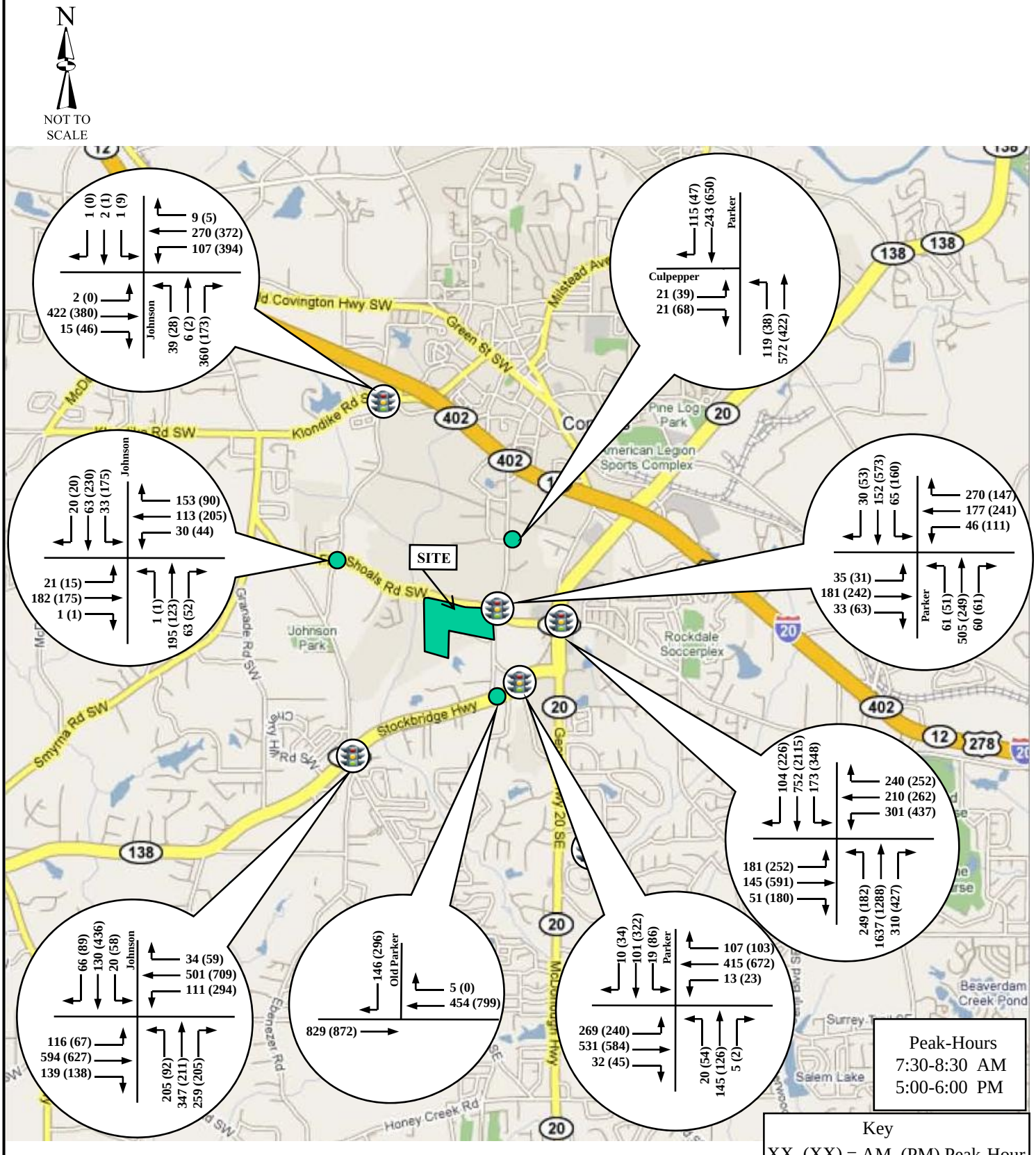
2013 SITE-GENERATED TRAFFIC VOLUMES – SITE DRIVES

Corner Market Development: Conyers, GA

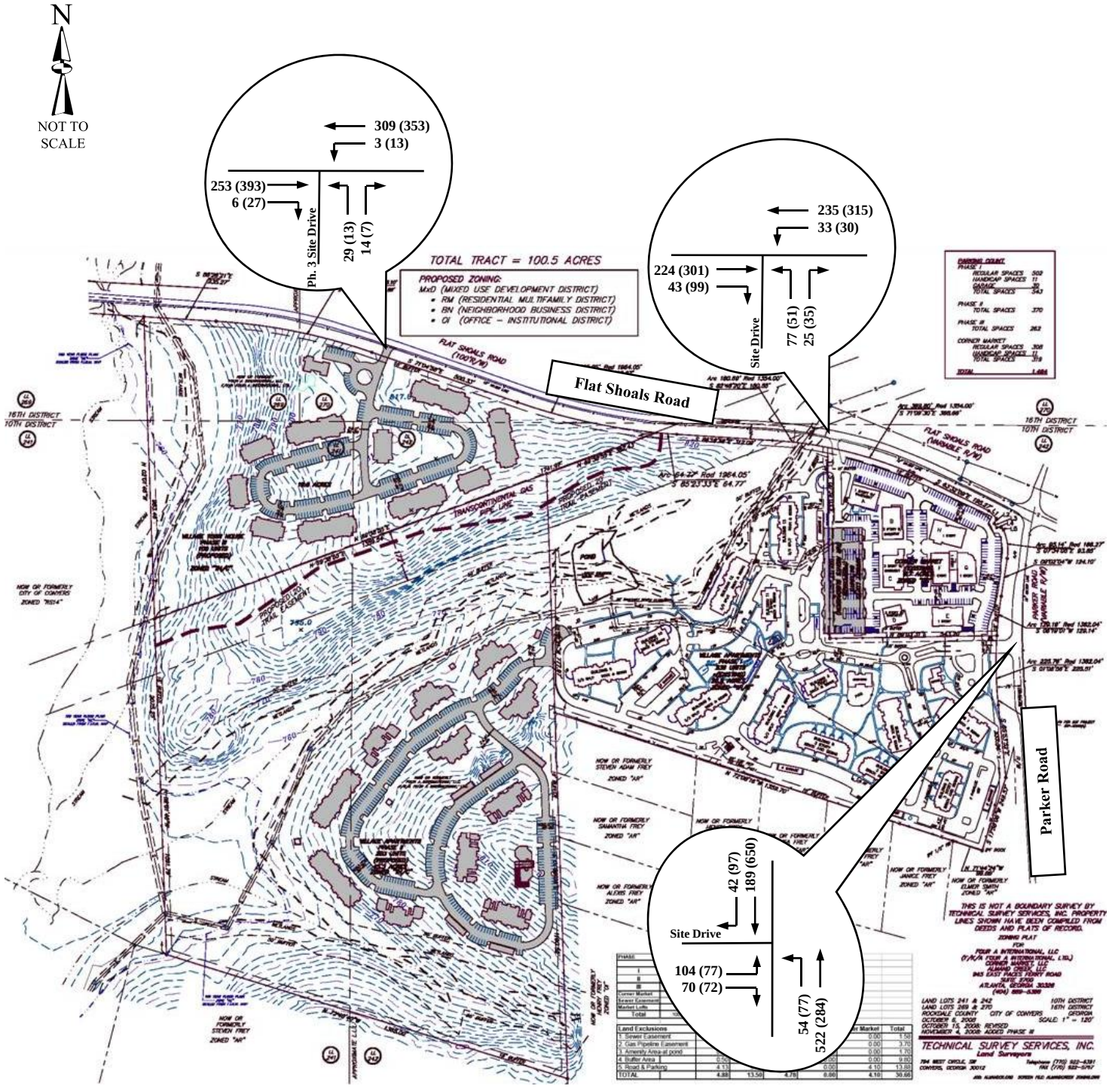
Figure 8b



2013 FUTURE BUILD TRAFFIC VOLUMES

Corner Market Development: Conyers, GA

Figure 9a



Peak-Hours
7:30-8:30 AM
5:00-6:00 PM

Key
XX (XX) = AM (PM) Peak-Hour

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2013 FUTURE BUILD SITE TRAFFIC VOLUMES

Corner Market Development: Conyers, GA

Figure 9b

6.
Planned and Programmed Roadway Improvements

A review of the local roadway projects in the study area was completed. The following is a summary of the projects:

1. Project ID: 752380 – CR 92/Parker Road From South of Flat Shoals to CS 651/Culpepper Drive

This project is located in Rockdale County adjacent to the Corner Market site and is under construction. The construction will widen Parker Road to two 12-foot lanes in each direction separated by a 20-foot raised median from Flat Shoals Road to just south of Davis Drive, then transition to a four lane roadway with a 14-foot flush median tying in just north of Culpepper Drive. The Parker Road and Flat Shoals Road intersection approaches will be improved to provide left and right turn lanes as required. The existing traffic signal at the intersection of Parker Road and Flat Shoals Road will also be upgraded. Also included will be the widening of Flat Shoals Road to the east, in order to tie into the recently completed construction of the Flat Shoals Road/SR 138 intersection, Project NH-035-1(26), Rockdale County. Improvements to the west include corrections to the vertical alignment and widening the roadway to include left/right turn lanes for the proposed school site. This project requires either State or Federal funding.

MPO: Atlanta TMA
Total Estimated Cost of Project: $6,014,000.
Completion/Open to Traffic Date: 2010

2. Project ID: 0004433 – Parker/Miller's Chapel Road From Flat Shoals to SR 20 PH III

The project is in Rockdale County and is located on Miller's Chapel Road and Parker Road between SR 20 and Flat Shoals Road. The project will connect to Phase II at Flat Shoals Road (Project STPOO-9349-00(004), PI 752380). From SR 20 north to SR 138, the typical section is a 15' lane in each direction, a 20' raised median, a 21' wide urban shoulder with a 10' multi-use path on the west side, and a 16' wide urban shoulder with a 5' wide sidewalk on the east side. There are two roundabouts along this section of roadway. From SR 138 north to Flat Shoals Road the typical section includes two 12' lanes in each direction, a 20' raised median, a 16' wide urban shoulder with; 10' multiuse

path on the west side and a 12' wide urban shoulder with a 5' sidewalk on the west side. The project includes improvements to the intersection at SR 138 and Parker Road/Miller's Chapel Road. This project will require either State or Federal funding.

MPO: Atlanta TMA
Total Estimated Cost of Project: $8,925,638.90.
Completion/Open to Traffic Date: Unknown

3. Other Projects

There are other projects in the County that will not directly impact this development such as the following:

- Widening SR 162/Salem Road from Flat Shoals Road to Old Salem Road (east of SR 20/SR 138, east of the site);
- Upgrading various traffic signals at various locations within Rockdale County (none involve any of the intersections studied in this report);
- Widening Flat Shoals Road from Old Salem Road to Salem Road (east of SR 20/SR 138, east of the site).

Other projects that are planned but on hold are as follows:

- Widening Klondike Road from Smyrna Road to Johnson Road;
- Widening SR 138 from Ebenezer Road to Parker Road;
- Signalization of Smyrna Road/Flat Shoals intersection.

7.
Traffic Analyses

The critical intersections identified for this study were analyzed according to the methodologies published in the *2000 Highway Capacity Manual*. The analysis determines the "Level of Service (LOS)" of the intersections and is based on factors such as the number and types of lanes, signal timing, traffic volumes, pedestrian activity, etc. Levels of service are expressed in a range from "A" through "F," with "A" being the highest level of service, and "F" representing the lowest level of service. Tables 5 and 6 show the thresholds for Levels of Service "A" through "F" for unsignalized and signalized intersections, respectively.

Table 5
LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

Level of Service	Delay/Vehicle (seconds)	Description
A	< 10.0	Little or no delay, very low main street traffic.
B	10.1 to 15.0	Short traffic delays, many acceptable gaps.
C	15.1 to 25.0	Average traffic delays, frequent gaps still occur.
D	25.1 to 35.0	Long traffic delays, limited number of acceptable gaps.
E	35.1 to 50.0	Very long traffic delays, very small number of acceptable gaps.
F	> 50.0	Extreme traffic delays, virtually no acceptable gaps in traffic.

Table 6
LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

Level of Service	Delay/Vehicle (seconds)	Description
A	< 10.0	Most vehicles do not stop at all.
B	10.1 to 20.0	Some vehicles stop.
C	20.1 to 35.0	The number of vehicles stopping is significant, although many pass through without stopping.
D	35.1 to 55.0	Many vehicles stop. Individual cycle failures are noticeable.
E	55.1 to 80.0	Considered to be the limit of acceptable delay. Individual cycle failures are frequent.
F	> 80.0	Unacceptable delay.

Capacity analyses were conducted at each intersection for the following conditions:

- Existing 2009 conditions;
- Future No-Build 2013 conditions;
- Future 2013 conditions with site built-out.

The LOS standard for this study as stated in GRTA's LOU is LOS D.

The traffic engineering software, Synchro/SimTraffic Version 7 was used to perform the capacity analyses. The capacity analyses worksheets are presented in Appendices B-F, summarized in Tables 7 and 8, and discussed in the following paragraphs.

2009 Existing Capacity Analyses

As shown in Table 7 below, under ***2009 Existing Conditions***, all study intersections are operating at acceptable levels of service during both the A.M. and P.M. peak hours.

2013 Future No-Build Capacity Analyses

Under ***2013 Future No-Build Conditions***, without the site traffic added, all but three of the study intersections will continue to operate at overall acceptable levels of service during both peak hours.

During the P.M. peak hour, the intersections of SR 138/Ebenezer and SR 20/Flat Shoals will operate at overall LOS "E" and LOS "F", respectively. At the Old Parker Road/SR 138 intersection, the southbound right turn movement will operate at LOS "E".

2013 Future Build Capacity Analyses

Under ***2013 Future Conditions***, with the addition of site traffic, all but four of the study intersections will continue to operate at overall acceptable levels of service during both peak hours.

During the P.M. peak hour, the intersections of SR 138/Ebenezer and SR 20/Flat Shoals will operate at overall LOS "E" and LOS "F", respectively. At the Old Parker Road/SR 138 intersection, the southbound right turn movement will operate at LOS "F". In addition, the intersection of Flat Shoals/Johnson Road will operate at LOS "E" during the P.M. peak hour.

Table 7
EXISTING, FUTURE NO-BUILD, AND FUTURE CAPACITY ANALYSES RESULTS

INTERSECTION	EXISTING CONDITIONS (2009)		FUTURE NO-BUILD CONDITIONS (2013)		FUTURE BUILD CONDITIONS (2013)	
	A.M. Peak	P.M. Peak	A.M. Peak	P.M. Peak	A.M. Peak	P.M. Peak
	Delay/LOS	Delay/LOS	Delay/LOS	Delay/LOS	Delay/LOS	Delay/LOS
Klondike/Johnson	17.2/B	19.2/B	17.1/B	19.6/B	19.8/B	18.1/B
Flat Shoals/Johnson	10.3/B	13.5/B	11.6/B	18.0/C	14.1/B	44.4/E
SR 138/Ebenezer	33.8/C	48.3/D	38.3/D	70.5/E	40.5/D	78.2/E
SR 138/Old Parker[(1)]	11.2/B	24.5/C	12.1/B	49.8/E	12.8/B	65.0/F
SR 138/Parker/Millers Chapel	21.5/C	28.3/C	22.2/C	30.1/C	22.5/C	30.5/C
Flat Shoals/Parker	25.8/C	23.4/C	23.4/C	17.6/B	24.5/C	18.1/B
Flat Shoals/SR 20	37.0/D	52.1/D	42.8/D	89.6/F	43.6/D	89.7/F
Culpepper/Parker[(1)]	19.4/C	19.6/C	16.7/C	18.3/C	17.3/C	18.9/C
Site Drive/Parker[(1)]	14.9/B	19.8/C	13.0/B	19.2/C	17.2/C	28.0/D
Site Drive/Flat Shoals[(1)]	10.2/B	12.3/B	10.0/B	12.2/B	13.2/B	12.9/B
Ph. 3 Site Drive/Flat Shoals[(1)]	N/A		N/A		11.3/B	12.8/B

[(1)] For noted unsignalized intersections, the LOS for the approach with the highest delay is reported. The overall intersection LOS is only reported for the signalized and four-way stop intersections.
Note: - Shaded items are intersections operating at LOS E or F.

Mitigated Capacity Analyses – 2013 Future No-Build Condition

Since it was determined that three intersections were operating at poor levels of service under the 2013 Future No-Build conditions, roadway mitigation was determined for each intersection to bring the level of service up to the standard set for this study, LOS "D". Each mitigation measure is discussed below and illustrated on Figures 10.

SR 138/Ebenezer

It was determined that to enable this intersection to operate at a minimum LOS "D", that it would be necessary to add a second northeastbound through lane. As shown in Table 8, this road improvement would allow the intersection to operate at overall LOS "D" for the 2013 Future No-Build Condition.

SR 138/Old Parker

It was determined that to enable this intersection to operate at a minimum LOS "D", that it would be necessary to add a second southbound right turn lane on Old Parker Road. As shown in Table 8, this road improvement would allow the approach to operate at LOS "C" for the 2013 Future No-Build Condition.

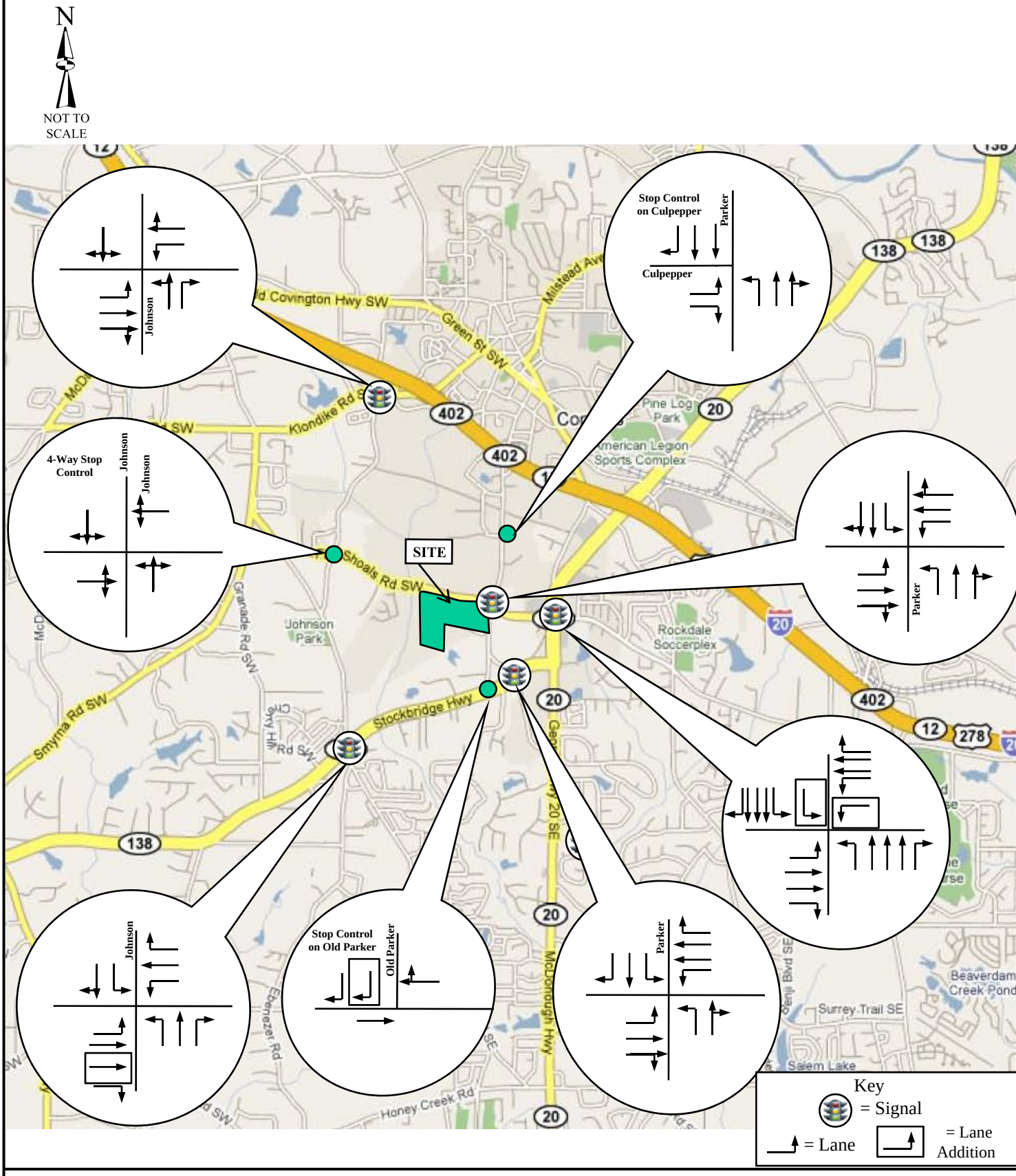
Flat Shoals/SR 20

It was determined that to enable this intersection to operate at a minimum LOS "D", that it would be necessary to add a second southbound left turn lane on SR 20 and a second westbound left turn lane on Flat Shoals. As shown in Table 8, this road improvement would allow the approach to operate at LOS "D" for the 2013 Future No-Build Condition.

Table 8
MITIGATED FUTURE NO-BUILD AND FUTURE BUILD CAPACITY ANALYSES RESULTS

INTERSECTION	FUTURE NO-BUILD CONDITIONS (2013)		FUTURE BUILD CONDITIONS (2013)	
	A.M. Peak	P.M. Peak	A.M. Peak	P.M. Peak
	Delay/LOS	Delay/LOS	Delay/LOS	Delay/LOS
Flat Shoals/Johnson	No Mitigation Needed		14.1/B	20.8/C
SR 138/Ebenezer	33.2/C	47.3/D	38.2/D	49.8/D
SR 138/Old Parker[(1)]	11.3/B	22.4/C	11.6/B	23.8/C
Flat Shoals/SR 20	33.7/C	54.5/D	35.6/D	54.8/D

[(1)] For noted unsignalized intersections, the LOS for the approach with the highest delay is reported. Note that the overall intersection LOS is only reported for the signalized and four-way stop intersections.



ITERIS Innovation for better mobility

2013 FUTURE NO-BUILD LANE CONFIGURATION

Corner Market Development: Conyers, GA

Figure 10

Mitigated Capacity Analyses – 2013 Future Build Condition

Since it was determined that four intersections would be operating at poor levels of service under the 2013 Future Build conditions, roadway mitigation was determined for each intersection to bring the level of service up to the standard set for this study, LOS "D". Table 8 presents the results of the mitigated capacity analyses.

For the intersections of SR 138/Ebenezer, Old Parker Road/SR 138, and SR 20/Flat Shoals, the mitigation determined to accommodate the 2013 Future No-Build Condition, will also accommodate the 2013 Future Build Condition.

However, mitigation would be necessary at the intersection of Flat Shoals/Johnson Road. It was determined that a southbound left turn lane on Johnson would be needed to bring this intersection up to overall LOS "D". In fact, the intersection improves to overall LOS "C" during the P.M. peak hour. Figure 11 shows the intersection mitigation.

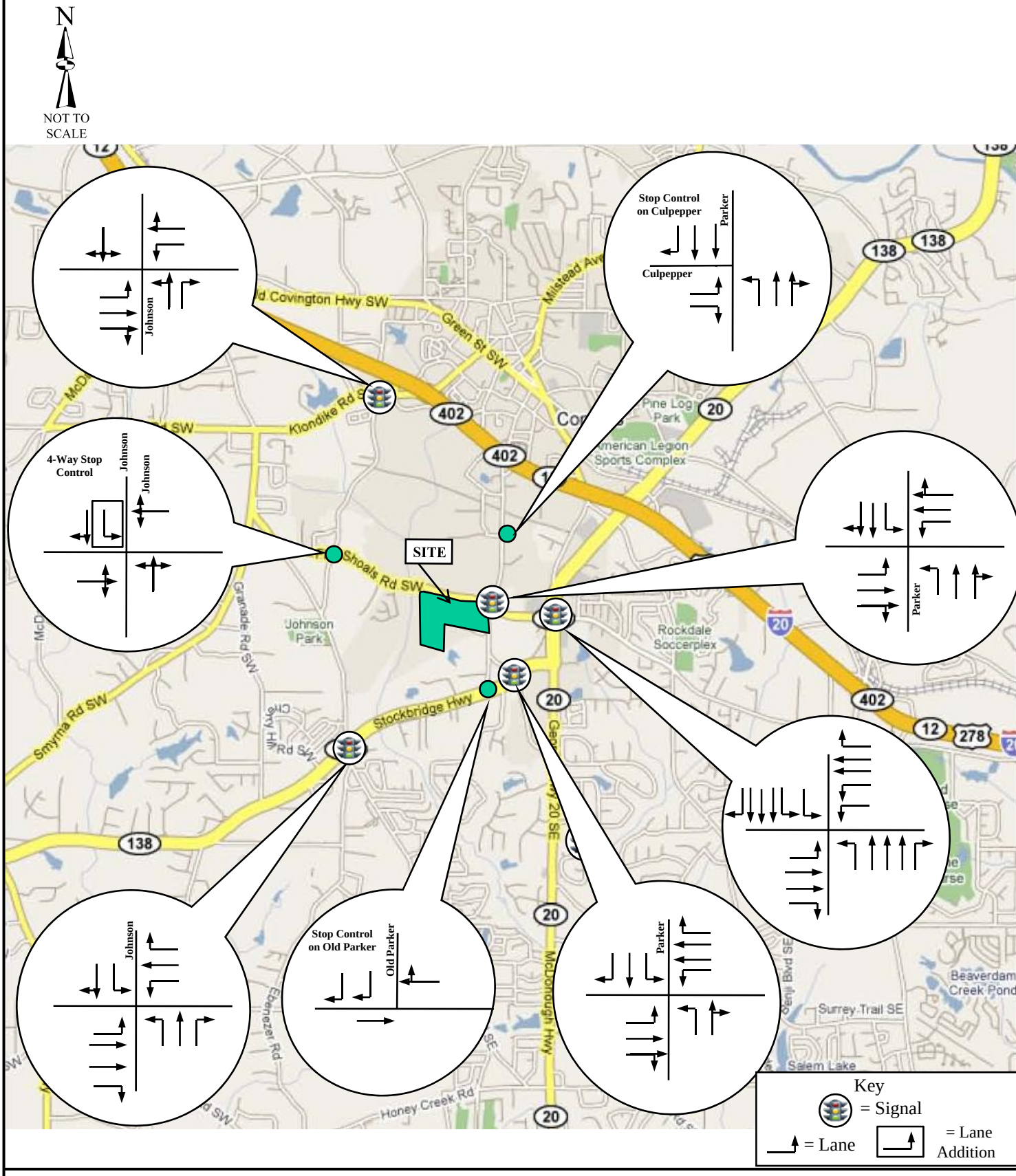
Site Access Auxiliary Lane Analysis

The Georgia Department of Transportation (GDOT) standards for right and left turn deceleration lanes contained in the "Regulations for Driveway and Encroachment Control" manual were reviewed to determine if these lanes would be needed at the site drives on Parker Road and Flat Shoals.

Based on the GDOT right turn lane guidelines for four-lane roadways with speeds between 40 mph and 55 mph, if the average daily traffic volume (ADT) on the major street is greater than 10,000 vehicles per day and/or there are over 150 projected daily right turning vehicles, a right turn lane would be required. In the case of Flat Shoals Road, the projected ADT in 2013 will likely not exceed 10,000 vpd; however the projected 2013 daily peak hour right turn volumes are expected to exceed 150 for both site drives on Flat Shoals. Therefore, an eastbound right turn lane is recommended at both site drives on Flat Shoals. No right turn lane will be needed at the right-in/right-out only drive on Flat Shoals.

Currently, a right turn lane already exists on Parker Road at the site drive. Since Parker Road has a posted speed limit of 25 mph across the site frontage, the GDOT guidelines state that if Parker Road carries 12,000 vpd and/or has over 300 projected daily right turns, a right turn lane would be required. Based on the projected daily 2013 right turn volumes, this right turn lane will continue to be needed and should be constructed as part of the current Parker Road widening project.

Based on the GDOT guidelines for left turn lanes on four-lane roadways with speeds greater than 40 mph, if the ADT on the major street is greater than 8,000 vehicles per day and/or there are over 200 projected daily left turning vehicles, a left turn lane would be required. In the case of the Phase 3 site drive on Flat Shoals Road, the projected ADT in 2013 is not expected to exceed 8,000 vpd and the projected daily left turn volumes are not expected to exceed 200. Therefore, no left turn lane would be needed at this drive. At the existing site drive on Flat Shoals however, the daily left turn volumes are expected to exceed 200 per day so a left turn lane should be constructed at this drive.

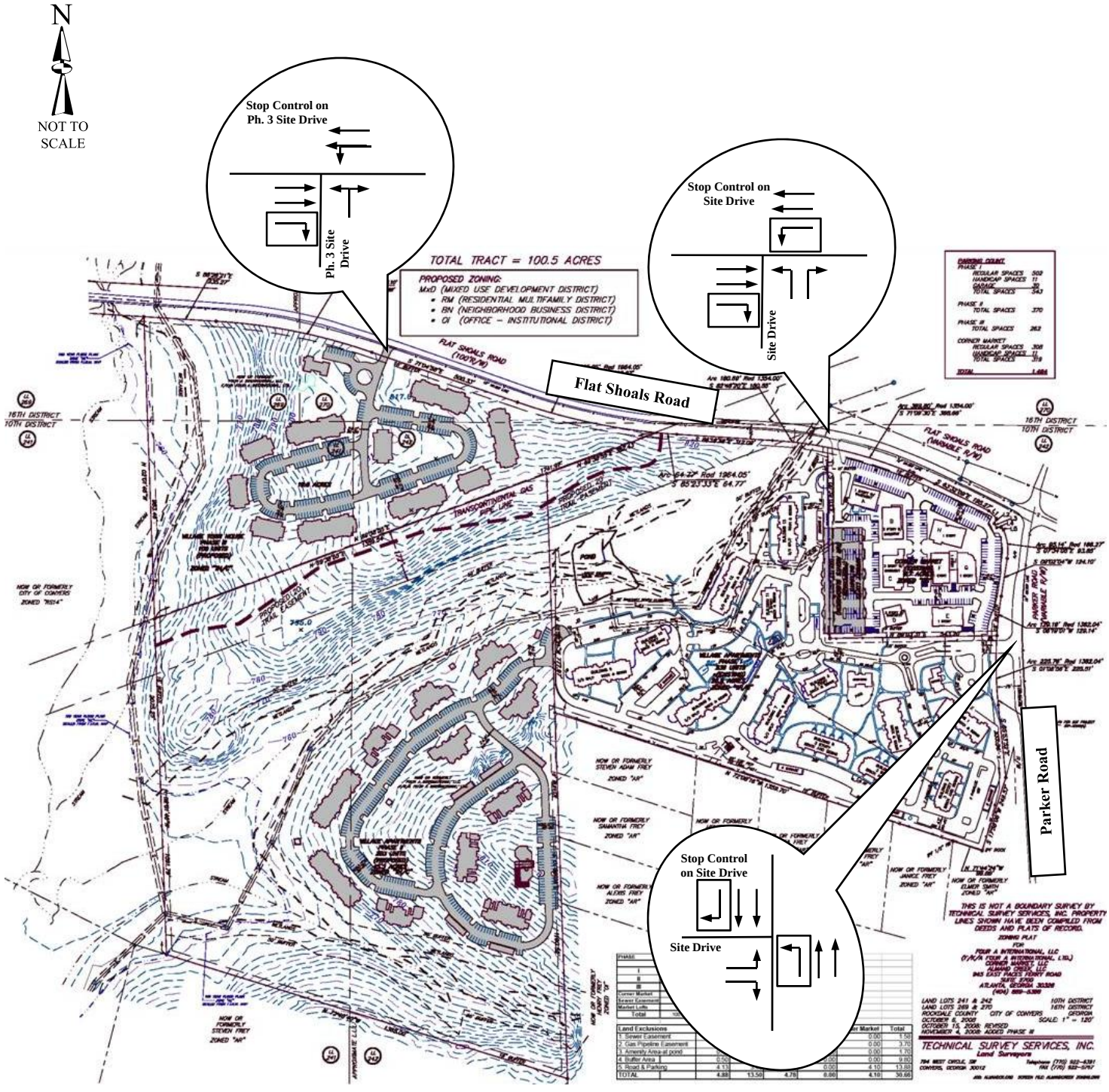


ITERIS Innovation for better mobility

2013 FUTURE BUILD LANE CONFIGURATION

Corner Market Development: Conyers, GA

Figure 11a



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2013 FUTURE BUILD LANE CONFIGURATIONS – SITE DRIVES

Corner Market Development: Conyers, GA

Figure 11b

On Parker Road, with the reduced speed limit, the ADT requirement becomes 10,000 vpd and the left turn requirement becomes 300 per day. It is expected that both of these volume requirements will be exceeded in 2013 and therefore, a left turn lane would be needed. Based on the widening proposed for Parker Road in the vicinity of the site drive, there will be adequate storage space available for left turns, so no new lane would need to be constructed.

In addition, at the existing site drive on Flat Shoals, there should be two outbound lanes provided on the site drive; a left turn lane and a right turn lane. At the Phase 3 site drive, a single outbound lane will be adequate. At the site drive on Parker Road, the existing two outbound lanes will be adequate to accommodate the 2013 site traffic.

Aside from the Village Townhouse Phase III portion of the development, the Corner Market and Village Apartments (Phase I and II) are internally connected for vehicular traffic and pedestrians. Adequate sidewalks with safe access to adjacent roadways exist for the Villages Phase I and are proposed for Phase II and Phase III.

As described above, if the driveways are constructed as recommended with the appropriate turn lanes, vehicular ingress/egress will be safe and efficient during peak access periods.

9.
Conclusions and Recommendations

This traffic analysis evaluated the impact of the Corner Market mixed-use development site traffic on the area roadways and determined the roadway improvements necessary to accommodate the site traffic. The analysis resulted in the following conclusions:

- The site will generate 353 new A.M. peak hour trips and 408 new P.M. peak hour trips.
- All study intersections are currently operating at LOS "D" or better.
- Under *2013 Future No-Build conditions*, three of the study intersections will operate at LOS "E" or worse. During the P.M. peak hour, the intersections of SR 138/Ebenezer and SR 20/Flat Shoals will operate at overall LOS "E" and LOS "F", respectively. At the Old Parker Road/SR 138 intersection, the southbound right turn movement will operate at LOS "E".
- Under *2013 Future Build conditions*, the intersection of Flat Shoals/Johnson Road will operate at LOS "E" during the P.M. peak hour.

Mitigation measures were developed at the failing intersections to enable them to operate at LOS "D" or better. To mitigate the *2013 Future No-Build conditions*, the following road improvements are recommended:

- At the SR 138/Ebenezer intersection, a northeastbound through lane is needed on SR 138;
- At the SR 138/Old Parker Road intersection, a second southbound right turn lane is needed on Old Parker Road;
- At the SR 20/Flat Shoals intersection, a second southbound left turn lane on SR 20 and a second westbound left turn on Flat Shoals are needed.

To mitigate the *2013 Future Build conditions*, the following road improvement is recommended:

- At the Flat Shoals/Johnson Road intersection, a southbound right turn lane is needed on Johnson Road (State or Federal funds may be required for this project).

At the site drives, the following road improvements are recommended:

- At the existing site drive on Flat Shoals, a westbound left turn lane and an eastbound right turn lane should be constructed;
- At the Phase 3 site drive on Flat Shoals, an eastbound right turn lane should be constructed.
- At the existing site drive on Parker Road, the southbound left turn lane should remain.

Based on the results of this analysis and the roadway improvements recommended above, the area roadways will be able to adequately accommodate the Corner Market development site traffic.

APPENDIX

APPENDIX A
TRAFFIC COUNTS

Traffic Data Collection, Inc.

Atlanta - Hilton Head

www.trafficdatacollection.com

Counter: 1328
Counted By: BLE/OK
Weather: Cold
Other: ITERIS

File Name : 09500-01
Site Code : 00950001
Start Date : 2/3/2009
Page No : 1

Groups Printed- Cars - Trucks & Buses

	SR 20 Northbound					SR 20 Southbound					Flat Shoals Rd Eastbound					Flat Shoals Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	38	294	48	0	380	25	149	8	0	182	19	18	8	0	45	40	36	30	0	106	713
07:15 AM	50	237	75	0	362	17	137	17	0	171	48	22	1	0	71	63	29	34	0	126	730
07:30 AM	72	416	56	0	544	44	181	20	0	245	28	43	11	0	82	53	36	47	0	136	1007
07:45 AM	62	364	90	0	516	45	156	24	0	225	36	37	13	1	87	69	57	66	0	192	1020
Total	222	1311	269	0	1802	131	623	69	0	823	131	120	33	1	285	225	158	177	0	560	3470
08:00 AM	41	303	59	0	403	31	135	12	0	178	33	25	12	0	70	67	40	53	0	160	811
08:15 AM	40	329	62	0	431	29	177	18	0	224	27	18	8	0	53	71	42	41	0	154	862
08:30 AM	42	243	35	0	320	20	154	15	0	189	32	25	16	0	73	47	42	46	0	135	717
08:45 AM	29	284	43	1	357	52	171	20	0	243	35	24	11	0	70	49	39	46	0	134	804
Total	152	1159	199	1	1511	132	637	65	0	834	127	92	47	0	266	234	163	186	0	583	3194
Break																					
04:00 PM	25	297	77	0	399	57	439	36	0	532	44	39	35	1	119	88	66	50	0	204	1254
04:15 PM	41	248	89	1	379	69	421	36	4	530	47	49	25	0	121	95	53	65	0	213	1243
04:30 PM	28	225	86	1	340	61	382	35	2	480	48	62	34	0	144	67	51	42	0	160	1124
04:45 PM	32	315	68	0	415	68	437	49	0	554	37	43	43	1	124	111	49	50	1	211	1304
Total	126	1085	320	2	1533	255	1679	156	6	2096	176	193	137	2	508	361	219	207	1	788	4925
05:00 PM	38	278	90	4	410	74	464	31	0	569	47	69	38	1	155	109	61	53	0	223	1357
05:15 PM	36	293	114	0	443	77	484	56	0	617	52	80	43	0	175	86	60	51	0	197	1432
05:30 PM	36	280	79	0	395	78	465	43	0	586	47	65	45	0	157	92	62	51	0	205	1343
05:45 PM	47	260	85	0	392	71	411	32	0	514	47	63	29	0	139	90	39	62	0	191	1236
Total	157	1111	368	4	1640	300	1824	162	0	2286	193	277	155	1	626	377	222	217	0	816	5368
Grand Total	657	4666	1156	7	6486	818	4763	452	6	6039	627	682	372	4	1685	1197	762	787	1	2747	16957
Apprch %	10.1	71.9	17.8	0.1		13.5	78.9	7.5	0.1		37.2	40.5	22.1	0.2		43.6	27.7	28.6	0		
Total %	3.9	27.5	6.8	0	38.2	4.8	28.1	2.7	0	35.6	3.7	4	2.2	0	9.9	7.1	4.5	4.6	0	16.2	
Cars	653	4545	1137	7	6342	811	4688	440	6	5945	617	676	365	4	1662	1169	748	776	1	2694	16643
% Cars	99.4	97.4	98.4	100	97.8	99.1	98.4	97.3	100	98.4	98.4	99.1	98.1	100	98.6	97.7	98.2	98.6	100	98.1	98.1
Trucks & Buses	4	121	19	0	144	7	75	12	0	94	10	6	7	0	23	28	14	11	0	53	314
% Trucks & Buses	0.6	2.6	1.6	0	2.2	0.9	1.6	2.7	0	1.6	1.6	0.9	1.9	0	1.4	2.3	1.8	1.4	0	1.9	1.9

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

TRAFFIC DATA COLLECTION, INC.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1934
Counted By: JRM
Weather: Cold
Other: ITERIS

File Name : 09500-02
Site Code : 00950002
Start Date : 2/3/2009
Page No : 1

Groups Printed- Cars - Trucks & Buses

	Parker Rd Northbound					Parker Rd Southbound					Flat Shoals Rd Eastbound					Flat Shoals Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	4	58	3	0	65	6	18	2	0	26	8	24	0	0	32	4	22	27	0	53	176
07:15 AM	3	91	15	0	109	9	31	6	0	46	6	31	4	0	41	4	22	42	0	68	264
07:30 AM	9	108	6	0	123	12	24	4	0	40	2	35	8	0	45	8	30	48	1	87	295
07:45 AM	6	138	9	0	153	15	30	5	0	50	9	46	7	0	62	10	37	89	0	136	401
Total	22	395	33	0	450	42	103	17	0	162	25	136	19	0	180	26	111	206	1	344	1136
08:00 AM	8	94	10	0	112	18	40	6	0	64	10	31	3	0	44	5	34	59	0	98	318
08:15 AM	9	94	9	0	112	11	28	1	0	40	5	28	4	0	37	7	37	37	0	81	270
08:30 AM	5	85	8	0	98	20	32	2	0	54	9	31	4	0	44	3	18	49	2	72	268
08:45 AM	6	79	10	0	95	17	28	5	0	50	3	25	4	0	32	7	23	49	0	79	256
Total	28	352	37	0	417	66	128	14	0	208	27	115	15	0	157	22	112	194	2	330	1112
Break																					
04:00 PM	5	51	11	0	67	36	87	8	0	131	9	48	10	0	67	23	49	34	0	106	371
04:15 PM	10	60	6	0	76	38	101	8	0	147	2	51	11	0	64	19	48	40	0	107	394
04:30 PM	10	54	6	0	70	32	108	12	0	152	5	46	8	0	59	12	69	28	0	109	390
04:45 PM	9	57	4	0	70	31	116	6	0	153	10	47	11	0	68	24	56	35	0	115	406
Total	34	222	27	0	283	137	412	34	0	583	26	192	40	0	258	78	222	137	0	437	1561
05:00 PM	9	46	6	0	61	49	133	7	0	189	4	53	14	0	71	20	38	37	0	95	416
05:15 PM	9	64	14	0	87	31	134	12	0	177	3	47	14	0	64	18	58	36	0	112	440
05:30 PM	7	48	10	0	65	32	115	10	0	157	5	41	13	0	59	21	49	27	0	97	378
05:45 PM	2	47	10	0	59	26	106	10	0	142	5	49	11	0	65	18	44	27	0	89	355
Total	27	205	40	0	272	138	488	39	0	665	17	190	52	0	259	77	189	127	0	393	1589
Grand Total	111	1174	137	0	1422	383	1131	104	0	1618	95	633	126	0	854	203	634	664	3	1504	5398
Apprch %	7.8	82.6	9.6	0		23.7	69.9	6.4	0		11.1	74.1	14.8	0		13.5	42.2	44.1	0.2		
Total %	2.1	21.7	2.5	0	26.3	7.1	21	1.9	0	30	1.8	11.7	2.3	0	15.8	3.8	11.7	12.3	0.1	27.9	
Cars	108	1142	135	0	1385	376	1123	100	0	1599	91	627	123	0	841	203	616	651	3	1473	5298
% Cars	97.3	97.3	98.5	0	97.4	98.2	99.3	96.2	0	98.8	95.8	99.1	97.6	0	98.5	100	97.2	98	100	97.9	98.1
Trucks & Buses	3	32	2	0	37	7	8	4	0	19	4	6	3	0	13	0	18	13	0	31	100
% Trucks & Buses	2.7	2.7	1.5	0	2.6	1.8	0.7	3.8	0	1.2	4.2	0.9	2.4	0	1.5	0	2.8	2	0	2.1	1.9

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

Traffic Data Collection, Inc.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 2447
Counted By: ADH
Weather: Cold
Other: ITERIS

File Name : 09500-03
Site Code : 00950003
Start Date : 2/4/2009
Page No : 1

Groups Printed- Cars - Trucks & Buses

	Johnson Rd Northbound					Johnson Rd Southbound					Flat Shoals Rd Eastbound					Flat Shoals Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	50	5	0	55	5	10	1	0	16	0	24	0	0	24	3	12	5	0	20	115
07:15 AM	0	45	4	0	49	3	13	0	0	16	1	34	0	0	35	3	23	6	0	32	132
07:30 AM	0	39	10	0	49	0	14	2	0	16	2	41	0	0	43	3	23	10	0	36	144
07:45 AM	1	49	16	0	66	5	9	1	0	15	9	47	0	0	56	6	23	13	0	42	179
Total	1	183	35	0	219	13	46	4	0	63	12	146	0	0	158	15	81	34	0	130	570
08:00 AM	0	44	12	0	56	5	16	1	0	22	6	34	0	0	40	8	29	6	0	43	161
08:15 AM	0	36	12	0	48	7	15	1	0	23	1	28	1	0	30	4	18	9	0	31	132
08:30 AM	0	33	11	1	45	1	20	2	0	23	2	25	0	0	27	5	23	11	0	39	134
08:45 AM	1	38	6	1	46	4	17	1	1	23	4	33	1	0	38	4	20	3	0	27	134
Total	1	151	41	2	195	17	68	5	1	91	13	120	2	0	135	21	90	29	0	140	561
Break																					
04:00 PM	0	26	9	0	35	10	40	4	0	54	1	47	1	0	49	7	40	7	0	54	192
04:15 PM	1	20	5	0	26	13	39	4	0	56	4	28	0	0	32	4	45	5	0	54	168
04:30 PM	2	23	8	0	33	15	39	0	0	54	2	36	0	0	38	11	49	9	0	69	194
04:45 PM	2	29	13	0	44	18	40	2	0	60	5	45	1	0	51	9	48	9	0	66	221
Total	5	98	35	0	138	56	158	10	0	224	12	156	2	0	170	31	182	30	0	243	775
05:00 PM	0	33	12	0	45	11	50	5	0	66	2	27	1	0	30	6	54	8	0	68	209
05:15 PM	0	33	12	0	45	29	48	8	0	85	4	41	0	0	45	7	35	9	0	51	226
05:30 PM	1	19	8	0	28	12	44	3	0	59	3	28	0	0	31	13	43	7	0	63	181
05:45 PM	0	21	7	0	28	13	56	1	0	70	4	48	0	0	52	7	37	7	0	51	201
Total	1	106	39	0	146	65	198	17	0	280	13	144	1	0	158	33	169	31	0	233	817
Grand Total	8	538	150	2	698	151	470	36	1	658	50	566	5	0	621	100	522	124	0	746	2723
Apprch %	1.1	77.1	21.5	0.3		22.9	71.4	5.5	0.2		8.1	91.1	0.8	0		13.4	70	16.6	0		
Total %	0.3	19.8	5.5	0.1	25.6	5.5	17.3	1.3	0	24.2	1.8	20.8	0.2	0	22.8	3.7	19.2	4.6	0	27.4	
Cars	8	525	143	2	678	148	463	34	1	646	48	549	5	0	602	98	516	123	0	737	2663
% Cars	100	97.6	95.3	100	97.1	98	98.5	94.4	100	98.2	96	97	100	0	96.9	98	98.9	99.2	0	98.8	97.8
Trucks & Buses	0	13	7	0	20	3	7	2	0	12	2	17	0	0	19	2	6	1	0	9	60
% Trucks & Buses	0	2.4	4.7	0	2.9	2	1.5	5.6	0	1.8	4	3	0	0	3.1	2	1.1	0.8	0	1.2	2.2

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

TRAFFIC DATA COLLECTION, INC.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1935
Counted By: EH
Weather: Cold
Other: ITERIS

File Name : 09500-04
Site Code : 00950004
Start Date : 2/4/2009
Page No : 1

Groups Printed- Cars - Trucks & Buses

	Millers Chapel Rd Northbound					Parker Rd Southbound					SR 138 Eastbound					SR 138 Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	8	0	0	8	0	2	0	0	2	27	87	2	0	116	1	80	19	0	100	226
07:15 AM	4	22	0	0	26	3	16	0	0	19	44	99	4	0	147	0	94	9	0	103	295
07:30 AM	2	29	2	0	33	1	18	1	0	20	47	140	7	0	194	1	99	17	0	117	364
07:45 AM	9	33	0	0	42	3	21	0	0	24	77	101	13	0	191	2	94	26	0	122	379
Total	15	92	2	0	109	7	57	1	0	65	195	427	26	0	648	4	367	71	0	442	1264
08:00 AM	4	25	0	0	29	2	16	4	0	22	38	115	5	0	158	2	76	24	0	102	311
08:15 AM	2	29	2	0	33	10	18	4	0	32	50	102	3	0	155	6	89	25	0	120	340
08:30 AM	7	36	1	0	44	8	14	1	0	23	54	111	1	0	166	2	69	24	0	95	328
08:45 AM	6	35	3	0	44	6	13	1	0	20	48	110	3	0	161	3	72	20	0	95	320
Total	19	125	6	0	150	26	61	10	0	97	190	438	12	0	640	13	306	93	0	412	1299
Break																					
04:00 PM	5	27	0	0	32	12	52	5	0	69	39	131	12	0	182	5	142	26	0	173	456
04:15 PM	11	24	1	0	36	15	60	4	0	79	45	103	8	0	156	11	115	19	0	145	416
04:30 PM	12	33	0	0	45	20	53	9	0	82	25	127	7	0	159	7	125	18	0	150	436
04:45 PM	9	24	2	0	35	22	59	8	0	89	36	112	11	0	159	6	114	17	1	138	421
Total	37	108	3	0	148	69	224	26	0	319	145	473	38	0	656	29	496	80	1	606	1729
05:00 PM	15	23	1	0	39	21	74	5	0	100	44	108	11	0	163	6	149	25	0	180	482
05:15 PM	7	30	1	0	38	19	62	3	0	84	41	126	12	0	179	6	165	22	1	194	495
05:30 PM	12	24	0	0	36	19	63	8	0	90	44	133	6	0	183	6	128	28	0	162	471
05:45 PM	13	17	0	0	30	15	66	13	0	94	43	137	10	0	190	2	138	14	0	154	468
Total	47	94	2	0	143	74	265	29	0	368	172	504	39	0	715	20	580	89	1	690	1916
Grand Total	118	419	13	0	550	176	607	66	0	849	702	1842	115	0	2659	66	1749	333	2	2150	6208
Apprch %	21.5	76.2	2.4	0		20.7	71.5	7.8	0		26.4	69.3	4.3	0		3.1	81.3	15.5	0.1		
Total %	1.9	6.7	0.2	0	8.9	2.8	9.8	1.1	0	13.7	11.3	29.7	1.9	0	42.8	1.1	28.2	5.4	0	34.6	
Cars	118	419	13	0	550	174	605	64	0	843	681	1799	111	0	2591	66	1725	330	2	2123	6107
% Cars	100	100	100	0	100	98.9	99.7	97	0	99.3	97	97.7	96.5	0	97.4	100	98.6	99.1	100	98.7	98.4
Trucks & Buses	0	0	0	0	0	2	2	2	0	6	21	43	4	0	68	0	24	3	0	27	101
% Trucks & Buses	0	0	0	0	0	1.1	0.3	3	0	0.7	3	2.3	3.5	0	2.6	0	1.4	0.9	0	1.3	1.6

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

TRAFFIC DATA COLLECTION, INC.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1934
Counted By: JRM
Weather: Cold
Other: ITERIS

File Name : 09500-05
Site Code : 00950005
Start Date : 2/4/2009
Page No : 1

Groups Printed- Cars - Trucks & Buses

	Northbound					Old Parker Rd Southbound					SR 138 Eastbound					SR 138 Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	19	0	19	0	134	0	0	134	0	95	0	0	95	248
07:15 AM	0	0	0	0	0	0	0	20	0	20	0	142	0	0	142	0	99	0	0	99	261
07:30 AM	0	0	0	0	0	0	0	27	0	27	0	182	0	0	182	0	103	2	0	105	314
07:45 AM	0	0	0	0	0	0	0	18	0	18	1	198	0	0	199	0	102	1	0	103	320
Total	0	0	0	0	0	0	0	84	0	84	1	656	0	0	657	0	399	3	0	402	1143
08:00 AM	0	0	0	0	0	0	0	27	0	27	2	144	0	0	146	0	88	1	0	89	262
08:15 AM	0	0	0	0	0	0	0	21	0	21	2	171	0	0	173	0	99	0	0	99	293
08:30 AM	0	0	0	0	0	0	0	13	0	13	1	166	0	0	167	0	80	1	0	81	261
08:45 AM	0	0	0	0	0	0	0	22	0	22	1	166	0	0	167	0	81	2	0	83	272
Total	0	0	0	0	0	0	0	83	0	83	6	647	0	0	653	0	348	4	0	352	1088
Break																					
04:00 PM	0	0	0	0	0	0	0	46	0	46	9	167	0	0	176	0	144	1	0	145	367
04:15 PM	0	0	0	0	0	0	0	43	0	43	0	158	0	0	158	0	135	0	0	135	336
04:30 PM	0	0	0	0	0	0	0	58	0	58	1	155	0	0	156	0	147	1	0	148	362
04:45 PM	0	0	0	0	0	0	0	54	0	54	1	156	0	0	157	0	138	1	0	139	350
Total	0	0	0	0	0	0	0	201	0	201	11	636	0	0	647	0	564	3	0	567	1415
05:00 PM	0	0	0	0	0	0	0	63	0	63	0	170	0	0	170	0	179	0	0	179	412
05:15 PM	0	0	0	0	0	0	0	63	0	63	0	167	0	0	167	0	181	0	0	181	411
05:30 PM	0	0	0	0	0	0	0	52	0	52	0	182	0	0	182	0	164	0	0	164	398
05:45 PM	0	0	0	0	0	0	0	52	0	52	0	198	0	0	198	0	165	0	0	165	415
Total	0	0	0	0	0	0	0	230	0	230	0	717	0	0	717	0	689	0	0	689	1636
Grand Total	0	0	0	0	0	0	0	598	0	598	18	2656	0	0	2674	0	2000	10	0	2010	5282
Apprch %	0	0	0	0		0	0	100	0		0.7	99.3	0	0		0	99.5	0.5	0		
Total %	0	0	0	0	0	0	0	11.3	0	11.3	0.3	50.3	0	0	50.6	0	37.9	0.2	0	38.1	
Cars	0	0	0	0	0	0	0	590	0	590	18	2588	0	0	2606	0	1961	9	0	1970	5166
% Cars	0	0	0	0	0	0	0	98.7	0	98.7	100	97.4	0	0	97.5	0	98.1	90	0	98	97.8
Trucks & Buses	0	0	0	0	0	0	0	8	0	8	0	68	0	0	68	0	39	1	0	40	116
% Trucks & Buses	0	0	0	0	0	0	0	1.3	0	1.3	0	2.6	0	0	2.5	0	2	10	0	2	2.2

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

TRAFFIC DATA COLLECTION, INC.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1174
Counted By: OSP
Weather: Cold
Other: ITERIS

File Name : 09500-06
Site Code : 00950006
Start Date : 2/5/2009
Page No : 1

Groups Printed- Cars - Trucks & Buses

	Ebenezer Rd Northbound					Ebenezer Rd Southbound					SR 138 Eastbound					SR 138 Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	26	67	22	0	115	1	20	10	0	31	19	63	9	0	91	18	96	3	0	117	354
07:15 AM	26	68	42	0	136	4	23	12	0	39	13	100	20	0	133	19	92	4	0	115	423
07:30 AM	40	103	70	0	213	5	32	18	0	55	30	143	25	0	198	13	98	8	0	119	585
07:45 AM	82	62	56	0	200	6	21	15	0	42	31	140	42	0	213	18	144	5	0	167	622
Total	174	300	190	0	664	16	96	55	0	167	93	446	96	0	635	68	430	20	0	518	1984
08:00 AM	33	58	45	0	136	2	22	9	0	33	20	112	33	0	165	29	75	10	0	114	448
08:15 AM	22	76	52	0	150	4	37	10	0	51	15	100	20	0	135	36	83	6	0	125	461
08:30 AM	18	67	50	0	135	2	33	5	0	40	16	95	15	0	126	18	62	7	0	87	388
08:45 AM	15	52	42	0	109	4	18	10	0	32	8	108	14	0	130	19	66	14	0	99	370
Total	88	253	189	0	530	12	110	34	0	156	59	415	82	0	556	102	286	37	0	425	1667
Break																					
04:00 PM	39	69	49	0	157	10	61	9	1	81	11	113	26	0	150	38	110	10	0	158	546
04:15 PM	12	41	42	0	95	11	69	13	0	93	17	121	25	0	163	51	129	10	0	190	541
04:30 PM	19	33	42	0	94	14	63	17	0	94	16	112	22	0	150	56	119	17	0	192	530
04:45 PM	14	44	45	0	103	12	80	25	0	117	17	119	13	0	149	73	137	8	0	218	587
Total	84	187	178	0	449	47	273	64	1	385	61	465	86	0	612	218	495	45	0	758	2204
05:00 PM	15	29	31	0	75	7	92	20	0	119	13	133	27	1	174	57	146	16	0	219	587
05:15 PM	20	57	53	1	131	14	113	22	0	149	12	110	17	0	139	71	147	10	0	228	647
05:30 PM	19	49	48	0	116	14	71	16	0	101	13	146	38	0	197	69	149	10	0	228	642
05:45 PM	25	47	45	0	117	15	100	14	0	129	14	118	37	0	169	57	147	15	0	219	634
Total	79	182	177	1	439	50	376	72	0	498	52	507	119	1	679	254	589	51	0	894	2510
Grand Total	425	922	734	1	2082	125	855	225	1	1206	265	1833	383	1	2482	642	1800	153	0	2595	8365
Apprch %	20.4	44.3	35.3	0		10.4	70.9	18.7	0.1		10.7	73.9	15.4	0		24.7	69.4	5.9	0		
Total %	5.1	11	8.8	0	24.9	1.5	10.2	2.7	0	14.4	3.2	21.9	4.6	0	29.7	7.7	21.5	1.8	0	31	
Cars	410	886	702	1	1999	125	820	218	1	1164	261	1765	373	1	2400	632	1760	150	0	2542	8105
% Cars	96.5	96.1	95.6	100	96	100	95.9	96.9	100	96.5	98.5	96.3	97.4	100	96.7	98.4	97.8	98	0	98	96.9
Trucks & Buses	15	36	32	0	83	0	35	7	0	42	4	68	10	0	82	10	40	3	0	53	260
% Trucks & Buses	3.5	3.9	4.4	0	4	0	4.1	3.1	0	3.5	1.5	3.7	2.6	0	3.3	1.6	2.2	2	0	2	3.1

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

Traffic Data Collection, Inc.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 2447
Counted By: ADH
Weather: Cold
Other: ITERIS

File Name : 09500-07
Site Code : 00950007
Start Date : 2/3/2009
Page No : 1

Groups Printed- Cars - Trucks & Buses

	Johnson Rd Northbound					Dr Southbound					Klondike Rd Eastbound					Klondike Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	4	0	57	0	61	0	0	0	0	0	0	55	0	0	55	14	40	1	0	55	171
07:15 AM	3	1	59	0	63	0	0	1	0	1	0	71	3	0	74	14	62	1	0	77	215
07:30 AM	9	0	60	0	69	0	0	0	0	0	0	115	4	0	119	17	39	3	0	59	247
07:45 AM	12	2	63	0	77	0	0	0	0	0	2	109	1	0	112	18	85	3	0	106	295
Total	28	3	239	0	270	0	0	1	0	1	2	350	8	0	360	63	226	8	0	297	928
08:00 AM	1	2	52	0	55	0	0	0	0	0	0	74	2	0	76	22	58	2	0	82	213
08:15 AM	10	1	46	0	57	1	2	1	0	4	0	66	2	0	68	21	51	0	0	72	201
08:30 AM	6	0	35	0	41	0	1	0	0	1	1	56	2	0	59	17	59	1	0	77	178
08:45 AM	5	0	49	0	54	1	0	0	0	1	0	69	5	0	74	20	63	1	0	84	213
Total	22	3	182	0	207	2	3	1	0	6	1	265	11	0	277	80	231	4	0	315	805
Break																					
04:00 PM	3	1	41	0	45	1	0	0	0	1	0	51	3	0	54	65	68	4	0	137	237
04:15 PM	8	0	36	0	44	7	0	0	0	7	0	60	7	0	67	44	65	2	0	111	229
04:30 PM	4	0	23	0	27	1	0	1	0	2	0	81	8	0	89	60	71	0	0	131	249
04:45 PM	8	0	38	0	46	2	0	1	0	3	1	69	7	0	77	61	69	0	0	130	256
Total	23	1	138	0	162	11	0	2	0	13	1	261	25	0	287	230	273	6	0	509	971
05:00 PM	4	1	22	0	27	1	1	0	0	2	0	88	13	0	101	75	95	2	0	172	302
05:15 PM	3	1	32	0	36	4	0	0	0	4	0	80	11	0	91	70	86	0	0	156	287
05:30 PM	8	0	27	0	35	1	0	0	0	1	0	88	9	0	97	61	76	1	0	138	271
05:45 PM	5	0	31	0	36	2	0	0	0	2	0	72	4	0	76	54	64	1	0	119	233
Total	20	2	112	0	134	8	1	0	0	9	0	328	37	0	365	260	321	4	0	585	1093
Grand Total	93	9	671	0	773	21	4	4	0	29	4	1204	81	0	1289	633	1051	22	0	1706	3797
Apprch %	12	1.2	86.8	0		72.4	13.8	13.8	0		0.3	93.4	6.3	0		37.1	61.6	1.3	0		
Total %	2.4	0.2	17.7	0	20.4	0.6	0.1	0.1	0	0.8	0.1	31.7	2.1	0	33.9	16.7	27.7	0.6	0	44.9	
Cars	91	9	657	0	757	21	4	3	0	28	4	1186	77	0	1267	624	1035	21	0	1680	3732
% Cars	97.8	100	97.9	0	97.9	100	100	75	0	96.6	100	98.5	95.1	0	98.3	98.6	98.5	95.5	0	98.5	98.3
Trucks & Buses	2	0	14	0	16	0	0	1	0	1	0	18	4	0	22	9	16	1	0	26	65
% Trucks & Buses	2.2	0	2.1	0	2.1	0	0	25	0	3.4	0	1.5	4.9	0	1.7	1.4	1.5	4.5	0	1.5	1.7

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

Traffic Data Collection, Inc.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1328
Counted By: BLE
Weather: Cold
Other: ITERIS

File Name : 09500-08
Site Code : 00950008
Start Date : 2/4/2009
Page No : 1

Groups Printed- Cars - Trucks & Buses

	Parker Rd Northbound					Parker Rd Southbound					Culpepper Rd Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	5	70	0	0	75	0	15	3	0	18	1	0	1	0	2	0	0	0	0	0	95
07:15 AM	16	99	0	0	115	0	55	12	0	67	4	0	2	0	6	0	0	0	0	0	188
07:30 AM	26	94	0	0	120	0	54	27	0	81	1	0	5	0	6	0	0	0	0	0	207
07:45 AM	37	161	0	0	198	0	46	49	0	95	9	0	4	0	13	0	0	0	0	0	306
Total	84	424	0	0	508	0	170	91	0	261	15	0	12	0	27	0	0	0	0	0	796
08:00 AM	32	123	0	0	155	0	57	19	0	76	3	0	10	0	13	0	0	0	0	0	244
08:15 AM	24	109	0	0	133	0	34	20	0	54	8	0	2	0	10	0	0	0	0	0	197
08:30 AM	25	100	0	0	125	0	43	19	0	62	4	0	12	0	16	0	0	0	0	0	203
08:45 AM	19	108	0	0	127	0	43	22	0	65	8	0	16	0	24	0	0	0	0	0	216
Total	100	440	0	0	540	0	177	80	0	257	23	0	40	0	63	0	0	0	0	0	860
Break																					
04:00 PM	7	91	0	0	98	0	112	5	0	117	27	0	8	0	35	0	0	0	0	0	250
04:15 PM	6	94	0	0	100	0	118	11	0	129	6	0	9	0	15	0	0	0	0	0	244
04:30 PM	7	79	0	0	86	0	149	5	0	154	9	0	7	0	16	0	0	0	0	0	256
04:45 PM	15	79	0	0	94	0	132	17	0	149	9	0	9	0	18	0	0	0	0	0	261
Total	35	343	0	0	378	0	511	38	0	549	51	0	33	0	84	0	0	0	0	0	1011
05:00 PM	16	71	0	0	87	0	152	17	0	169	19	0	21	0	40	0	0	0	0	0	296
05:15 PM	14	103	0	0	117	0	132	18	0	150	8	0	13	0	21	0	0	0	0	0	288
05:30 PM	6	93	0	0	99	0	153	10	0	163	7	0	23	0	30	0	0	0	0	0	292
05:45 PM	2	78	0	0	80	0	111	2	0	113	5	0	11	0	16	0	0	0	0	0	209
Total	38	345	0	0	383	0	548	47	0	595	39	0	68	0	107	0	0	0	0	0	1085
Grand Total	257	1552	0	0	1809	0	1406	256	0	1662	128	0	153	0	281	0	0	0	0	0	3752
Apprch %	14.2	85.8	0	0		0	84.6	15.4	0		45.6	0	54.4	0		0	0	0	0		
Total %	6.8	41.4	0	0	48.2	0	37.5	6.8	0	44.3	3.4	0	4.1	0	7.5	0	0	0	0	0	
Cars	255	1510	0	0	1765	0	1391	244	0	1635	122	0	149	0	271	0	0	0	0	0	3671
% Cars	99.2	97.3	0	0	97.6	0	98.9	95.3	0	98.4	95.3	0	97.4	0	96.4	0	0	0	0	0	97.8
Trucks & Buses	2	42	0	0	44	0	15	12	0	27	6	0	4	0	10	0	0	0	0	0	81
% Trucks & Buses	0.8	2.7	0	0	2.4	0	1.1	4.7	0	1.6	4.7	0	2.6	0	3.6	0	0	0	0	0	2.2

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

TRAFFIC DATA COLLECTION, INC.

Atlanta - Hilton Head
www.trafficdatacollection.com

Counter: 1174
Counted By: JRM
Weather: Mild
Other: Iteris

File Name : 09500-09
Site Code : 00950009
Start Date : 3/17/2009
Page No : 1

Groups Printed- Cars - Trucks & Buses

	Apt/Retail Ent Northbound					Southbound					Flat Shoals Rd Eastbound					Flat Shoals Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	43	0	0	43	0	19	0	0	19	62
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	38	1	0	39	0	29	0	0	29	68
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	48	2	0	50	0	43	0	0	43	93
07:45 AM	0	0	2	0	2	0	0	0	0	0	0	56	0	0	56	0	40	0	0	40	98
Total	0	0	2	0	2	0	0	0	0	0	0	185	3	0	188	0	131	0	0	131	321
08:00 AM	1	0	0	0	1	0	0	0	0	0	0	44	1	0	45	0	58	0	0	58	104
08:15 AM	1	0	0	0	1	0	0	0	0	0	0	48	0	0	48	0	56	0	0	56	105
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	54	0	0	54	0	38	0	0	38	92
08:45 AM	1	0	0	0	1	0	0	0	0	0	0	35	0	0	35	0	31	0	0	31	67
Total	3	0	0	0	3	0	0	0	0	0	0	181	1	0	182	0	183	0	0	183	368
Break																					
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	59	1	0	60	0	57	0	0	57	117
04:15 PM	1	0	0	0	1	0	0	0	0	0	0	61	1	0	62	0	69	0	0	69	132
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	42	0	0	42	0	77	0	0	77	119
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	59	1	0	60	0	70	0	0	70	130
Total	1	0	0	0	1	0	0	0	0	0	0	221	3	0	224	0	273	0	0	273	498
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	63	0	0	63	0	68	0	0	68	131
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	76	2	0	78	0	64	0	0	64	142
05:30 PM	1	0	0	0	1	0	0	0	0	0	0	68	2	0	70	0	69	0	0	69	140
05:45 PM	1	0	0	0	1	0	0	0	0	0	0	64	1	0	65	0	72	0	0	72	138
Total	2	0	0	0	2	0	0	0	0	0	0	271	5	0	276	0	273	0	0	273	551
Grand Total	6	0	2	0	8	0	0	0	0	0	0	858	12	0	870	0	860	0	0	860	1738
Apprch %	75	0	25	0		0	0	0	0		0	98.6	1.4	0		0	100	0	0		
Total %	0.3	0	0.1	0	0.5	0	0	0	0	0	0	49.4	0.7	0	50.1	0	49.5	0	0	49.5	
Cars	6	0	2	0	8	0	0	0	0	0	0	854	12	0	866	0	851	0	0	851	1725
% Cars	100	0	100	0	100	0	0	0	0	0	0	99.5	100	0	99.5	0	99	0	0	99	99.3
Trucks & Buses	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	9	0	0	9	13
% Trucks & Buses	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0.5	0	1	0	0	1	0.7

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

Traffic Data Collection, Inc.

Atlanta - Hilton Head

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Counter: 1174
Counted By: JRM
Weather: Mild
Other: Iteris

File Name : 09500-10
Site Code : 00950010
Start Date : 3/18/2009
Page No : 1

Groups Printed- Cars - Trucks & Buses

	Parker Rd Northbound					Parker Rd Southbound					Apt/Retail Ent Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	54	0	0	54	0	21	1	0	22	7	0	5	0	12	0	0	0	0	0	88
07:15 AM	2	85	0	0	87	0	31	2	0	33	11	0	4	0	15	0	0	0	0	0	135
07:30 AM	1	107	0	0	108	0	35	7	0	42	16	0	5	0	21	0	0	0	0	0	171
07:45 AM	1	142	0	0	143	0	50	1	0	51	10	0	7	0	17	0	0	0	0	0	211
Total	4	388	0	0	392	0	137	11	0	148	44	0	21	0	65	0	0	0	0	0	605
08:00 AM	2	98	0	0	100	0	35	4	0	39	9	0	0	0	9	0	0	0	0	0	148
08:15 AM	1	90	0	0	91	0	53	2	0	55	7	0	5	0	12	0	0	0	0	0	158
08:30 AM	2	99	0	0	101	0	50	4	0	54	10	0	1	0	11	0	0	0	0	0	166
08:45 AM	0	124	0	0	124	0	43	4	0	47	8	0	2	0	10	0	0	0	0	0	181
Total	5	411	0	0	416	0	181	14	0	195	34	0	8	0	42	0	0	0	0	0	653
Break																					
04:00 PM	4	69	0	0	73	0	111	8	0	119	4	0	3	0	7	0	0	0	0	0	199
04:15 PM	0	47	0	0	47	0	72	6	0	78	6	0	0	0	6	0	0	0	0	0	131
04:30 PM	0	43	0	0	43	0	79	2	0	81	0	0	1	0	1	0	0	0	0	0	125
04:45 PM	0	66	0	0	66	0	137	8	0	145	9	0	1	1	11	0	0	0	0	0	222
Total	4	225	0	0	229	0	399	24	0	423	19	0	5	1	25	0	0	0	0	0	677
05:00 PM	2	62	0	0	64	0	180	14	0	194	6	0	3	0	9	0	0	0	0	0	267
05:15 PM	5	51	0	0	56	0	143	11	0	154	5	0	2	0	7	0	0	0	0	0	217
05:30 PM	5	66	0	0	71	0	115	16	0	131	11	0	3	0	14	0	0	0	0	0	216
05:45 PM	6	77	0	0	83	0	123	10	0	133	8	0	6	0	14	0	0	0	0	0	230
Total	18	256	0	0	274	0	561	51	0	612	30	0	14	0	44	0	0	0	0	0	930
Grand Total	31	1280	0	0	1311	0	1278	100	0	1378	127	0	48	1	176	0	0	0	0	0	2865
Apprch %	2.4	97.6	0	0		0	92.7	7.3	0		72.2	0	27.3	0.6		0	0	0	0		
Total %	1.1	44.7	0	0	45.8	0	44.6	3.5	0	48.1	4.4	0	1.7	0	6.1	0	0	0	0	0	
Cars	31	1264	0	0	1295	0	1272	99	0	1371	127	0	48	1	176	0	0	0	0	0	2842
% Cars	100	98.8	0	0	98.8	0	99.5	99	0	99.5	100	0	100	100	100	0	0	0	0	0	99.2
Trucks & Buses	0	16	0	0	16	0	6	1	0	7	0	0	0	0	0	0	0	0	0	0	23
% Trucks & Buses	0	1.2	0	0	1.2	0	0.5	1	0	0.5	0	0	0	0	0	0	0	0	0	0	0.8

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

Traffic Data Collection, Inc.

7610 Ball Mill Rd NE Atlanta, GA 30350
Atlanta - Hilton Head

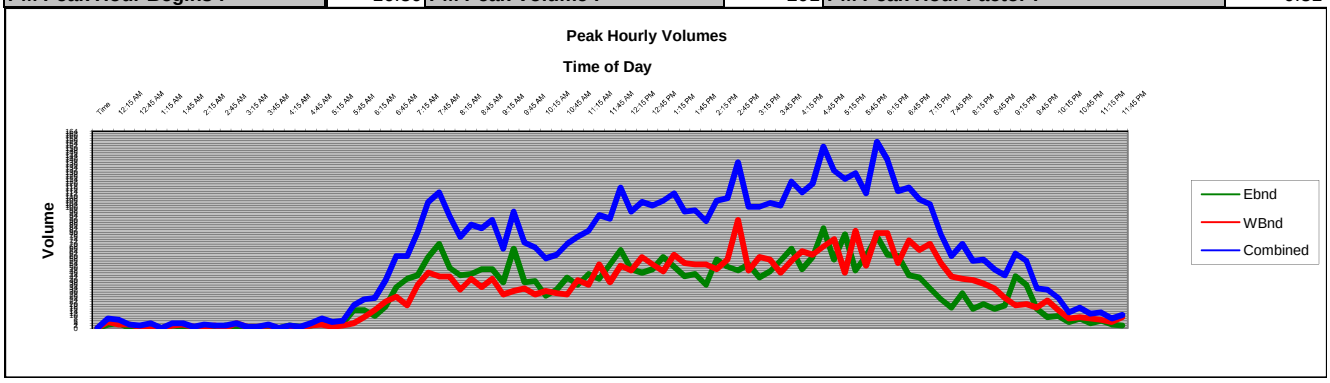
Ph. 770 394-5728 Fax 770 394-5729
File: 09500-A1.xls

4-Feb-09	Location A1 - Eastbound Flat Shoals Rd west of Parker Rd - Conyers, GA											
End Time	**00**	**01**	**02**	**03**	**04**	**05**	**06**	**07**	**08**	**09**	**10**	**11**
15	3	3	0	0	0	5	15	41	50	49	39	36
30	4	0	2	0	2	4	10	44	44	38	27	45
45	0	2	0	0	1	4	18	59	45	66	32	41
00	1	1	2	1	2	15	34	70	49	38	42	53
Hr Total	8	6	4	1	5	28	77	214	188	191	140	175
End Time	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**
15	65	59	36	53	66	57	76	42	29	19	9	4
30	49	51	57	42	49	78	61	33	16	43	10	6
45	46	43	51	47	59	48	60	24	20	36	5	3
00	49	45	48	56	83	60	44	17	16	16	8	2
Hr Total	209	198	192	198	257	243	241	116	81	114	32	15

24 Hour Total :	2933				
AM Peak Hour Begins :	07:15	**AM Peak Volume :**	223	**AM Peak Hour Factor :**	0.80
PM Peak Hour Begins :	16:30	**PM Peak Volume :**	277	**PM Peak Hour Factor :**	0.83

4-Feb-09	Location A1 - Westbound Flat Shoals Rd west of Parker Rd - Conyers, GA											
End Time	**00**	**01**	**02**	**03**	**04**	**05**	**06**	**07**	**08**	**09**	**10**	**11**
15	5	1	1	4	0	3	9	19	43	41	28	40
30	3	0	1	1	0	1	15	36	32	28	31	36
45	3	2	2	1	0	2	22	46	41	31	29	53
00	1	3	0	2	2	4	26	43	34	33	28	38
Hr Total	12	6	4	8	2	10	72	144	150	133	116	167
End Time	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**
15	52	47	53	48	56	74	79	65	41	25	23	8
30	48	61	49	59	64	46	79	70	40	19	15	7
45	59	54	57	57	61	81	54	54	37	20	8	5
00	53	53	90	46	68	52	73	43	33	17	9	9
Hr Total	212	215	249	210	249	253	285	232	151	81	55	29

24 Hour Total :	3045				
AM Peak Hour Begins :	07:15	**AM Peak Volume :**	168	**AM Peak Hour Factor :**	0.79
PM Peak Hour Begins :	16:30	**PM Peak Volume :**	291	**PM Peak Hour Factor :**	0.81



Traffic Data Collection, Inc.

7610 Ball Mill Rd NE Atlanta, GA 30350
Atlanta - Hilton Head

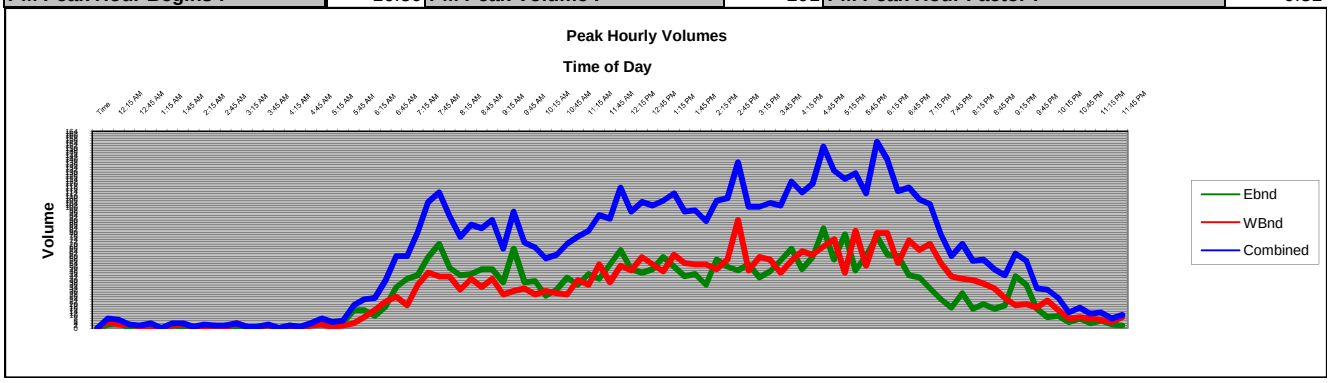
Ph. 770 394-5728 Fax 770 394-5729
File: 09500-A1.xls

4-Feb-09	Location A1 - Eastbound Flat Shoals Rd west of Parker Rd - Conyers, GA											
End Time	**00**	**01**	**02**	**03**	**04**	**05**	**06**	**07**	**08**	**09**	**10**	**11**
15	3	3	0	0	0	5	15	41	50	49	39	36
30	4	0	2	0	2	4	10	44	44	38	27	45
45	0	2	0	0	1	4	18	59	45	66	32	41
00	1	1	2	1	2	15	34	70	49	38	42	53
Hr Total	8	6	4	1	5	28	77	214	188	191	140	175
End Time	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**
15	65	59	36	53	66	57	76	42	29	19	9	4
30	49	51	57	42	49	78	61	33	16	43	10	6
45	46	43	51	47	59	48	60	24	20	36	5	3
00	49	45	48	56	83	60	44	17	16	16	8	2
Hr Total	209	198	192	198	257	243	241	116	81	114	32	15

24 Hour Total :	2933				
AM Peak Hour Begins :	07:15	**AM Peak Volume :**	223	**AM Peak Hour Factor :**	0.80
PM Peak Hour Begins :	16:30	**PM Peak Volume :**	277	**PM Peak Hour Factor :**	0.83

4-Feb-09	Location A1 - Westbound Flat Shoals Rd west of Parker Rd - Conyers, GA											
End Time	**00**	**01**	**02**	**03**	**04**	**05**	**06**	**07**	**08**	**09**	**10**	**11**
15	5	1	1	4	0	3	9	19	43	41	28	40
30	3	0	1	1	0	1	15	36	32	28	31	36
45	3	2	2	1	0	2	22	46	41	31	29	53
00	1	3	0	2	2	4	26	43	34	33	28	38
Hr Total	12	6	4	8	2	10	72	144	150	133	116	167
End Time	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**
15	52	47	53	48	56	74	79	65	41	25	23	8
30	48	61	49	59	64	46	79	70	40	19	15	7
45	59	54	57	57	61	81	54	54	37	20	8	5
00	53	53	90	46	68	52	73	43	33	17	9	9
Hr Total	212	215	249	210	249	253	285	232	151	81	55	29

24 Hour Total :	3045				
AM Peak Hour Begins :	07:15	**AM Peak Volume :**	168	**AM Peak Hour Factor :**	0.79
PM Peak Hour Begins :	16:30	**PM Peak Volume :**	291	**PM Peak Hour Factor :**	0.81



Traffic Data Collection, Inc.

7610 Ball Mill Rd NE Atlanta, GA 30350
Atlanta - Hilton Head

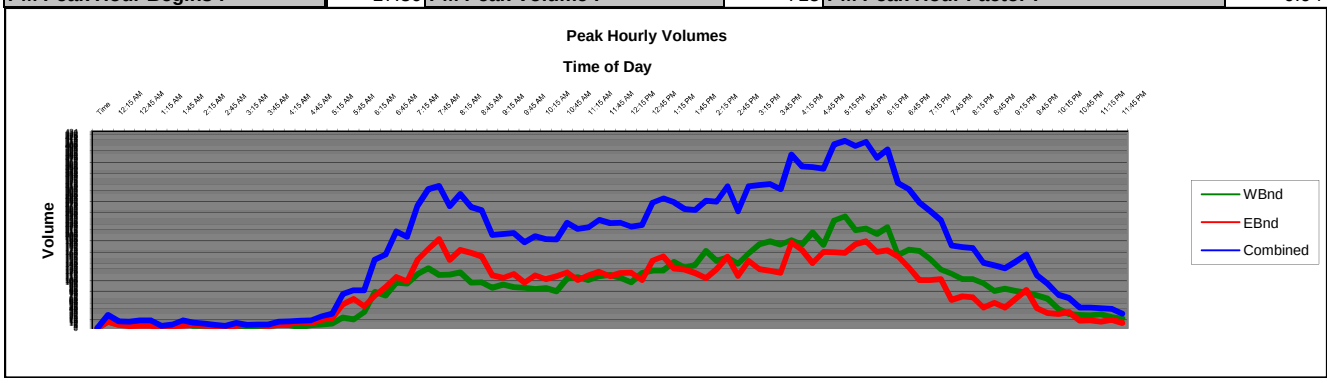
Ph. 770 394-5728 Fax 770 394-5729
File: 09500-B1.xls

4-Feb-09	Location B1 - Westbound Stockbridge Hwy west of Parker Rd - Conyers, GA											
End Time	**00**	**01**	**02**	**03**	**04**	**05**	**06**	**07**	**08**	**09**	**10**	**11**
15	15	12	5	6	7	8	35	98	118	89	86	112
30	8	4	5	0	6	10	80	119	123	96	88	106
45	10	4	3	2	2	23	72	132	100	90	81	114
00	12	12	4	4	6	19	100	117	101	89	109	117
Hr Total	45	32	17	12	21	60	287	466	442	364	364	449
End Time	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**
15	111	127	170	164	194	237	207	170	108	87	65	28
30	101	146	148	185	184	246	222	152	108	82	42	30
45	121	133	155	191	211	216	161	129	99	78	31	24
00	127	139	142	184	183	219	173	120	82	72	29	21
Hr Total	460	545	615	724	772	918	763	571	397	319	167	103

24 Hour Total :	8913				
AM Peak Hour Begins :	07:30	**AM Peak Volume :**	490	**AM Peak Hour Factor :**	0.93
PM Peak Hour Begins :	17:00	**PM Peak Volume :**	918	**PM Peak Hour Factor :**	0.93

4-Feb-09	Location B1 - Eastbound Stockbridge Hwy west of Parker Rd - Conyers, GA											
End Time	**00**	**01**	**02**	**03**	**04**	**05**	**06**	**07**	**08**	**09**	**10**	**11**
15	14	5	7	5	7	18	48	103	150	116	116	106
30	7	1	5	7	9	22	71	151	172	111	108	116
45	4	4	4	6	14	52	90	174	166	119	114	124
00	5	5	1	4	11	64	113	196	158	100	123	114
Hr Total	30	15	17	22	41	156	322	624	646	446	461	460
End Time	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**
15	121	158	110	148	188	167	168	106	70	45	33	17
30	122	131	130	130	172	166	171	106	68	64	31	14
45	106	129	157	126	143	185	158	108	45	84	35	18
00	149	121	115	122	168	191	133	62	56	44	16	11
Hr Total	498	539	512	526	671	709	630	382	239	237	115	60

24 Hour Total :	8358				
AM Peak Hour Begins :	07:30	**AM Peak Volume :**	692	**AM Peak Hour Factor :**	0.88
PM Peak Hour Begins :	17:30	**PM Peak Volume :**	715	**PM Peak Hour Factor :**	0.94



Traffic Data Collection, Inc.

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Atlanta - Hilton Head

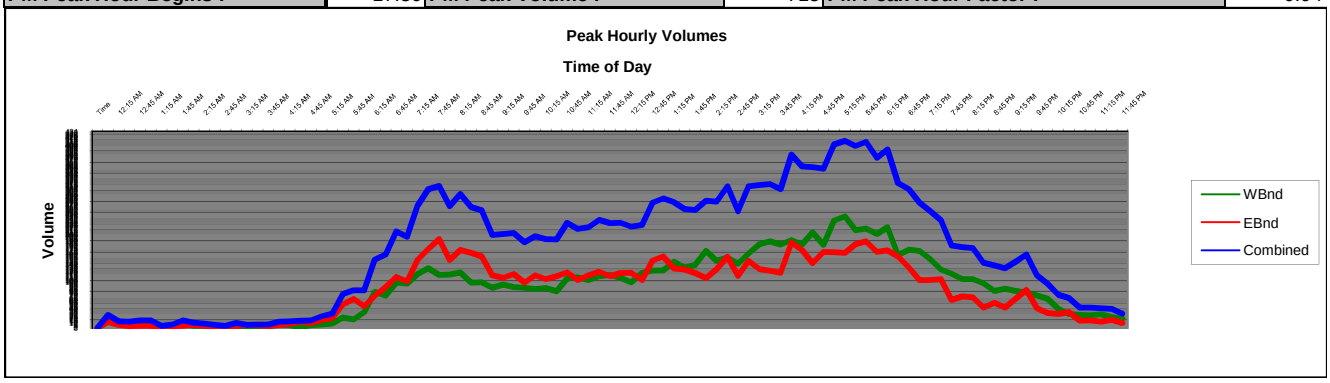
Ph. 770 394-5728 Fax 770 394-5729
File: 09500-B1.xls

4-Feb-09	Location B1 - Westbound Stockbridge Hwy west of Parker Rd - Conyers, GA											
End Time	**00**	**01**	**02**	**03**	**04**	**05**	**06**	**07**	**08**	**09**	**10**	**11**
15	15	12	5	6	7	8	35	98	118	89	86	112
30	8	4	5	0	6	10	80	119	123	96	88	106
45	10	4	3	2	2	23	72	132	100	90	81	114
00	12	12	4	4	6	19	100	117	101	89	109	117
Hr Total	45	32	17	12	21	60	287	466	442	364	364	449
End Time	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**
15	111	127	170	164	194	237	207	170	108	87	65	28
30	101	146	148	185	184	246	222	152	108	82	42	30
45	121	133	155	191	211	216	161	129	99	78	31	24
00	127	139	142	184	183	219	173	120	82	72	29	21
Hr Total	460	545	615	724	772	918	763	571	397	319	167	103

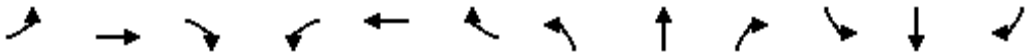
24 Hour Total :	8913				
AM Peak Hour Begins :	07:30	**AM Peak Volume :**	490	**AM Peak Hour Factor :**	0.93
PM Peak Hour Begins :	17:00	**PM Peak Volume :**	918	**PM Peak Hour Factor :**	0.93

4-Feb-09	Location B1 - Eastbound Stockbridge Hwy west of Parker Rd - Conyers, GA											
End Time	**00**	**01**	**02**	**03**	**04**	**05**	**06**	**07**	**08**	**09**	**10**	**11**
15	14	5	7	5	7	18	48	103	150	116	116	106
30	7	1	5	7	9	22	71	151	172	111	108	116
45	4	4	4	6	14	52	90	174	166	119	114	124
00	5	5	1	4	11	64	113	196	158	100	123	114
Hr Total	30	15	17	22	41	156	322	624	646	446	461	460
End Time	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**
15	121	158	110	148	188	167	168	106	70	45	33	17
30	122	131	130	130	172	166	171	106	68	64	31	14
45	106	129	157	126	143	185	158	108	45	84	35	18
00	149	121	115	122	168	191	133	62	56	44	16	11
Hr Total	498	539	512	526	671	709	630	382	239	237	115	60

24 Hour Total :	8358				
AM Peak Hour Begins :	07:30	**AM Peak Volume :**	692	**AM Peak Hour Factor :**	0.88
PM Peak Hour Begins :	17:30	**PM Peak Volume :**	715	**PM Peak Hour Factor :**	0.94



APPENDIX B
EXISTING CAPACITY ANALYSES



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	364	9	78	233	8	32	5	221	1	2	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			6.0	6.0		6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	0.99			1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.99	
Satd. Flow (prot)	1770	1855		1770	1851			1786	1583		1659	
Flt Permitted	0.51	1.00		0.38	1.00			0.81	1.00		0.97	
Satd. Flow (perm)	949	1855		715	1851			1511	1583		1627	
Peak-hour factor, PHF	0.79	0.79	0.79	0.75	0.75	0.75	0.84	0.84	0.84	0.60	0.60	0.60
Adj. Flow (vph)	3	461	11	104	311	11	38	6	263	2	3	2
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	168	0	1	0
Lane Group Flow (vph)	3	471	0	104	321	0	0	44	95	0	6	0
Heavy Vehicles (%)	2%	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	25%
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	53.0	53.0		53.0	53.0			36.0	36.0		36.0	
Effective Green, g (s)	53.0	53.0		53.0	53.0			36.0	36.0		36.0	
Actuated g/C Ratio	0.53	0.53		0.53	0.53			0.36	0.36		0.36	
Clearance Time (s)	5.0	5.0		5.0	5.0			6.0	6.0		6.0	
Lane Grp Cap (vph)	503	983		379	981			544	570		586	
v/s Ratio Prot		c0.25			0.17							
v/s Ratio Perm	0.00			0.15				0.03	c0.06		0.00	
v/c Ratio	0.01	0.48		0.27	0.33			0.08	0.17		0.01	
Uniform Delay, d1	11.1	14.8		12.9	13.4			21.1	21.8		20.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.0	1.7		1.8	0.9			0.3	0.6		0.0	
Delay (s)	11.1	16.5		14.7	14.2			21.4	22.4		20.6	
Level of Service	B	B		B	B			C	C		C	
Approach Delay (s)		16.4			14.4			22.3			20.6	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	50.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	177	299	223	17	112	52	96	495	120	96	400	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.5	5.5	5.5		8.0	8.0	8.0	5.0	8.0	8.0
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	1.00	0.85	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	1845	1509	1770	1635		1770	1810	1538	1736	1845	1583
Flt Permitted	0.45	1.00	1.00	0.54	1.00		0.43	1.00	1.00	0.14	1.00	1.00
Satd. Flow (perm)	816	1845	1509	1013	1635		796	1810	1538	248	1845	1583
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82	0.84	0.84	0.84	0.79	0.79	0.79
Adj. Flow (vph)	216	365	272	21	137	63	114	589	143	122	506	37
RTOR Reduction (vph)	0	0	81	0	10	0	0	0	74	0	0	19
Lane Group Flow (vph)	216	365	191	21	190	0	114	589	69	122	506	18
Heavy Vehicles (%)	5%	3%	7%	2%	12%	8%	2%	5%	5%	4%	3%	2%
Turn Type	pm+pt		Perm	Perm			Perm		Perm	pm+pt		Perm
Protected Phases	5	2			6			4		3	8	
Permitted Phases	2		2	6			4		4	8		8
Actuated Green, G (s)	55.0	55.0	55.0	35.0	35.0		48.4	48.4	48.4	62.1	62.1	62.1
Effective Green, g (s)	55.0	55.0	55.0	35.0	35.0		48.4	48.4	48.4	62.1	62.1	62.1
Actuated g/C Ratio	0.42	0.42	0.42	0.27	0.27		0.37	0.37	0.37	0.48	0.48	0.48
Clearance Time (s)	5.0	5.5	5.5	5.5	5.5		8.0	8.0	8.0	5.0	8.0	8.0
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)	447	777	635	271	438		295	671	570	217	877	753
v/s Ratio Prot	0.06	c0.20			0.12			c0.33		0.04	c0.27	
v/s Ratio Perm	c0.15		0.13	0.02			0.14		0.05	0.23		0.01
v/c Ratio	0.48	0.47	0.30	0.08	0.43		0.39	0.88	0.12	0.56	0.58	0.02
Uniform Delay, d1	25.6	27.3	25.1	35.7	39.6		30.2	38.3	27.1	25.5	24.8	18.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.8	2.0	1.2	0.6	3.1		0.8	12.4	0.1	3.3	0.9	0.0
Delay (s)	26.5	29.3	26.3	36.3	42.7		31.0	50.8	27.2	28.8	25.7	18.2
Level of Service	C	C	C	D	D		C	D	C	C	C	B
Approach Delay (s)		27.6			42.1			44.1			25.8	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	33.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	130.6	Sum of lost time (s)	21.5
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	212	458	28	11	358	92	17	116	4	16	73	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.8		5.7	5.8	5.8	6.3	6.3		6.3	6.3	6.3
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3441		1770	3505	1583	1770	1853		1770	1845	1324
Flt Permitted	0.34	1.00		0.45	1.00	1.00	0.70	1.00		0.66	1.00	1.00
Satd. Flow (perm)	637	3441		840	3505	1583	1295	1853		1237	1845	1324
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.82	0.82	0.82	0.77	0.77	0.77
Adj. Flow (vph)	236	509	31	12	389	100	21	141	5	21	95	12
RTOR Reduction (vph)	0	4	0	0	0	78	0	1	0	0	0	7
Lane Group Flow (vph)	236	536	0	12	389	22	21	145	0	21	95	5
Heavy Vehicles (%)	2%	4%	4%	2%	3%	2%	2%	2%	2%	2%	3%	22%
Turn Type	pm+pt			pm+pt		Perm	Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	39.7	32.8		20.1	18.9	18.9	33.9	33.9		33.9	33.9	33.9
Effective Green, g (s)	39.7	32.8		20.1	18.9	18.9	33.9	33.9		33.9	33.9	33.9
Actuated g/C Ratio	0.46	0.38		0.23	0.22	0.22	0.40	0.40		0.40	0.40	0.40
Clearance Time (s)	5.7	5.8		5.7	5.8	5.8	6.3	6.3		6.3	6.3	6.3
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)	495	1317		210	773	349	512	733		489	730	524
v/s Ratio Prot	c0.08	0.16		0.00	0.11			c0.08			0.05	
v/s Ratio Perm	c0.14			0.01		0.01	0.02			0.02		0.00
v/c Ratio	0.48	0.41		0.06	0.50	0.06	0.04	0.20		0.04	0.13	0.01
Uniform Delay, d1	14.8	19.3		25.3	29.3	26.4	15.9	17.0		15.9	16.5	15.7
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.7	0.2		0.1	0.5	0.1	0.2	0.6		0.2	0.4	0.0
Delay (s)	15.5	19.5		25.4	29.8	26.5	16.1	17.6		16.1	16.9	15.7
Level of Service	B	B		C	C	C	B	B		B	B	B
Approach Delay (s)		18.3			29.0			17.4			16.6	
Approach LOS		B			C			B			B	

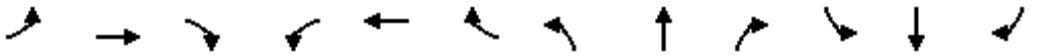
Intersection Summary			
HCM Average Control Delay	21.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	85.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	44.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	140	22	30	138	233	32	434	34	56	122	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.8		5.7	5.7	5.7		5.9			5.9	
Lane Util. Factor		1.00		1.00	1.00	1.00		1.00			1.00	
Frt		0.98		1.00	1.00	0.85		0.99			0.99	
Flt Protected		0.99		0.95	1.00	1.00		1.00			0.99	
Satd. Flow (prot)		1803		1770	1792	1583		1823			1765	
Flt Permitted		0.93		0.46	1.00	1.00		0.97			0.74	
Satd. Flow (perm)		1692		848	1792	1583		1767			1321	
Peak-hour factor, PHF	0.76	0.76	0.76	0.74	0.74	0.74	0.82	0.82	0.82	0.76	0.76	0.76
Adj. Flow (vph)	34	184	29	41	186	315	39	529	41	74	161	21
RTOR Reduction (vph)	0	5	0	0	0	0	0	1	0	0	2	0
Lane Group Flow (vph)	0	242	0	41	186	315	0	608	0	0	254	0
Heavy Vehicles (%)	4%	3%	2%	2%	6%	2%	2%	3%	3%	11%	2%	6%
Turn Type	Perm			Perm		Perm	Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		26.7		26.8	26.8	26.8		70.4			70.4	
Effective Green, g (s)		26.7		26.8	26.8	26.8		70.4			70.4	
Actuated g/C Ratio		0.25		0.25	0.25	0.25		0.65			0.65	
Clearance Time (s)		5.8		5.7	5.7	5.7		5.9			5.9	
Vehicle Extension (s)		3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		415		209	441	390		1143			855	
v/s Ratio Prot					0.10							
v/s Ratio Perm		0.14		0.05		c0.20		c0.34			0.19	
v/c Ratio		0.58		0.20	0.42	0.81		0.53			0.30	
Uniform Delay, d1		36.2		32.5	34.5	38.6		10.3			8.4	
Progression Factor		1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2		2.1		0.5	0.7	11.6		1.8			0.2	
Delay (s)		38.3		32.9	35.1	50.2		12.1			8.6	
Level of Service		D		C	D	D		B			A	
Approach Delay (s)		38.3			43.7			12.1			8.6	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	108.8	Sum of lost time (s)	11.6
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		

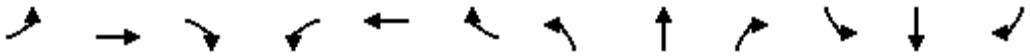
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	124	123	44	260	175	207	215	1412	267	149	649	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.91	1.00	1.00	0.91	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)	1752	3539	1482	1719	3471	1583	1770	5036	1568	1770	4988	1495
Flt Permitted	0.62	1.00	1.00	0.43	1.00	1.00	0.33	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	1146	3539	1482	786	3471	1583	617	5036	1568	149	4988	1495
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.87	0.87	0.87	0.89	0.89	0.89
Adj. Flow (vph)	148	146	52	310	208	246	247	1623	307	167	729	83
RTOR Reduction (vph)	0	0	48	0	0	205	0	0	131	0	0	42
Lane Group Flow (vph)	148	146	4	310	208	41	247	1623	176	167	729	41
Heavy Vehicles (%)	3%	2%	9%	5%	4%	2%	2%	3%	3%	2%	4%	8%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	26.0	11.9	11.9	46.8	26.7	26.7	93.5	78.3	78.3	94.9	79.0	79.0
Effective Green, g (s)	26.0	11.9	11.9	46.8	26.7	26.7	93.5	78.3	78.3	94.9	79.0	79.0
Actuated g/C Ratio	0.16	0.07	0.07	0.29	0.17	0.17	0.58	0.49	0.49	0.59	0.49	0.49
Clearance Time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5
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)	240	263	110	398	579	264	470	2464	767	249	2463	738
v/s Ratio Prot	0.05	0.04		c0.14	0.06		0.05	0.32		c0.07	0.15	
v/s Ratio Perm	0.05		0.00	c0.09		0.03	0.26		0.11	c0.33		0.03
v/c Ratio	0.62	0.56	0.04	0.78	0.36	0.16	0.53	0.66	0.23	0.67	0.30	0.06
Uniform Delay, d1	61.3	71.5	68.7	49.0	59.1	57.0	16.3	30.8	23.5	28.1	24.0	21.1
Progression 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
Incremental Delay, d2	4.7	2.5	0.1	9.3	0.4	0.3	1.1	1.4	0.7	6.9	0.3	0.1
Delay (s)	65.9	74.0	68.9	58.3	59.5	57.3	17.4	32.2	24.2	35.0	24.3	21.2
Level of Service	E	E	E	E	E	E	B	C	C	D	C	C
Approach Delay (s)		69.8			58.3			29.4			25.9	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM Average Control Delay	37.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		

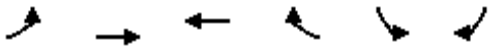
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	18	150	1	21	93	38	1	168	50	5	54	17
Peak Hour Factor	0.75	0.75	0.75	0.88	0.88	0.88	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	24	200	1	24	106	43	1	202	60	6	65	20

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	225	173	264	92
Volume Left (vph)	24	24	1	6
Volume Right (vph)	1	43	60	20
Hadj (s)	0.07	-0.09	-0.09	-0.07
Departure Headway (s)	5.2	5.1	5.0	5.3
Degree Utilization, x	0.32	0.24	0.37	0.13
Capacity (veh/h)	646	649	665	609
Control Delay (s)	10.6	9.7	10.9	9.1
Approach Delay (s)	10.6	9.7	10.9	9.1
Approach LOS	B	A	B	A

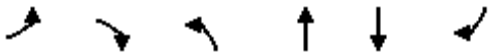
Intersection Summary				
Delay	10.3			
HCM Level of Service	B			
Intersection Capacity Utilization	30.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	695	392	4	0	93
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.88	0.92	0.92	0.92	0.86
Hourly flow rate (vph)	0	790	426	4	0	108
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1151			
pX, platoon unblocked	0.83				0.83	0.83
vC, conflicting volume	430				1218	428
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	219				1162	216
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	84
cM capacity (veh/h)	1128				180	688

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	790	430	108
Volume Left	0	0	0
Volume Right	0	4	108
cSH	1700	1700	688
Volume to Capacity	0.46	0.25	0.16
Queue Length 95th (ft)	0	0	14
Control Delay (s)	0.0	0.0	11.2
Lane LOS			B
Approach Delay (s)	0.0	0.0	11.2
Approach LOS			B

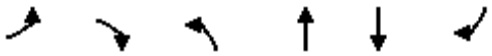
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	21	21	119	487	191	115
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.60	0.60	0.77	0.77	0.81	0.81
Hourly flow rate (vph)	35	35	155	632	236	142
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	1177	236	236			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1177	236	236			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	81	96	88			
cM capacity (veh/h)	184	801	1331			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	35	35	155	632	236	142
Volume Left	35	0	155	0	0	0
Volume Right	0	35	0	0	0	142
cSH	184	801	1331	1700	1700	1700
Volume to Capacity	0.19	0.04	0.12	0.37	0.14	0.08
Queue Length 95th (ft)	17	3	10	0	0	0
Control Delay (s)	29.1	9.7	8.1	0.0	0.0	0.0
Lane LOS	D	A	A			
Approach Delay (s)	19.4		1.6		0.0	
Approach LOS	C					

Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	35.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	42	17	5	458	160	14
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.70	0.70	0.77	0.77	0.85	0.85
Hourly flow rate (vph)	60	24	6	595	188	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		10				
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					452	
pX, platoon unblocked						
vC, conflicting volume	796	188	205			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	796	188	205			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	83	97	100			
cM capacity (veh/h)	354	854	1367			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	84	601	188	16
Volume Left	60	6	0	0
Volume Right	24	0	0	16
cSH	498	1367	1700	1700
Volume to Capacity	0.17	0.00	0.11	0.01
Queue Length 95th (ft)	15	0	0	0
Control Delay (s)	14.9	0.1	0.0	0.0
Lane LOS	B	A		
Approach Delay (s)	14.9	0.1	0.0	
Approach LOS	B			

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	38.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	186	3	0	186	2	2
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.85	0.85	0.60	0.60
Hourly flow rate (vph)	209	3	0	219	3	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)				669		
pX, platoon unblocked					0.93	
vC, conflicting volume			212		429	211
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			212		353	211
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)			1358		602	830

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	212	219	7
Volume Left	0	0	3
Volume Right	3	0	3
cSH	1700	1358	697
Volume to Capacity	0.12	0.00	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.0	10.2
Lane LOS			B
Approach Delay (s)	0.0	0.0	10.2
Approach LOS			B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	20.0%	ICU Level of Service	A
Analysis Period (min)	15		

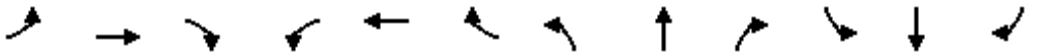
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	328	37	260	321	4	20	2	112	8	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0			6.0	6.0		6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		0.98		1.00	1.00			1.00	0.85		1.00	
Flt Protected		1.00		0.95	1.00			0.96	1.00		0.96	
Satd. Flow (prot)		1829		1770	1858			1781	1583		1785	
Flt Permitted		1.00		0.43	1.00			0.83	1.00		0.86	
Satd. Flow (perm)		1829		799	1858			1550	1583		1597	
Peak-hour factor, PHF	0.91	0.91	0.91	0.85	0.85	0.85	0.92	0.92	0.92	0.60	0.60	0.60
Adj. Flow (vph)	0	360	41	306	378	5	22	2	122	13	2	0
RTOR Reduction (vph)	0	7	0	0	1	0	0	0	75	0	0	0
Lane Group Flow (vph)	0	394	0	306	382	0	0	24	47	0	15	0
Heavy Vehicles (%)	2%	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	25%
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		25.1		25.1	25.1			22.6	22.6		22.6	
Effective Green, g (s)		25.1		25.1	25.1			22.6	22.6		22.6	
Actuated g/C Ratio		0.43		0.43	0.43			0.39	0.39		0.39	
Clearance Time (s)		5.0		5.0	5.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		782		342	794			597	609		615	
v/s Ratio Prot		0.22			0.21							
v/s Ratio Perm				c0.38				0.02	c0.03		0.01	
v/c Ratio		0.50		0.89	0.48			0.04	0.08		0.02	
Uniform Delay, d1		12.3		15.6	12.1			11.3	11.4		11.2	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		0.5		24.3	0.5			0.1	0.2		0.1	
Delay (s)		12.8		39.9	12.6			11.4	11.7		11.3	
Level of Service		B		D	B			B	B		B	
Approach Delay (s)		12.8			24.7			11.6			11.3	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	19.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	58.7	Sum of lost time (s)	11.0
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

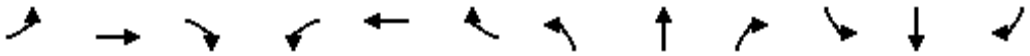
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	79	182	177	50	376	72	52	507	119	254	589	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.5	5.5	5.5		8.0	8.0	8.0	5.0	8.0	8.0
Lane Util. Factor	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	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1818		1770	1863	1583	1770	1863	1583
Flt Permitted	0.12	1.00	1.00	0.62	1.00		0.33	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)	223	1863	1583	1160	1818		621	1863	1583	169	1863	1583
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.86	0.86	0.86	0.92	0.92	0.92
Adj. Flow (vph)	94	217	211	60	448	86	60	590	138	276	640	55
RTOR Reduction (vph)	0	0	125	0	6	0	0	0	78	0	0	29
Lane Group Flow (vph)	94	217	86	60	528	0	60	590	60	276	640	26
Turn Type	pm+pt		Perm	Perm			Perm		Perm	pm+pt		Perm
Protected Phases	5	2			6			4		3	8	
Permitted Phases	2		2	6			4		4	8		8
Actuated Green, G (s)	48.5	48.5	48.5	39.5	39.5		39.1	39.1	39.1	57.1	57.1	57.1
Effective Green, g (s)	48.5	48.5	48.5	39.5	39.5		39.1	39.1	39.1	57.1	57.1	57.1
Actuated g/C Ratio	0.41	0.41	0.41	0.33	0.33		0.33	0.33	0.33	0.48	0.48	0.48
Clearance Time (s)	5.0	5.5	5.5	5.5	5.5		8.0	8.0	8.0	5.0	8.0	8.0
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)	143	759	645	385	603		204	612	520	256	893	759
v/s Ratio Prot	c0.02	0.12			c0.29			0.32		c0.12	0.34	
v/s Ratio Perm	0.25		0.05	0.05			0.10		0.04	c0.40		0.02
v/c Ratio	0.66	0.29	0.13	0.16	0.88		0.29	0.96	0.12	1.08	0.72	0.03
Uniform Delay, d1	27.3	23.7	22.1	28.0	37.5		29.7	39.3	27.9	35.3	24.6	16.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.4	0.9	0.4	0.9	16.3		0.8	27.4	0.1	78.6	2.8	0.0
Delay (s)	37.7	24.6	22.6	28.9	53.8		30.5	66.7	28.0	113.9	27.4	16.4
Level of Service	D	C	C	C	D		C	E	C	F	C	B
Approach Delay (s)		26.1			51.3			57.2			51.3	
Approach LOS		C			D			E			D	

Intersection Summary			
HCM Average Control Delay	48.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	119.1	Sum of lost time (s)	15.5
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	172	504	39	20	580	89	47	94	2	74	265	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.8		5.7	5.8	5.8	6.3	6.3		6.3	6.3	6.3
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3501		1770	3539	1583	1770	1857		1770	1863	1583
Flt Permitted	0.18	1.00		0.43	1.00	1.00	0.52	1.00		0.69	1.00	1.00
Satd. Flow (perm)	339	3501		800	3539	1583	965	1857		1285	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.89	0.89	0.89	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	187	548	42	22	652	100	51	102	2	80	288	32
RTOR Reduction (vph)	0	5	0	0	0	62	0	1	0	0	0	18
Lane Group Flow (vph)	187	585	0	22	652	38	51	103	0	80	288	14
Turn Type	pm+pt			pm+pt		Perm	Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	49.2	40.9		31.3	28.7	28.7	48.0	48.0		48.0	48.0	48.0
Effective Green, g (s)	49.2	40.9		31.3	28.7	28.7	48.0	48.0		48.0	48.0	48.0
Actuated g/C Ratio	0.45	0.37		0.29	0.26	0.26	0.44	0.44		0.44	0.44	0.44
Clearance Time (s)	5.7	5.8		5.7	5.8	5.8	6.3	6.3		6.3	6.3	6.3
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)	346	1310		252	929	416	424	816		564	818	695
v/s Ratio Prot	c0.07	0.17		0.00	c0.18			0.06			c0.15	
v/s Ratio Perm	0.17			0.02		0.02	0.05			0.06		0.01
v/c Ratio	0.54	0.45		0.09	0.70	0.09	0.12	0.13		0.14	0.35	0.02
Uniform Delay, d1	20.6	25.7		28.2	36.4	30.4	18.1	18.2		18.3	20.3	17.3
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.7	0.2		0.2	2.4	0.1	0.6	0.3		0.5	1.2	0.1
Delay (s)	22.4	25.9		28.3	38.9	30.5	18.7	18.5		18.9	21.5	17.4
Level of Service	C	C		C	D	C	B	B		B	C	B
Approach Delay (s)		25.1			37.5			18.6			20.7	
Approach LOS		C			D			B			C	

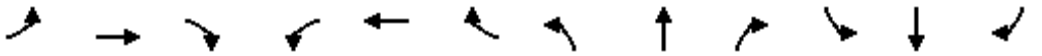
Intersection Summary			
HCM Average Control Delay	28.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	109.3	Sum of lost time (s)	17.8
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	190	52	77	189	127	27	205	40	138	488	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.8		5.7	5.7	5.7		5.9			5.9	
Lane Util. Factor		1.00		1.00	1.00	1.00		1.00			1.00	
Frt		0.97		1.00	1.00	0.85		0.98			0.99	
Flt Protected		1.00		0.95	1.00	1.00		1.00			0.99	
Satd. Flow (prot)		1804		1770	1845	1583		1802			1827	
Flt Permitted		0.97		0.33	1.00	1.00		0.89			0.84	
Satd. Flow (perm)		1749		610	1845	1583		1618			1547	
Peak-hour factor, PHF	0.91	0.91	0.91	0.88	0.88	0.88	0.78	0.78	0.78	0.88	0.88	0.88
Adj. Flow (vph)	19	209	57	88	215	144	35	263	51	157	555	44
RTOR Reduction (vph)	0	10	0	0	0	0	0	4	0	0	2	0
Lane Group Flow (vph)	0	275	0	88	215	144	0	345	0	0	754	0
Heavy Vehicles (%)	4%	2%	2%	2%	3%	2%	3%	3%	2%	2%	2%	4%
Turn Type	Perm			Perm		Perm	Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		19.1		19.2	19.2	19.2		65.2			65.2	
Effective Green, g (s)		19.1		19.2	19.2	19.2		65.2			65.2	
Actuated g/C Ratio		0.20		0.20	0.20	0.20		0.68			0.68	
Clearance Time (s)		5.8		5.7	5.7	5.7		5.9			5.9	
Vehicle Extension (s)		3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)		348		122	369	317		1099			1051	
v/s Ratio Prot					0.12							
v/s Ratio Perm		c0.16		0.14		0.09		0.21			c0.49	
v/c Ratio		0.79		0.72	0.58	0.45		0.31			0.72	
Uniform Delay, d1		36.6		35.9	34.8	33.8		6.3			9.6	
Progression Factor		1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2		11.6		18.9	2.3	1.0		0.7			2.4	
Delay (s)		48.2		54.8	37.1	34.8		7.0			12.0	
Level of Service		D		D	D	C		A			B	
Approach Delay (s)		48.2			39.8			7.0			12.0	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM Average Control Delay	23.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	96.0	Sum of lost time (s)	11.7
Intersection Capacity Utilization	93.9%	ICU Level of Service	F
Analysis Period (min)	15		

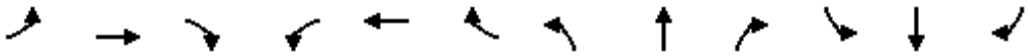
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	193	277	155	377	222	217	157	1111	368	300	1824	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.91	1.00	1.00	0.91	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	3539	1583	1770	3539	1583	1770	5036	1583	1770	5085	1568
Flt Permitted	0.60	1.00	1.00	0.21	1.00	1.00	0.07	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)	1118	3539	1583	399	3539	1583	125	5036	1583	210	5085	1568
Peak-hour factor, PHF	0.89	0.89	0.89	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	217	311	174	414	244	238	171	1208	400	326	1983	176
RTOR Reduction (vph)	0	0	149	0	0	190	0	0	251	0	0	97
Lane Group Flow (vph)	217	311	25	414	244	48	171	1208	149	326	1983	79
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	3%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	34.5	16.4	16.4	56.1	32.0	32.0	72.4	59.7	59.7	90.9	72.2	72.2
Effective Green, g (s)	34.5	16.4	16.4	56.1	32.0	32.0	72.4	59.7	59.7	90.9	72.2	72.2
Actuated g/C Ratio	0.22	0.10	0.10	0.35	0.20	0.20	0.45	0.37	0.37	0.57	0.45	0.45
Clearance Time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5
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)	315	363	162	429	708	317	187	1879	591	365	2295	708
v/s Ratio Prot	0.08	0.09		c0.20	0.07		0.07	0.24		c0.14	c0.39	
v/s Ratio Perm	0.07		0.02	c0.14		0.03	0.34		0.09	c0.37		0.05
v/c Ratio	0.69	0.86	0.15	0.97	0.34	0.15	0.91	0.64	0.25	0.89	0.86	0.11
Uniform Delay, d1	56.1	70.6	65.5	45.7	55.0	52.8	44.9	41.4	34.7	40.2	39.5	25.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.2	17.7	0.4	34.2	0.3	0.2	42.1	1.7	1.0	23.0	4.6	0.3
Delay (s)	62.3	88.3	65.9	79.9	55.3	53.0	87.0	43.1	35.7	63.1	44.1	25.7
Level of Service	E	F	E	E	E	D	F	D	D	E	D	C
Approach Delay (s)		74.7			66.0			45.6			45.3	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM Average Control Delay	52.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	93.3%	ICU Level of Service	F
Analysis Period (min)	15		

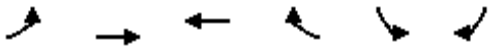
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	13	144	1	33	169	31	1	106	39	65	198	17
Peak Hour Factor	0.76	0.76	0.76	0.86	0.86	0.86	0.81	0.81	0.81	0.82	0.82	0.82
Hourly flow rate (vph)	17	189	1	38	197	36	1	131	48	79	241	21

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	208	271	180	341
Volume Left (vph)	17	38	1	79
Volume Right (vph)	1	36	48	21
Hadj (s)	0.06	-0.02	-0.11	0.05
Departure Headway (s)	6.1	5.9	5.9	5.7
Degree Utilization, x	0.35	0.44	0.30	0.55
Capacity (veh/h)	532	562	535	587
Control Delay (s)	12.3	13.4	11.4	15.4
Approach Delay (s)	12.3	13.4	11.4	15.4
Approach LOS	B	B	B	C

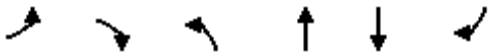
Intersection Summary				
Delay	13.5			
HCM Level of Service	B			
Intersection Capacity Utilization	52.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	717	689	0	0	230
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.91	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	788	749	0	0	250
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1151			
pX, platoon unblocked	0.75				0.75	0.75
vC, conflicting volume	749				1537	749
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	497				1549	497
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	42
cM capacity (veh/h)	799				94	429

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	788	749	250
Volume Left	0	0	0
Volume Right	0	0	250
cSH	1700	1700	429
Volume to Capacity	0.46	0.44	0.58
Queue Length 95th (ft)	0	0	90
Control Delay (s)	0.0	0.0	24.5
Lane LOS			C
Approach Delay (s)	0.0	0.0	24.5
Approach LOS			C

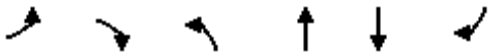
Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	39	68	38	345	548	47
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.67	0.67	0.82	0.82	0.88	0.88
Hourly flow rate (vph)	58	101	46	421	623	53
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1136	623	623			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1136	623	623			
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	79	95			
cM capacity (veh/h)	210	484	958			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	58	101	46	421	623	53
Volume Left	58	0	46	0	0	0
Volume Right	0	101	0	0	0	53
cSH	210	484	958	1700	1700	1700
Volume to Capacity	0.28	0.21	0.05	0.25	0.37	0.03
Queue Length 95th (ft)	27	20	4	0	0	0
Control Delay (s)	28.6	14.4	8.9	0.0	0.0	0.0
Lane LOS	D	B	A			
Approach Delay (s)	19.6		0.9		0.0	
Approach LOS	C					

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	30	14	18	242	566	51
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.79	0.83	0.83	0.79	0.79
Hourly flow rate (vph)	33	18	22	292	716	65
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		10				
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					452	
pX, platoon unblocked	0.84	0.84	0.84			
vC, conflicting volume	1051	716	781			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	966	567	644			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	86	96	97			
cM capacity (veh/h)	231	439	790			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	50	313	716	65
Volume Left	33	22	0	0
Volume Right	18	0	0	65
cSH	356	790	1700	1700
Volume to Capacity	0.14	0.03	0.42	0.04
Queue Length 95th (ft)	12	2	0	0
Control Delay (s)	19.8	1.0	0.0	0.0
Lane LOS	C	A		
Approach Delay (s)	19.8	1.0	0.0	
Approach LOS	C			

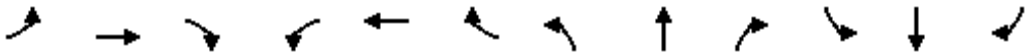
Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	39.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	259	5	0	255	2	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.92	0.92	0.60	0.60
Hourly flow rate (vph)	291	6	0	277	3	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)				669		
pX, platoon unblocked					0.91	
vC, conflicting volume			297		571	294
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			297		476	294
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)			1265		497	745

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	297	277	3
Volume Left	0	0	3
Volume Right	6	0	0
cSH	1700	1265	497
Volume to Capacity	0.17	0.00	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.0	12.3
Lane LOS			B
Approach Delay (s)	0.0	0.0	12.3
Approach LOS			B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	23.9%	ICU Level of Service	A
Analysis Period (min)	15		

APPENDIX C
FUTURE NO-BUILD CAPACITY ANALYSES



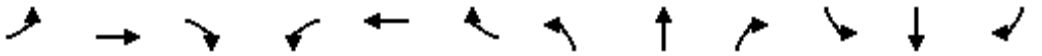
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	422	10	90	270	9	37	6	256	1	2	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			6.0	6.0		6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	1.00		1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.99	
Satd. Flow (prot)	1770	1855		1770	1852			1786	1583		1659	
Flt Permitted	0.48	1.00		0.34	1.00			0.80	1.00		0.96	
Satd. Flow (perm)	890	1855		639	1852			1489	1583		1622	
Peak-hour factor, PHF	0.79	0.79	0.79	0.75	0.75	0.75	0.84	0.84	0.84	0.60	0.60	0.60
Adj. Flow (vph)	3	534	13	120	360	12	44	7	305	2	3	2
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	204	0	1	0
Lane Group Flow (vph)	3	546	0	120	371	0	0	51	101	0	6	0
Heavy Vehicles (%)	2%	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	25%
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	56.0	56.0		56.0	56.0			33.0	33.0		33.0	
Effective Green, g (s)	56.0	56.0		56.0	56.0			33.0	33.0		33.0	
Actuated g/C Ratio	0.56	0.56		0.56	0.56			0.33	0.33		0.33	
Clearance Time (s)	5.0	5.0		5.0	5.0			6.0	6.0		6.0	
Lane Grp Cap (vph)	498	1039		358	1037			491	522		535	
v/s Ratio Prot		c0.29			0.20							
v/s Ratio Perm	0.00			0.19				0.03	c0.06		0.00	
v/c Ratio	0.01	0.53		0.34	0.36			0.10	0.19		0.01	
Uniform Delay, d1	9.7	13.7		11.9	12.1			23.2	24.0		22.5	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.0	1.9		2.5	1.0			0.4	0.8		0.0	
Delay (s)	9.7	15.6		14.4	13.1			23.7	24.8		22.6	
Level of Service	A	B		B	B			C	C		C	
Approach Delay (s)		15.6			13.4			24.6			22.6	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	17.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	205	347	259	20	130	60	111	574	139	111	464	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.5	5.5	5.5		8.0	8.0	8.0	5.0	8.0	8.0
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	1.00	0.85	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	1845	1509	1770	1635		1770	1810	1538	1736	1845	1583
Flt Permitted	0.37	1.00	1.00	0.52	1.00		0.35	1.00	1.00	0.10	1.00	1.00
Satd. Flow (perm)	668	1845	1509	960	1635		652	1810	1538	184	1845	1583
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82	0.84	0.84	0.84	0.79	0.79	0.79
Adj. Flow (vph)	250	423	316	24	159	73	132	683	165	141	587	43
RTOR Reduction (vph)	0	0	85	0	11	0	0	0	69	0	0	21
Lane Group Flow (vph)	250	423	231	24	221	0	132	683	96	141	587	22
Heavy Vehicles (%)	5%	3%	7%	2%	12%	8%	2%	5%	5%	4%	3%	2%
Turn Type	pm+pt		Perm	Perm			Perm		Perm	pm+pt		Perm
Protected Phases	5	2			6			4		3	8	
Permitted Phases	2		2	6			4		4	8		8
Actuated Green, G (s)	54.9	54.9	54.9	33.0	33.0		57.3	57.3	57.3	70.4	70.4	70.4
Effective Green, g (s)	54.9	54.9	54.9	33.0	33.0		57.3	57.3	57.3	70.4	70.4	70.4
Actuated g/C Ratio	0.40	0.40	0.40	0.24	0.24		0.41	0.41	0.41	0.51	0.51	0.51
Clearance Time (s)	5.0	5.5	5.5	5.5	5.5		8.0	8.0	8.0	5.0	8.0	8.0
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)	392	730	597	228	389		269	747	635	184	936	803
v/s Ratio Prot	c0.08	0.23			0.14			c0.38		0.04	c0.32	
v/s Ratio Perm	c0.17		0.15	0.02			0.20		0.06	0.34		0.01
v/c Ratio	0.64	0.58	0.39	0.11	0.57		0.49	0.91	0.15	0.77	0.63	0.03
Uniform Delay, d1	30.7	32.9	29.9	41.4	46.6		30.0	38.4	25.5	28.1	24.7	17.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.4	3.3	1.9	0.9	5.9		1.4	15.7	0.1	17.2	1.3	0.0
Delay (s)	34.1	36.2	31.8	42.3	52.6		31.4	54.1	25.6	45.3	26.0	17.1
Level of Service	C	D	C	D	D		C	D	C	D	C	B
Approach Delay (s)		34.3			51.6			46.2			29.1	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	38.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	138.8	Sum of lost time (s)	21.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		

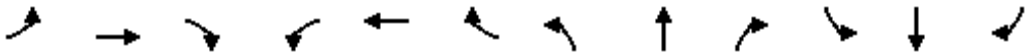
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	246	531	32	13	415	107	20	134	5	19	85	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.8		5.7	5.8	5.8	6.3	6.3		6.3	6.3	6.3
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3441		1770	3505	1583	1770	1853		1770	1845	1324
Flt Permitted	0.30	1.00		0.41	1.00	1.00	0.69	1.00		0.65	1.00	1.00
Satd. Flow (perm)	561	3441		772	3505	1583	1278	1853		1211	1845	1324
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.82	0.82	0.82	0.77	0.77	0.77
Adj. Flow (vph)	273	590	36	14	451	116	24	163	6	25	110	13
RTOR Reduction (vph)	0	5	0	0	0	89	0	1	0	0	0	8
Lane Group Flow (vph)	273	621	0	14	451	27	24	168	0	25	110	5
Heavy Vehicles (%)	2%	4%	4%	2%	3%	2%	2%	2%	2%	2%	3%	22%
Turn Type	pm+pt			pm+pt		Perm	Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	43.7	36.8		22.2	21.0	21.0	34.0	34.0		34.0	34.0	34.0
Effective Green, g (s)	43.7	36.8		22.2	21.0	21.0	34.0	34.0		34.0	34.0	34.0
Actuated g/C Ratio	0.49	0.41		0.25	0.23	0.23	0.38	0.38		0.38	0.38	0.38
Clearance Time (s)	5.7	5.8		5.7	5.8	5.8	6.3	6.3		6.3	6.3	6.3
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)	502	1410		204	820	370	484	702		459	699	501
v/s Ratio Prot	c0.10	0.18		0.00	0.13			c0.09			0.06	
v/s Ratio Perm	c0.16			0.02		0.02	0.02			0.02		0.00
v/c Ratio	0.54	0.44		0.07	0.55	0.07	0.05	0.24		0.05	0.16	0.01
Uniform Delay, d1	14.8	19.1		25.6	30.2	26.8	17.7	19.1		17.7	18.4	17.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.2	0.2		0.1	0.8	0.1	0.2	0.8		0.2	0.5	0.0
Delay (s)	16.0	19.3		25.8	31.0	26.9	17.9	19.9		17.9	18.9	17.4
Level of Service	B	B		C	C	C	B	B		B	B	B
Approach Delay (s)		18.3			30.1			19.6			18.6	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	89.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		

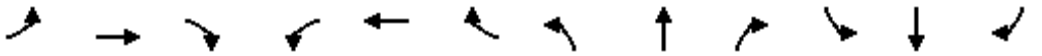
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	140	22	30	138	233	32	434	34	56	122	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	5.8		5.7	5.7		5.9	5.9		5.6	5.9	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.91		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	3438		1770	3159		1770	3467		1626	3462	
Flt Permitted	0.30	1.00		0.62	1.00		0.64	1.00		0.38	1.00	
Satd. Flow (perm)	542	3438		1152	3159		1187	3467		643	3462	
Peak-hour factor, PHF	0.76	0.76	0.76	0.74	0.74	0.74	0.82	0.82	0.82	0.76	0.76	0.76
Adj. Flow (vph)	34	184	29	41	186	315	39	529	41	74	161	21
RTOR Reduction (vph)	0	13	0	0	0	0	0	4	0	0	6	0
Lane Group Flow (vph)	34	200	0	41	501	0	39	566	0	74	176	0
Heavy Vehicles (%)	4%	3%	2%	2%	6%	2%	2%	3%	3%	11%	2%	6%
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.5	20.5		20.6	20.6		53.9	53.9		65.4	65.4	
Effective Green, g (s)	20.5	20.5		20.6	20.6		53.9	53.9		65.4	65.4	
Actuated g/C Ratio	0.21	0.21		0.21	0.21		0.55	0.55		0.67	0.67	
Clearance Time (s)	5.8	5.8		5.7	5.7		5.9	5.9		5.6	5.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	114	722		243	667		656	1915		490	2320	
v/s Ratio Prot		0.06			c0.16			c0.16		c0.01	0.05	
v/s Ratio Perm	0.06			0.04			0.03			0.09		
v/c Ratio	0.30	0.28		0.17	0.93dr		0.06	0.30		0.15	0.08	
Uniform Delay, d1	32.5	32.3		31.5	36.1		10.1	11.7		6.0	5.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	0.2		0.3	4.8		0.2	0.4		0.1	0.1	
Delay (s)	34.0	32.5		31.8	40.9		10.3	12.1		6.1	5.7	
Level of Service	C	C		C	D		B	B		A	A	
Approach Delay (s)		32.7			40.2			12.0			5.8	
Approach LOS		C			D			B			A	

Intersection Summary			
HCM Average Control Delay	23.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	97.6	Sum of lost time (s)	17.2
Intersection Capacity Utilization	50.2%	ICU Level of Service	A
Analysis Period (min)	15		

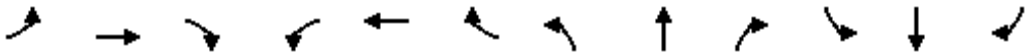
dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	144	143	51	301	203	240	249	1637	310	173	752	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.91	1.00	1.00	0.91	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)	1752	3539	1482	1719	3471	1583	1770	5036	1568	1770	4988	1495
Flt Permitted	0.60	1.00	1.00	0.40	1.00	1.00	0.27	1.00	1.00	0.05	1.00	1.00
Satd. Flow (perm)	1109	3539	1482	725	3471	1583	505	5036	1568	100	4988	1495
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.87	0.87	0.87	0.89	0.89	0.89
Adj. Flow (vph)	171	170	61	358	242	286	286	1882	356	194	845	96
RTOR Reduction (vph)	0	0	56	0	0	218	0	0	141	0	0	51
Lane Group Flow (vph)	171	170	5	358	242	68	286	1882	215	194	845	45
Heavy Vehicles (%)	3%	2%	9%	5%	4%	2%	2%	3%	3%	2%	4%	8%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	28.9	13.0	13.0	49.0	27.1	27.1	92.5	74.8	74.8	91.5	74.3	74.3
Effective Green, g (s)	28.9	13.0	13.0	49.0	27.1	27.1	92.5	74.8	74.8	91.5	74.3	74.3
Actuated g/C Ratio	0.18	0.08	0.08	0.31	0.17	0.17	0.58	0.47	0.47	0.57	0.46	0.46
Clearance Time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5
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)	264	288	120	408	588	268	432	2354	733	237	2316	694
v/s Ratio Prot	0.06	0.05		c0.16	0.07		0.07	0.37		c0.09	0.17	
v/s Ratio Perm	0.05		0.00	c0.10		0.04	0.31		0.14	c0.38		0.03
v/c Ratio	0.65	0.59	0.04	0.88	0.41	0.26	0.66	0.80	0.29	0.82	0.36	0.06
Uniform Delay, d1	59.5	70.9	67.8	48.9	59.3	57.7	17.8	36.2	26.3	48.1	27.6	23.7
Progression 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
Incremental Delay, d2	5.4	3.2	0.1	18.7	0.5	0.5	3.8	3.0	1.0	19.3	0.4	0.2
Delay (s)	64.9	74.2	67.9	67.5	59.8	58.2	21.6	39.2	27.3	67.4	28.1	23.8
Level of Service	E	E	E	E	E	E	C	D	C	E	C	C
Approach Delay (s)		69.3			62.4			35.5			34.4	
Approach LOS		E			E			D			C	

Intersection Summary			
HCM Average Control Delay	42.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		

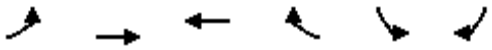
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	21	174	1	24	108	44	1	195	58	6	63	20
Peak Hour Factor	0.75	0.75	0.75	0.88	0.88	0.88	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	28	232	1	27	123	50	1	235	70	7	76	24

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	261	200	306	107
Volume Left (vph)	28	27	1	7
Volume Right (vph)	1	50	70	24
Hadj (s)	0.07	-0.09	-0.09	-0.07
Departure Headway (s)	5.5	5.4	5.3	5.6
Degree Utilization, x	0.40	0.30	0.45	0.17
Capacity (veh/h)	612	608	632	560
Control Delay (s)	12.0	10.7	12.5	9.8
Approach Delay (s)	12.0	10.7	12.5	9.8
Approach LOS	B	B	B	A

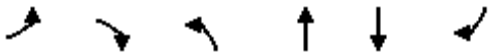
Intersection Summary				
Delay	11.6			
HCM Level of Service	B			
Intersection Capacity Utilization	34.6%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	806	454	5	0	108
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.88	0.92	0.92	0.92	0.86
Hourly flow rate (vph)	0	916	493	5	0	126
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1151			
pX, platoon unblocked	0.81				0.81	0.81
vC, conflicting volume	499				1412	496
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	265				1392	261
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	80
cM capacity (veh/h)	1053				127	630

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	916	499	126
Volume Left	0	0	0
Volume Right	0	5	126
cSH	1700	1700	630
Volume to Capacity	0.54	0.29	0.20
Queue Length 95th (ft)	0	0	18
Control Delay (s)	0.0	0.0	12.1
Lane LOS			B
Approach Delay (s)	0.0	0.0	12.1
Approach LOS			B

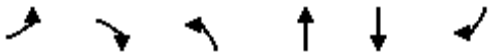
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	21	21	119	565	221	115
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.60	0.60	0.77	0.77	0.81	0.81
Hourly flow rate (vph)	35	35	155	734	273	142
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	949	136	273			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	949	136	273			
tC, single (s)	6.9	7.0	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.3	2.2			
p0 queue free %	84	96	88			
cM capacity (veh/h)	223	884	1287			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	35	35	155	367	367	136	136	142
Volume Left	35	0	155	0	0	0	0	0
Volume Right	0	35	0	0	0	0	0	142
cSH	223	884	1287	1700	1700	1700	1700	1700
Volume to Capacity	0.16	0.04	0.12	0.22	0.22	0.08	0.08	0.08
Queue Length 95th (ft)	14	3	10	0	0	0	0	0
Control Delay (s)	24.1	9.2	8.2	0.0	0.0	0.0	0.0	0.0
Lane LOS	C	A	A					
Approach Delay (s)	16.7		1.4			0.0		
Approach LOS	C							

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	26.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	42	17	5	537	188	14
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.70	0.70	0.77	0.77	0.85	0.85
Hourly flow rate (vph)	60	24	6	697	221	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		10				
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					452	
pX, platoon unblocked						
vC, conflicting volume	591	119	238			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	591	119	238			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	86	97	100			
cM capacity (veh/h)	436	910	1326			

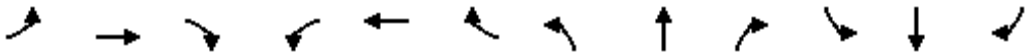
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	84	239	465	147	90
Volume Left	60	6	0	0	0
Volume Right	24	0	0	0	16
cSH	612	1326	1700	1700	1700
Volume to Capacity	0.14	0.00	0.27	0.09	0.05
Queue Length 95th (ft)	12	0	0	0	0
Control Delay (s)	13.0	0.3	0.0	0.0	0.0
Lane LOS	B	A			
Approach Delay (s)	13.0	0.1		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	28.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	216	3	0	216	2	2
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.85	0.85	0.60	0.60
Hourly flow rate (vph)	243	3	0	254	3	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)				669		
pX, platoon unblocked						
vC, conflicting volume			246		371	123
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			246		371	123
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	100
cM capacity (veh/h)			1317		602	905

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	162	84	85	169	7
Volume Left	0	0	0	0	3
Volume Right	0	3	0	0	3
cSH	1700	1700	1317	1700	723
Volume to Capacity	0.10	0.05	0.00	0.10	0.01
Queue Length 95th (ft)	0	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	0.0	10.0
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.0
Approach LOS					B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	16.1%	ICU Level of Service	A
Analysis Period (min)	15		



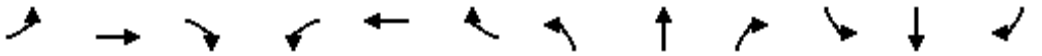
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	380	43	301	372	5	23	2	130	9	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0			6.0	6.0		6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		0.98		1.00	1.00			1.00	0.85		1.00	
Flt Protected		1.00		0.95	1.00			0.96	1.00		0.96	
Satd. Flow (prot)		1829		1770	1858			1780	1583		1784	
Flt Permitted		1.00		0.40	1.00			0.81	1.00		0.84	
Satd. Flow (perm)		1829		751	1858			1514	1583		1563	
Peak-hour factor, PHF	0.91	0.91	0.91	0.85	0.85	0.85	0.92	0.92	0.92	0.60	0.60	0.60
Adj. Flow (vph)	0	418	47	354	438	6	25	2	141	15	2	0
RTOR Reduction (vph)	0	6	0	0	1	0	0	0	95	0	0	0
Lane Group Flow (vph)	0	459	0	354	443	0	0	27	46	0	17	0
Heavy Vehicles (%)	2%	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	25%
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		32.6		32.6	32.6			20.9	20.9		20.9	
Effective Green, g (s)		32.6		32.6	32.6			20.9	20.9		20.9	
Actuated g/C Ratio		0.51		0.51	0.51			0.32	0.32		0.32	
Clearance Time (s)		5.0		5.0	5.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		924		380	939			491	513		506	
v/s Ratio Prot		0.25			0.24							
v/s Ratio Perm				c0.47				0.02	c0.03		0.01	
v/c Ratio		0.50		0.93	0.47			0.05	0.09		0.03	
Uniform Delay, d1		10.5		14.9	10.4			15.0	15.2		14.9	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		0.4		29.3	0.4			0.2	0.3		0.1	
Delay (s)		11.0		44.2	10.7			15.2	15.5		15.0	
Level of Service		B		D	B			B	B		B	
Approach Delay (s)		11.0			25.6			15.5			15.0	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	64.5	Sum of lost time (s)	11.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

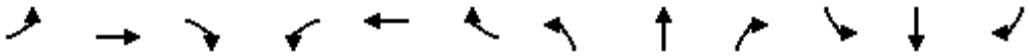
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	92	211	205	58	436	83	60	588	138	294	683	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.5	5.5	5.5		8.0	8.0	8.0	5.0	8.0	8.0
Lane Util. Factor	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	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1818		1770	1863	1583	1770	1863	1583
Flt Permitted	0.09	1.00	1.00	0.60	1.00		0.24	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	160	1863	1583	1124	1818		445	1863	1583	152	1863	1583
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.86	0.86	0.86	0.92	0.92	0.92
Adj. Flow (vph)	110	251	244	69	519	99	70	684	160	320	742	64
RTOR Reduction (vph)	0	0	135	0	5	0	0	0	71	0	0	27
Lane Group Flow (vph)	110	251	109	69	613	0	70	684	89	320	742	38
Turn Type	pm+pt		Perm	Perm			Perm		Perm	pm+pt		Perm
Protected Phases	5	2			6			4		3	8	
Permitted Phases	2		2	6			4		4	8		8
Actuated Green, G (s)	51.5	51.5	51.5	41.5	41.5		44.0	44.0	44.0	65.0	65.0	65.0
Effective Green, g (s)	51.5	51.5	51.5	41.5	41.5		44.0	44.0	44.0	65.0	65.0	65.0
Actuated g/C Ratio	0.40	0.40	0.40	0.32	0.32		0.34	0.34	0.34	0.50	0.50	0.50
Clearance Time (s)	5.0	5.5	5.5	5.5	5.5		8.0	8.0	8.0	5.0	8.0	8.0
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)	125	738	627	359	580		151	631	536	275	932	792
v/s Ratio Prot	c0.03	0.13			c0.34			0.37		c0.14	0.40	
v/s Ratio Perm	0.31		0.07	0.06			0.16		0.06	c0.44		0.02
v/c Ratio	0.88	0.34	0.17	0.19	1.06		0.46	1.08	0.17	1.16	0.80	0.05
Uniform Delay, d1	33.7	27.4	25.5	32.1	44.2		33.7	43.0	30.1	41.4	27.0	16.6
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	46.1	1.3	0.6	1.2	53.1		2.2	60.7	0.1	106.0	4.8	0.0
Delay (s)	79.8	28.6	26.1	33.3	97.3		36.0	103.7	30.3	147.3	31.8	16.7
Level of Service	E	C	C	C	F		D	F	C	F	C	B
Approach Delay (s)		36.9			90.9			85.7			63.8	
Approach LOS		D			F			F			E	

Intersection Summary			
HCM Average Control Delay	70.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	99.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	199	584	45	23	672	103	54	109	2	86	307	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.8		5.7	5.8	5.8	6.3	6.3		6.3	6.3	6.3
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3501		1770	3539	1583	1770	1858		1770	1863	1583
Flt Permitted	0.14	1.00		0.39	1.00	1.00	0.46	1.00		0.68	1.00	1.00
Satd. Flow (perm)	265	3501		729	3539	1583	849	1858		1266	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.89	0.89	0.89	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	216	635	49	26	755	116	59	118	2	93	334	37
RTOR Reduction (vph)	0	5	0	0	0	60	0	1	0	0	0	21
Lane Group Flow (vph)	216	679	0	26	755	56	59	119	0	93	334	16
Turn Type	pm+pt			pm+pt		Perm	Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	54.6	45.9		35.4	32.4	32.4	48.1	48.1		48.1	48.1	48.1
Effective Green, g (s)	54.6	45.9		35.4	32.4	32.4	48.1	48.1		48.1	48.1	48.1
Actuated g/C Ratio	0.48	0.40		0.31	0.28	0.28	0.42	0.42		0.42	0.42	0.42
Clearance Time (s)	5.7	5.8		5.7	5.8	5.8	6.3	6.3		6.3	6.3	6.3
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)	342	1400		252	999	447	356	778		530	781	663
v/s Ratio Prot	c0.09	0.19		0.00	c0.21			0.06			c0.18	
v/s Ratio Perm	0.21			0.03		0.04	0.07			0.07		0.01
v/c Ratio	0.63	0.49		0.10	0.76	0.12	0.17	0.15		0.18	0.43	0.02
Uniform Delay, d1	21.4	25.7		27.9	37.6	30.7	20.8	20.7		20.9	23.6	19.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.8	0.3		0.2	3.3	0.1	1.0	0.4		0.7	1.7	0.1
Delay (s)	25.2	25.9		28.0	40.9	30.8	21.8	21.1		21.6	25.3	19.6
Level of Service	C	C		C	D	C	C	C		C	C	B
Approach Delay (s)		25.7			39.2			21.4			24.1	
Approach LOS		C			D			C			C	

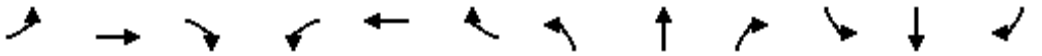
Intersection Summary			
HCM Average Control Delay	30.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	114.8	Sum of lost time (s)	17.8
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	220	60	89	219	147	31	238	46	160	566	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	5.8		5.7	5.7		5.9	5.9		5.6	5.9	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	0.94		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	3425		1770	3307		1752	3425		1770	3495	
Flt Permitted	0.39	1.00		0.53	1.00		0.39	1.00		0.47	1.00	
Satd. Flow (perm)	713	3425		991	3307		715	3425		878	3495	
Peak-hour factor, PHF	0.91	0.91	0.91	0.88	0.88	0.88	0.78	0.78	0.78	0.88	0.88	0.88
Adj. Flow (vph)	22	242	66	101	249	167	40	305	59	182	643	51
RTOR Reduction (vph)	0	30	0	0	0	0	0	12	0	0	4	0
Lane Group Flow (vph)	22	278	0	101	416	0	40	352	0	182	690	0
Heavy Vehicles (%)	4%	2%	2%	2%	3%	2%	3%	3%	2%	2%	2%	4%
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	15.9	15.9		16.0	16.0		41.8	41.8		56.2	56.2	
Effective Green, g (s)	15.9	15.9		16.0	16.0		41.8	41.8		56.2	56.2	
Actuated g/C Ratio	0.19	0.19		0.19	0.19		0.50	0.50		0.67	0.67	
Clearance Time (s)	5.8	5.8		5.7	5.7		5.9	5.9		5.6	5.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	135	650		189	631		357	1708		682	2344	
v/s Ratio Prot		0.08			c0.13			0.10		0.03	c0.20	
v/s Ratio Perm	0.03			0.10			0.06			0.15		
v/c Ratio	0.16	0.43		0.53	0.66		0.11	0.21		0.27	0.29	
Uniform Delay, d1	28.4	29.9		30.5	31.4		11.1	11.7		5.3	5.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	0.5		2.9	2.5		0.6	0.3		0.2	0.3	
Delay (s)	29.0	30.4		33.4	33.9		11.8	12.0		5.5	6.0	
Level of Service	C	C		C	C		B	B		A	A	
Approach Delay (s)		30.3			33.8			12.0			5.9	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	83.8	Sum of lost time (s)	11.6
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		

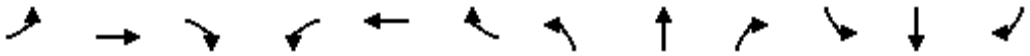
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	224	584	180	437	257	252	182	1288	427	348	2115	188
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.91	1.00	1.00	0.91	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	3539	1583	1770	3539	1583	1770	5036	1583	1770	5085	1568
Flt Permitted	0.58	1.00	1.00	0.12	1.00	1.00	0.08	1.00	1.00	0.07	1.00	1.00
Satd. Flow (perm)	1078	3539	1583	229	3539	1583	154	5036	1583	137	5085	1568
Peak-hour factor, PHF	0.89	0.89	0.89	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	252	656	202	480	282	277	198	1400	464	378	2299	204
RTOR Reduction (vph)	0	0	99	0	0	208	0	0	265	0	0	114
Lane Group Flow (vph)	252	656	103	480	282	69	198	1400	199	378	2299	90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	3%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	45.1	26.5	26.5	64.5	39.9	39.9	57.5	48.5	48.5	82.5	67.5	67.5
Effective Green, g (s)	45.1	26.5	26.5	64.5	39.9	39.9	57.5	48.5	48.5	82.5	67.5	67.5
Actuated g/C Ratio	0.28	0.17	0.17	0.40	0.25	0.25	0.36	0.30	0.30	0.52	0.42	0.42
Clearance Time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5
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)	384	586	262	401	883	395	146	1527	480	356	2145	662
v/s Ratio Prot	0.08	0.19		c0.24	0.08		0.08	0.28		c0.19	c0.45	
v/s Ratio Perm	0.11		0.06	c0.24		0.04	c0.41		0.13	0.36		0.06
v/c Ratio	0.66	1.12	0.39	1.20	0.32	0.17	1.36	0.92	0.41	1.06	1.07	0.14
Uniform Delay, d1	48.1	66.8	59.6	50.8	49.0	47.1	43.2	53.8	44.4	53.3	46.2	28.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.0	74.5	1.0	110.5	0.2	0.2	198.2	10.2	2.6	65.0	42.0	0.4
Delay (s)	52.1	141.3	60.5	161.4	49.2	47.3	241.5	64.0	47.1	118.3	88.2	28.8
Level of Service	D	F	E	F	D	D	F	E	D	F	F	C
Approach Delay (s)		106.3			100.5			77.2			87.9	
Approach LOS		F			F			E			F	

Intersection Summary			
HCM Average Control Delay	89.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.5
Intersection Capacity Utilization	112.1%	ICU Level of Service	H
Analysis Period (min)	15		

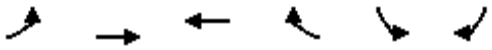
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	15	167	1	38	196	36	1	123	45	75	230	20
Peak Hour Factor	0.76	0.76	0.76	0.86	0.86	0.86	0.81	0.81	0.81	0.82	0.82	0.82
Hourly flow rate (vph)	20	220	1	44	228	42	1	152	56	91	280	24

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	241	314	209	396
Volume Left (vph)	20	44	1	91
Volume Right (vph)	1	42	56	24
Hadj (s)	0.07	-0.02	-0.11	0.05
Departure Headway (s)	6.7	6.5	6.6	6.3
Degree Utilization, x	0.45	0.56	0.38	0.69
Capacity (veh/h)	472	504	460	533
Control Delay (s)	15.1	17.5	13.7	22.4
Approach Delay (s)	15.1	17.5	13.7	22.4
Approach LOS	C	C	B	C

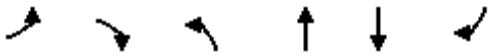
Intersection Summary				
Delay	18.0			
HCM Level of Service	C			
Intersection Capacity Utilization	59.7%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	831	799	0	0	267
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.91	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	913	868	0	0	290
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1151			
pX, platoon unblocked	0.72				0.72	0.72
vC, conflicting volume	868				1782	868
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	626				1890	626
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	17
cM capacity (veh/h)	691				56	350

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	913	868	290
Volume Left	0	0	0
Volume Right	0	0	290
cSH	1700	1700	350
Volume to Capacity	0.54	0.51	0.83
Queue Length 95th (ft)	0	0	184
Control Delay (s)	0.0	0.0	49.8
Lane LOS			E
Approach Delay (s)	0.0	0.0	49.8
Approach LOS			E

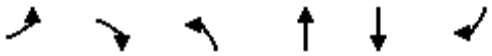
Intersection Summary			
Average Delay	7.0		
Intersection Capacity Utilization	65.3%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	39	68	38	400	635	47
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.67	0.67	0.82	0.82	0.88	0.88
Hourly flow rate (vph)	58	101	46	488	722	53
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1058	361	722			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1058	361	722			
tC, single (s)	6.9	7.0	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.3	2.2			
p0 queue free %	71	84	95			
cM capacity (veh/h)	204	633	876			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	58	101	46	244	244	361	361	53
Volume Left	58	0	46	0	0	0	0	0
Volume Right	0	101	0	0	0	0	0	53
cSH	204	633	876	1700	1700	1700	1700	1700
Volume to Capacity	0.29	0.16	0.05	0.14	0.14	0.21	0.21	0.03
Queue Length 95th (ft)	28	14	4	0	0	0	0	0
Control Delay (s)	29.6	11.8	9.3	0.0	0.0	0.0	0.0	0.0
Lane LOS	D	B	A					
Approach Delay (s)	18.3		0.8			0.0		
Approach LOS	C							

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	30	14	18	285	664	51
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.79	0.83	0.83	0.79	0.79
Hourly flow rate (vph)	33	18	22	343	841	65
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		10				
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					452	
pX, platoon unblocked	0.95	0.95	0.95			
vC, conflicting volume	1088	453	905			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	995	328	803			
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	97	97			
cM capacity (veh/h)	224	636	779			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	50	136	229	560	345
Volume Left	33	22	0	0	0
Volume Right	18	0	0	0	65
cSH	346	779	1700	1700	1700
Volume to Capacity	0.15	0.03	0.13	0.33	0.20
Queue Length 95th (ft)	13	2	0	0	0
Control Delay (s)	19.2	1.8	0.0	0.0	0.0
Lane LOS	C	A			
Approach Delay (s)	19.2	0.7		0.0	
Approach LOS	C				

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	31.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	300	5	0	295	2	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.92	0.92	0.60	0.60
Hourly flow rate (vph)	337	6	0	321	3	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)				669		
pX, platoon unblocked						
vC, conflicting volume			343		500	171
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			343		500	171
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	100
cM capacity (veh/h)			1213		500	842

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	225	118	107	214	3
Volume Left	0	0	0	0	3
Volume Right	0	6	0	0	0
cSH	1700	1700	1213	1700	500
Volume to Capacity	0.13	0.07	0.00	0.13	0.01
Queue Length 95th (ft)	0	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	0.0	12.2
Lane LOS					B
Approach Delay (s)	0.0		0.0		12.2
Approach LOS					B

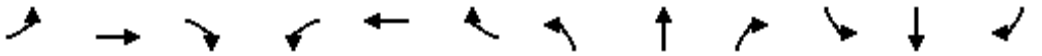
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	18.5%	ICU Level of Service	A
Analysis Period (min)	15		

APPENDIX D
FUTURE NO-BUILD CAPACITY ANALYSES - MITIGATION

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	205	347	259	20	130	60	111	574	139	111	464	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.5	5.5	5.5		8.0	8.0	8.0	5.0	8.0	8.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	1845	1509	1770	1635		1770	3438	1538	1736	1845	1583
Flt Permitted	0.45	1.00	1.00	0.52	1.00		0.27	1.00	1.00	0.20	1.00	1.00
Satd. Flow (perm)	808	1845	1509	960	1635		505	3438	1538	373	1845	1583
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82	0.84	0.84	0.84	0.79	0.79	0.79
Adj. Flow (vph)	250	423	316	24	159	73	132	683	165	141	587	43
RTOR Reduction (vph)	0	0	72	0	10	0	0	0	119	0	0	26
Lane Group Flow (vph)	250	423	244	24	222	0	132	683	46	141	587	17
Heavy Vehicles (%)	5%	3%	7%	2%	12%	8%	2%	5%	5%	4%	3%	2%
Turn Type	pm+pt		Perm	Perm			Perm		Perm	pm+pt		Perm
Protected Phases	5	2			6			4		3	8	
Permitted Phases	2		2	6			4		4	8		8
Actuated Green, G (s)	54.8	54.8	54.8	35.1	35.1		31.1	31.1	31.1	44.1	44.1	44.1
Effective Green, g (s)	54.8	54.8	54.8	35.1	35.1		31.1	31.1	31.1	44.1	44.1	44.1
Actuated g/C Ratio	0.49	0.49	0.49	0.31	0.31		0.28	0.28	0.28	0.39	0.39	0.39
Clearance Time (s)	5.0	5.5	5.5	5.5	5.5		8.0	8.0	8.0	5.0	8.0	8.0
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)	513	900	736	300	511		140	951	426	243	724	621
v/s Ratio Prot	0.06	c0.23			0.14			0.20		0.04	c0.32	
v/s Ratio Perm	c0.17		0.16	0.02			c0.26		0.03	0.19		0.01
v/c Ratio	0.49	0.47	0.33	0.08	0.44		0.94	0.72	0.11	0.58	0.81	0.03
Uniform Delay, d1	18.0	19.1	17.6	27.3	30.8		39.8	36.7	30.3	24.2	30.4	21.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	1.8	1.2	0.5	2.7		58.5	2.6	0.1	3.5	6.9	0.0
Delay (s)	18.7	20.9	18.8	27.8	33.4		98.3	39.3	30.4	27.7	37.3	21.0
Level of Service	B	C	B	C	C		F	D	C	C	D	C
Approach Delay (s)		19.7			32.9			45.8			34.6	
Approach LOS		B			C			D			C	

Intersection Summary			
HCM Average Control Delay	33.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	112.4	Sum of lost time (s)	21.5
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		

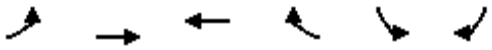
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	144	143	51	301	203	240	249	1637	310	173	752	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.91	1.00	0.97	0.91	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)	1752	3539	1482	3335	3471	1583	1770	5036	1568	3433	4988	1495
Flt Permitted	0.42	1.00	1.00	0.64	1.00	1.00	0.27	1.00	1.00	0.07	1.00	1.00
Satd. Flow (perm)	772	3539	1482	2262	3471	1583	499	5036	1568	251	4988	1495
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.87	0.87	0.87	0.89	0.89	0.89
Adj. Flow (vph)	171	170	61	358	242	286	286	1882	356	194	845	96
RTOR Reduction (vph)	0	0	53	0	0	156	0	0	127	0	0	45
Lane Group Flow (vph)	171	170	8	358	242	130	286	1882	229	194	845	51
Heavy Vehicles (%)	3%	2%	9%	5%	4%	2%	2%	3%	3%	2%	4%	8%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	36.9	22.0	22.0	31.9	19.5	19.5	106.6	90.8	90.8	94.2	84.4	84.4
Effective Green, g (s)	36.9	22.0	22.0	31.9	19.5	19.5	106.6	90.8	90.8	94.2	84.4	84.4
Actuated g/C Ratio	0.23	0.14	0.14	0.20	0.12	0.12	0.67	0.57	0.57	0.59	0.53	0.53
Clearance Time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5
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)	269	487	204	534	423	193	461	2858	890	343	2631	789
v/s Ratio Prot	c0.06	0.05		0.05	0.07		c0.06	c0.37		0.03	0.17	
v/s Ratio Perm	c0.09		0.01	0.08		0.08	0.35		0.15	0.30		0.03
v/c Ratio	0.64	0.35	0.04	0.67	0.57	0.67	0.62	0.66	0.26	0.57	0.32	0.06
Uniform Delay, d1	52.6	62.5	59.9	57.6	66.3	67.2	12.0	23.9	17.5	20.0	21.5	18.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.9	0.4	0.1	3.3	1.9	8.9	2.6	1.2	0.7	2.1	0.3	0.2
Delay (s)	57.5	62.9	59.9	60.9	68.2	76.1	14.6	25.1	18.2	22.1	21.8	18.6
Level of Service	E	E	E	E	E	E	B	C	B	C	C	B
Approach Delay (s)		60.2			67.8			22.9			21.6	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM Average Control Delay	33.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	18.5
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



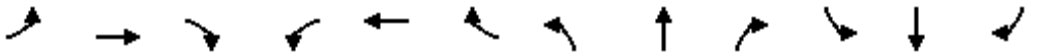
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	806	454	5	0	108
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.88	0.92	0.92	0.92	0.86
Hourly flow rate (vph)	0	916	493	5	0	126
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1151			
pX, platoon unblocked	0.81				0.81	0.81
vC, conflicting volume	499				1412	496
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	265				1392	261
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	80
cM capacity (veh/h)	1053				127	630

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	916	499	63	63
Volume Left	0	0	0	0
Volume Right	0	5	63	63
cSH	1700	1700	630	630
Volume to Capacity	0.54	0.29	0.10	0.10
Queue Length 95th (ft)	0	0	8	8
Control Delay (s)	0.0	0.0	11.3	11.3
Lane LOS			B	B
Approach Delay (s)	0.0	0.0	11.3	
Approach LOS			B	

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	92	211	205	58	436	83	60	588	138	294	683	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.5	5.5	5.5		8.0	8.0	8.0	5.0	8.0	8.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1818		1770	3539	1583	1770	1863	1583
Flt Permitted	0.12	1.00	1.00	0.60	1.00		0.14	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)	220	1863	1583	1124	1818		252	3539	1583	343	1863	1583
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.86	0.86	0.86	0.92	0.92	0.92
Adj. Flow (vph)	110	251	244	69	519	99	70	684	160	320	742	64
RTOR Reduction (vph)	0	0	131	0	5	0	0	0	118	0	0	27
Lane Group Flow (vph)	110	251	113	69	613	0	70	684	42	320	742	37
Turn Type	pm+pt		Perm	Perm			Perm		Perm	pm+pt		Perm
Protected Phases	5	2			6			4		3	8	
Permitted Phases	2		2	6			4		4	8		8
Actuated Green, G (s)	58.6	58.6	58.6	49.6	49.6		33.3	33.3	33.3	54.3	54.3	54.3
Effective Green, g (s)	58.6	58.6	58.6	49.6	49.6		33.3	33.3	33.3	54.3	54.3	54.3
Actuated g/C Ratio	0.46	0.46	0.46	0.39	0.39		0.26	0.26	0.26	0.43	0.43	0.43
Clearance Time (s)	5.0	5.5	5.5	5.5	5.5		8.0	8.0	8.0	5.0	8.0	8.0
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)	151	864	734	441	713		66	932	417	328	800	680
v/s Ratio Prot	c0.02	0.13			c0.34			0.19		0.12	c0.40	
v/s Ratio Perm	0.32		0.07	0.06			c0.28		0.03	0.30		0.02
v/c Ratio	0.73	0.29	0.15	0.16	0.86		1.06	0.73	0.10	0.98	0.93	0.05
Uniform Delay, d1	29.3	21.0	19.6	24.9	35.2		46.6	42.5	35.2	28.0	34.2	21.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	16.1	0.9	0.4	0.8	12.8		128.5	3.0	0.1	42.7	16.6	0.0
Delay (s)	45.4	21.9	20.0	25.6	48.0		175.1	45.5	35.3	70.7	50.8	21.1
Level of Service	D	C	C	C	D		F	D	D	E	D	C
Approach Delay (s)		25.4			45.8			53.7			54.8	
Approach LOS		C			D			D			D	

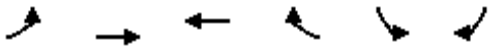
Intersection Summary			
HCM Average Control Delay	47.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	126.4	Sum of lost time (s)	26.5
Intersection Capacity Utilization	94.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	224	584	180	437	257	252	182	1288	427	348	2115	188
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.91	1.00	0.97	0.91	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	3539	1583	3433	3539	1583	1770	5036	1583	3433	5085	1568
Flt Permitted	0.51	1.00	1.00	0.14	1.00	1.00	0.06	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)	947	3539	1583	500	3539	1583	110	5036	1583	383	5085	1568
Peak-hour factor, PHF	0.89	0.89	0.89	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	252	656	202	480	282	277	198	1400	464	378	2299	204
RTOR Reduction (vph)	0	0	110	0	0	140	0	0	166	0	0	107
Lane Group Flow (vph)	252	656	92	480	282	137	198	1400	298	378	2299	97
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	3%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	41.9	27.9	27.9	43.9	28.9	28.9	79.0	68.0	68.0	85.2	71.1	71.1
Effective Green, g (s)	41.9	27.9	27.9	43.9	28.9	28.9	79.0	68.0	68.0	85.2	71.1	71.1
Actuated g/C Ratio	0.28	0.19	0.19	0.29	0.19	0.19	0.53	0.45	0.45	0.57	0.47	0.47
Clearance Time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5
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)	341	658	294	440	682	305	180	2283	718	504	2410	743
v/s Ratio Prot	0.07	0.19		c0.11	0.08		c0.08	0.28		0.07	c0.45	
v/s Ratio Perm	0.14		0.06	c0.21		0.09	c0.50		0.19	0.36		0.06
v/c Ratio	0.74	1.00	0.31	1.09	0.41	0.45	1.10	0.61	0.41	0.75	0.95	0.13
Uniform Delay, d1	46.4	61.0	52.8	46.0	53.1	53.5	47.3	31.0	27.6	22.5	37.9	22.1
Progression 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
Incremental Delay, d2	8.1	34.1	0.6	69.7	0.4	1.0	96.4	1.2	1.8	6.2	10.3	0.4
Delay (s)	54.6	95.1	53.4	115.7	53.5	54.5	143.6	32.3	29.4	28.7	48.2	22.5
Level of Service	D	F	D	F	D	D	F	C	C	C	D	C
Approach Delay (s)		78.3			82.5			42.3			43.8	
Approach LOS		E			F			D			D	

Intersection Summary			
HCM Average Control Delay	54.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	24.5
Intersection Capacity Utilization	100.4%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

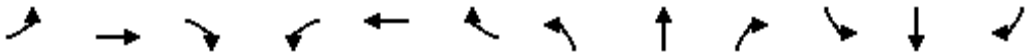


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	831	799	0	0	267
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.91	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	913	868	0	0	290
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1151			
pX, platoon unblocked	0.72				0.72	0.72
vC, conflicting volume	868				1782	868
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	626				1890	626
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	17
cM capacity (veh/h)	691				56	350

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	913	868	145	145
Volume Left	0	0	0	0
Volume Right	0	0	145	145
cSH	1700	1700	350	350
Volume to Capacity	0.54	0.51	0.41	0.41
Queue Length 95th (ft)	0	0	49	49
Control Delay (s)	0.0	0.0	22.4	22.4
Lane LOS			C	C
Approach Delay (s)	0.0	0.0	22.4	
Approach LOS			C	

Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)	15		

APPENDIX E
FUTURE BUILD CAPACITY ANALYSES



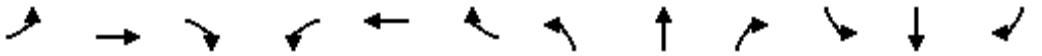
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	422	15	107	270	9	39	6	360	1	2	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0			6.0	6.0		6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Frt	1.00	0.99		1.00	1.00			1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.99	
Satd. Flow (prot)	1770	1851		1770	1852			1785	1583		1659	
Flt Permitted	0.47	1.00		0.32	1.00			0.80	1.00		0.97	
Satd. Flow (perm)	869	1851		597	1852			1489	1583		1625	
Peak-hour factor, PHF	0.79	0.79	0.79	0.75	0.75	0.75	0.84	0.84	0.84	0.60	0.60	0.60
Adj. Flow (vph)	3	534	19	143	360	12	46	7	429	2	3	2
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	189	0	1	0
Lane Group Flow (vph)	3	552	0	143	371	0	0	53	240	0	6	0
Heavy Vehicles (%)	2%	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	25%
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	53.0	53.0		53.0	53.0			36.0	36.0		36.0	
Effective Green, g (s)	53.0	53.0		53.0	53.0			36.0	36.0		36.0	
Actuated g/C Ratio	0.53	0.53		0.53	0.53			0.36	0.36		0.36	
Clearance Time (s)	5.0	5.0		5.0	5.0			6.0	6.0		6.0	
Lane Grp Cap (vph)	461	981		316	982			536	570		585	
v/s Ratio Prot		c0.30			0.20							
v/s Ratio Perm	0.00			0.24				0.04	c0.15		0.00	
v/c Ratio	0.01	0.56		0.45	0.38			0.10	0.42		0.01	
Uniform Delay, d1	11.1	15.7		14.5	13.8			21.2	24.1		20.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.0	2.3		4.6	1.1			0.4	2.3		0.0	
Delay (s)	11.1	18.1		19.2	14.9			21.6	26.4		20.6	
Level of Service	B	B		B	B			C	C		C	
Approach Delay (s)		18.0			16.1			25.9			20.6	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	205	347	259	20	130	66	116	594	139	111	501	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.5	5.5	5.5		8.0	8.0	8.0	5.0	8.0	8.0
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	1.00	0.85	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	1845	1509	1770	1631		1770	1810	1538	1736	1845	1583
Flt Permitted	0.36	1.00	1.00	0.52	1.00		0.31	1.00	1.00	0.09	1.00	1.00
Satd. Flow (perm)	646	1845	1509	960	1631		569	1810	1538	161	1845	1583
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82	0.84	0.84	0.84	0.79	0.79	0.79
Adj. Flow (vph)	250	423	316	24	159	80	138	707	165	141	634	43
RTOR Reduction (vph)	0	0	86	0	11	0	0	0	66	0	0	19
Lane Group Flow (vph)	250	423	230	24	228	0	138	707	99	141	634	24
Heavy Vehicles (%)	5%	3%	7%	2%	12%	8%	2%	5%	5%	4%	3%	2%
Turn Type	pm+pt		Perm	Perm			Perm		Perm	pm+pt		Perm
Protected Phases	5	2			6			4		3	8	
Permitted Phases	2		2	6			4		4	8		8
Actuated Green, G (s)	55.8	55.8	55.8	33.7	33.7		59.6	59.6	59.6	72.6	72.6	72.6
Effective Green, g (s)	55.8	55.8	55.8	33.7	33.7		59.6	59.6	59.6	72.6	72.6	72.6
Actuated g/C Ratio	0.39	0.39	0.39	0.24	0.24		0.42	0.42	0.42	0.51	0.51	0.51
Clearance Time (s)	5.0	5.5	5.5	5.5	5.5		8.0	8.0	8.0	5.0	8.0	8.0
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)	383	726	593	228	387		239	760	646	171	944	810
v/s Ratio Prot	c0.08	0.23			0.14			c0.39		0.05	c0.34	
v/s Ratio Perm	c0.18		0.15	0.02			0.24		0.06	0.37		0.02
v/c Ratio	0.65	0.58	0.39	0.11	0.59		0.58	0.93	0.15	0.82	0.67	0.03
Uniform Delay, d1	31.7	33.9	30.8	42.3	47.9		31.5	39.2	25.5	29.5	25.8	17.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.0	3.4	1.9	0.9	6.4		3.4	17.9	0.1	26.4	1.9	0.0
Delay (s)	35.7	37.3	32.7	43.2	54.4		34.9	57.0	25.6	55.9	27.7	17.2
Level of Service	D	D	C	D	D		C	E	C	E	C	B
Approach Delay (s)		35.4			53.3			48.9			32.0	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM Average Control Delay	40.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	141.9	Sum of lost time (s)	21.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		

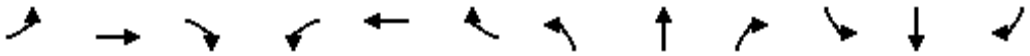
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	269	531	32	13	415	107	20	145	5	19	101	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.8		5.7	5.8	5.8	6.3	6.3		6.3	6.3	6.3
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3441		1770	3505	1583	1770	1854		1770	1845	1324
Flt Permitted	0.30	1.00		0.41	1.00	1.00	0.67	1.00		0.64	1.00	1.00
Satd. Flow (perm)	555	3441		772	3505	1583	1254	1854		1188	1845	1324
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.82	0.82	0.82	0.77	0.77	0.77
Adj. Flow (vph)	299	590	36	14	451	116	24	177	6	25	131	13
RTOR Reduction (vph)	0	5	0	0	0	89	0	1	0	0	0	8
Lane Group Flow (vph)	299	621	0	14	451	27	24	182	0	25	131	5
Heavy Vehicles (%)	2%	4%	4%	2%	3%	2%	2%	2%	2%	2%	3%	22%
Turn Type	pm+pt			pm+pt		Perm	Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	45.5	38.6		22.4	21.2	21.2	34.0	34.0		34.0	34.0	34.0
Effective Green, g (s)	45.5	38.6		22.4	21.2	21.2	34.0	34.0		34.0	34.0	34.0
Actuated g/C Ratio	0.50	0.42		0.24	0.23	0.23	0.37	0.37		0.37	0.37	0.37
Clearance Time (s)	5.7	5.8		5.7	5.8	5.8	6.3	6.3		6.3	6.3	6.3
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)	522	1450		202	811	366	465	688		441	685	491
v/s Ratio Prot	c0.12	0.18		0.00	0.13			c0.10			0.07	
v/s Ratio Perm	c0.17			0.02		0.02	0.02			0.02		0.00
v/c Ratio	0.57	0.43		0.07	0.56	0.07	0.05	0.27		0.06	0.19	0.01
Uniform Delay, d1	14.9	18.7		26.3	31.0	27.5	18.5	20.1		18.5	19.5	18.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.5	0.2		0.1	0.8	0.1	0.2	0.9		0.2	0.6	0.0
Delay (s)	16.4	18.9		26.5	31.9	27.6	18.7	21.0		18.7	20.1	18.2
Level of Service	B	B		C	C	C	B	C		B	C	B
Approach Delay (s)		18.1			30.9			20.8			19.8	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM Average Control Delay	22.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	91.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		

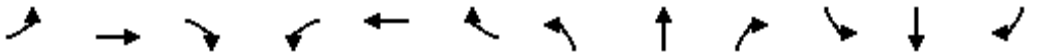
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	181	33	46	177	270	61	505	60	65	152	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	5.8		5.7	5.7		5.9	5.9		5.6	5.9	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.91		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	3430		1770	3169		1770	3449		1626	3431	
Flt Permitted	0.24	1.00		0.55	1.00		0.60	1.00		0.31	1.00	
Satd. Flow (perm)	438	3430		1031	3169		1124	3449		532	3431	
Peak-hour factor, PHF	0.76	0.76	0.76	0.74	0.74	0.74	0.82	0.82	0.82	0.76	0.76	0.76
Adj. Flow (vph)	46	238	43	62	239	365	74	616	73	86	200	39
RTOR Reduction (vph)	0	14	0	0	0	0	0	6	0	0	10	0
Lane Group Flow (vph)	46	267	0	62	604	0	74	683	0	86	229	0
Heavy Vehicles (%)	4%	3%	2%	2%	6%	2%	2%	3%	3%	11%	2%	6%
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	25.0	25.0		25.1	25.1		53.5	53.5		65.5	65.5	
Effective Green, g (s)	25.0	25.0		25.1	25.1		53.5	53.5		65.5	65.5	
Actuated g/C Ratio	0.24	0.24		0.25	0.25		0.52	0.52		0.64	0.64	
Clearance Time (s)	5.8	5.8		5.7	5.7		5.9	5.9		5.6	5.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	107	839		253	778		588	1805		409	2199	
v/s Ratio Prot		0.08			c0.19			c0.20		c0.01	0.07	
v/s Ratio Perm	0.10			0.06			0.07			0.12		
v/c Ratio	0.43	0.32		0.25	0.93dr		0.13	0.38		0.21	0.10	
Uniform Delay, d1	32.6	31.6		30.9	35.9		12.4	14.5		7.8	7.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.8	0.2		0.5	4.9		0.4	0.6		0.3	0.1	
Delay (s)	35.3	31.8		31.5	40.8		12.9	15.1		8.0	7.2	
Level of Service	D	C		C	D		B	B		A	A	
Approach Delay (s)		32.3			39.9			14.9			7.4	
Approach LOS		C			D			B			A	

Intersection Summary			
HCM Average Control Delay	24.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	102.2	Sum of lost time (s)	17.2
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		

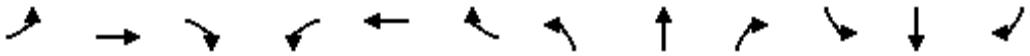
dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	181	145	51	301	210	240	249	1637	310	173	752	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.91	1.00	1.00	0.91	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)	1752	3539	1482	1719	3471	1583	1770	5036	1568	1770	4988	1495
Flt Permitted	0.60	1.00	1.00	0.39	1.00	1.00	0.27	1.00	1.00	0.05	1.00	1.00
Satd. Flow (perm)	1101	3539	1482	714	3471	1583	505	5036	1568	100	4988	1495
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.87	0.87	0.87	0.89	0.89	0.89
Adj. Flow (vph)	215	173	61	358	250	286	286	1882	356	194	845	117
RTOR Reduction (vph)	0	0	56	0	0	204	0	0	141	0	0	63
Lane Group Flow (vph)	215	173	5	358	250	82	286	1882	215	194	845	54
Heavy Vehicles (%)	3%	2%	9%	5%	4%	2%	2%	3%	3%	2%	4%	8%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	29.5	13.0	13.0	49.0	26.5	26.5	92.6	74.9	74.9	91.4	74.3	74.3
Effective Green, g (s)	29.5	13.0	13.0	49.0	26.5	26.5	92.6	74.9	74.9	91.4	74.3	74.3
Actuated g/C Ratio	0.18	0.08	0.08	0.31	0.17	0.17	0.58	0.47	0.47	0.57	0.46	0.46
Clearance Time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5
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)	270	288	120	407	575	262	432	2357	734	236	2316	694
v/s Ratio Prot	0.08	0.05		c0.16	0.07		0.07	0.37		c0.09	0.17	
v/s Ratio Perm	0.06		0.00	c0.10		0.05	0.31		0.14	c0.38		0.04
v/c Ratio	0.80	0.60	0.04	0.88	0.43	0.31	0.66	0.80	0.29	0.82	0.36	0.08
Uniform Delay, d1	60.7	71.0	67.8	48.9	60.0	58.7	17.8	36.1	26.2	48.1	27.6	23.8
Progression 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
Incremental Delay, d2	14.9	3.5	0.1	19.0	0.5	0.7	3.8	2.9	1.0	20.1	0.4	0.2
Delay (s)	75.6	74.5	67.9	67.8	60.5	59.4	21.6	39.1	27.2	68.2	28.1	24.0
Level of Service	E	E	E	E	E	E	C	D	C	E	C	C
Approach Delay (s)		74.1			63.1			35.4			34.4	
Approach LOS		E			E			D			C	

Intersection Summary			
HCM Average Control Delay	43.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		

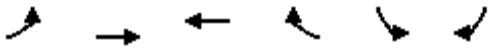
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	21	182	1	30	113	153	1	195	63	33	63	20
Peak Hour Factor	0.75	0.75	0.75	0.88	0.88	0.88	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	28	243	1	34	128	174	1	235	76	40	76	24

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	272	336	312	140
Volume Left (vph)	28	34	1	40
Volume Right (vph)	1	174	76	24
Hadj (s)	0.07	-0.26	-0.10	0.00
Departure Headway (s)	6.0	5.6	5.9	6.4
Degree Utilization, x	0.46	0.52	0.51	0.25
Capacity (veh/h)	549	598	562	478
Control Delay (s)	14.0	14.6	14.9	11.5
Approach Delay (s)	14.0	14.6	14.9	11.5
Approach LOS	B	B	B	B

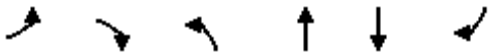
Intersection Summary			
Delay	14.1		
HCM Level of Service	B		
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	829	454	5	0	146
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.88	0.92	0.92	0.92	0.86
Hourly flow rate (vph)	0	942	493	5	0	170
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1151			
pX, platoon unblocked	0.81				0.81	0.81
vC, conflicting volume	499				1438	496
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	265				1424	262
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	73
cM capacity (veh/h)	1053				121	630

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	942	499	170
Volume Left	0	0	0
Volume Right	0	5	170
cSH	1700	1700	630
Volume to Capacity	0.55	0.29	0.27
Queue Length 95th (ft)	0	0	27
Control Delay (s)	0.0	0.0	12.8
Lane LOS			B
Approach Delay (s)	0.0	0.0	12.8
Approach LOS			B

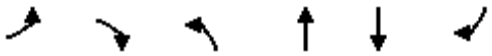
Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	21	21	119	572	243	115
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.60	0.60	0.77	0.77	0.81	0.81
Hourly flow rate (vph)	35	35	155	743	300	142
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	981	150	300			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	981	150	300			
tC, single (s)	6.9	7.0	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.3	2.2			
p0 queue free %	83	96	88			
cM capacity (veh/h)	212	866	1258			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	35	35	155	371	371	150	150	142
Volume Left	35	0	155	0	0	0	0	0
Volume Right	0	35	0	0	0	0	0	142
cSH	212	866	1258	1700	1700	1700	1700	1700
Volume to Capacity	0.17	0.04	0.12	0.22	0.22	0.09	0.09	0.08
Queue Length 95th (ft)	14	3	10	0	0	0	0	0
Control Delay (s)	25.3	9.3	8.3	0.0	0.0	0.0	0.0	0.0
Lane LOS	D	A	A					
Approach Delay (s)	17.3		1.4			0.0		
Approach LOS	C							

Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	26.6%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	104	70	54	522	189	42
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.70	0.70	0.77	0.77	0.85	0.85
Hourly flow rate (vph)	149	100	70	678	222	49
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		10				
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					452	
pX, platoon unblocked						
vC, conflicting volume	702	111	272			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	702	111	272			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	58	89	95			
cM capacity (veh/h)	352	921	1289			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	249	70	339	339	111	111	49
Volume Left	149	70	0	0	0	0	0
Volume Right	100	0	0	0	0	0	49
cSH	590	1289	1700	1700	1700	1700	1700
Volume to Capacity	0.42	0.05	0.20	0.20	0.07	0.07	0.03
Queue Length 95th (ft)	52	4	0	0	0	0	0
Control Delay (s)	17.2	8.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	C	A					
Approach Delay (s)	17.2	0.7			0.0		
Approach LOS	C						

Intersection Summary			
Average Delay	3.8		
Intersection Capacity Utilization	26.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	224	43	33	235	77	25
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.85	0.85	0.60	0.60
Hourly flow rate (vph)	252	48	39	276	128	42
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				669		
pX, platoon unblocked						
vC, conflicting volume			300		468	126
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			300		468	126
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		75	95
cM capacity (veh/h)			1258		508	901

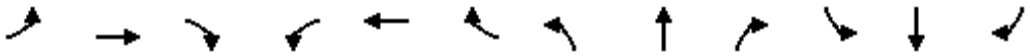
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	126	126	48	39	138	138	128	42
Volume Left	0	0	0	39	0	0	128	0
Volume Right	0	0	48	0	0	0	0	42
cSH	1700	1700	1700	1258	1700	1700	508	901
Volume to Capacity	0.07	0.07	0.03	0.03	0.08	0.08	0.25	0.05
Queue Length 95th (ft)	0	0	0	2	0	0	25	4
Control Delay (s)	0.0	0.0	0.0	8.0	0.0	0.0	14.5	9.2
Lane LOS				A			B	A
Approach Delay (s)	0.0			1.0			13.2	
Approach LOS							B	

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	23.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	253	6	3	309	29	14
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	275	7	3	336	32	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			282		449	138
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			282		449	138
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		94	98
cM capacity (veh/h)			1278		537	886

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	138	138	7	115	224	47
Volume Left	0	0	0	3	0	32
Volume Right	0	0	7	0	0	15
cSH	1700	1700	1700	1278	1700	616
Volume to Capacity	0.08	0.08	0.00	0.00	0.13	0.08
Queue Length 95th (ft)	0	0	0	0	0	6
Control Delay (s)	0.0	0.0	0.0	0.2	0.0	11.3
Lane LOS				A		B
Approach Delay (s)	0.0			0.1		11.3
Approach LOS						B

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	20.6%	ICU Level of Service	A
Analysis Period (min)	15		



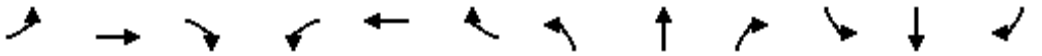
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	380	46	394	372	5	28	2	173	9	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0			6.0	6.0		6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Frt		0.98		1.00	1.00			1.00	0.85		1.00	
Flt Protected		1.00		0.95	1.00			0.96	1.00		0.96	
Satd. Flow (prot)		1827		1770	1858			1779	1583		1784	
Flt Permitted		1.00		0.44	1.00			0.78	1.00		0.81	
Satd. Flow (perm)		1827		818	1858			1448	1583		1516	
Peak-hour factor, PHF	0.91	0.91	0.91	0.85	0.85	0.85	0.92	0.92	0.92	0.60	0.60	0.60
Adj. Flow (vph)	0	418	51	464	438	6	30	2	188	15	2	0
RTOR Reduction (vph)	0	6	0	0	1	0	0	0	143	0	0	0
Lane Group Flow (vph)	0	463	0	464	443	0	0	32	45	0	17	0
Heavy Vehicles (%)	2%	2%	5%	2%	2%	5%	2%	2%	2%	2%	2%	25%
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		43.6		43.6	43.6			17.0	17.0		17.0	
Effective Green, g (s)		43.6		43.6	43.6			17.0	17.0		17.0	
Actuated g/C Ratio		0.61		0.61	0.61			0.24	0.24		0.24	
Clearance Time (s)		5.0		5.0	5.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1113		498	1131			344	376		360	
v/s Ratio Prot		0.25			0.24							
v/s Ratio Perm				c0.57				0.02	c0.03		0.01	
v/c Ratio		0.42		0.93	0.39			0.09	0.12		0.05	
Uniform Delay, d1		7.3		12.7	7.2			21.3	21.4		21.1	
Progression Factor		1.00		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2		0.3		24.4	0.2			0.5	0.6		0.2	
Delay (s)		7.6		37.1	7.4			21.8	22.1		21.3	
Level of Service		A		D	A			C	C		C	
Approach Delay (s)		7.6			22.6			22.0			21.3	
Approach LOS		A			C			C			C	

Intersection Summary			
HCM Average Control Delay	18.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	71.6	Sum of lost time (s)	11.0
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

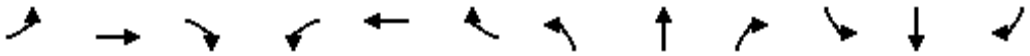
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	92	211	205	58	436	89	67	627	138	294	709	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.5	5.5	5.5		8.0	8.0	8.0	5.0	8.0	8.0
Lane Util. Factor	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	1.00	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1815		1770	1863	1583	1770	1863	1583
Flt Permitted	0.08	1.00	1.00	0.60	1.00		0.19	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	154	1863	1583	1124	1815		356	1863	1583	152	1863	1583
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.86	0.86	0.86	0.92	0.92	0.92
Adj. Flow (vph)	110	251	244	69	519	106	78	729	160	320	771	64
RTOR Reduction (vph)	0	0	135	0	6	0	0	0	67	0	0	25
Lane Group Flow (vph)	110	251	109	69	619	0	78	729	93	320	771	39
Turn Type	pm+pt		Perm	Perm			Perm		Perm	pm+pt		Perm
Protected Phases	5	2			6			4		3	8	
Permitted Phases	2		2	6			4		4	8		8
Actuated Green, G (s)	52.5	52.5	52.5	43.5	43.5		44.0	44.0	44.0	64.0	64.0	64.0
Effective Green, g (s)	52.5	52.5	52.5	43.5	43.5		44.0	44.0	44.0	64.0	64.0	64.0
Actuated g/C Ratio	0.40	0.40	0.40	0.33	0.33		0.34	0.34	0.34	0.49	0.49	0.49
Clearance Time (s)	5.0	5.5	5.5	5.5	5.5		8.0	8.0	8.0	5.0	8.0	8.0
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)	112	752	639	376	607		120	631	536	262	917	779
v/s Ratio Prot	c0.03	0.13			0.34			0.39		c0.14	0.41	
v/s Ratio Perm	c0.37		0.07	0.06			0.22		0.06	c0.46		0.02
v/c Ratio	0.98	0.33	0.17	0.18	1.02		0.65	1.16	0.17	1.22	0.84	0.05
Uniform Delay, d1	39.0	26.7	24.8	30.7	43.3		36.5	43.0	30.2	41.0	28.6	17.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	79.0	1.2	0.6	1.1	41.6		11.9	86.9	0.2	128.9	7.0	0.0
Delay (s)	118.0	27.9	25.4	31.7	84.9		48.4	129.9	30.4	169.9	35.6	17.2
Level of Service	F	C	C	C	F		D	F	C	F	D	B
Approach Delay (s)		43.3			79.6			106.9			71.8	
Approach LOS		D			E			F			E	

Intersection Summary			
HCM Average Control Delay	78.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	102.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	240	584	45	23	672	103	54	126	2	86	322	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.8		5.7	5.8	5.8	6.3	6.3		6.3	6.3	6.3
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3501		1770	3539	1583	1770	1859		1770	1863	1583
Flt Permitted	0.14	1.00		0.39	1.00	1.00	0.43	1.00		0.67	1.00	1.00
Satd. Flow (perm)	259	3501		729	3539	1583	792	1859		1245	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.89	0.89	0.89	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	261	635	49	26	755	116	59	137	2	93	350	37
RTOR Reduction (vph)	0	5	0	0	0	58	0	1	0	0	0	22
Lane Group Flow (vph)	261	679	0	26	755	58	59	138	0	93	350	15
Turn Type	pm+pt			pm+pt		Perm	Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4			8		8	2			6		6
Actuated Green, G (s)	57.7	49.0		35.4	32.4	32.4	46.2	46.2		46.2	46.2	46.2
Effective Green, g (s)	57.7	49.0		35.4	32.4	32.4	46.2	46.2		46.2	46.2	46.2
Actuated g/C Ratio	0.50	0.42		0.31	0.28	0.28	0.40	0.40		0.40	0.40	0.40
Clearance Time (s)	5.7	5.8		5.7	5.8	5.8	6.3	6.3		6.3	6.3	6.3
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)	384	1479		249	988	442	315	740		496	742	630
v/s Ratio Prot	c0.11	0.19		0.00	c0.21			0.07			c0.19	
v/s Ratio Perm	0.22			0.03		0.04	0.07			0.07		0.01
v/c Ratio	0.68	0.46		0.10	0.76	0.13	0.19	0.19		0.19	0.47	0.02
Uniform Delay, d1	21.2	24.0		28.4	38.3	31.3	22.7	22.7		22.7	25.9	21.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.7	0.2		0.2	3.6	0.1	1.3	0.6		0.8	2.1	0.1
Delay (s)	26.0	24.2		28.6	41.9	31.4	24.0	23.2		23.5	28.0	21.3
Level of Service	C	C		C	D	C	C	C		C	C	C
Approach Delay (s)		24.7			40.1			23.5			26.6	
Approach LOS		C			D			C			C	

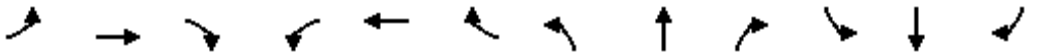
Intersection Summary			
HCM Average Control Delay	30.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	17.8
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	31	242	63	111	241	147	51	249	61	160	573	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.8	5.8		5.7	5.7		5.9	5.9		5.6	5.9	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	0.94		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	3430		1770	3318		1752	3408		1770	3489	
Flt Permitted	0.38	1.00		0.51	1.00		0.38	1.00		0.45	1.00	
Satd. Flow (perm)	695	3430		944	3318		703	3408		845	3489	
Peak-hour factor, PHF	0.91	0.91	0.91	0.88	0.88	0.88	0.78	0.78	0.78	0.88	0.88	0.88
Adj. Flow (vph)	34	266	69	126	274	167	65	319	78	182	651	60
RTOR Reduction (vph)	0	28	0	0	0	0	0	17	0	0	5	0
Lane Group Flow (vph)	34	307	0	126	441	0	65	380	0	182	706	0
Heavy Vehicles (%)	4%	2%	2%	2%	3%	2%	3%	3%	2%	2%	2%	4%
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	17.4	17.4		17.5	17.5		39.7	39.7		54.3	54.3	
Effective Green, g (s)	17.4	17.4		17.5	17.5		39.7	39.7		54.3	54.3	
Actuated g/C Ratio	0.21	0.21		0.21	0.21		0.48	0.48		0.65	0.65	
Clearance Time (s)	5.8	5.8		5.7	5.7		5.9	5.9		5.6	5.9	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	145	716		198	696		335	1622		650	2272	
v/s Ratio Prot		0.09			0.13			0.11		0.03	c0.20	
v/s Ratio Perm	0.05			c0.13			0.09			0.15		
v/c Ratio	0.23	0.43		0.64	0.63		0.19	0.23		0.28	0.31	
Uniform Delay, d1	27.5	28.7		30.0	30.0		12.6	12.9		5.9	6.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	0.4		6.5	1.9		1.3	0.3		0.2	0.4	
Delay (s)	28.3	29.1		36.6	31.9		13.9	13.2		6.1	6.7	
Level of Service	C	C		D	C		B	B		A	A	
Approach Delay (s)		29.0			33.0			13.3			6.6	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM Average Control Delay	18.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	83.4	Sum of lost time (s)	11.6
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		

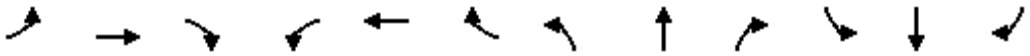
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	252	591	180	437	262	252	182	1288	427	348	2115	226
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.91	1.00	1.00	0.91	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	3539	1583	1770	3539	1583	1770	5036	1583	1770	5085	1568
Flt Permitted	0.58	1.00	1.00	0.12	1.00	1.00	0.08	1.00	1.00	0.07	1.00	1.00
Satd. Flow (perm)	1072	3539	1583	229	3539	1583	151	5036	1583	134	5085	1568
Peak-hour factor, PHF	0.89	0.89	0.89	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	283	664	202	480	288	277	198	1400	464	378	2299	246
RTOR Reduction (vph)	0	0	99	0	0	212	0	0	265	0	0	138
Lane Group Flow (vph)	283	664	103	480	288	65	198	1400	199	378	2299	108
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	3%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	47.6	26.5	26.5	64.5	37.4	37.4	58.5	49.5	49.5	82.5	67.5	67.5
Effective Green, g (s)	47.6	26.5	26.5	64.5	37.4	37.4	58.5	49.5	49.5	82.5	67.5	67.5
Actuated g/C Ratio	0.30	0.17	0.17	0.40	0.23	0.23	0.37	0.31	0.31	0.52	0.42	0.42
Clearance Time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5
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)	411	586	262	401	827	370	146	1558	490	345	2145	662
v/s Ratio Prot	0.09	0.19		c0.24	0.08		0.08	0.28		c0.18	c0.45	
v/s Ratio Perm	0.11		0.06	c0.24		0.04	c0.42		0.13	0.38		0.07
v/c Ratio	0.69	1.13	0.39	1.20	0.35	0.17	1.36	0.90	0.41	1.10	1.07	0.16
Uniform Delay, d1	47.0	66.8	59.6	50.8	51.1	49.0	42.5	52.8	43.7	53.4	46.2	28.7
Progression 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
Incremental Delay, d2	4.8	79.6	1.0	110.5	0.3	0.2	198.2	8.6	2.5	76.6	42.0	0.5
Delay (s)	51.8	146.3	60.5	161.4	51.4	49.2	240.8	61.5	46.2	130.0	88.2	29.2
Level of Service	D	F	E	F	D	D	F	E	D	F	F	C
Approach Delay (s)		108.0			101.3			75.2			88.6	
Approach LOS		F			F			E			F	

Intersection Summary			
HCM Average Control Delay	89.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.5
Intersection Capacity Utilization	112.3%	ICU Level of Service	H
Analysis Period (min)	15		

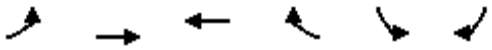
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	15	175	1	44	205	90	1	123	52	175	230	20
Peak Hour Factor	0.76	0.76	0.76	0.86	0.86	0.86	0.81	0.81	0.81	0.82	0.82	0.82
Hourly flow rate (vph)	20	230	1	51	238	105	1	152	64	213	280	24

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	251	394	217	518
Volume Left (vph)	20	51	1	213
Volume Right (vph)	1	105	64	24
Hadj (s)	0.06	-0.10	-0.13	0.09
Departure Headway (s)	7.9	7.3	7.8	7.2
Degree Utilization, x	0.55	0.80	0.47	1.03
Capacity (veh/h)	429	475	424	494
Control Delay (s)	20.1	32.9	17.5	76.2
Approach Delay (s)	20.1	32.9	17.5	76.2
Approach LOS	C	D	C	F

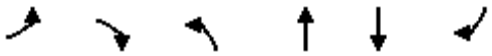
Intersection Summary				
Delay	44.4			
HCM Level of Service	E			
Intersection Capacity Utilization	71.5%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	872	799	0	0	296
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.91	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	958	868	0	0	322
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1151			
pX, platoon unblocked	0.72				0.72	0.72
vC, conflicting volume	868				1827	868
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	628				1951	628
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	8
cM capacity (veh/h)	691				51	350

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	958	868	322
Volume Left	0	0	0
Volume Right	0	0	322
cSH	1700	1700	350
Volume to Capacity	0.56	0.51	0.92
Queue Length 95th (ft)	0	0	234
Control Delay (s)	0.0	0.0	65.0
Lane LOS			F
Approach Delay (s)	0.0	0.0	65.0
Approach LOS			F

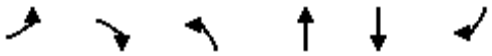
Intersection Summary			
Average Delay	9.7		
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	39	68	38	422	650	47
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.67	0.67	0.82	0.82	0.88	0.88
Hourly flow rate (vph)	58	101	46	515	739	53
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1089	369	739			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1089	369	739			
tC, single (s)	6.9	7.0	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.3	2.2			
p0 queue free %	70	84	95			
cM capacity (veh/h)	194	625	863			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	58	101	46	257	257	369	369	53
Volume Left	58	0	46	0	0	0	0	0
Volume Right	0	101	0	0	0	0	0	53
cSH	194	625	863	1700	1700	1700	1700	1700
Volume to Capacity	0.30	0.16	0.05	0.15	0.15	0.22	0.22	0.03
Queue Length 95th (ft)	30	14	4	0	0	0	0	0
Control Delay (s)	31.3	11.9	9.4	0.0	0.0	0.0	0.0	0.0
Lane LOS	D	B	A					
Approach Delay (s)	18.9		0.8			0.0		
Approach LOS	C							

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	34.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	77	72	77	284	650	97
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.79	0.83	0.83	0.79	0.79
Hourly flow rate (vph)	84	91	93	342	823	123
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		10				
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					452	
pX, platoon unblocked	0.97	0.97	0.97			
vC, conflicting volume	1179	411	946			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1128	338	887			
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	86	87			
cM capacity (veh/h)	168	640	738			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	175	93	171	171	411	411	123
Volume Left	84	93	0	0	0	0	0
Volume Right	91	0	0	0	0	0	123
cSH	352	738	1700	1700	1700	1700	1700
Volume to Capacity	0.50	0.13	0.10	0.10	0.24	0.24	0.07
Queue Length 95th (ft)	66	11	0	0	0	0	0
Control Delay (s)	28.0	10.6	0.0	0.0	0.0	0.0	0.0
Lane LOS	D	B					
Approach Delay (s)	28.0	2.3			0.0		
Approach LOS	D						

Intersection Summary			
Average Delay	3.8		
Intersection Capacity Utilization	36.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	301	99	30	315	51	35
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.92	0.92	0.60	0.60
Hourly flow rate (vph)	338	111	33	342	85	58
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				669		
pX, platoon unblocked						
vC, conflicting volume			449		575	169
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			449		575	169
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		80	93
cM capacity (veh/h)			1107		435	845

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	169	169	111	33	171	171	85	58
Volume Left	0	0	0	33	0	0	85	0
Volume Right	0	0	111	0	0	0	0	58
cSH	1700	1700	1700	1107	1700	1700	435	845
Volume to Capacity	0.10	0.10	0.07	0.03	0.10	0.10	0.20	0.07
Queue Length 95th (ft)	0	0	0	2	0	0	18	6
Control Delay (s)	0.0	0.0	0.0	8.3	0.0	0.0	15.3	9.6
Lane LOS				A			C	A
Approach Delay (s)	0.0			0.7			12.9	
Approach LOS							B	

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	25.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	393	27	13	353	13	7
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	427	29	14	384	14	8
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			457		647	214
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			457		647	214
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		96	99
cM capacity (veh/h)			1101		398	791

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	214	214	29	142	256	22
Volume Left	0	0	0	14	0	14
Volume Right	0	0	29	0	0	8
cSH	1700	1700	1700	1101	1700	482
Volume to Capacity	0.13	0.13	0.02	0.01	0.15	0.05
Queue Length 95th (ft)	0	0	0	1	0	4
Control Delay (s)	0.0	0.0	0.0	0.9	0.0	12.8
Lane LOS				A		B
Approach Delay (s)	0.0			0.3		12.8
Approach LOS						B

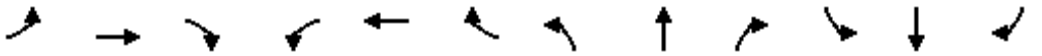
Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	29.2%	ICU Level of Service	A
Analysis Period (min)	15		

APPENDIX F
FUTURE BUILD CAPACITY ANALYSES - MITIGATION

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	205	347	259	20	130	66	116	594	139	111	501	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.5	5.5	5.5		8.0	8.0	8.0	5.0	8.0	8.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1719	1845	1509	1770	1631		1770	3438	1538	1736	1845	1583
Flt Permitted	0.43	1.00	1.00	0.52	1.00		0.22	1.00	1.00	0.21	1.00	1.00
Satd. Flow (perm)	785	1845	1509	960	1631		414	3438	1538	382	1845	1583
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82	0.84	0.84	0.84	0.79	0.79	0.79
Adj. Flow (vph)	250	423	316	24	159	80	138	707	165	141	634	43
RTOR Reduction (vph)	0	0	78	0	11	0	0	0	114	0	0	21
Lane Group Flow (vph)	250	423	238	24	228	0	138	707	51	141	634	22
Heavy Vehicles (%)	5%	3%	7%	2%	12%	8%	2%	5%	5%	4%	3%	2%
Turn Type	pm+pt		Perm	Perm			Perm		Perm	pm+pt		Perm
Protected Phases	5	2			6			4		3	8	
Permitted Phases	2		2	6			4		4	8		8
Actuated Green, G (s)	61.2	61.2	61.2	39.9	39.9		39.3	39.3	39.3	53.2	53.2	53.2
Effective Green, g (s)	61.2	61.2	61.2	39.9	39.9		39.3	39.3	39.3	53.2	53.2	53.2
Actuated g/C Ratio	0.48	0.48	0.48	0.31	0.31		0.31	0.31	0.31	0.42	0.42	0.42
Clearance Time (s)	5.0	5.5	5.5	5.5	5.5		8.0	8.0	8.0	5.0	8.0	8.0
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)	495	883	722	299	509		127	1056	473	253	767	658
v/s Ratio Prot	0.06	c0.23			0.14			0.21		0.04	c0.34	
v/s Ratio Perm	c0.18		0.16	0.02			c0.33		0.03	0.19		0.01
v/c Ratio	0.51	0.48	0.33	0.08	0.45		1.09	0.67	0.11	0.56	0.83	0.03
Uniform Delay, d1	21.2	22.6	20.6	31.1	35.2		44.3	38.6	31.7	25.7	33.2	22.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.8	1.9	1.2	0.5	2.8		105.0	1.6	0.1	2.7	7.3	0.0
Delay (s)	22.0	24.4	21.9	31.6	38.0		149.3	40.3	31.8	28.4	40.5	22.1
Level of Service	C	C	C	C	D		F	D	C	C	D	C
Approach Delay (s)		23.0			37.4			53.8			37.5	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	38.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	127.9	Sum of lost time (s)	21.5
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		

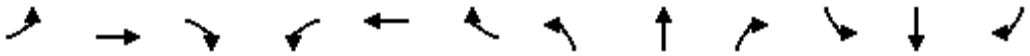
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	181	145	51	301	210	240	249	1637	310	173	752	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.91	1.00	0.97	0.91	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)	1752	3539	1482	3335	3471	1583	1770	5036	1568	3433	4988	1495
Flt Permitted	0.35	1.00	1.00	0.64	1.00	1.00	0.26	1.00	1.00	0.07	1.00	1.00
Satd. Flow (perm)	653	3539	1482	2256	3471	1583	488	5036	1568	235	4988	1495
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.87	0.87	0.87	0.89	0.89	0.89
Adj. Flow (vph)	215	173	61	358	250	286	286	1882	356	194	845	117
RTOR Reduction (vph)	0	0	51	0	0	154	0	0	128	0	0	59
Lane Group Flow (vph)	215	173	10	358	250	132	286	1882	228	194	845	59
Heavy Vehicles (%)	3%	2%	9%	5%	4%	2%	2%	3%	3%	2%	4%	8%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	44.0	25.7	25.7	32.2	19.8	19.8	102.9	87.1	87.1	89.8	80.0	80.0
Effective Green, g (s)	44.0	25.7	25.7	32.2	19.8	19.8	102.9	87.1	87.1	89.8	80.0	80.0
Actuated g/C Ratio	0.28	0.16	0.16	0.20	0.12	0.12	0.64	0.54	0.54	0.56	0.50	0.50
Clearance Time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5
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)	305	568	238	538	430	196	449	2741	854	328	2494	748
v/s Ratio Prot	c0.08	0.05		0.05	0.07		c0.07	c0.37		0.04	0.17	
v/s Ratio Perm	c0.11		0.01	0.08		0.08	0.34		0.15	0.30		0.04
v/c Ratio	0.70	0.30	0.04	0.67	0.58	0.67	0.64	0.69	0.27	0.59	0.34	0.08
Uniform Delay, d1	48.4	59.3	56.7	57.3	66.2	67.0	13.7	26.5	19.4	22.6	24.1	20.8
Progression 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
Incremental Delay, d2	7.2	0.3	0.1	3.1	2.0	8.8	3.0	1.4	0.8	2.8	0.4	0.2
Delay (s)	55.6	59.6	56.8	60.4	68.2	75.8	16.7	27.9	20.2	25.4	24.4	21.0
Level of Service	E	E	E	E	E	E	B	C	C	C	C	C
Approach Delay (s)		57.3			67.5			25.6			24.3	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM Average Control Delay	35.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.5
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		

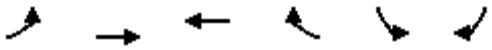
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	21	182	1	30	113	153	1	195	63	33	63	20
Peak Hour Factor	0.75	0.75	0.75	0.88	0.88	0.88	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	28	243	1	34	128	174	1	235	76	40	76	24

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	272	336	312	40	100
Volume Left (vph)	28	34	1	40	0
Volume Right (vph)	1	174	76	0	24
Hadj (s)	0.07	-0.26	-0.10	0.53	-0.12
Departure Headway (s)	6.0	5.6	6.0	7.5	6.8
Degree Utilization, x	0.46	0.52	0.52	0.08	0.19
Capacity (veh/h)	550	599	553	411	453
Control Delay (s)	14.0	14.6	15.4	9.9	10.2
Approach Delay (s)	14.0	14.6	15.4	10.1	
Approach LOS	B	B	C	B	

Intersection Summary				
Delay	14.1			
HCM Level of Service	B			
Intersection Capacity Utilization	51.1%	ICU Level of Service	A	
Analysis Period (min)	15			



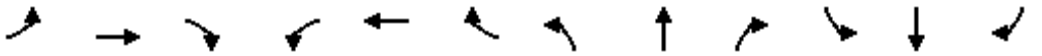
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	829	454	5	0	146
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.88	0.92	0.92	0.92	0.86
Hourly flow rate (vph)	0	942	493	5	0	170
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1151			
pX, platoon unblocked	0.81				0.81	0.81
vC, conflicting volume	499				1438	496
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	265				1424	262
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	73
cM capacity (veh/h)	1053				121	630

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	942	499	85	85
Volume Left	0	0	0	0
Volume Right	0	5	85	85
cSH	1700	1700	630	630
Volume to Capacity	0.55	0.29	0.13	0.13
Queue Length 95th (ft)	0	0	12	12
Control Delay (s)	0.0	0.0	11.6	11.6
Lane LOS			B	B
Approach Delay (s)	0.0	0.0	11.6	
Approach LOS			B	

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	92	211	205	58	436	89	67	627	138	294	709	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.5	5.5	5.5	5.5		8.0	8.0	8.0	5.0	8.0	8.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1815		1770	3539	1583	1770	1863	1583
Flt Permitted	0.08	1.00	1.00	0.60	1.00		0.13	1.00	1.00	0.20	1.00	1.00
Satd. Flow (perm)	145	1863	1583	1124	1815		244	3539	1583	365	1863	1583
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.86	0.86	0.86	0.92	0.92	0.92
Adj. Flow (vph)	110	251	244	69	519	106	78	729	160	320	771	64
RTOR Reduction (vph)	0	0	133	0	6	0	0	0	111	0	0	26
Lane Group Flow (vph)	110	251	111	69	619	0	78	729	49	320	771	38
Turn Type	pm+pt		Perm	Perm			Perm		Perm	pm+pt		Perm
Protected Phases	5	2			6			4		3	8	
Permitted Phases	2		2	6			4		4	8		8
Actuated Green, G (s)	56.5	56.5	56.5	46.5	46.5		39.2	39.2	39.2	58.2	58.2	58.2
Effective Green, g (s)	56.5	56.5	56.5	46.5	46.5		39.2	39.2	39.2	58.2	58.2	58.2
Actuated g/C Ratio	0.44	0.44	0.44	0.36	0.36		0.31	0.31	0.31	0.45	0.45	0.45
Clearance Time (s)	5.0	5.5	5.5	5.5	5.5		8.0	8.0	8.0	5.0	8.0	8.0
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)	127	821	698	408	658		75	1082	484	319	846	719
v/s Ratio Prot	c0.03	0.13			c0.34			0.21		0.11	c0.41	
v/s Ratio Perm	0.35		0.07	0.06			0.32		0.03	c0.35		0.02
v/c Ratio	0.87	0.31	0.16	0.17	0.94		1.04	0.67	0.10	1.00	0.91	0.05
Uniform Delay, d1	29.6	23.2	21.6	27.7	39.5		44.5	38.9	31.9	28.5	32.6	19.6
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	42.0	1.0	0.5	0.9	23.3		115.4	1.7	0.1	51.2	13.9	0.0
Delay (s)	71.6	24.1	22.0	28.6	62.8		159.9	40.6	32.0	79.7	46.5	19.6
Level of Service	E	C	C	C	E		F	D	C	E	D	B
Approach Delay (s)		31.9			59.4			48.8			54.2	
Approach LOS		C			E			D			D	

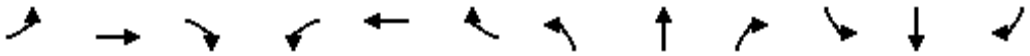
Intersection Summary			
HCM Average Control Delay	49.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	128.2	Sum of lost time (s)	18.5
Intersection Capacity Utilization	96.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	252	591	180	437	262	252	182	1288	427	348	2115	226
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.91	1.00	0.97	0.91	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	3539	1583	3433	3539	1583	1770	5036	1583	3433	5085	1568
Flt Permitted	0.48	1.00	1.00	0.14	1.00	1.00	0.06	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)	895	3539	1583	522	3539	1583	112	5036	1583	381	5085	1568
Peak-hour factor, PHF	0.89	0.89	0.89	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	283	664	202	480	288	277	198	1400	464	378	2299	246
RTOR Reduction (vph)	0	0	110	0	0	138	0	0	175	0	0	131
Lane Group Flow (vph)	283	664	92	480	288	139	198	1400	289	378	2299	115
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	2%	3%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	42.7	27.7	27.7	42.7	27.7	27.7	77.5	66.5	66.5	83.1	69.3	69.3
Effective Green, g (s)	42.7	27.7	27.7	42.7	27.7	27.7	77.5	66.5	66.5	83.1	69.3	69.3
Actuated g/C Ratio	0.29	0.19	0.19	0.29	0.19	0.19	0.52	0.45	0.45	0.56	0.47	0.47
Clearance Time (s)	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5	6.0	6.5	6.5
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)	347	662	296	446	662	296	182	2263	711	499	2381	734
v/s Ratio Prot	0.08	0.19		c0.11	0.08		c0.08	0.28		0.07	c0.45	
v/s Ratio Perm	0.15		0.06	c0.20		0.09	c0.49		0.18	0.36		0.07
v/c Ratio	0.82	1.00	0.31	1.08	0.44	0.47	1.09	0.62	0.41	0.76	0.97	0.16
Uniform Delay, d1	46.2	60.2	51.9	46.0	53.2	53.6	46.6	31.1	27.5	22.7	38.2	22.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	13.7	35.7	0.6	64.6	0.5	1.2	92.1	1.3	1.7	6.5	12.0	0.5
Delay (s)	59.9	95.9	52.5	110.5	53.7	54.8	138.7	32.4	29.2	29.1	50.2	23.0
Level of Service	E	F	D	F	D	D	F	C	C	C	D	C
Approach Delay (s)		79.4			80.1			41.9			45.2	
Approach LOS		E			F			D			D	

Intersection Summary			
HCM Average Control Delay	54.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	148.0	Sum of lost time (s)	30.5
Intersection Capacity Utilization	100.6%	ICU Level of Service	G
Analysis Period (min)	15		

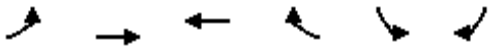
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	15	175	1	44	205	90	1	123	52	175	230	20
Peak Hour Factor	0.76	0.76	0.76	0.86	0.86	0.86	0.81	0.81	0.81	0.82	0.82	0.82
Hourly flow rate (vph)	20	230	1	51	238	105	1	152	64	213	280	24

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	251	394	217	213	305
Volume Left (vph)	20	51	1	213	0
Volume Right (vph)	1	105	64	0	24
Hadj (s)	0.06	-0.10	-0.13	0.53	-0.02
Departure Headway (s)	7.4	6.8	7.5	7.9	7.4
Degree Utilization, x	0.52	0.75	0.45	0.47	0.62
Capacity (veh/h)	441	498	427	434	464
Control Delay (s)	18.1	27.4	16.5	16.6	20.7
Approach Delay (s)	18.1	27.4	16.5	19.0	
Approach LOS	C	D	C	C	

Intersection Summary				
Delay	20.8			
HCM Level of Service	C			
Intersection Capacity Utilization	61.8%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	0	872	799	0	0	296
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.91	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	958	868	0	0	322
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			1151			
pX, platoon unblocked	0.72				0.72	0.72
vC, conflicting volume	868				1827	868
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	628				1951	628
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	8
cM capacity (veh/h)	691				51	350

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total	958	868	161	161
Volume Left	0	0	0	0
Volume Right	0	0	161	161
cSH	1700	1700	350	350
Volume to Capacity	0.56	0.51	0.46	0.46
Queue Length 95th (ft)	0	0	58	58
Control Delay (s)	0.0	0.0	23.8	23.8
Lane LOS			C	C
Approach Delay (s)	0.0	0.0	23.8	
Approach LOS			C	

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		