Transportation Analysis

Georgia Tech High Performance Computing Center (HPCC) DRI #2569

City of Atlanta, Georgia

Report Prepared:

May 2016

Prepared for:

Portman Holdings, LLC

Prepared by:

Kimley-Horn and Associates, Inc.
817 West Peachtree Street NW, The Biltmore, Suite 601
Atlanta, Georgia 30308
019292007

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EXECUTIVE SUMMARY

This report presents the analysis of the anticipated traffic impacts of the proposed Georgia Tech High Performance Computing Center (HPCC) mixed-use development located in the City of Atlanta, Georgia. The approximate 2.2-acre site is located north of 4th Street, south of Armstead Place, east of Spring Street, and west of West Peachtree Street. The proposed development will be mixed-use, consisting of approximately 750,000 square feet of office, data center, retail, and restaurant land uses. The data center portion of the project is being developed by others, but is included in this transportation analysis.

The project is a Development of Regional Impact (DRI) and is subject to Georgia Regional Transportation Authority (GRTA) and Atlanta Regional Commission (ARC) review due to the project size exceeding 700,000 SF of mixed-use development in a region core area type, as determined by the Atlanta Regional Commission's *Unified Growth Policy Map (UGPM)*. The DRI trigger for this development was the submittal of the SAP (Special Administrative Permit) Application with the City of Atlanta. The DRI was formally triggered with the filing of the Initial DRI Information (Form 1) on March 29, 2016 by the City of Atlanta.

The proposed project is expected to be completed by 2018. The proposed site will consist of the following land uses and densities:

Office:	625,000 SF
Data Center:	80,000 SF*
Retail:	11,000 SF
Restaurant:	34,000 SF

**The data center portion of the project is being developed by others and is anticipated to be built-out concurrently with the office, retail, and restaurant portions of the project.*

The DRI analysis includes an estimation of the overall vehicle trips projected to be generated by the development, also known as gross trips. Reductions to gross trips are also considered in the analysis, including mixed-use reductions, alternative transportation mode reductions, and pass-by trip reductions.

Mixed-use reductions occur when a site has a combination of different land uses that interact with one another. For example, people working in an office development may walk to the restaurants and retail instead of driving off-site to dine. This reduces the number of vehicle trips that will be made on the roadway, thus reducing traffic congestion. These types of interactions are expected at the Georgia Tech HPCC development – including workers walking to the data center, retail, and restaurant land uses.

Alternative mode reductions are taken when a site can be accessed by modes other than vehicles (walking, bicycling, transit, etc.). As the Georgia Tech HPCC development is located in a region core with proximity to transit and increased pedestrian facilities, a 25% alternative mode reduction was taken. The project site is located 0.2 miles (two blocks) from the North Avenue MARTA Rail Station and 0.5 miles (six blocks) from the Midtown MARTA Rail Station, both of which are served by the Red and Gold rail lines seven days a week. The project site is adjacent to three bus stops that are served by GRTA Xpress buses, Cobb County Transit buses, and the Georgia Tech Trolley. The project site is also 0.2 miles (two blocks) from MARTA Bus Route 110 which provides service seven days a week along the Peachtree Street/Peachtree Road corridor.

Pass-by reductions are taken for retail and restaurant trips only. Traffic normally travelling along a roadway may choose to visit a retail or restaurant establishment that is along the vehicle's pre-ordained

path. These trips were already on the road and would therefore only be new trips at the driveways. The project site is located next to Georgia Tech in the heart of Midtown Atlanta, an area with increased pedestrian and bicycle facilities. Based on knowledge of the area, it is anticipated that there will be no vehicular pass-by trips for the proposed retail and restaurant land uses. Therefore, for the Georgia Tech HPCC development, no pass-by reductions were taken thus providing a conservative analysis.

Capacity analyses were performed throughout the study network for the Existing 2016 conditions, the Projected 2018 No-Build conditions, and the Projected 2018 Build conditions.

- Existing 2016 conditions represent traffic volumes that were collected in April 2016 by performing AM and PM peak hour turning movement counts.

- Projected 2018 No-Build conditions represent the existing traffic volumes grown for two (2) years at one percent per year throughout the study network.

- Projected 2018 Build conditions represent the Projected 2018 No-Build conditions with the addition of the project trips that are anticipated to be generated by the Georgia Tech HPCC development. Also included are the two (2) proposed site access driveways in addition to the existing study network intersections.

Based on the analysis of Existing 2016 conditions (present conditions; i.e. excludes background traffic growth and excludes the Georgia Tech HPCC project traffic), the following improvements are recommended:

- West Peachtree Street at 4th Street (Int. #3)
  - Install a traffic signal at the intersection – preliminary analysis suggests that a traffic signal may be warranted (Warrant 3 – Peak Hour Warrant) based on existing traffic volumes.

- Williams Street at 5th Street (Int. #7)
  - Install a traffic signal at the intersection – preliminary analysis suggests that a traffic signal may be warranted (Warrant 3 – Peak Hour Warrant and Warrant 4 – Pedestrian Warrant) based on existing traffic volumes and pedestrian volumes.
  - Restrict the northbound right-turn on red (to reduce vehicle and pedestrian conflicts).

Based on the analysis of Projected 2018 No-Build conditions (includes background traffic growth but excludes the Georgia Tech HPCC project traffic), there are no recommended improvements IN ADDITION TO the improvements associated with the Existing 2016 conditions.

Based on the analysis of Projected 2018 Build conditions (includes background traffic growth and includes the Georgia Tech HPCC project traffic plus the site access driveway), the following improvements are recommended IN ADDITION TO the improvements associated with the Existing 2016 conditions and the Projected 2018 No-Build conditions:

- Armstead Place at Proposed Driveway 1 (Int. #8)
  - Construct one ingress lane on-site along Proposed Driveway 1.
  - Construct one egress lane on-site along Proposed Driveway 1 – one shared northbound left-turn/right-turn lane.

- 4th Street at Proposed Driveway 2 (Int. #9)
  - Construct one ingress lane on-site along Proposed Driveway 2.

- Construct one egress lane on-site along Proposed Driveway 2 – one southbound right-turn only lane.

Based on the Projected 2018 Build conditions, the following additional improvements may be considered:

- Spring Street at 4th Street (Int. #4)
  - Install a traffic signal at the intersection – preliminary analysis indicates that a traffic signal will improve the operation of the intersection. While analysis suggests that the intersection may not warrant a traffic signal based on traffic volumes alone, a traffic signal will be beneficial for pedestrians crossing Spring Street as the Georgia Tech HPCC development will utilize parking in the existing Georgia Tech Parking Deck on the west side of Spring Street.

Additionally, as requested by the City of Atlanta and the Midtown Alliance as noted in the GRTA LOU, an Alternative Analysis with a two-way conversion of 4th Street was performed and is presented in Section 6.4 Alternative Analysis. Based on the alternative analysis, the intersection of Spring Street at 4th Street (Int. #4) experiences increased delay, further supporting the need for a traffic signal to improve operations and benefit pedestrians (consistent with the bullet note above).

1.0 PROJECT DESCRIPTION

1.1 Introduction

This report presents the analysis of the anticipated traffic impacts of the proposed Georgia Tech High Performance Computing Center (HPCC) development located in the City of Atlanta, Georgia. The approximate 2.2-acre redevelopment site is located north of 4th Street, south of Armstead Place, east of Spring Street, and west of West Peachtree Street. The proposed development will be mixed-use, consisting of approximately 750,000 square feet of office, data center, retail, and restaurant land uses. The data center portion of the project is being developed by others, but is included in this transportation analysis. The project site is located south of the existing Georgia Tech School of Business and Georgia Tech Bookstore and east of the Georgia Tech Hotel and Conference Center. In addition to on-site parking, the Georgia Tech HPCC development will utilize an off-site parking deck located in the northwest corner of the intersection of Spring Street and 4th Street/Williams Street. The development will be an addition to the existing Technology Square development.

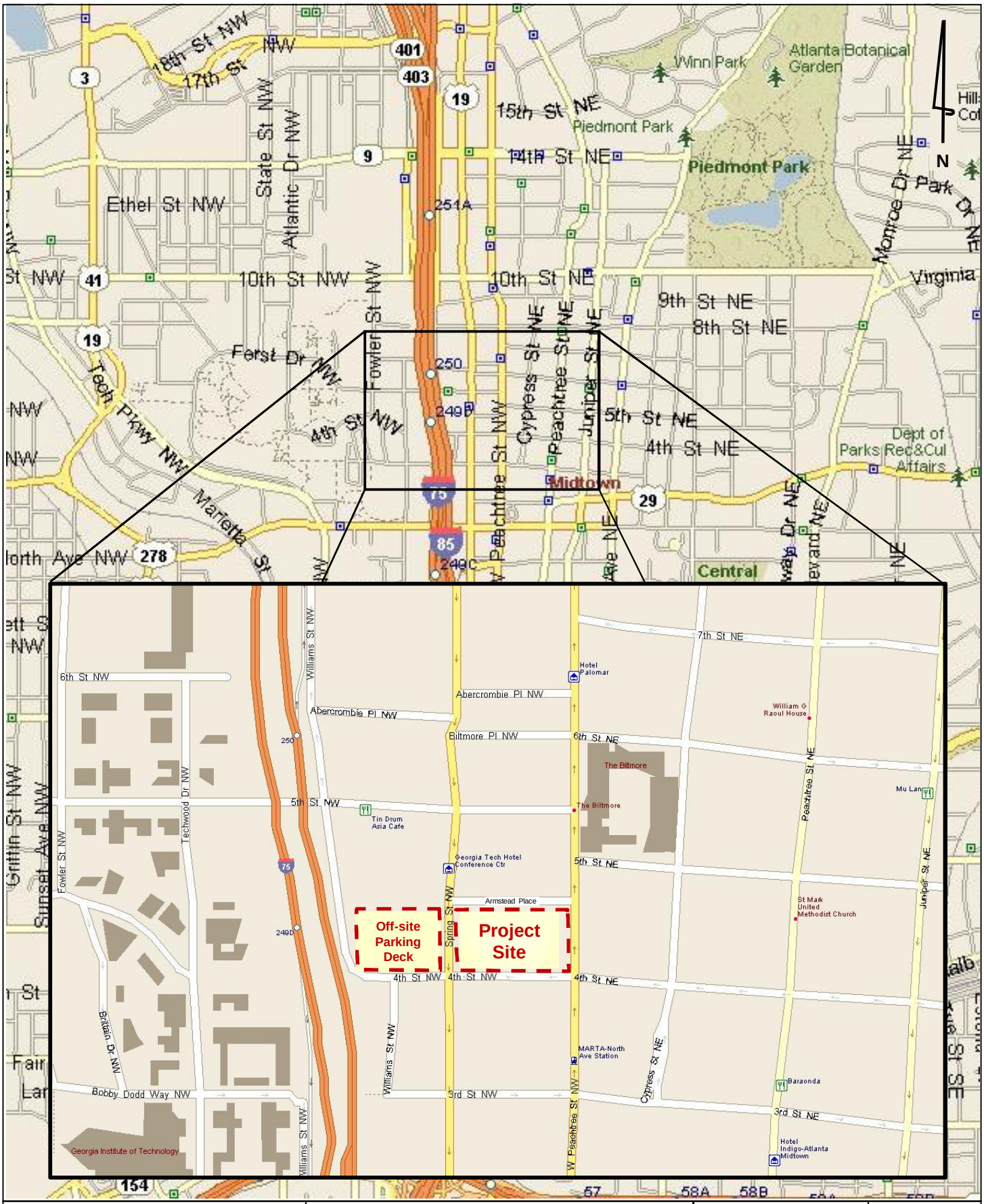
The project will exceed 700,000 square feet of mixed-use development in a region core area type and therefore, the proposed development is a Development of Regional Impact (DRI) and is subject to Atlanta Regional Commission (ARC) and Georgia Regional Transportation Authority (GRTA) review.

Figure 1 provides the location map of the Georgia Tech HPCC development, and **Figure 2** provides a site aerial showing of the project site and surrounding area. **Figure 3** provides a zoomed-in bird's eye view of the project. Field review photographs taken within the vicinity of the study network are located in the site photo log in Appendix A. The City of Atlanta Zoning Ordinance Map and ARC's *Unified Growth Policy Map (UGPM)* are included in Appendix B.

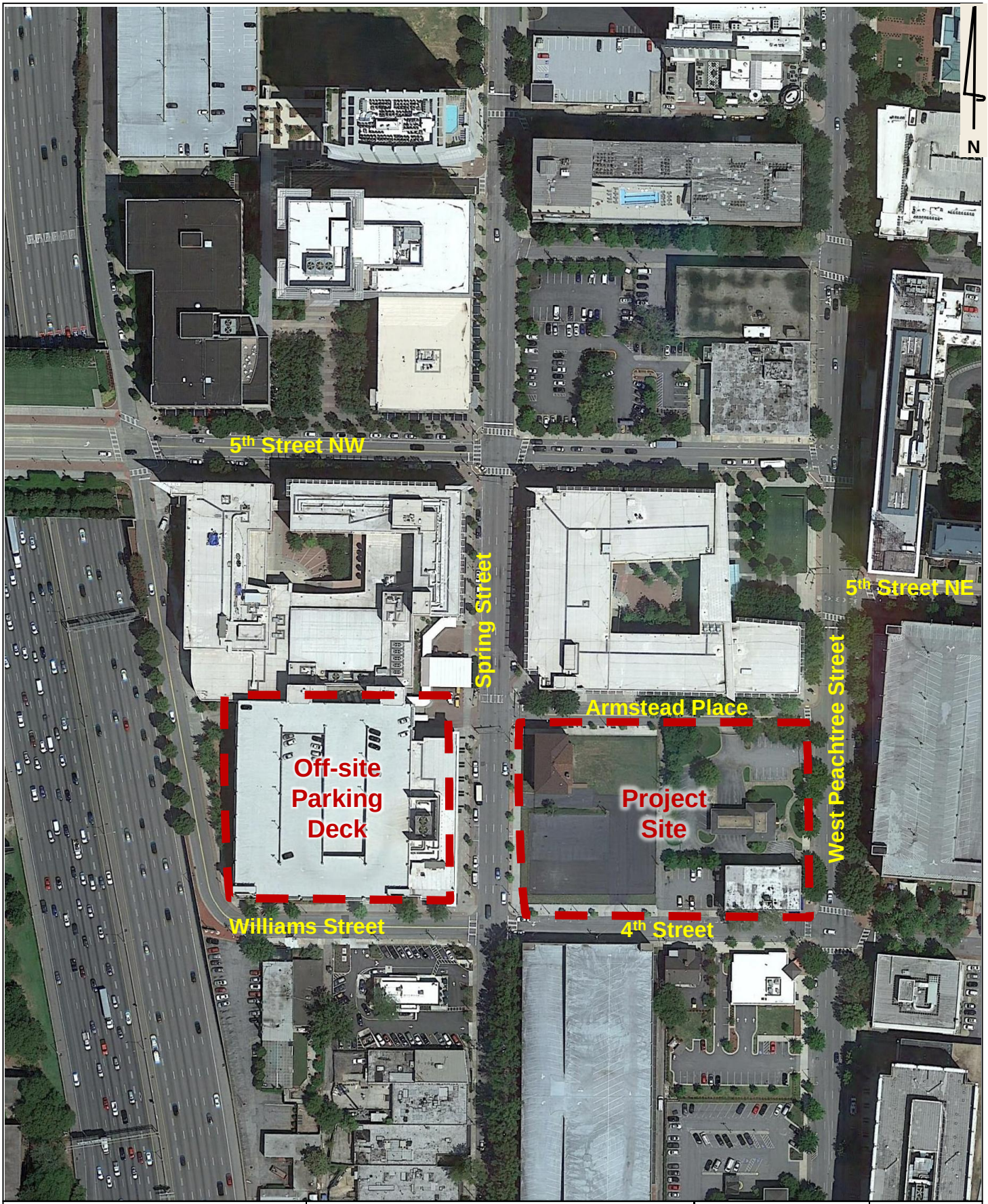
The proposed project is expected to be completed by 2018, and this analysis will consider the full build-out of the proposed site in 2018. A summary of the proposed land-uses and densities is provided below in **Table 1**.

Table 1
Proposed Land Uses and Densities

Office	625,000 SF
Data Center	80,000 SF
Retail	11,000 SF
Restaurant	34,000 SF



Kimley»Horn	**Georgia Tech HPCC** **DRI #2569** **Transportation Analysis**	**Location Map**	**Figure 1**



Kimley»Horn	Georgia Tech HPCC DRI #2569 Transportation Analysis	Site Aerial	Figure 2

Kimley»Horn	Georgia Tech HPCC DRI #2569 Transportation Analysis	Bird's Eye View	Figure 3

1.2 Site Plan Review

The project site currently consists of the three-story vacant Crum and Forster Building, a one-story vacant bank building (3,500 SF), a three-story occupied office building (18,000 SF), and associated parking. The one-story bank building and three-story office building will be demolished. The Crum and Forster Building will be renovated and remain. The project site is located in the Special Public Interest (SPI) Zone 16 according to the *City of Atlanta Zoning Ordinance Map* and requires review by the SPI-16 Development Review Committee (DRC). The project site is located in a Region Core area type according to ARC's *Unified Growth Policy Map (UGPM)*. Additionally, the project site is within and adheres to the recommendations in the most recent Midtown LCI, which qualifies the Georgia Tech HPCC development for GRTA's expedited review.

A reference of the proposed site plan is provided in Appendix C. A full-sized site plan consistent with GRTA's Site Plan Guidelines is also being submitted as part of the review package.

1.3 Site Access

The project site is currently served by two (2) driveways along West Peachtree Street, one (1) driveway along Armstead Place, one driveway (1) along Spring Street, and one (1) driveway along 4th Street. As currently envisioned, the proposed development will be served by one (1) driveway along 4th Street and one (1) driveway along Armstead Place. The proposed driveway along Armstead Place will be open only during peak hours for monthly card access. No visitors will be permitted to use this driveway. The existing two (2) driveways along West Peachtree Street and one (1) driveway along Spring Street are proposed to be closed. Additionally, the development will utilize parking in the existing Georgia Tech parking deck located in the northwest quadrant of the intersection of Spring Street and 4th Street/Williams Street. The existing parking deck is accessed by one (1) existing driveway along Spring Street, one (1) existing driveway along 4th Street, and one (1) existing driveway along Williams Street. Following is a description of each of the driveways:

1. Georgia Tech Existing Driveway 1 – an existing full movement driveway located as the west leg of the signalized intersection Spring Street at Armstead Place. Georgia Tech Existing Driveway 1 is proposed to remain a signalized full movement driveway.
2. Georgia Tech Existing Driveway 2 – an existing stop controlled full movement driveway located approximately 150 feet west of the intersection of Spring Street at 4th Street/Williams Street. Georgia Tech Existing Driveway 2 is proposed to remain a stop controlled full movement driveway.
3. Georgia Tech Existing Driveway 3 – an existing stop controlled full movement driveway located approximately 350 feet south of the intersection of 5th Street at Williams Street. Georgia Tech Existing Driveway 3 is proposed to remain a stop controlled full movement driveway.
4. Proposed Driveway 1 – a proposed driveway to be located approximately 150 feet east of the intersection of Spring Street and Armstead Place. Proposed Driveway 1 is proposed to be a stop controlled full movement driveway. Proposed Driveway 1 access will be restricted to monthly card access only during peak hours.
5. Proposed Driveway 2 – a proposed driveway located approximately 250 feet east of the intersection of Spring Street and Armstead Place. Proposed Driveway 2 is proposed to be a stop controlled full movement driveway.

The site driveways mentioned above provide access to all parking for the site. Parking will be provided throughout the development as follows:

New Parking Provided:	*576 spaces*
Georgia Tech Existing Parking Utilized:	*400 spaces*
Total Parking Provided:	976 spaces
Parking Required per SPI-16 Zoning:	
Office:	2.5 spaces per 1,000 SF (maximum)
Retail & Restaurant	1 space per 600 SF (minimum)
	2.5 spaces per 600 SF (maximum)

As the Georgia Tech HPCC development is located in a Region Core, shared parking will be utilized on the project site. Additionally, as the project site is envisioned to be an extension of the existing Technology Square development with increased pedestrian and bicyclist infrastructure, it is anticipated that there will be limited vehicular trips for the retail and restaurant land uses. The project site is being parked at much lower than the maximum parking spaces required, and the development will utilize existing parking assets located in the vicinity of the project site.

1.4 Bicycle and Pedestrian Facilities

The project site is located next to Georgia Tech in the heart of Midtown Atlanta, in an area with increased pedestrian and bicyclist facilities. Pedestrian facilities (sidewalks) currently exist along the project site frontage. There are currently bicycle facilities (bike lanes/paths) along 5th Street in the vicinity of the project site. Additional bicycle facilities are planned as part of project AT-271 (Juniper Street Bicycle/Pedestrian Facilities) and AT-277 (Cycle Atlanta: Phase 1.0 – includes routes on West Peachtree Street and Peachtree Street). More details are provided in Section 8.0.

1.5 Transit Facilities

The project site is located 0.2 miles (2 blocks) from the North Avenue MARTA Rail Station and 0.5 miles (6 blocks) from the Midtown MARTA Rail Station, both of which are served by the Red and Gold lines seven days a week. The project site is adjacent to three bus stops that are served by GRTA Xpress buses, Cobb County Transit buses, and the Georgia Tech Trolley. The project site is also 0.2 miles (two blocks) from MARTA Bus Route 110 which provides service seven days a week along the Peachtree Road corridor.

2.0 TRAFFIC ANALYSES, METHODOLOGY AND ASSUMPTIONS

2.1 Growth Rate

Background traffic is defined as expected traffic on the roadway network in future year(s) absent the construction and opening of the proposed project. Background traffic can include a base growth rate based on historical count data as well as population growth data and estimates as well as trips anticipated from nearby or adjacent other projects. Based on methodology outlined in the GRTA Letter of Understanding (LOU), a one (1) percent per year for two (2) years background traffic growth rate was used for all roadways. This background growth rate was used to account for other development activity in the area.

2.2 Traffic Data Collection

Weekday peak hour turning movement counts were collected on Tuesday, April 12, 2016 at the study intersections during the AM and PM peak periods. The morning and afternoon peak hours varied slightly between the intersections. Peak hours for all intersections are shown in **Table 2**.

Table 2 Peak Hour Summary		
Intersection	AM Peak Hour	PM Peak Hour
1. Spring Street at Armstead Place/Georgia Tech Existing Driveway 1	8:00-9:00	5:00-6:00
2. West Peachtree Street at Armstead Place	8:00-9:00	5:00-6:00
3. West Peachtree Street at 4th Street	7:45-8:45	5:00-6:00
4. Spring Street at 4th Street/Williams Street	8:00-9:00	4:00-5:00
5. 4th Street at Georgia Tech Existing Driveway 2	7:45-8:45	4:15-5:15
6. Williams Street at Georgia Tech Existing Driveway 3	7:45-8:45	4:15-5:15
7. Williams Street at 5th Street	8:00-9:00	5:00-6:00

The collected peak hour turning movement traffic counts are available upon request.

2.3 Detailed Intersection Analysis

Level-of-service (LOS) is used to describe the operating characteristics of a road segment or intersection in relation to its capacity. LOS is defined as a qualitative measure that describes operational conditions and motorists' perceptions within a traffic stream. The *Highway Capacity Manual* defines six levels-of-service, LOS A through LOS F, with A being the best and F being the worst. Level-of-service analyses were conducted at all intersections within the study network using *Synchro Professional, Version 9.0*.

Existing traffic signal phasing and timing data were retrieved from the Midtown Traffic Operations Program (MTOP) for Intersection 1. Existing timing data was used in the Existing 2016 conditions, Projected 2018 No-Build conditions, and Projected 2018 Build conditions. All signal timings were optimized using *Synchro Professional, Version 9.0* for the improved conditions.

Levels-of-service for signalized intersections are reported for the intersection as a whole. One or more movements at an intersection may experience a low level-of-service, while the intersection as a whole may operate acceptably.

Levels-of-service for unsignalized intersections, with stop control on the minor street only, are reported for the side street approaches and the major street left-turn movements. Low levels-of-service for side street approaches are not uncommon, as vehicles may experience significant delays in turning onto a major roadway.

3.0 STUDY NETWORK

3.1 Gross Trip Generation

Traffic for the proposed land uses and densities were calculated using methodology contained in the *Institute of Transportation Engineers' (ITE) Trip Generation Manual, Ninth Edition*. Gross trips generated are displayed below in **Table 3**. Existing trips generated by the existing land uses on the site are minimal and therefore, were not removed from the network in order to present a more conservative analysis.

Table 3
Gross Trip Generation

Land Use (Intensity)	ITE Code	Daily Traffic			AM Peak Hour			PM Peak Hour		
		Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit
Data Center (80,000 SF)	*160*	79	40	39	7	4	3	7	2	5
General Office Building (625,000 SF)	*710*	5,285	2,643	2,642	829	730	99	778	132	646
Specialty Retail Center* (11,000 SF)	*826*	508	254	254	41	25	16	48	21	27
Quality Restaurant (18,000 SF)	*931*	1,619	809	810	15	**	**	135	90	45
High-Turnover (Sit-Down) Restaurant (8,000 SF)	*932*	1,017	508	509	86	47	39	79	47	32
Fast-Food Restaurant without Drive-Through Window (8,000 SF)	*933*	5,728	2,864	2,864	351	211	140	209	107	102
Total Gross Trips		**14,236**	**7,118**	**7,118**	**1,329**	**1,017**	**297**	**1,256**	**399**	**857**

* Land Use 826 Special Retail does not generate any AM peak hour trips. Therefore, Land Use 820 Shopping Center was used to generate AM peak hour trips.
** Land Use 931 Quality Restaurant does not provide entering and exiting distributions for the AM peak hour trips.

3.2 Trip Distribution

The directional distribution and assignment of new project trips was based on the project land uses, a review of the land use densities and road facilities in the area, engineering judgment, and methodology discussions with the Georgia Regional Transportation Authority (GRTA), Atlanta Regional Commission (ARC), Georgia Department of Transportation (GDOT), and the City of Atlanta.

3.3 Level-of-Service Standards

For the purposes of this traffic analysis, a level-of-service standard of D was assumed for all intersections and segments within the study network. If, however, an intersection or segment currently operates at LOS E or LOS F during an existing peak period, the LOS standard for that peak period becomes LOS E, consistent with the GRTA Letter of Understanding.

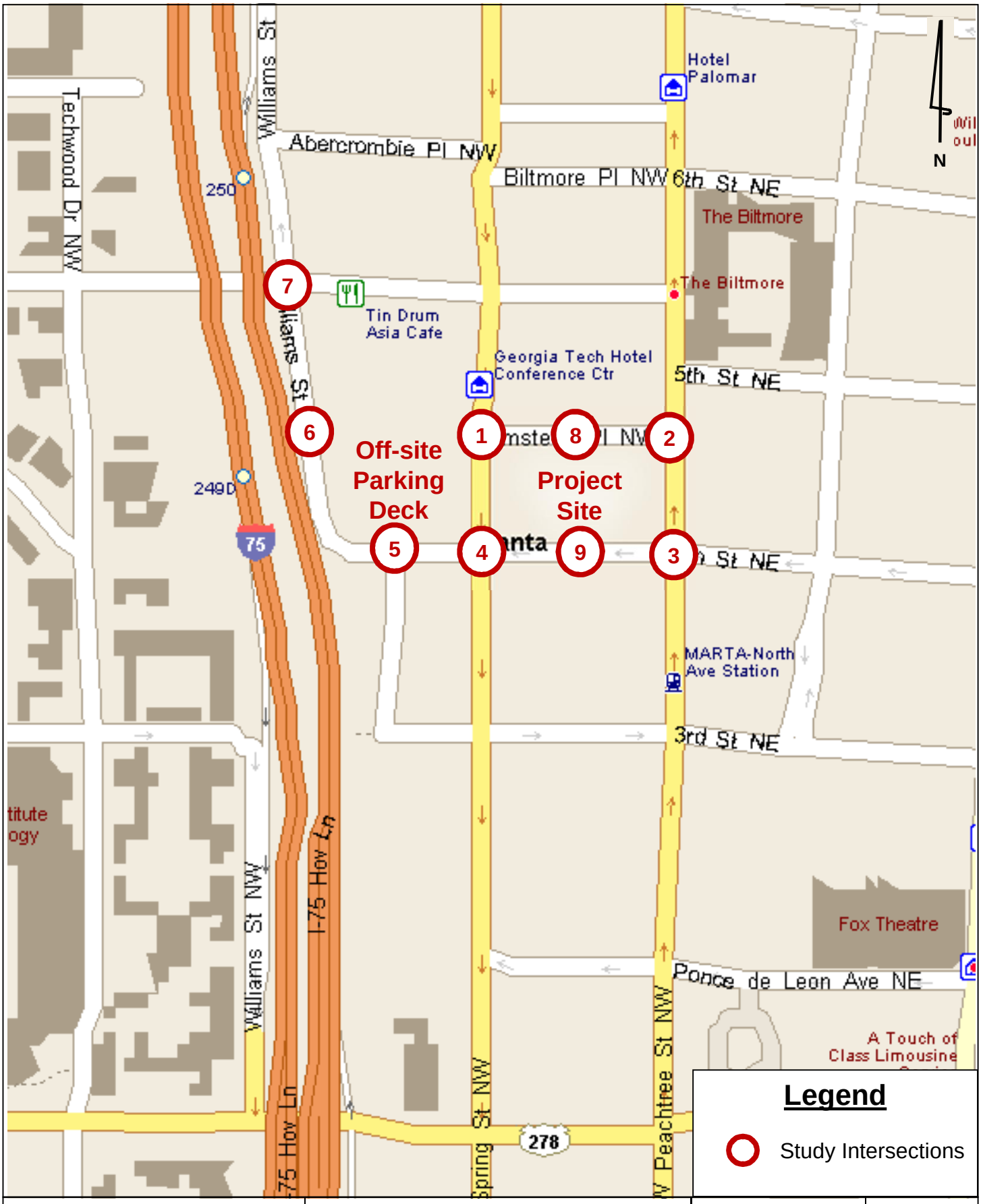
3.4 Study Network Determination

A general study area was determined based on a review of land uses and population densities in the area as well as a review of peak hour traffic counts and engineering judgement. As the Georgia Tech HPCC development is located in the Midtown LCI, it qualifies for GRTA Expedited Review, consistent with the GRTA Letter of Understanding. The study area was agreed upon during methodology discussions with GRTA, ARC, GDOT, and City of Atlanta staff, and includes the following nine (9) intersections described in **Table 4**.

The study network includes one (1) signalized intersections and eight (8) stop controlled intersections as noted in **Table 4**. The study intersections are shown in **Figure 4**.

Table 4 Intersection Control Summary	
Intersection	Control
1. Spring Street at Armstead Place/Georgia Tech Existing Driveway 1	Signal
2. West Peachtree Street at Armstead Place	Stop Control
3. West Peachtree Street at 4th Street	Stop Control
4. Spring Street at 4th Street/Williams Street	Stop Control
5. 4th Street at Georgia Tech Existing Driveway 2	Stop Control
6. Williams Street at Georgia Tech Existing Driveway 3	Stop Control
7. Williams Street at 5th Street	Stop Control
8. Armstead Place at Proposed Driveway 1	Stop Control
9. 4th Street at Proposed Driveway 2	Stop Control

Each of the above listed intersections was analyzed for the Existing 2016 conditions, the Projected 2018 No-Build conditions, and the Projected 2018 Build conditions. The Projected 2018 No-Build conditions represent the existing traffic volumes grown for two (2) years at one percent per year throughout the study network. The Projected 2018 Build conditions add the project trips associated with the Georgia Tech HPCC development to the Projected 2018 No-Build conditions.



Kimley»Horn	Georgia Tech HPCC DRI #2569 Transportation Analysis	Study Intersections	Figure 4

3.5 Existing Roadway Facilities

Roadway classification descriptions and estimated Average Daily Traffic (ADT) for the entire study area are provided in **Table 5**.

ADTs were collected using 24-hour pneumatic tube counts for 5th Street, Spring Street, and West Peachtree Street. ADTs were estimated for Armstead Place, 4th Street, and Williams Street, based on the PM Peak Hour volume.

Table 5
Roadway Classification and ADTs

Roadway	No. of Lanes	ADT	Posted Speed Limit (MPH)	GDOT Classification
Spring Street	4	17,719	35	Minor Arterial
West Peachtree Street	4	15,160	30	Minor Arterial
Armstead Place	2	500	25*	Local Road
4th Street	2	1,800	25	Local Road
Williams Street	2	1,600	25*	Major Collector
5th Street	2	7,789	25	Local Road

* Estimated speed limit as no speed limit is posted.

4.0 TRIP GENERATION

As stated previously, gross trips associated with the proposed development were estimated using the *Institute of Transportation Engineers' (ITE) Trip Generation Manual, Ninth Edition, 2012*, using equations where available. Trip generation for this proposed development is calculated based upon the following land uses: Data Center (ITE 160), General Office Building (ITE 710), Specialty Retail Center (ITE 826), Quality Restaurant (ITE 931), High-Turnover (Sit-Down) Restaurant (ITE 932), and Fast-Food Restaurant without Drive-Through Window (ITE 932).

Mixed-use vehicle trip reductions were taken according to the *ITE Trip Generation Handbook, Third Edition, 2014*. Total internal capture and vehicle trip reduction between the land uses is expected to be 18.7% daily, 20.0% for the AM peak hour, and 5.1% for the PM peak hour as a result of the anticipated interaction between the office, retail, and restaurant land uses within the proposed development.

Due to the Georgia Tech HPCC development being located in a region core and the adjacent land uses in the area, an alternative transportation (walking, bicycle, and transit) reduction was applied for the Georgia Tech HPCC project trips. An alternative transportation mode reduction of 25%, consistent with GRTA's Letter of Understanding, was applied to all land uses for this study.

In accordance with the GRTA LOU, pass-by reductions were not taken. As the project site is located in the heart of Midtown Atlanta next to Georgia Tech, an area with heavy pedestrian and bicyclist volumes, the nature of the restaurant and retail on the proposed site will generate limited vehicular pass-by trips. Pass-by trips are more likely to be pedestrian or bicyclist trips.

The total (net) trips generated and analyzed in this report are listed in **Table 6**.

Table 6
Net Trip Generation

	Daily Traffic			AM Peak Hour			PM Peak Hour		
	Total	**Enter**	**Exit**	**Total**	**Enter**	**Exit**	**Total**	**Enter**	**Exit**
Gross Project Trips	**12,858**	**6,429**	**6,429**	**1,280**	**974**	**291**	**1,157**	**382**	**775**
Mixed-Use Reduction	*-2,642*	*-1,321*	*-1,321*	*-262*	*-131*	*-131*	*-64*	*-32*	*-32*
Alternative Mode Reduction	*-2,899*	*-1,450*	*-1,449*	*-268*	*-222*	*-42*	*-298*	*-92*	*-206*
Pass-By Reduction	*-0*	*-0*	*-0*	*-0*	*-0*	*-0*	*-0*	*-0*	*-0*
Net New Trips	**8,695**	**3,658**	**3,659**	**799**	**664**	**124**	**894**	**275**	**619**

A more detailed trip generation analysis summary table is provided in Appendix D.

5.0 TRIP DISTRIBUTION AND ASSIGNMENT

New trips were distributed onto the roadway network using the percentages developed as described in *Section 3.2* of this report, and as agreed to during methodology discussions with GRTA, ARC, GDOT, and City of Atlanta staff.

Figure 5 displays the anticipated distribution and assignment of the office, retail and restaurant project trips throughout the study roadway network. These trip assignment percentages were applied to the net new trips expected to be generated by the development, and the volumes were assigned to the roadway network. The combined peak hour project trips by turning movement throughout the study network, anticipated to be generated by the proposed Georgia Tech HPCC development, are shown in **Figure 6**.

Detailed intersection volume worksheets are provided in Appendix E.

NOT TO SCALE

LEGEND

- Turning Movement
- XX Trips Entering
- (XX) Trips Exiting
- STOP Stop Control
- Traffic Signal
- (X) Intersection Reference Number

Williams Street

0% (8%)

7

3% (3%)

(1%)

5th Street

1%
2%

STOP

(2%)
(8%)
(10%)

68% (0%)

68%

(1%)

(10%)
1%

Spring Street

1

8% 22% 39%

1%
(2%)

Georgia Tech Existing Driveway #1

(15%)
(1%)

8

1%
2%

Armstead Place

(15%)
39%

STOP

(2%)
(34%)

0% (60%)

(10%)

(1%)
(50%)

West Peachtree Street

2

(49%)

STOP

3%
(2%)

6

2%

STOP

(13%)

Georgia Tech Existing Driveway #3

(7%)
3%

Off-Site Parking Deck
(400 parking spaces)

Proposed Driveway #1

Project Site
(576 parking spaces)

Georgia Tech Existing Driveway #2

Proposed Driveway #2

5

4

9

3

Williams Street

(2%)
(11%)

STOP

28%
3% (5%)

20%
2% (3%)

STOP

11% (5%)
(17%)

(22%)

STOP

17%
11%

STOP

1%
6%

4th Street

4th Street

(11%)

STOP

7% (0%)

22%
(2%) 2%

0% (29%)

22% (0%)

Figure 5

Trip Distribution and Assignment

Georgia Tech HPCC
DRI #2569
Transportation Analysis

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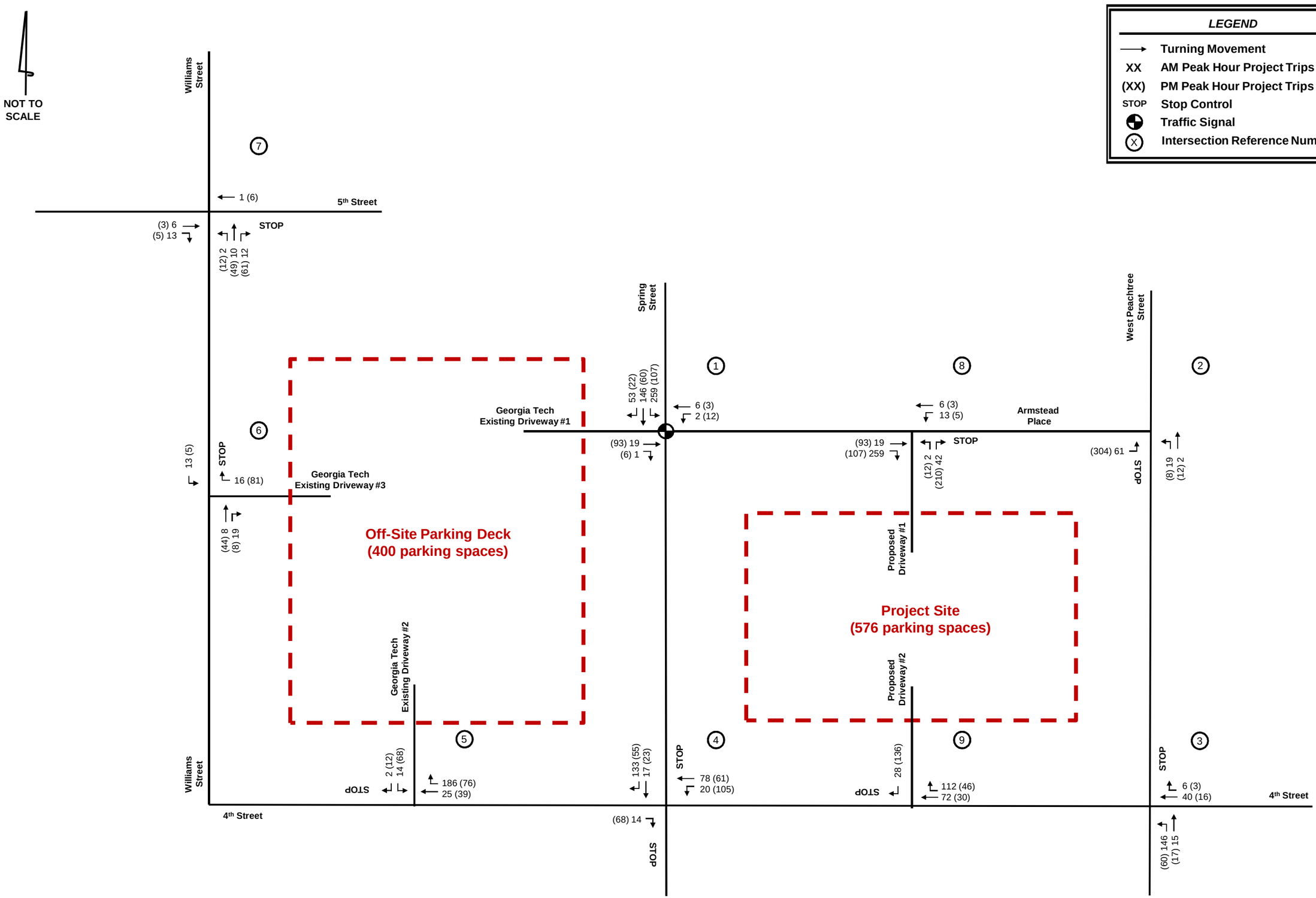

Figure 6

Project Trips

Georgia Tech HPCC
DRI #2569
Transportation Analysis

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6.0 TRAFFIC ANALYSIS

6.1 Existing 2016 Conditions

The observed existing peak hour traffic volumes were entered into *Synchro 9.0,* and capacity analyses were performed for the AM and PM peak hours. The existing peak hour traffic volumes are displayed in **Figure 7**, and the results of the capacity analyses for the Existing 2016 conditions are shown in **Table 7**. Detailed *Synchro* analysis reports are available upon request. Signal timings were optimized for the Existing 2016 Improved conditions.

Table 7
Existing 2016 Intersection Levels-of-Service
LOS (delay in seconds)

Intersection	LOS Std.	Existing 2016 Conditions			Existing 2016 Improved		
		Control	AM Peak Hour	PM Peak Hour	Control	AM Peak Hour	PM Peak Hour
1. Spring Street at Armstead Place/ Georgia Tech Existing Driveway 1	D	Signal	A (4.4)	A (8.2)	**	**	**
2. West Peachtree Street at Armstead Place	D	EB Stop NBL	B (13.3) A (1.0)	C (17.1) A (1.9)	**	**	**
3. West Peachtree Street at 4th Street	E***	WB Stop NBL	F (322.7) A (3.5)	F (218.3) A (2.5)	Signal	A (8.1)	B (15.2)
4. Spring Street at 4th Street/ Williams Street	E***	EB Stop WB Stop	A (9.9) D (33.5)	B (10.9) E (36.0)	**	**	**
5. 4th Street at Georgia Tech Existing Driveway 2	D	SB Stop	A (9.1)	B (11.3)	**	**	**
6. Williams Street at Georgia Tech Existing Driveway 3	D	WB Stop SBL	A (8.8) A (1.5)	A (10.0) A (1.1)	**	**	**
7. Williams Street at 5th Street	E***	NB Stop EBL	E (40.7) A (8.6)	F (Err)* B (12.1)	Signal	B (10.8)	B (13.2)

* Delay is too large to be calculated
** No improvements recommended at this intersection
*** Per the GRTA LOU, the LOS standard is LOS E for intersections that operate at LOS E or LOS F in existing conditions

As shown in **Table 7**, the side street movement for Intersection 3 and Intersection 7 operate at LOS E or LOS F. While low levels-of-service for side street approaches are not uncommon, these delays are relatively high. Preliminary traffic signal warrant analyses were performed, and consideration may be given by the City of Atlanta for the following improvements.

Based on the Existing 2016 conditions, the following improvements are recommended:

- West Peachtree Street at 4th Street (Int. #3)
  - Install a traffic signal at the intersection – preliminary analysis suggests that a traffic signal may be warranted (Warrant 3 – Peak Hour Warrant) based on existing traffic volumes.

- Williams Street at 5th Street (Int. #7)
  - Install a traffic signal at the intersection – preliminary analysis suggests that a traffic signal may be warranted (Warrant 3 – Peak Hour Warrant and Warrant 4 – Pedestrian Warrant) based on existing traffic volumes and pedestrian volumes.
  - Restrict the northbound right-turn on red (to reduce vehicle and pedestrian conflicts).

NOT TO SCALE

LEGEND

- XXX — Average Daily Traffic (ADT)
- → — Existing Laneage
- XX — Existing AM Peak Hour Traffic Volumes
- (XX) — Existing PM Peak Hour Traffic Volumes
- STOP — Stop Control
- Existing Traffic Signal
- Recommended Existing Improved Traffic Signal
- (X) — Intersection Reference Number

*Estimated ADT based on PM Peak Hour Volume

Williams Street — 1,600*

5th Street — 7,789

Spring Street — 17,719

West Peachtree Street — 15,160

Armstead Place — 500*

4th Street — 1,800*

Georgia Tech Existing Driveway #1

Georgia Tech Existing Driveway #2

Georgia Tech Existing Driveway #3

Off-Site Parking Deck (400 parking spaces)

Project Site (576 parking spaces)

1: 72 (97), 1,088 (1,161), 60 (39); 16 (28), 7 (24); (50) 2, (27) 7

2: (91) 54; (52) 24, (1,376) 1,273

3: STOP; 73 (208), 82 (109); (68) 134, (1,167) 1,427

4: STOP; 107 (48), 97 (136); 70 (43), 1,025 (1,229); (156) 43

5: STOP; 5 (115), 5 (124); 0 (0), 68 (76); (0) 0, (83) 78

6: STOP; 72 (72), 16 (12); 13 (5), 1 (6); (153) 73, (5) 0

7: 87 (136), 190 (387), 11 (11); (196) 83, (242) 133, (78) 72; STOP; (72) 50, (65) 33, (15) 9

Figure 7

Existing 2016 Weekday Conditions

Georgia Tech HPCC DRI #2569 Transportation Analysis

Kimley»Horn

6.2 Projected 2018 No-Build Conditions

To account for growth in the vicinity of the proposed development, the existing traffic volumes were increased for two (2) years at one percent per year throughout the study network. These volumes were entered into *Synchro 9.0*, and capacity analyses were performed. The Projected 2018 No-Build conditions were analyzed using existing roadway geometry and existing intersection control types. Signal timings were optimized for the Projected 2018 No-Build Improved conditions.

The intersection laneage and traffic volumes for the Projected 2018 No-Build conditions are shown in **Figure 8**. The results of the capacity analyses for the Projected 2018 No-Build conditions with existing laneage and control types are shown in **Table 8**. Detailed *Synchro* analysis reports are available upon request.

Table 8
Projected 2018 No-Build Intersection Levels-of-Service
LOS (delay in seconds)

Intersection	LOS Std.	Projected 2018 No-Build Conditions			Projected 2018 No-Build Improved		
		Control	AM Peak Hour	PM Peak Hour	Control	AM Peak Hour	PM Peak Hour
1. Spring Street at Armstead Place/ Georgia Tech Existing Driveway 1	D	Signal	A (4.4)	A (8.2)	**	**	**
2. West Peachtree Street at Armstead Place	D	EB Stop NBL	B (13.5) A (1.0)	C (17.5) A (1.9)	**	**	**
3. West Peachtree Street at 4th Street	E***	WB Stop NBL	F (371.6) A (3.5)	F (240.8) A (2.5)	Signal	A (8.2)	B (15.2)
4. Spring Street at 4th Street/ Williams Street	E***	EB Stop WB Stop	A (9.9) E (36.2)	B (10.9) E (38.2)	**	**	**
5. 4th Street at Georgia Tech Existing Driveway 2	D	SB Stop	A (9.1)	B (11.4)	**	**	**
6. Williams Street at Georgia Tech Existing Driveway 3	D	WB Stop SBL	A (8.8) A (1.4)	A (10.0) A (1.1)	**	**	**
7. Williams Street at 5th Street	E***	NB Stop EBL	E (43.2) A (8.6)	F (Err)* B (12.3)	Signal	B (10.9)	B (13.5)

* Delay is too large to be calculated
** No improvements recommended at this intersection
*** Per the GRTA LOU, the LOS standard is LOS E for intersections that operate at LOS E or LOS F in existing conditions

As shown in **Table 8**, the side street movement for Intersection 3 and Intersection 7 operate at LOS E or LOS F. Traffic signals were previously recommended for West Peachtree Street at 4th Street (Int. #3) and Williams Street at 5th Street (Int. #7) in Section 6.1 Existing 2016 conditions and are therefore reflected in the Projected 2018 No-Build Improved conditions.

Therefore, there are no additional recommended improvements for the Projected 2018 No-Build conditions scenario.

NOT TO SCALE

LEGEND

- Existing Laneage
- XX — 2018 No-Build AM Peak Hour Traffic Volumes
- (XX) — 2018 No-Build PM Peak Hour Traffic Volumes
- STOP — Stop Control
- Existing Traffic Signal
- Recommended Existing Improved Traffic Signal
- (X) — Intersection Reference Number

Williams Street

7

89 (139)
194 (395)
11 (11)

5th Street

(200) 85
(247) 136
(80) 73

STOP

(73) 51
(66) 34
(15) 9

Spring Street

West Peachtree Street

1

73 (99)
1,110 (1,184)
61 (40)

16 (29)
7 (24)

Georgia Tech Existing Driveway #1

(51) 2
(28) 7

Armstead Place

2

(93) 55

STOP

(53) 24
(1,404) 1,299

6

STOP

73 (73)
16 (12)

13 (5)
1 (6)

Georgia Tech Existing Driveway #3

(156) 74
(5) 0

Off-Site Parking Deck
(400 parking spaces)

Project Site
(576 parking spaces)

Georgia Tech Existing Driveway #2

5

4

3

Williams Street

STOP

5 (117)
5 (126)

0 (0)
69 (78)

71 (44)
1,046 (1,254)

STOP

109 (49)
99 (139)

STOP

74 (212)
84 (111)

4th Street

(0) 0
(85) 80

(159) 44

STOP

(69) 137
(1,190) 1,456

4th Street

Figure 8

Projected 2018 No-Build Weekday Conditions

Georgia Tech HPCC
DRI #2569
Transportation Analysis

Kimley»Horn

6.3 Projected 2018 Build Conditions

The traffic associated with the proposed Georgia Tech HPCC development was added to the Projected 2018 No-Build volumes. These volumes were then entered into *Synchro 9.0*, and capacity analyses were performed. The Projected 2018 Build conditions were analyzed using the proposed laneage and intersection control types shown in the DRI site plan. Signal timings were optimized for the Projected 2018 Build Improved conditions.

The intersection laneage and traffic volumes used for the Projected 2018 Build conditions are shown in **Figure 9**. The results of the capacity analyses for the Projected 2018 Build conditions with proposed laneage and control types are shown in **Table 9**. Detailed *Synchro* analysis reports are available upon request.

Table 9
Projected 2018 Build Intersection Levels-of-Service
LOS (delay in seconds)

Intersection	LOS Std.	Projected 2018 Build Conditions			Projected 2018 Build Improved		
		Control	AM Peak Hour	PM Peak Hour	Control	AM Peak Hour	PM Peak Hour
1. Spring Street at Armstead Place/ Georgia Tech Existing Driveway 1	D	Signal	A (5.5)	B (14.0)	**	**	**
2. West Peachtree Street at Armstead Place	D	EB Stop NBL	C (16.9) A (1.6)	F (139.4) A (2.1)	**	**	**
3. West Peachtree Street at 4th Street	E***	WB Stop NBL	F (7,383.6) A (5.2)	F (461.2) A (3.7)	Signal	A (10.0)	B (15.5)
4. Spring Street at 4th Street/ Williams Street	E***	EB Stop WB Stop	B (10.4) F (180.0)	C (19.3) F (593.8)	Signal	B (19.2)	A (9.8)
5. 4th Street at Georgia Tech Existing Driveway 2	D	SB Stop	B (10.4)	B (14.8)	**	**	**
6. Williams Street at Georgia Tech Existing Driveway 3	D	WB Stop SBL	A (9.0) A (2.3)	B (10.9) A (1.6)	**	**	**
7. Williams Street at 5th Street	E***	NB Stop EBL	F (52.1) A (8.6)	F (Err)* B (12.3)	Signal	B (11.2)	B (16.1)
8. Armstead Place at Proposed Driveway 1	D	NB Stop WBL	B (10.3) A (2.8)	B (12.3) A (0.7)	**	**	**
9. 4th Street at Proposed Driveway 2	D	SB Stop	A (9.8)	B (10.3)	**	**	**

* Delay is too large to be calculated
** No improvements recommended at this intersection
*** Per the GRTA LOU, the LOS standard is LOS E for intersections that operate at LOS E or LOS F in existing conditions

As shown in **Table 9**, the side street movement for Intersection 2, Intersection 3, Intersection 4, and Intersection 7 operate at LOS E or LOS F. Traffic signals were previously recommended for West Peachtree Street at 4th Street (Int. #3) and Williams Street at 5th Street (Int. #7) in Section 6.1 Existing 2016 conditions and are therefore reflected in the Projected 2018 Build Improved conditions.

The intersection of West Peachtree Street and Armstead Place (Int. #2) experiences increased delay in the Projected 2018 Build conditions. While a traffic signal would improve the operations at this intersection, it is not recommended due to the proximity of nearby signals. The intersection is located approximately 135 feet south of the signalized intersection of West Peachtree Street at 5th Street (not studied) and 290 feet north of the intersection of West Peachtree Street at 4th Street (Int. #3) which is recommended to be signalized in the Existing 2016 conditions. If a traffic signal is installed at the upstream intersection of West Peachtree Street at 4th Street (Int. #3), it may provide adequate gaps for vehicles on the side-street at West Peachtree Street at Armstead Place (Int. #2). The City of Atlanta should continue to monitor the operations at this intersection.

Based on the Projected 2018 Build conditions, the following improvements <u>are recommended</u>:

- Armstead Place at Proposed Driveway 1 (Int. #8)
  - Construct one ingress lane on-site along Proposed Driveway 1.
  - Construct one egress lane on-site along Proposed Driveway 1 – one shared northbound left-turn/right-turn lane.

- 4th Street at Proposed Driveway 2 (Int. #9)
  - Construct one ingress lane on-site along Proposed Driveway 2.
  - Construct one egress lane on-site along Proposed Driveway 2 – one southbound right-turn only lane.

Based on the Projected 2018 Build conditions, the following additional improvements <u>may be considered</u>:

- Spring Street at 4th Street (Int. #4)
  - Install a traffic signal at the intersection – preliminary analysis indicates that a traffic signal will improve the operation of the intersection. While analysis suggests that the intersection may not warrant a traffic signal based on traffic volumes alone, a traffic signal will be beneficial for pedestrians crossing Spring Street as the Georgia Tech HPCC development will utilize parking in the existing Georgia Tech Parking Deck on the west side of Spring Street.

NOT TO SCALE

LEGEND

- Existing Laneage
- Build Laneage
- XX — 2018 Build AM Peak Hour Traffic Volumes
- (XX) — 2018 Build PM Peak Hour Traffic Volumes
- STOP — Stop Control
- Existing Traffic Signal
- Recommended Existing Improved Traffic Signal
- Recommended Build Improved Traffic Signal
- X — Intersection Reference Number

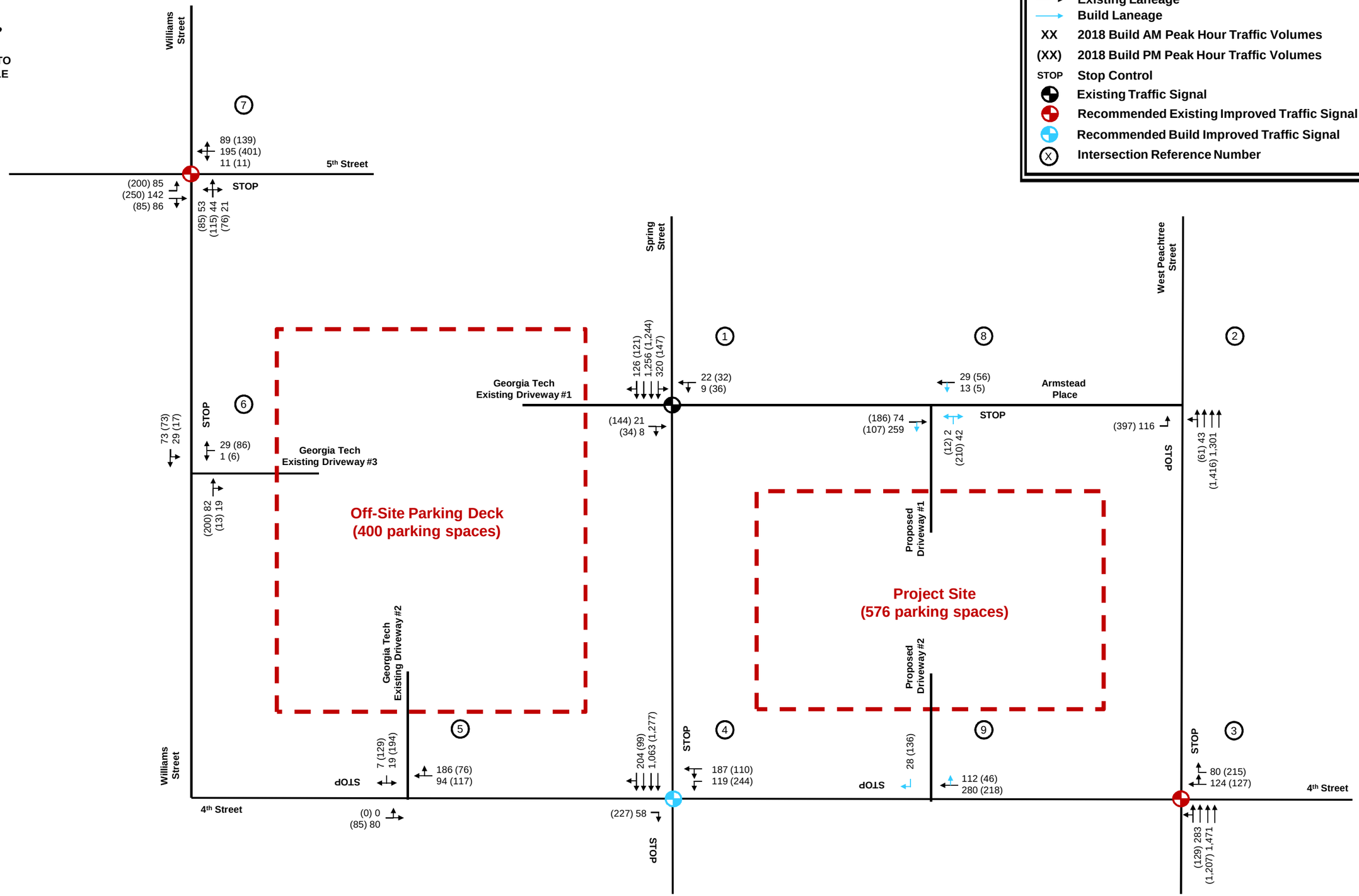


Figure 9

Projected 2018 Build Weekday Conditions

Georgia Tech HPCC
DRI #2569
Transportation Analysis

Kimley»Horn

6.4 Alternative Analysis (City/Midtown Alliance Project)

As requested by the City of Atlanta and the Midtown Alliance as noted in the GRTA LOU, an alternative analysis with a two-way conversion of 4th Street was performed. Midtown Alliance is currently studying the two-way conversion of 4th Street from Spring Street to Myrtle Street, which is adjacent to the project site. This section is provided for informational purposes, and **is not** being proposed as part of the Georgia Tech HPCC development.

The two-way conversion of 4th Street will require the following restriping to the study network:

- West Peachtree Street at 4th Street (Int. #3)
  - Restripe the northbound approach along West Peachtree Street to have one shared left-turn/through lane, two exclusive through lanes, and one shared through/right-turn lane.
  - Restripe the eastbound approach along 4th Street to have one shared left-turn/through lane and one receiving lane.
  - Restripe the westbound approach along 4th Street to have one shared through/right-turn lane and one receiving lane.

- Spring Street at 4th Street (Int. #4)
  - Restripe the southbound approach along Spring Street to have one shared left-turn/through lane, two exclusive through lanes, and one shared through/right-turn lane.
  - Restripe the eastbound approach along 4th Street to have one shared through/right-turn lane and one receiving lane.
  - Restripe the westbound approach along 4th Street to have one shared left-turn/through lane and one receiving lane.

- 4th Street at Proposed Driveway 2 (Int. #9)
  - Restripe the southbound approach along Proposed Driveway 2 to have one shared left-turn/right-turn lane.
  - Restripe the eastbound approach along 4th Street to have one shared left-turn/through lane and one receiving lane.
  - Restripe the westbound approach along 4th Street to have one shared through/right-turn lane and one receiving lane.

Figure 10 shows the Alternative Analysis Distributions, **Figure 11** shows the Alternative Analysis Project Trips, and **Figure 12** shows the Projected 2018 Build Alternative conditions.

The results of the alternative capacity analyses are shown in **Table 10**. Detailed *Synchro* analysis reports are available upon request.

Table 10
Projected 2018 Build Alternative Intersection Levels-of-Service
LOS (delay in seconds)

Intersection	LOS Std.	Projected 2018 Build Alternative Conditions			Projected 2018 Build Alternative Improved		
		Control	AM Peak Hour	PM Peak Hour	Control	AM Peak Hour	PM Peak Hour
1. Spring Street at Armstead Place/ Georgia Tech Existing Driveway 1	D	Signal	A (4.9)	B (15.3)	**	**	**
2. West Peachtree Street at Armstead Place	D	EB Stop NBL	C (16.3) A (1.6)	F (88.7) A (2.1)	**	**	**
3. West Peachtree Street at 4th Street	E***	EB Stop WB Stop NBL	F (Err)* F (Err)* A (5.1)	F (Err)* F (Err)* A (3.5)	Signal	C (21.6)	C (30.9)
4. Spring Street at 4th Street/ Williams Street	E***	EB Stop WB Stop SBL	C (22.9) F (Err)* A (4.6)	F (361.8) F (Err)* A (4.5)	Signal	B (19.7)	C (32.2)
5. 4th Street at Georgia Tech Existing Driveway 2	D	SB Stop	B (10.7)	C (17.5)	**	**	**
6. Williams Street at Georgia Tech Existing Driveway 3	D	WB Stop SBL	A (9.0) A (2.3)	B (10.9) A (1.6)	**	**	**
7. Williams Street at 5th Street	E***	NB Stop EBL	F (52.1) A (8.6)	F (Err) B (12.3)	Signal	B (11.4)	B (16.0)
8. Armstead Place at Proposed Driveway 1	D	NB Stop WBL	B (10.0) A (2.7)	B (11.0) A (0.7)	**	**	**
9. 4th Street at Proposed Driveway 2	D	SB Stop EBL	B (11.9) A (2.6)	B (12.9) A (0.9)	**	**	**

* Delay is too large to be calculated
** No improvements recommended at this intersection
*** Per the GRTA LOU, the LOS standard is LOS E for intersections that operate at LOS E or LOS F in existing conditions

Results of the alternative analysis show that the side street movement for Intersection 2, Intersection 3, Intersection 4, and Intersection 7 operate at LOS E or LOS F. Traffic signals were previously recommended for West Peachtree Street at 4th Street (Int. #3) and Williams Street at 5th Street (Int. #7) in Section 6.1 Existing 2016 conditions and are therefore reflected in the Projected 2018 Build Alternative Improved conditions.

With the two-way conversion of 4th Street, the intersection of Spring Street at 4th Street (Int. #4) experiences increased delay. Preliminary analysis indicates that a signal would improve the operations at this intersection and benefit pedestrians; a traffic signal is an improvement being considered in the Projected 2018 Build conditions. Additionally, the two-way conversion of 4th Street will improve the operations at the intersection of West Peachtree Street at Armstead Place (Int. #2) as traffic will also be able to travel eastbound along 4th Street. Overall, the two-way conversion of 4th Street will help create a more balanced network surrounding the project site.

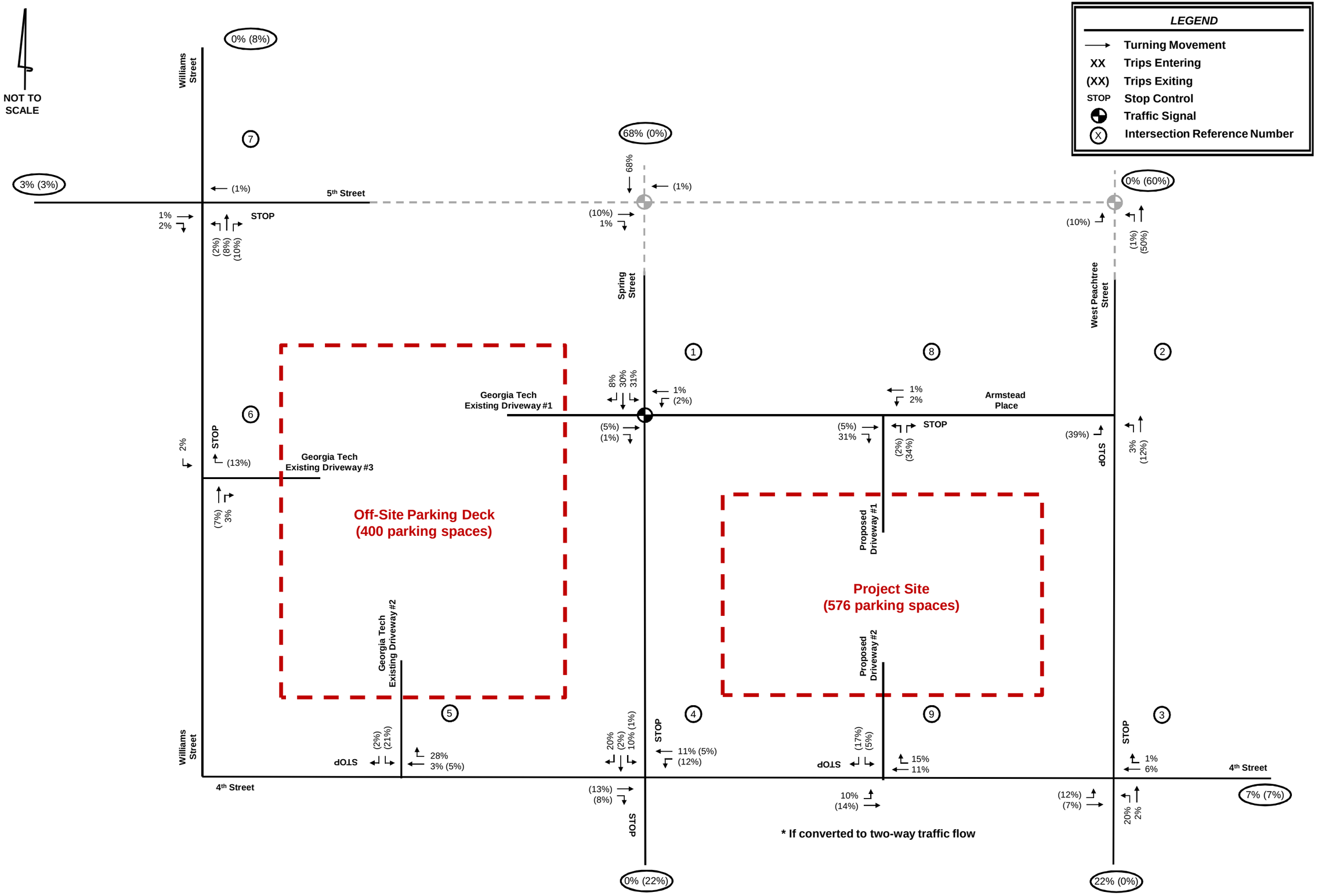


Figure 10

Alternative Analysis Distributions (City/Midtown Alliance Project)

Georgia Tech HPCC DRI #2569 Transportation Analysis

Kimley»Horn

NOT TO SCALE

LEGEND

- Turning Movement
- XX — Alternative Build AM Peak Hour Project Trips
- (XX) — Alternative Build PM Peak Hour Project Trips
- STOP — Stop Control
- Traffic Signal
- (X) — Intersection Reference Number

Williams Street

5th Street

Spring Street

West Peachtree Street

Armstead Place

4th Street

Georgia Tech Existing Driveway #1

Georgia Tech Existing Driveway #2

Georgia Tech Existing Driveway #3

Proposed Driveway #1

Proposed Driveway #2

Off-Site Parking Deck
(400 parking spaces)

Project Site
(576 parking spaces)

* If converted to two-way traffic flow

Figure 11

Alternative Analysis
Project Trips
(City/Midtown Alliance Project)

Georgia Tech HPCC
DRI #2569
Transportation Analysis

Kimley»Horn

NOT TO SCALE

LEGEND

- Existing Laneage
- Build Laneage
- Build Alternative Laneage
- XX — Alternative Build AM Peak Hour Traffic Volumes
- (XX) — Alternative Build PM Peak Hour Traffic Volumes
- STOP — Stop Control
- Traffic Signal
- Recommended Existing Improved Traffic Signal
- Recommended Build Improved Traffic Signal
- (X) — Intersection Reference Number

Williams Street

7

89 (139)
195 (401)
11 (11)

5th Street

(200) 85
(250) 142
(85) 86

STOP

(85) 53
(115) 44
(76) 21

Spring Street

1

126 (121)
1,309 (1,266)
267 (125)

22 (32)
9 (36)

Georgia Tech Existing Driveway #1

(82) 8
(34) 8

8

29 (56)
13 (5)

Armstead Place

(138) 71
(99) 219

STOP

(12) 2
(211) 42

West Peachtree Street

2

(335) 103

STOP

(61) 43
(1,479) 1,314

6

STOP

73 (73)
29 (17)

29 (86)
1 (6)

Georgia Tech Existing Driveway #3

(200) 82
(13) 19

Off-Site Parking Deck
(400 parking spaces)

Proposed Driveway #1

Project Site
(576 parking spaces)

Proposed Driveway #2

Georgia Tech Existing Driveway #2

5

7 (129)
31 (257)

STOP

186 (76)
94 (117)

Williams Street

4th Street

(0) 0
(85) 80

4

204 (99)
1,048 (1,266)
195 (201)

STOP

187 (110)
114 (214)

(93) 17
(208) 54

STOP

9

20 (105)
6 (31)

STOP

99 (41)
280 (218)

(27) 66
(286) 192

3

STOP

80 (215)
124 (127)

4th Street

(152) 66
(146) 54

(124) 270
(1,195) 1,469
(153) 209

Figure 12

Projected 2018 Build Alternative Weekday Conditions (City/Midtown Alliance Project)

Georgia Tech HPCC
DRI #2569
Transportation Analysis

Kimley»Horn

7.0 INGRESS/EGRESS ANALYSIS

Vehicular access to the Georgia Tech HPCC development is proposed at five (5) locations. Site driveway locations are discussed in Section 1.3. Georgia Tech Existing Driveway 1 is currently signalized and is proposed to remain signalized in the Projected 2018 Build conditions. Georgia Tech Existing Driveway 2, Georgia Tech Existing Driveway 3, Proposed Driveway 1, and Proposed Driveway 2 are currently unsignalized and are proposed to remain unsignalized in the Projected 2018 Build conditions. All driveways are proposed to have one ingress lane and one egress lane.

Capacity analyses were performed for the proposed site driveway intersections (Int. #1, #5, #6, #8, #9) using *Synchro 9.0*. The results of the capacity analyses for this intersection (LOS, delay, and recommended laneage) are reported in *Section 6.3* of this report. Based on the Projected 2018 Build conditions, the proposed site driveway intersections are anticipated to operate at an acceptable level-of-service, assuming implementation of the recommended laneage, signalization, and roadway improvements listed in this report.

8.0 IDENTIFICATION OF PROGRAMMED PROJECTS

According to ARC's Transportation Improvement Program, the Regional Transportation Improvement Program, GDOT's Construction Work Program (none at this time), City of Atlanta's programmed projects, and the GA STIP, the following projects are programmed or planned to be completed by the respective years within the vicinity of the proposed development. The identified projects are listed in **Table 11** below.

Table 11
Programmed Projects

#	Completion Date	Project ID	Description
1	2020	AT-271	Juniper Street Bicycle/Pedestrian Facilities – from Ponce de Leon Avenue to 14th Street
2	2020	AT-277	Cycle Atlanta: Phase 1.0 – Bicycle Mobility Improvements – Includes a route on West Peachtree Street and Peachtree Street
3	2040	AR-490	Atlanta Streetcar Expansion – Phase 1 – Includes a route on North Avenue
4	TBD	AT-278	Midtown Atlanta Regional Activity Center – Pedestrian Mobility and Safety Improvements

Fact sheets for projects 1-4 are provided in Appendix F.

9.0 INTERNAL CIRCULATION ANALYSIS

The proposed site driveways will provide access to buildings on the site. A detailed copy of the proposed site plan is provided in Appendix C and a full-sized site plan is included in the report submittal.

Mixed-use vehicle trip reductions were taken according to the *ITE Trip Generation Handbook, Third Edition, 2014*. Total internal capture and vehicle trip reduction between the proposed land uses is expected to be 18.7% daily, 20.0% for the AM peak hour, and 5.1% for the PM peak hour as a result of the anticipated interaction between the various land uses within the proposed development.

10.0 COMPLIANCE WITH COMPREHENSIVE PLAN ANALYSIS

The project site currently consists of the three-story vacant Crum and Forster Building, a one-story vacant bank building, a three-story occupied office building, and associated parking. The one-story bank building and three-story office building will be demolished. The Crum and Forster Building will remain. The project site is located in the Special Public Interest (SPI) Zone 16 according to the *City of Atlanta Zoning Ordinance Map* and requires review by the SPI-16 Development Review Committee (DRC).

The most recent 10-Year update to the LCI study for Midtown Atlanta *Greenprint Midtown* focuses on a sustainable approach to the original *Blueprint Midtown* vision. The LCI study discusses decreasing single occupancy vehicle trips and increasing streetscape programs, bicycle plans, and transit/coordinated shuttle services. The LCI focuses on building on a high number of commuters are residents using transit, walking, or bicycling. The Georgia Tech HPCC development aligns with the goals and visions of the LCI study by reducing parking and creating a walkable environment. The project site is located adjacent to Technology Square, an area that already experiences high pedestrian and bicyclist volumes. Additionally, the project site is located in a Region Core area type according to *PLAN 2040 Unified Growth Policy Map*. The Georgia Tech HPCC development plan is consistent with the area type and future land use identified. The land use maps are provided in Appendix B.

Appendix A
Site Photo Log

Kimley»Horn

City of Atlanta, Georgia

Photograph Sheet

KHA Job No.: 019292007

Date: May 2016

Armstead Place at Proposed Driveway 1

Photo No. 1

Comments: Proposed Driveway 1 looking west

Photo No. 2

Comments: Proposed Driveway 1 looking east

Kimley»Horn

City of Atlanta, Georgia

Photograph Sheet

KHA Job No.: 019292007

Date: May 2016

Page: 2 of 2

4th Street at Proposed Driveway 2

Photo No. 1

Comments: Proposed Driveway 2 looking east

Photo No. 2

Comments: Proposed Driveway 2 looking west

Appendix B
Land Use and Zoning Maps

NPU-E

15 YEAR FUTURE LAND USE MAP
2008 ATLANTA COMPREHENSIVE DEVELOPMENT PLAN (CDP)

ATLANTA
strategic action plan
your city your vision your plan

- NPU's
- parcels
- Land Lots

Future Land Use Classifications

- Transportation/Communication
- Community Facility
- Single Family Residential
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Very High Density Residential
- Low Density Commercial
- High Denstiy Commercial
- Office/Institution
- Office/Institution/Residential
- Open Space
- POS
- Industrial
- Mixed Use
- Low Density Mixed Use
- Medium Density Mixed Use
- High Density Mixed Use

UP-TO-DATE AS OF:
8/25/2011

1 inch = 2,135 feet

NORTH

City of Atlanta/Bureau of Planning/GIS Division : 404.330.6145

SHEET NO. 14-079

ZONING ORDINANCE
CITY OF ATLANTA, GEORGIA
OFFICIAL ZONING MAP

SHEET 26 OF 129 SHEETS

ORDINANCE Z-78-5

LAND LOTS _____

_____ DISTRICT

_____ COUNTY

CERTIFICATION

THIS SHEET 26 OF 129 SHEETS, IS HEREBY CERTIFIED AS INCLUDED IN THE OFFICIAL ZONING MAPS, ON FILE IN THE DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT, BUREAU OF PLANNING, AND FORMING A PART OF THE CITY OF ATLANTA ZONING ORDINANCE ADOPTED BY CITY COUNCIL ON DECEMBER 15, 1980 AND APPROVED BY THE MAYOR ON DECEMBER 19, 1980, AS AMENDED

_____ _____
DIRECTOR, BUREAU OF PLANNING, CITY OF ATLANTA, GEORGIA — DATE

_____ _____
MUNICIPAL CLERK, CMC, CITY OF ATLANTA, GA — DATE

Legend

- Tax Parcels
- Zoning District Outline
- Human Service Facilities
- Special Use Permits
- LBS/HBS

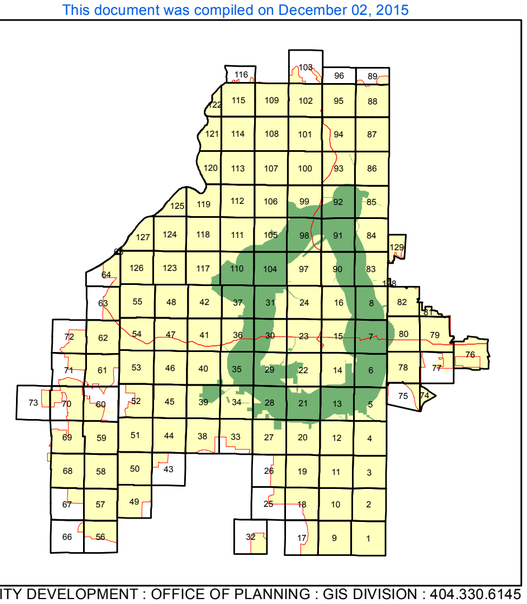
OVERLAY DISTRICTS

- Beltline
- SPI-19
- All Others

Base Zoning

- SPI - Special Public Interest
- Industrial
- Historic & Cultural
- Live-Work
- QOL Multi-Family
- QOL Mixed Use
- Commercial
- Neighborhood Commercial
- Residential - Single Family
- Office Institutional
- Planned Development
- Residential - Duplex
- Residential - Multi-Family
- Residential - Limited Commercial

This document was compiled on December 02, 2015



PARCEL BOUNDARIES SHOWN ARE SUPPLIED BY THE FULTON OR DEKALB COUNTY TAX ASSESSOR. THESE BOUNDARIES MAY NOT REPRESENT THE BOUNDARIES RECOGNIZED BY THE CITY OF ATLANTA FOR THE PURPOSES OF ISSUING BUILDING PERMITS.

CITY OF ATLANTA : DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT : OFFICE OF PLANNING : GIS DIVISION : 404.330.6145
1 INCH = 400 FEET

Appendix C
Proposed Site Plan

PROGRAM:

625,000 SF OFFICE
80,000 SF DATA CENTER
*TO BE DEVELOPED BY OTHERS
11,000 SF RETAIL
34,000 SF RESTAURANT

PARKING:

576 PROPOSED SPACES BELOW GRADE
400 SPACES IN EXISTING GEORGIA TECH PARKING DECK
LOCATED IN THE NORTHWEST QUADRANT OF SPRING STREET AT 4TH STREET / WILLIAMS STREET

SITE NOTES:

GENERAL NOTES:

1. SITE ACREAGE : 2.2 ACRES
2. BUILDING HEIGHTS HAVE NOT BEEN DETERMINED AT THIS TIME.
3. TOPOGRAPHIC INFORMATION IS NOT AVAILABLE AT THIS TIME.

SAP 16-044
ZONING: SPI 16 SA1

1. THE PROPOSED BUILDING INFORMATION SHOWN HEREON IS FROM AN ELECTRONIC FILE PROVIDED BY JOHN PORTMAN & ASSOCIATES DATED 03/04/2016 AND IS FOR ILLUSTRATED PURPOSES ONLY. CONTRACTOR SHALL REFERENCE ARCHITECTURAL PLANS FOR EXACT BUILDING INFORMATION.
2. ALL DIMENSIONS ARE FROM FACE OF CURB TO FACE OF CURB UNLESS OTHERWISE NOTED.
3. SIDEWALK INSTALLED AGAINST BACK OF CURB SHALL BE INSTALLED PER THE PLAN AS MEASURED FROM THE BACK OF CURB.
4. ALL SIGNAGE AND STRIPING MUST MEET THE LATEST REQUIREMENTS SET FORTH BY MUTCD, GDOT, AND GEORGIA STATE CODE.
5. REFERENCE LANDSCAPE PLANS FOR ALL HARDSCAPE AND LANDSCAPE DETAILS AND SPECIFICATIONS.
6. OWNER TO MAINTAIN PORTION OF SIDEWALK ON PROPERTY IN PERPETUITY AT OWNER'S EXPENSE.
7. CONTRACTOR TO REUSE EXISTING STREET LIGHTS BASED ON CONDITION AND APPROVAL BY OWNER AND COA DPW.

SITE PLAN LEGEND:

- PROPERTY LINE
- ASPHALT PAVEMENT PER COA COMMERCIAL STREET STANDARD DETAIL
- HEAVY DUTY CONCRETE PAVEMENT
- STANDARD DUTY CONCRETE SIDEWALK
- TREE WELL / LANDSCAPED AREA

CONTACT INFORMATION:

CLIENT:	PORTMAN HOLDINGS JOSHUA GATELY 404-614-5392
ARCHITECT:	JOHN PORTMAN & ASSOCIATES JONATHAN MICKLE 404-614-5291
CIVIL ENGINEER:	KIMLEY-HORN EMMY MONTANYE 404-419-8711
TRAFFIC ENGINEER:	KIMLEY-HORN JEFFREY SMITH 404-419-8709

No.	REVISIONS	DATE	BY
7			
6			
5			
4			
3			
2			
1			

Kimley»Horn
© 2015 KIMLEY-HORN AND ASSOCIATES, INC.
817 W. PEACHTREE STREET, NW
THE BILTMORE, SUITE 601
ATLANTA, GEORGIA 30308
PHONE: (404) 419-8700
WWW.KIMLEY-HORN.COM

SCALE: 1" = 20'
DRAWN BY: CAZ
DESIGNED BY: KRT
CHECKED BY: EFM

CLIENT: PORTMAN HOLDINGS
303 PEACHTREE CENTER AVE NE
SUITE 575
ATLANTA, GA 30303
PHONE: 404-614-5437

PROJECT: GT HPCC DRI #2569
771 SPRING ST

TITLE: DRI SITE PLAN

DATE 05/23/2016
PROJECT NO. 019292007
SHEET NUMBER 1 OF 1

GEORGIA811. Utilities Protection Center, Inc. Know what's below. Call before you dig.

NORTH
GRAPHIC SCALE IN FEET
0 10 20 40

Drawing name: K:\AMT_CIVIL\019292006_GT HPCC\CAD\PlanSheets\C2-00 - DRI - SITE PLAN.dwg C2-00 - SITE PLAN May 18, 2016 4:06pm by rbrahris
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Appendix D
Trip Generation Analysis

Trip Generation Analysis (9th Ed.)
Georgia Tech High Performance Computing Center
City of Atlanta, Georgia

Land Use		Intensity	Alternate Independent Variables Available	Daily Trips	AM Peak Hour			PM Peak Hour		
					Total	In	Out	Total	In	Out
Proposed Site Traffic										
160	Data Center	80,000 s.f.		79	7	4	3	7	2	5
710	General Office Building	625,000 s.f.	employees	5,285	829	730	99	778	132	646
826	Specialty Retail Center	11,000		508	41	25	16	48	21	27
931	Quality Restaurant	18,000 s.f.	seats	1,619	15	N/A	N/A	135	90	45
932	High-Turnover (Sit-Down) Restaurant	8,000 s.f.	seats	1,017	86	47	39	79	47	32
933	Fast-Food Restaurant without Drive-Through Window	8,000 s.f.	seats	5,728	351	211	140	209	107	102
Gross Trips				**14,236**	**1,329**	**1,017**	**297**	**1,256**	**399**	**857**
Office Trips				5,285	829	730	99	778	132	646
	Mixed-Use Reductions			*-1,194*	*-127*	*-60*	*-67*	*-13*	*-6*	*-7*
	Alternative Mode Reductions			*-1,023*	*-176*	*-168*	*-8*	*-191*	*-32*	*-160*
	Adjusted Office Trips			3,068	526	502	24	574	94	479
Retail Trips				508	41	25	16	48	21	27
	Mixed-Use Reductions			*-217*	*-17*	*-10*	*-7*	*-22*	*-13*	*-9*
	Alternative Mode Reductions			*-73*	*-6*	*-4*	*-2*	*-6*	*-2*	*-4*
	Pass By Reductions (Based on ITE Rates)			*0*	*0*	*0*	*0*	*0*	*0*	*0*
	Adjusted Retail Trips			218	18	11	7	20	6	14
Restaurant Trips				8,364	452	258	179	423	244	179
	Mixed-Use Reductions			*-1,231*	*-118*	*-61*	*-57*	*-29*	*-13*	*-16*
	Alternative Mode Reductions			*-1,783*	*-84*	*-49*	*-31*	*-99*	*-58*	*-41*
	Pass By Reductions (Based on ITE Rates)			*0*	*0*	*0*	*0*	*0*	*0*	*0*
	Adjusted Restaurant Trips			5,350	250	148	91	295	173	122
Other Non-Residential Trips				79	7	4	3	7	2	5
	Mixed-Use Reductions			*0*	*0*	*0*	*0*	*0*	*0*	*0*
	Alternative Mode Reductions			*-20*	*-2*	*-1*	*-1*	*-2*	*0*	*-1*
	Adjusted Other Non-Residential Trips			59	5	3	2	5	2	4
Mixed-Use Reductions - TOTAL				*-2,642*	*-262*	*-131*	*-131*	*-64*	*-32*	*-32*
Alternative Mode Reductions - TOTAL				*-2,899*	*-268*	*-222*	*-42*	*-298*	*-92*	*-206*
Pass-By Reductions - TOTAL				*0*	*0*	*0*	*0*	*0*	*0*	*0*
New Trips				**8,695**	**799**	**664**	**124**	**894**	**275**	**619**
Driveway Volumes				**8,695**	**799**	**664**	**124**	**894**	**275**	**619**

Appendix E
Intersection Volume Worksheets

INTERSECTION VOLUME DEVELOPMENT

Spring Street at Armstead Place/Georgia Tech Existing Driveway 1
AM PEAK HOUR

Description	N/A Northbound			Spring Street Southbound			GT Existing Driveway 1 Eastbound			Armstead Place Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2016 Traffic Volumes				60	1,088	72	0	2	7	7	16	0
Pedestrians		0			74			0			10	
Conflicting Pedestrians	0		10	10		0	74		0	0		74
Heavy Vehicles				0	16	0	0	0	0	0	0	0
Heavy Vehicle %	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor					0.93			0.56			0.48	
Adjusted 2016 Volumes	0	0	0	60	1088	72	0	2	7	7	16	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020
2018 Background Traffic	0	0	0	61	1,110	73	0	2	7	7	16	0
Project Trips												
Trip Distribution IN				39%	22%	8%					1%	
Trip Distribution OUT								15%	1%	2%		
Office Trips	0	0	0	196	110	40	0	4	0	0	5	0
Trip Distribution IN				39%	22%	8%					1%	
Trip Distribution OUT								15%	1%	2%		
Retail Trips	0	0	0	4	2	1	0	1	0	0	0	0
Trip Distribution IN				39%	22%	8%					1%	
Trip Distribution OUT								15%	1%	2%		
Restaurant Trips	0	0	0	58	33	12	0	14	1	2	1	0
Trip Distribution IN				39%	22%	8%					1%	
Trip Distribution OUT								15%	1%	2%		
Other Non-Residential Trips	0	0	0	1	1	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	0	0	259	146	53	0	19	1	2	6	0
2018 Buildout Total	0	0	0	320	1,256	126	0	21	8	9	22	0

PM PEAK HOUR

Description	N/A Northbound			Spring Street Southbound			GT Existing Driveway 1 Eastbound			Armstead Place Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2016 Traffic Volumes				39	1,161	97	0	50	27	24	28	0
Pedestrians		1			199			0			22	
Conflicting Pedestrians	0		22	22		0	199		1	1		199
Heavy Vehicles				0	18	0	0	0	0	0	0	0
Heavy Vehicle %	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor					0.87			0.69			0.81	
Adjusted 2016 Volumes	0	0	0	39	1161	97	0	50	27	24	28	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020
2018 Background Traffic	0	0	0	40	1,184	99	0	51	28	24	29	0
Project Trips												
Trip Distribution IN				39%	22%	8%					1%	
Trip Distribution OUT								15%	1%	2%		
Office Trips	0	0	0	37	21	8	0	72	5	10	1	0
Trip Distribution IN				39%	22%	8%					1%	
Trip Distribution OUT								15%	1%	2%		
Retail Trips	0	0	0	2	1	0	0	2	0	0	0	0
Trip Distribution IN				39%	22%	8%					1%	
Trip Distribution OUT								15%	1%	2%		
Restaurant Trips	0	0	0	67	38	14	0	18	1	2	2	0
Trip Distribution IN				39%	22%	8%					1%	
Trip Distribution OUT								15%	1%	2%		
Non-Residential Trips	0	0	0	1	0	0	0	1	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	0	0	107	60	22	0	93	6	12	3	0
2018 Buildout Total	0	0	0	147	1,244	121	0	144	34	36	32	0

INTERSECTION VOLUME DEVELOPMENT

West Peachtree Street at Armstead Place
AM PEAK HOUR

Description	West Peachtree Street Northbound			N/A Southbound			Armstead Place Eastbound			N/A Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2016 Traffic Volumes	24	1,273	0				54	0	0			
Pedestrians		0			2			53			0	
Conflicting Pedestrians	53		0	0		53	2		0	0		2
Heavy Vehicles	0	27	0				0	0	0			
Heavy Vehicle %	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor		0.96						0.68				
Adjusted 2016 Volumes	24	1273	0	0	0	0	54	0	0	0	0	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020
2018 Background Traffic	24	1,299	0	0	0	0	55	0	0	0	0	0
Project Trips												
Trip Distribution IN	3%											
Trip Distribution OUT		2%					49%					
Office Trips	15	0	0	0	0	0	12	0	0	0	0	0
Trip Distribution IN	3%											
Trip Distribution OUT		2%					49%					
Retail Trips	0	0	0	0	0	0	3	0	0	0	0	0
Trip Distribution IN	3%											
Trip Distribution OUT		2%					49%					
Restaurant Trips	4	2	0	0	0	0	45	0	0	0	0	0
Trip Distribution IN	3%											
Trip Distribution OUT		2%					49%					
Other Non-Residential Trips	0	0	0	0	0	0	1	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	19	2	0	0	0	0	61	0	0	0	0	0
2018 Buildout Total	43	1,301	0	0	0	0	116	0	0	0	0	0

PM PEAK HOUR

Description	West Peachtree Street Northbound			N/A Southbound			Armstead Place Eastbound			N/A Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2016 Traffic Volumes	52	1,376	0				91	0	0			
Pedestrians		1						75				
Conflicting Pedestrians	75		0	0		75	0		1	1		0
Heavy Vehicles	0	23	0				0	0	0			
Heavy Vehicle %	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor		0.90						0.88				
Adjusted 2016 Volumes	52	1376	0	0	0	0	91	0	0	0	0	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020
2018 Background Traffic	53	1,404	0	0	0	0	93	0	0	0	0	0
Project Trips												
Trip Distribution IN	3%											
Trip Distribution OUT		2%					49%					
Office Trips	3	10	0	0	0	0	235	0	0	0	0	0
Trip Distribution IN	3%											
Trip Distribution OUT		2%					49%					
Retail Trips	0	0	0	0	0	0	7	0	0	0	0	0
Trip Distribution IN	3%											
Trip Distribution OUT		2%					49%					
Restaurant Trips	5	2	0	0	0	0	60	0	0	0	0	0
Trip Distribution IN	3%											
Trip Distribution OUT		2%					49%					
Non-Residential Trips	0	0	0	0	0	0	2	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	8	12	0	0	0	0	304	0	0	0	0	0
2018 Buildout Total	61	1,416	0	0	0	0	397	0	0	0	0	0

INTERSECTION VOLUME DEVELOPMENT

West Peachtree Street at 4th Street
AM PEAK HOUR

Description	West Peachtree Street Northbound			N/A Southbound			N/A Eastbound			4th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2016 Traffic Volumes	134	1,427	0							0	82	73
Pedestrians		11			11			52			59	
Conflicting Pedestrians	52		59	59		52	11		11	11		11
Heavy Vehicles	0	30	0							0	1	0
Heavy Vehicle %	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
Peak Hour Factor		0.96									0.81	
Adjusted 2016 Volumes	134	1427	0	0	0	0	0	0	0	0	82	73
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020
2018 Background Traffic	137	1,456	0	0	0	0	0	0	0	0	84	74
Project Trips												
Trip Distribution IN	22%	2%									6%	1%
Trip Distribution OUT		2%										
Office Trips	110	10	0	0	0	0	0	0	0	0	30	5
Trip Distribution IN	22%	2%									6%	1%
Trip Distribution OUT		2%										
Retail Trips	2	0	0	0	0	0	0	0	0	0	1	0
Trip Distribution IN	22%	2%									6%	1%
Trip Distribution OUT		2%										
Restaurant Trips	33	5	0	0	0	0	0	0	0	0	9	1
Trip Distribution IN	22%	2%									6%	1%
Trip Distribution OUT		2%										
Other Non-Residential Trips	1	0	0	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	146	15	0	0	0	0	0	0	0	0	40	6
2018 Buildout Total	283	1,471	0	0	0	0	0	0	0	0	124	80

PM PEAK HOUR

Description	West Peachtree Street Northbound			N/A Southbound			N/A Eastbound			4th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2016 Traffic Volumes	68	1,167	0							0	109	208
Pedestrians		25			14			69			82	
Conflicting Pedestrians	69		82	82		69	14		25	25		14
Heavy Vehicles	0	23	0							0	0	0
Heavy Vehicle %	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor		0.88									0.84	
Adjusted 2016 Volumes	68	1167	0	0	0	0	0	0	0	0	109	208
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020
2018 Background Traffic	69	1,190	0	0	0	0	0	0	0	0	111	212
Project Trips												
Trip Distribution IN	22%	2%									6%	1%
Trip Distribution OUT		2%										
Office Trips	21	12	0	0	0	0	0	0	0	0	6	1
Trip Distribution IN	22%	2%									6%	1%
Trip Distribution OUT		2%										
Retail Trips	1	0	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN	22%	2%									6%	1%
Trip Distribution OUT		2%										
Restaurant Trips	38	5	0	0	0	0	0	0	0	0	10	2
Trip Distribution IN	22%	2%									6%	1%
Trip Distribution OUT		2%										
Non-Residential Trips	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	60	17	0	0	0	0	0	0	0	0	16	3
2018 Buildout Total	129	1,207	0	0	0	0	0	0	0	0	127	215

INTERSECTION VOLUME DEVELOPMENT

Spring Street at 4th Street/Williams Street
AM PEAK HOUR

Description	Northbound			Spring Street Southbound			Williams Street Eastbound			4th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2016 Traffic Volumes				0	1,025	70	0	0	43	97	107	0
Pedestrians		7			15			14			16	
Conflicting Pedestrians	14		16	16		14	15		7	7		15
Heavy Vehicles				0	15	0	0	0	0	1	0	0
Heavy Vehicle %	0%	0%	0%	0%	1%	0%	0%	0%	0%	1%	0%	0%
Peak Hour Factor					0.94			0.72			0.86	
Adjusted 2016 Volumes	0	0	0	0	1025	70	0	0	43	97	107	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020
2018 Background Traffic	0	0	0	0	1,046	71	0	0	44	99	109	0
Project Trips												
Trip Distribution IN					2%	20%					11%	
Trip Distribution OUT					3%				11%	17%	5%	
Office Trips	0	0	0	0	11	100	0	0	3	4	56	0
Trip Distribution IN					2%	20%					11%	
Trip Distribution OUT					3%				11%	17%	5%	
Retail Trips	0	0	0	0	0	2	0	0	1	1	1	0
Trip Distribution IN					2%	20%					11%	
Trip Distribution OUT					3%				11%	17%	5%	
Restaurant Trips	0	0	0	0	6	30	0	0	10	15	21	0
Trip Distribution IN					2%	20%					11%	
Trip Distribution OUT					3%				11%	17%	5%	
Other Non-Residential Trips	0	0	0	0	0	1	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	0	0	0	17	133	0	0	14	20	78	0
2018 Buildout Total	0	0	0	0	1,063	204	0	0	58	119	187	0

PM PEAK HOUR

Description	Northbound			Spring Street Southbound			Williams Street Eastbound			4th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2016 Traffic Volumes				0	1,229	43	0	0	156	136	48	0
Pedestrians		7			26			22			32	
Conflicting Pedestrians	22		32	32		22	26		7	7		26
Heavy Vehicles				0	21	0	0	0	0	0	0	0
Heavy Vehicle %	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor					0.84			0.80			0.72	
Adjusted 2016 Volumes	0	0	0	0	1229	43	0	0	156	136	48	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020
2018 Background Traffic	0	0	0	0	1,254	44	0	0	159	139	49	0
Project Trips												
Trip Distribution IN					2%	20%					11%	
Trip Distribution OUT					3%				11%	17%	5%	
Office Trips	0	0	0	0	16	19	0	0	53	81	34	0
Trip Distribution IN					2%	20%					11%	
Trip Distribution OUT					3%				11%	17%	5%	
Retail Trips	0	0	0	0	0	1	0	0	2	2	2	0
Trip Distribution IN					2%	20%					11%	
Trip Distribution OUT					3%				11%	17%	5%	
Restaurant Trips	0	0	0	0	7	35	0	0	13	21	25	0
Trip Distribution IN					2%	20%					11%	
Trip Distribution OUT					3%				11%	17%	5%	
Non-Residential Trips	0	0	0	0	0	0	0	0	0	1	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	0	0	0	23	55	0	0	68	105	61	0
2018 Buildout Total	0	0	0	0	1,277	99	0	0	227	244	110	0

INTERSECTION VOLUME DEVELOPMENT

Williams Street at Georgia Tech Existing Driveway 2
AM PEAK HOUR

Description	N/A Northbound			GT Existing Driveway 2 Southbound			Williams Street Eastbound			Williams Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2016 Traffic Volumes				5	0	5	0	78	0	0	68	0
Pedestrians		2			3			1			1	
Conflicting Pedestrians	1		1	1		1	3		2	2		3
Heavy Vehicles				0	0	0	0	0	0	0	0	0
Heavy Vehicle %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor					0.50			0.89			0.91	
Adjusted 2016 Volumes	0	0	0	5	0	5	0	78	0	0	68	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020
2018 Background Traffic	0	0	0	5	0	5	0	80	0	0	69	0
Project Trips												
Trip Distribution IN											3%	28%
Trip Distribution OUT				11%		2%					5%	
Office Trips	0	0	0	3	0	0	0	0	0	0	16	141
Trip Distribution IN											3%	28%
Trip Distribution OUT				11%		2%					5%	
Retail Trips	0	0	0	1	0	0	0	0	0	0	0	3
Trip Distribution IN											3%	28%
Trip Distribution OUT				11%		2%					5%	
Restaurant Trips	0	0	0	10	0	2	0	0	0	0	9	41
Trip Distribution IN											3%	28%
Trip Distribution OUT				11%		2%					5%	
Other Non-Residential Trips	0	0	0	0	0	0	0	0	0	0	0	1
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	0	0	14	0	2	0	0	0	0	25	186
2018 Buildout Total	0	0	0	19	0	7	0	80	0	0	94	186

PM PEAK HOUR

Description	N/A Northbound			GT Existing Driveway 2 Southbound			Williams Street Eastbound			Williams Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2016 Traffic Volumes				124	0	115	0	83	0	0	76	0
Pedestrians		5			4			6			0	
Conflicting Pedestrians	6		0	0		6	4		5	5		4
Heavy Vehicles				0	0	0	0	0	0	0	0	0
Heavy Vehicle %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor					0.88			0.74			0.79	
Adjusted 2016 Volumes	0	0	0	124	0	115	0	83	0	0	76	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020
2018 Background Traffic	0	0	0	126	0	117	0	85	0	0	78	0
Project Trips												
Trip Distribution IN											3%	28%
Trip Distribution OUT				11%		2%					5%	
Office Trips	0	0	0	53	0	10	0	0	0	0	27	26
Trip Distribution IN											3%	28%
Trip Distribution OUT				11%		2%					5%	
Retail Trips	0	0	0	2	0	0	0	0	0	0	1	2
Trip Distribution IN											3%	28%
Trip Distribution OUT				11%		2%					5%	
Restaurant Trips	0	0	0	13	0	2	0	0	0	0	11	48
Trip Distribution IN											3%	28%
Trip Distribution OUT				11%		2%					5%	
Non-Residential Trips	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	0	0	68	0	12	0	0	0	0	39	76
2018 Buildout Total	0	0	0	194	0	129	0	85	0	0	117	76

INTERSECTION VOLUME DEVELOPMENT

Williams Street at Georgia Tech Existing Driveway 3
AM PEAK HOUR

Description	Williams Street Northbound			Williams Street Southbound			N/A Eastbound			GT Existing Driveway 3 Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2016 Traffic Volumes	0	73	0	16	72	0				1	0	13
Pedestrians		0			0			0			3	
Conflicting Pedestrians	0		3	3		0	0		0	0		0
Heavy Vehicles	0	0	0	0	0	0				0	0	0
Heavy Vehicle %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor		0.91			0.82						0.70	
Adjusted 2016 Volumes	0	73	0	16	72	0	0	0	0	1	0	13
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020
2018 Background Traffic	0	74	0	16	73	0	0	0	0	1	0	13
Project Trips												
Trip Distribution IN			3%	2%								
Trip Distribution OUT		7%										13%
Office Trips	0	2	15	10	0	0	0	0	0	0	0	3
Trip Distribution IN			3%	2%								
Trip Distribution OUT		7%										13%
Retail Trips	0	0	0	0	0	0	0	0	0	0	0	1
Trip Distribution IN			3%	2%								
Trip Distribution OUT		7%										13%
Restaurant Trips	0	6	4	3	0	0	0	0	0	0	0	12
Trip Distribution IN			3%	2%								
Trip Distribution OUT		7%										13%
Other Non-Residential Trips	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	8	19	13	0	0	0	0	0	0	0	16
2018 Buildout Total	0	82	19	29	73	0	0	0	0	1	0	29

PM PEAK HOUR

Description	Williams Street Northbound			Williams Street Southbound			N/A Eastbound			GT Existing Driveway 3 Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2016 Traffic Volumes	0	153	5	12	72	0				6	0	5
Pedestrians		0			0			0			10	
Conflicting Pedestrians	0		10	10		0	0		0	0		0
Heavy Vehicles	0	0	0	0	0	0				0	0	0
Heavy Vehicle %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor		0.88			0.84						0.55	
Adjusted 2016 Volumes	0	153	5	12	72	0	0	0	0	6	0	5
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020
2018 Background Traffic	0	156	5	12	73	0	0	0	0	6	0	5
Project Trips												
Trip Distribution IN			3%	2%								
Trip Distribution OUT		7%										13%
Office Trips	0	34	3	2	0	0	0	0	0	0	0	62
Trip Distribution IN			3%	2%								
Trip Distribution OUT		7%										13%
Retail Trips	0	1	0	0	0	0	0	0	0	0	0	2
Trip Distribution IN			3%	2%								
Trip Distribution OUT		7%										13%
Restaurant Trips	0	9	5	3	0	0	0	0	0	0	0	16
Trip Distribution IN			3%	2%								
Trip Distribution OUT		7%										13%
Non-Residential Trips	0	0	0	0	0	0	0	0	0	0	0	1
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	44	8	5	0	0	0	0	0	0	0	81
2018 Buildout Total	0	200	13	17	73	0	0	0	0	6	0	86

INTERSECTION VOLUME DEVELOPMENT

Williams Street at 5th Street
AM PEAK HOUR

Description	Williams Street Northbound			N/A Southbound			5th Street Eastbound			5th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2016 Traffic Volumes	50	33	9				83	133	72	11	190	87
Pedestrians		131			134			9			30	
Conflicting Pedestrians	9		30	30		9	134		131	131		134
Heavy Vehicles	0	0	0				0	1	0	0	0	1
Heavy Vehicle %	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	1%
Peak Hour Factor		0.85						0.77			0.90	
Adjusted 2016 Volumes	50	33	9	0	0	0	83	133	72	11	190	87
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020
2018 Background Traffic	51	34	9	0	0	0	85	136	73	11	194	89
Project Trips												
Trip Distribution IN								1%	2%			
Trip Distribution OUT	2%	8%	10%								1%	
Office Trips	0	2	2	0	0	0	0	5	10	0	0	0
Trip Distribution IN								1%	2%			
Trip Distribution OUT	2%	8%	10%								1%	
Retail Trips	0	1	1	0	0	0	0	0	0	0	0	0
Trip Distribution IN								1%	2%			
Trip Distribution OUT	2%	8%	10%								1%	
Restaurant Trips	2	7	9	0	0	0	0	1	3	0	1	0
Trip Distribution IN								1%	2%			
Trip Distribution OUT	2%	8%	10%								1%	
Other Non-Residential Trips	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	2	10	12	0	0	0	0	6	13	0	1	0
2018 Buildout Total	53	44	21	0	0	0	85	142	86	11	195	89

PM PEAK HOUR

Description	Williams Street Northbound			N/A Southbound			5th Street Eastbound			5th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2016 Traffic Volumes	72	65	15				196	242	78	11	387	136
Pedestrians		409			396			38			90	
Conflicting Pedestrians	38		90	90		38	396		409	409		396
Heavy Vehicles	0	0	0				0	0	0	0	0	4
Heavy Vehicle %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%
Peak Hour Factor		0.88						0.96			0.91	
Adjusted 2016 Volumes	72	65	15	0	0	0	196	242	78	11	387	136
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020
2018 Background Traffic	73	66	15	0	0	0	200	247	80	11	395	139
Project Trips												
Trip Distribution IN								1%	2%			
Trip Distribution OUT	2%	8%	10%								1%	
Office Trips	10	38	48	0	0	0	0	1	2	0	5	0
Trip Distribution IN								1%	2%			
Trip Distribution OUT	2%	8%	10%								1%	
Retail Trips	0	1	1	0	0	0	0	0	0	0	0	0
Trip Distribution IN								1%	2%			
Trip Distribution OUT	2%	8%	10%								1%	
Restaurant Trips	2	10	12	0	0	0	0	2	3	0	1	0
Trip Distribution IN								1%	2%			
Trip Distribution OUT	2%	8%	10%								1%	
Non-Residential Trips	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	12	49	61	0	0	0	0	3	5	0	6	0
2018 Buildout Total	85	115	76	0	0	0	200	250	85	11	401	139

INTERSECTION VOLUME DEVELOPMENT

Armstead Place at Proposed Driveway 1
AM PEAK HOUR

Description	Proposed Driveway 1 Northbound			Southbound			Armstead Place Eastbound			Armstead Place Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2016 Traffic Volumes	0	0	0				0	54	0	0	23	0
Pedestrians		0						0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles	0	0	0				0	0	0	0	0	0
Heavy Vehicle %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor		0.92						0.68			0.48	
Adjusted 2016 Volumes	0	0	0	0	0	0	0	54	0	0	23	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020
2018 Background Traffic	0	0	0	0	0	0	0	55	0	0	23	0
Project Trips												
Trip Distribution IN									39%	2%	1%	
Trip Distribution OUT	2%		34%					15%				
Office Trips	0	0	8	0	0	0	0	4	196	10	5	0
Trip Distribution IN									39%	2%	1%	
Trip Distribution OUT	2%		34%					15%				
Retail Trips	0	0	2	0	0	0	0	1	4	0	0	0
Trip Distribution IN									39%	2%	1%	
Trip Distribution OUT	2%		34%					15%				
Restaurant Trips	2	0	31	0	0	0	0	14	58	3	1	0
Trip Distribution IN									39%	2%	1%	
Trip Distribution OUT	2%		34%					15%				
Other Non-Residential Trips	0	0	1	0	0	0	0	0	1	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	2	0	42	0	0	0	0	19	259	13	6	0
2018 Buildout Total	2	0	42	0	0	0	0	74	259	13	29	0

PM PEAK HOUR

Description	Proposed Driveway 1 Northbound			Southbound			Armstead Place Eastbound			Armstead Place Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2016 Traffic Volumes	0	0	0				0	91	0	0	52	0
Pedestrians		0						0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles	0	0	0				0	0	0	0	0	0
Heavy Vehicle %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor		0.92						0.88			0.81	
Adjusted 2016 Volumes	0	0	0	0	0	0	0	91	0	0	52	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020
2018 Background Traffic	0	0	0	0	0	0	0	93	0	0	53	0
Project Trips												
Trip Distribution IN									39%	2%	1%	
Trip Distribution OUT	2%		34%					15%				
Office Trips	10	0	163	0	0	0	0	72	37	2	1	0
Trip Distribution IN									39%	2%	1%	
Trip Distribution OUT	2%		34%					15%				
Retail Trips	0	0	5	0	0	0	0	2	2	0	0	0
Trip Distribution IN									39%	2%	1%	
Trip Distribution OUT	2%		34%					15%				
Restaurant Trips	2	0	41	0	0	0	0	18	67	3	2	0
Trip Distribution IN									39%	2%	1%	
Trip Distribution OUT	2%		34%					15%				
Non-Residential Trips	0	0	1	0	0	0	0	1	1	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	12	0	210	0	0	0	0	93	107	5	3	0
2018 Buildout Total	12	0	210	0	0	0	0	186	107	5	56	0

INTERSECTION VOLUME DEVELOPMENT

4th Street at Proposed Driveway 2
AM PEAK HOUR

Description	Northbound			Proposed Driveway 2 Southbound			N/A Eastbound			4th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2016 Traffic Volumes				0	0	0				0	204	0
Pedestrians					0						0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles				0	0	0				0	0	0
Heavy Vehicle %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor					0.92						0.86	
Adjusted 2016 Volumes	0	0	0	0	0	0	0	0	0	0	204	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020
2018 Background Traffic	0	0	0	0	0	0	0	0	0	0	208	0
Project Trips												
Trip Distribution IN											11%	17%
Trip Distribution OUT						22%						
Office Trips	0	0	0	0	0	5	0	0	0	0	55	85
Trip Distribution IN											11%	17%
Trip Distribution OUT						22%						
Retail Trips	0	0	0	0	0	2	0	0	0	0	1	2
Trip Distribution IN											11%	17%
Trip Distribution OUT						22%						
Restaurant Trips	0	0	0	0	0	20	0	0	0	0	16	25
Trip Distribution IN											11%	17%
Trip Distribution OUT						22%						
Other Non-Residential Trips	0	0	0	0	0	1	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	0	0	0	0	28	0	0	0	0	72	112
2018 Buildout Total	0	0	0	0	0	28	0	0	0	0	280	112

PM PEAK HOUR

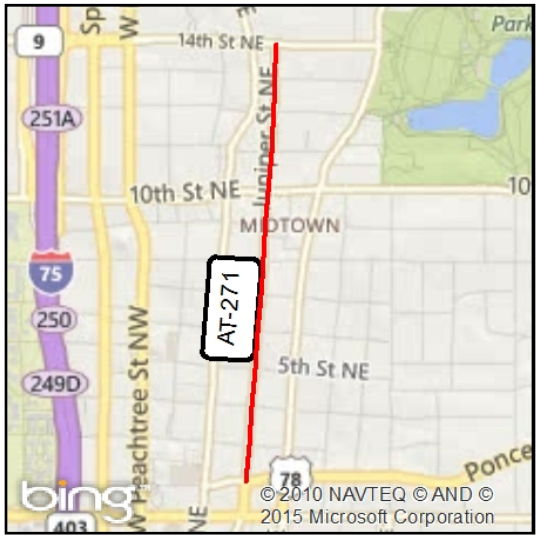
Description	Northbound			Proposed Driveway 2 Southbound			N/A Eastbound			4th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2016 Traffic Volumes				0	0	0				0	184	0
Pedestrians					0						0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles				0	0	0				0	0	0
Heavy Vehicle %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor					0.92						0.72	
Adjusted 2016 Volumes	0	0	0	0	0	0	0	0	0	0	184	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Growth Factor	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020
2018 Background Traffic	0	0	0	0	0	0	0	0	0	0	188	0
Project Trips												
Trip Distribution IN											11%	17%
Trip Distribution OUT						22%						
Office Trips	0	0	0	0	0	105	0	0	0	0	10	16
Trip Distribution IN											11%	17%
Trip Distribution OUT						22%						
Retail Trips	0	0	0	0	0	3	0	0	0	0	1	1
Trip Distribution IN											11%	17%
Trip Distribution OUT						22%						
Restaurant Trips	0	0	0	0	0	27	0	0	0	0	19	29
Trip Distribution IN											11%	17%
Trip Distribution OUT						22%						
Non-Residential Trips	0	0	0	0	0	1	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	0	0	0	0	136	0	0	0	0	30	46
2018 Buildout Total	0	0	0	0	0	136	0	0	0	0	218	46

Appendix F
Programmed Project Fact Sheets

AT-271

Atlanta Region's Plan RTP (2016) PROJECT FACT SHEET

Short Title	JUNIPER STREET BICYCLE/PEDESTRIAN FACILITIES FROM PONCE DE LEON AVENUE TO 14TH STREET
GDOT Project No.	0012587
Federal ID No.	N/A
Status	Programmed
Service Type	Last Mile Connectivity / Complete Street Retrofit
Sponsor	City of Atlanta,Midtown Alliance
Jurisdiction	City of Atlanta
Analysis Level	In the Region's Air Quality Conformity Analysis
Existing Thru Lane	4
Planned Thru Lane	2



Network Year	2020
Corridor Length	1.0 miles

Detailed Description and Justification

Reduction of travel lanes and construction of buffered southbound bike lane, sidewalk and streetscape improvements, landscaping, crosswalks, and on-street parking where possible.

Phase Status & Funding Information		Status	FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
					FEDERAL	STATE	BONDS	LOCAL/PRIVATE
PE	Local Jurisdiction/Municipality Funds	AUTH	2014	**$450,000**	~~$0,000~~	~~$0,000~~	~~$0,000~~	~~$450,000~~
CST	STP - Urban (>200K) (ARC)	AUTH	2015	**$5,171,535**	~~$3,347,200~~	~~$0,000~~	~~$0,000~~	~~$1,824,335~~
				$5,621,535	**$3,347,200**	**$0,000**	**$0,000**	**$2,274,335**

SCP: Scoping PE: Preliminary engineering / engineering / design / planning PE-OV: GDOT oversight services for engineering ROW: Right-of-way Acquistion
UTL: Utility relocation CST: Construction / Implementation ALL: Total estimated cost, inclusive of all phases

? For additional information about this project, please call (404) 463-3100 or email transportation@atlantaregional.com.

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AT-277

Atlanta Region's Plan RTP (2016) PROJECT FACT SHEET

Short Title	CYCLE ATLANTA: PHASE 1.0 - BICYCLE MOBILITY IMPROVEMENTS
GDOT Project No.	0012593
Federal ID No.	N/A
Status	Programmed
Service Type	Last Mile Connectivity / Bicycle Facility
Sponsor	City of Atlanta
Jurisdiction	City of Atlanta
Analysis Level	Exempt from Air Quality Analysis (40 CFR 93)
Existing Thru Lane	N/A
Planned Thru Lane	N/A

Network Year	TBD
Corridor Length	26.8 miles

Detailed Description and Justification

This project involves installing the bicycle facilities identified by the ARC-funded Cycle Atlanta: Phase 1.0 study. These facilities will support the existing and planned compact development in the central core of the city, as well as within the Atlanta BeltLine Planning Area, by supporting cycling as a mode of transportation between varied land uses. The five Core Bicycle Connection corridors from the Connect Atlanta Plan that will be analyzed under Phase 1.0 connect directly to 13 of the 38 MARTA heavy rail stations, providing enhanced connections between housing, services, employment opportunities and transit stations. The results of the study will identify methods to retrofit existing urban roadways with bicycle facilities in a context sensitive manner that protects the character and integrity of existing neighborhoods while meeting the needs of the community. Many of these study corridors overlap the ARC Bicycle Study Network, including West Marietta Street, Howell Mill Road, Peachtree Street, Lee Street and Martin Luther King, Jr Drive. Examples of the types of projects to be implemented can be found in the NACTO Urban Bikeway Design Guide. The study will be completed and adopted by June 30, 2013. Project components are identified as Core Bicycle Connections and Secondary Bicycle Connections in the Connect Atlanta Plan. Portions of this project are located in defined Equitable Target Areas. The project is being funded under the Last Mile Connectivity Program, a regional program defined in PLAN 2040 to improve pedestrian and bicyclist mobility, accessibility and safety along transit corridors, within employment and commercial centers, and in the vicinity of other major origins and destinations such as schools.

Phase Status & Funding Information		Status	FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
					FEDERAL	STATE	BONDS	LOCAL/PRIVATE
PE	STP - Urban (>200K) (ARC)	AUTH	2014	**$450,000**	~~$360,000~~	~~$0,000~~	~~$0,000~~	~~$90,000~~
ROW	STP - Urban (>200K) (ARC)	AUTH	2015	**$50,000**	~~$40,000~~	~~$0,000~~	~~$0,000~~	~~$10,000~~
CST	STP - Urban (>200K) (ARC)	AUTH	2015	**$2,000,000**	~~$1,600,000~~	~~$0,000~~	~~$0,000~~	~~$400,000~~
				$2,500,000	**$2,000,000**	**$0,000**	**$0,000**	**$500,000**

SCP: Scoping PE: Preliminary engineering / engineering / design / planning PE-OV: GDOT oversight services for engineering ROW: Right-of-way Acquistion
UTL: Utility relocation CST: Construction / Implementation ALL: Total estimated cost, inclusive of all phases

? For additional information about this project, please call (404) 463-3100 or email transportation@atlantaregional.com.

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AR-490C

Atlanta Region's Plan RTP (2016) PROJECT FACT SHEET

Short Title	ATLANTA STREETCAR - MIDTOWN / CROSSTOWN CORRIDOR FROM BELTLINE EAST CORRIDOR TO BELTLINE WEST CORRIDOR
GDOT Project No.	TBD
Federal ID No.	N/A
Status	Long Range
Service Type	Transit / Rail Capital
Sponsor	City of Atlanta
Jurisdiction	Regional - Central
Analysis Level	In the Region's Air Quality Conformity Analysis
Existing Thru Lane	N/A
Planned Thru Lane	N/A

Network Year	2040
Corridor Length	4.8 miles

Detailed Description and Justification

Construction of Phase 1 of the Atlanta Streetcar Expansion Strategy has been broken down into 5 smaller sections. This section is the 4.8 miles serving as a Midtown/Crosstown Corridor.

Phase Status & Funding Information		Status	FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
					FEDERAL	STATE	BONDS	LOCAL/PRIVATE
ALL	New Starts		LR 2031-2040	**$345,600,000**	$155,520,000	$0,000	$0,000	$190,080,000
				$345,600,000	**$155,520,000**	**$0,000**	**$0,000**	**$190,080,000**

SCP: Scoping PE: Preliminary engineering / engineering / design / planning PE-OV: GDOT oversight services for engineering ROW: Right-of-way Acquistion
UTL: Utility relocation CST: Construction / Implementation ALL: Total estimated cost, inclusive of all phases

? For additional information about this project, please call (404) 463-3100 or email transportation@atlantaregional.com.

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AT-278

Atlanta Region's Plan RTP (2016) PROJECT FACT SHEET

Short Title	MIDTOWN ATLANTA REGIONAL ACTIVITY CENTER - PEDESTRIAN MOBILITY AND SAFETY IMPROVEMENTS
GDOT Project No.	0012594
Federal ID No.	N/A
Status	Programmed
Service Type	Last Mile Connectivity / Pedestrian Facility
Sponsor	City of Atlanta,Midtown Alliance
Jurisdiction	City of Atlanta
Analysis Level	Exempt from Air Quality Analysis (40 CFR 93)
Existing Thru Lane	N/A
Planned Thru Lane	N/A

Network Year	TBD
Corridor Length	N/A miles

Detailed Description and Justification

This project involves installing/constructing pedestrian safety improvements at several intersections adjacent to existing heavy rail stations and regional local and express bus stops. This project includes the addition of new traffic signals at seven intersections as well as rectangular rapid flash beacons (RRFBs) at five intersections. These signals are necessary to provide safe opportunities for pedestrian crossings of the Strategic Regional Throughfare Network and the Regional Strategic Transportation System corridors within Midtown. These locations were identified for improvements in the Blueprint Midtown plan. To increase the visibility of pedestrian crossings in Midtown, approximately 140 intersections will be restriped in the Midtown core. The existing striping is in poor condition and many intersections were never re-striped after resurfacing and construction projects. The project is being funded under the Last Mile Connectivity Program, a regional program defined in PLAN 2040 to improve pedestrian and bicyclist mobility, accessibility and safety along transit corridors, within employment and commercial centers, and in the vicinity of other major origins and destinations such as schools.

Phase Status & Funding Information		Status	FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
					FEDERAL	STATE	BONDS	LOCAL/PRIVATE
PE	STP - Urban (>200K) (ARC)	AUTH	2015	**$27,000**	~~$21,600~~	~~$0,000~~	~~$0,000~~	~~$5,400~~
CST	STP - Urban (>200K) (ARC)	AUTH	2015	**$1,750,000**	~~$1,400,000~~	~~$0,000~~	~~$0,000~~	~~$350,000~~
				$1,777,000	**$1,421,600**	**$0,000**	**$0,000**	**$355,400**

SCP: Scoping PE: Preliminary engineering / engineering / design / planning PE-OV: GDOT oversight services for engineering ROW: Right-of-way Acquistion
UTL: Utility relocation CST: Construction / Implementation ALL: Total estimated cost, inclusive of all phases

? For additional information about this project, please call (404) 463-3100 or email transportation@atlantaregional.com.

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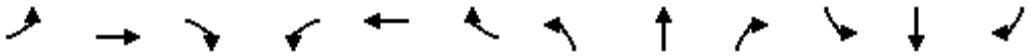
Available Upon Request

Synchro Capacity Analyses

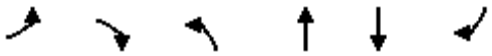
Raw Traffic Count Data

Appendix G
Synchro Capacity Analyses



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	2	7	7	16	0	0	0	0	60	1088	72
Future Volume (vph)	0	2	7	7	16	0	0	0	0	60	1088	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.3			5.3						4.4	
Lane Util. Factor		1.00			1.00						0.86	
Frpb, ped/bikes		1.00			1.00						1.00	
Flpb, ped/bikes		1.00			1.00						1.00	
Frt		0.90			1.00						0.99	
Flt Protected		1.00			0.98						1.00	
Satd. Flow (prot)		1670			1834						6325	
Flt Permitted		1.00			0.89						1.00	
Satd. Flow (perm)		1670			1656						6325	
Peak-hour factor, PHF	0.56	0.56	0.56	0.48	0.48	0.48	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	0	4	12	15	33	0	0	0	0	65	1170	77
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	5	0	0	48	0	0	0	0	0	1308	0
Confl. Peds. (#/hr)	74					74				10		
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		8			4						2	
Permitted Phases				4						2		
Actuated Green, G (s)		9.0			9.0						101.3	
Effective Green, g (s)		9.0			9.0						101.3	
Actuated g/C Ratio		0.08			0.08						0.84	
Clearance Time (s)		5.3			5.3						4.4	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		125			124						5339	
v/s Ratio Prot		0.00										
v/s Ratio Perm					c0.03						0.21	
v/c Ratio		0.04			0.39						0.24	
Uniform Delay, d1		51.5			52.9						1.8	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		0.1			2.0						0.1	
Delay (s)		51.6			54.9						1.9	
Level of Service		D			D						A	
Approach Delay (s)		51.6			54.9			0.0			1.9	
Approach LOS		D			D			A			A	

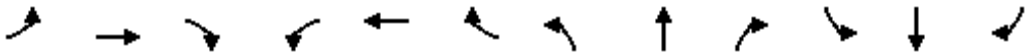
Intersection Summary			
HCM 2000 Control Delay	4.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.7
Intersection Capacity Utilization	39.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	54	0	24	1273	0	0
Future Volume (Veh/h)	54	0	24	1273	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.68	0.68	0.96	0.96	0.92	0.92
Hourly flow rate (vph)	79	0	25	1326	0	0
Pedestrians	53				2	
Lane Width (ft)	12.0				0.0	
Walking Speed (ft/s)	3.5				3.5	
Percent Blockage	5				0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	436	53	53			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	436	53	53			
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	100	98			
cM capacity (veh/h)	512	953	1473			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4
Volume Total	79	214	379	379	379
Volume Left	79	25	0	0	0
Volume Right	0	0	0	0	0
cSH	512	1473	1700	1700	1700
Volume to Capacity	0.15	0.02	0.22	0.22	0.22
Queue Length 95th (ft)	14	1	0	0	0
Control Delay (s)	13.3	1.0	0.0	0.0	0.0
Lane LOS	B	A			
Approach Delay (s)	13.3	0.2			
Approach LOS	B				

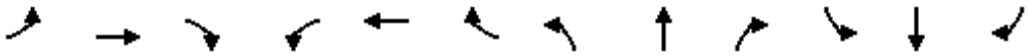
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	28.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	82	73	134	1427	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	82	73	134	1427	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.81	0.81	0.81	0.96	0.96	0.96	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	101	90	140	1486	0	0	0	0
Pedestrians		52			59			11			11	
Lane Width (ft)		0.0			12.0			12.0			0.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		0			6			1			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	855	1877	63	1836	1877	442	52			1545		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	855	1877	63	1836	1877	442	52			1545		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	100	100	0	83	91			100		
cM capacity (veh/h)	0	61	978	39	61	532	1552			402		

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	NB 3	NB 4
Volume Total	131	60	352	425	425	425
Volume Left	0	0	140	0	0	0
Volume Right	30	60	0	0	0	0
cSH	76	532	1552	1700	1700	1700
Volume to Capacity	1.72	0.11	0.09	0.25	0.25	0.25
Queue Length 95th (ft)	281	9	7	0	0	0
Control Delay (s)	464.7	12.6	3.5	0.0	0.0	0.0
Lane LOS	F	B	A			
Approach Delay (s)	322.7		0.8			
Approach LOS	F					

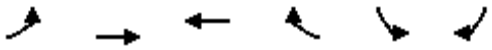
Intersection Summary				
Average Delay	34.6			
Intersection Capacity Utilization	37.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	43	97	107	0	0	0	0	0	1025	70
Future Volume (Veh/h)	0	0	43	97	107	0	0	0	0	0	1025	70
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.72	0.72	0.72	0.86	0.86	0.86	0.92	0.92	0.92	0.94	0.94	0.94
Hourly flow rate (vph)	0	0	60	113	124	0	0	0	0	0	1090	74
Pedestrians		14			16			7			15	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		1			2			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											288	
pX, platoon unblocked	0.97	0.97	0.97	0.97	0.97		0.97					
vC, conflicting volume	1218	1157	330	356	1194	31	1178			16		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1095	1033	185	211	1071	31	1054			16		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	92	82	40	100	100			100		
cM capacity (veh/h)	82	219	794	632	208	1006	631			1576		

Direction, Lane #	EB 1	WB 1	WB 2	SB 1	SB 2	SB 3	SB 4
Volume Total	60	75	162	311	311	311	230
Volume Left	0	75	38	0	0	0	0
Volume Right	60	0	0	0	0	0	74
cSH	794	632	246	1700	1700	1700	1700
Volume to Capacity	0.08	0.12	0.66	0.18	0.18	0.18	0.14
Queue Length 95th (ft)	6	10	103	0	0	0	0
Control Delay (s)	9.9	11.5	43.7	0.0	0.0	0.0	0.0
Lane LOS	A	B	E				
Approach Delay (s)	9.9	33.5		0.0			
Approach LOS	A	D					

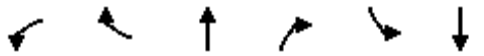
Intersection Summary				
Average Delay	5.8			
Intersection Capacity Utilization	37.7%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	78	68	0	5	5
Future Volume (Veh/h)	0	78	68	0	5	5
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.89	0.89	0.91	0.91	0.50	0.50
Hourly flow rate (vph)	0	88	75	0	10	10
Pedestrians		1	1		3	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	78				167	79
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	78				167	79
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	99
cM capacity (veh/h)	1516				820	978

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	88	75	20
Volume Left	0	0	10
Volume Right	0	0	10
cSH	1516	1700	892
Volume to Capacity	0.00	0.04	0.02
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.0	0.0	9.1
Lane LOS			A
Approach Delay (s)	0.0	0.0	9.1
Approach LOS			A

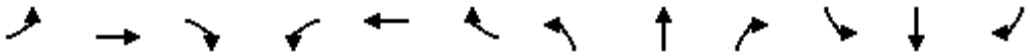
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	14.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	13	73	0	16	72
Future Volume (Veh/h)	1	13	73	0	16	72
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.70	0.70	0.91	0.91	0.82	0.82
Hourly flow rate (vph)	1	19	80	0	20	88
Pedestrians	3					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	211	83			83	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	211	83			83	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	98			99	
cM capacity (veh/h)	765	974			1510	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	20	80	108
Volume Left	1	0	20
Volume Right	19	0	0
cSH	961	1700	1510
Volume to Capacity	0.02	0.05	0.01
Queue Length 95th (ft)	2	0	1
Control Delay (s)	8.8	0.0	1.5
Lane LOS	A		A
Approach Delay (s)	8.8	0.0	1.5
Approach LOS	A		

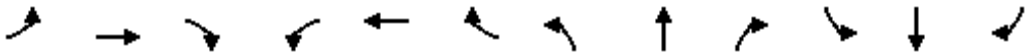
Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	21.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	133	72	11	190	87	50	33	9	0	0	0
Future Volume (Veh/h)	83	133	72	11	190	87	50	33	9	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.77	0.77	0.77	0.90	0.90	0.90	0.85	0.85	0.85	0.92	0.92	0.92
Hourly flow rate (vph)	108	173	94	12	211	97	59	39	11	0	0	0
Pedestrians		9			30			131			134	
Lane Width (ft)		12.0			12.0			12.0			0.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		1			3			12			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	442			398			860	1033	381	867	1032	402
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	442			398			860	1033	381	867	1032	402
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	90			99			70	79	98	100	100	100
cM capacity (veh/h)	1118			1016			199	182	566	182	182	642

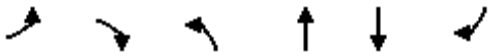
Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	108	267	320	109
Volume Left	108	0	12	59
Volume Right	0	94	97	11
cSH	1118	1700	1016	206
Volume to Capacity	0.10	0.16	0.01	0.53
Queue Length 95th (ft)	8	0	1	69
Control Delay (s)	8.6	0.0	0.4	40.7
Lane LOS	A		A	E
Approach Delay (s)	2.5		0.4	40.7
Approach LOS				E

Intersection Summary				
Average Delay	6.8			
Intersection Capacity Utilization	52.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	50	27	24	28	0	0	0	0	39	1161	97
Future Volume (vph)	0	50	27	24	28	0	0	0	0	39	1161	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.3			5.3						4.4	
Lane Util. Factor		1.00			1.00						0.86	
Frpb, ped/bikes		1.00			1.00						1.00	
Flpb, ped/bikes		1.00			1.00						1.00	
Frt		0.95			1.00						0.99	
Flt Protected		1.00			0.98						1.00	
Satd. Flow (prot)		1766			1819						6312	
Flt Permitted		1.00			0.69						1.00	
Satd. Flow (perm)		1766			1292						6312	
Peak-hour factor, PHF	0.69	0.69	0.69	0.81	0.81	0.81	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	0	72	39	30	35	0	0	0	0	45	1334	111
RTOR Reduction (vph)	0	20	0	0	0	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	91	0	0	65	0	0	0	0	0	1485	0
Confl. Peds. (#/hr)	199		1	1		199				22		
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		8			4						2	
Permitted Phases				4						2		
Actuated Green, G (s)		12.7			12.7						97.6	
Effective Green, g (s)		12.7			12.7						97.6	
Actuated g/C Ratio		0.11			0.11						0.81	
Clearance Time (s)		5.3			5.3						4.4	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		186			136						5133	
v/s Ratio Prot		c0.05										
v/s Ratio Perm					0.05						0.24	
v/c Ratio		0.49			0.48						0.29	
Uniform Delay, d1		50.6			50.5						2.7	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		2.0			2.6						0.1	
Delay (s)		52.6			53.2						2.9	
Level of Service		D			D						A	
Approach Delay (s)		52.6			53.2			0.0			2.9	
Approach LOS		D			D			A			A	

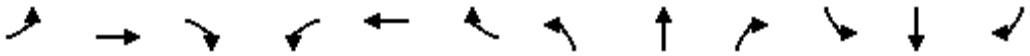
Intersection Summary			
HCM 2000 Control Delay	8.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.7
Intersection Capacity Utilization	41.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	91	0	52	1376	0	0
Future Volume (Veh/h)	91	0	52	1376	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	103	0	58	1529	0	0
Pedestrians	75			1		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	3.5			3.5		
Percent Blockage	7			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	573	76	75			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	573	76	75			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	74	100	96			
cM capacity (veh/h)	400	900	1414			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4
Volume Total	103	276	437	437	437
Volume Left	103	58	0	0	0
Volume Right	0	0	0	0	0
cSH	400	1414	1700	1700	1700
Volume to Capacity	0.26	0.04	0.26	0.26	0.26
Queue Length 95th (ft)	25	3	0	0	0
Control Delay (s)	17.1	1.9	0.0	0.0	0.0
Lane LOS	C	A			
Approach Delay (s)	17.1	0.3			
Approach LOS	C				

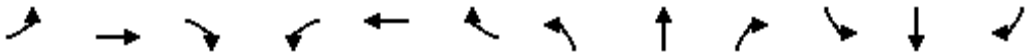
Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	32.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	109	208	68	1167	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	109	208	68	1167	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.84	0.84	0.84	0.88	0.88	0.88	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	130	248	77	1326	0	0	0	0
Pedestrians		69			82			25			14	
Lane Width (ft)		0.0			12.0			12.0			0.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		0			8			2			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	882	1631	94	1587	1631	428	69			1408		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	882	1631	94	1587	1631	428	69			1408		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	100	100	0	53	95			100		
cM capacity (veh/h)	0	88	922	59	88	531	1530			443		

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	NB 3	NB 4
Volume Total	213	165	266	379	379	379
Volume Left	0	0	77	0	0	0
Volume Right	83	165	0	0	0	0
cSH	130	531	1530	1700	1700	1700
Volume to Capacity	1.63	0.31	0.05	0.22	0.22	0.22
Queue Length 95th (ft)	387	33	4	0	0	0
Control Delay (s)	376.5	14.8	2.5	0.0	0.0	0.0
Lane LOS	F	B	A			
Approach Delay (s)	218.3		0.5			
Approach LOS	F					

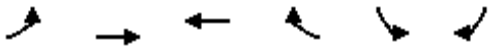
Intersection Summary				
Average Delay	46.7			
Intersection Capacity Utilization	36.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	156	136	48	0	0	0	0	0	1229	43
Future Volume (Veh/h)	0	0	156	136	48	0	0	0	0	0	1229	43
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.72	0.72	0.72	0.92	0.92	0.92	0.84	0.84	0.84
Hourly flow rate (vph)	0	0	195	189	67	0	0	0	0	0	1463	51
Pedestrians		22			32			7			26	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		2			3			0			2	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											288	
pX, platoon unblocked	0.95	0.95	0.95	0.95	0.95		0.95					
vC, conflicting volume	1570	1542	420	600	1568	58	1536			32		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1360	1332	156	344	1358	58	1325			32		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	76	52	50	100	100			100		
cM capacity (veh/h)	57	139	805	395	134	942	484			1530		

Direction, Lane #	EB 1	WB 1	WB 2	SB 1	SB 2	SB 3	SB 4
Volume Total	195	126	130	418	418	418	260
Volume Left	0	126	63	0	0	0	0
Volume Right	195	0	0	0	0	0	51
cSH	805	395	197	1700	1700	1700	1700
Volume to Capacity	0.24	0.32	0.66	0.25	0.25	0.25	0.15
Queue Length 95th (ft)	24	34	99	0	0	0	0
Control Delay (s)	10.9	18.3	53.1	0.0	0.0	0.0	0.0
Lane LOS	B	C	F				
Approach Delay (s)	10.9	36.0		0.0			
Approach LOS	B	E					

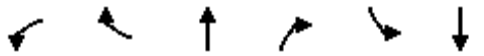
Intersection Summary				
Average Delay	5.8			
Intersection Capacity Utilization	36.3%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	83	76	0	124	115
Future Volume (Veh/h)	0	83	76	0	124	115
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.74	0.74	0.79	0.79	0.88	0.88
Hourly flow rate (vph)	0	112	96	0	141	131
Pedestrians		6			4	
Lane Width (ft)		12.0			12.0	
Walking Speed (ft/s)		3.5			3.5	
Percent Blockage		1			0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	100				212	106
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	100				212	106
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				82	86
cM capacity (veh/h)	1487				773	939

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	112	96	272
Volume Left	0	0	141
Volume Right	0	0	131
cSH	1487	1700	845
Volume to Capacity	0.00	0.06	0.32
Queue Length 95th (ft)	0	0	35
Control Delay (s)	0.0	0.0	11.3
Lane LOS			B
Approach Delay (s)	0.0	0.0	11.3
Approach LOS			B

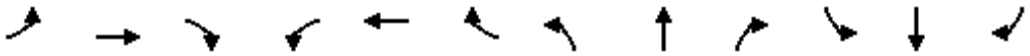
Intersection Summary			
Average Delay	6.4		
Intersection Capacity Utilization	26.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	6	5	153	5	12	72
Future Volume (Veh/h)	6	5	153	5	12	72
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.55	0.55	0.88	0.88	0.84	0.84
Hourly flow rate (vph)	11	9	174	6	14	86
Pedestrians	10					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	1					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	301	187			190	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	301	187			190	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	99			99	
cM capacity (veh/h)	677	847			1371	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	20	180	100
Volume Left	11	0	14
Volume Right	9	6	0
cSH	744	1700	1371
Volume to Capacity	0.03	0.11	0.01
Queue Length 95th (ft)	2	0	1
Control Delay (s)	10.0	0.0	1.1
Lane LOS	A		A
Approach Delay (s)	10.0	0.0	1.1
Approach LOS	A		

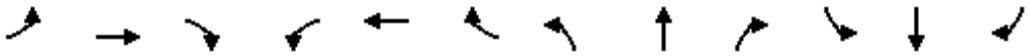
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	24.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	196	242	78	11	387	136	72	65	15	0	0	0
Future Volume (Veh/h)	196	242	78	11	387	136	72	65	15	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.96	0.96	0.96	0.91	0.91	0.91	0.88	0.88	0.88	0.92	0.92	0.92
Hourly flow rate (vph)	204	252	81	12	425	149	82	74	17	0	0	0
Pedestrians		38			90			409			396	
Lane Width (ft)		12.0			12.0			12.0			0.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		4			9			39			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	970			742			1671	2104	792	1724	2070	934
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	970			742			1671	2104	792	1724	2070	934
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	71			98			0	0	92	0	100	100
cM capacity (veh/h)	710			528			24	22	217	0	23	311

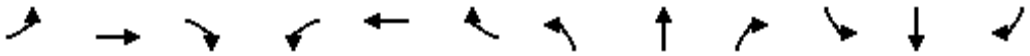
Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	204	333	586	173
Volume Left	204	0	12	82
Volume Right	0	81	149	17
cSH	710	1700	528	25
Volume to Capacity	0.29	0.20	0.02	6.82
Queue Length 95th (ft)	30	0	2	Err
Control Delay (s)	12.1	0.0	0.6	Err
Lane LOS	B		A	F
Approach Delay (s)	4.6		0.6	Err
Approach LOS				F

Intersection Summary			
Average Delay	1336.9		
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		



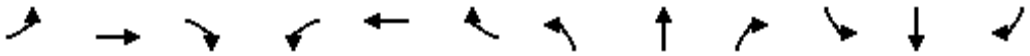
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	82	73	134	1427	0	0	0	0
Future Volume (vph)	0	0	0	0	82	73	134	1427	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5	4.5		4.5				
Lane Util. Factor					0.95	0.95		0.86				
Frpb, ped/bikes					1.00	0.97		1.00				
Flpb, ped/bikes					1.00	1.00		0.99				
Frt					0.99	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					1743	1454		6323				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					1743	1454		6323				
Peak-hour factor, PHF	0.92	0.92	0.92	0.81	0.81	0.81	0.96	0.96	0.96	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	101	90	140	1486	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	33	0	6	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	106	48	0	1620	0	0	0	0
Confl. Peds. (#/hr)				11		11	52		59			
Turn Type					NA	Perm	Perm	NA				
Protected Phases					8			2				
Permitted Phases						8	2					
Actuated Green, G (s)					12.7	12.7		98.3				
Effective Green, g (s)					12.7	12.7		98.3				
Actuated g/C Ratio					0.11	0.11		0.82				
Clearance Time (s)					4.5	4.5		4.5				
Vehicle Extension (s)					3.0	3.0		3.0				
Lane Grp Cap (vph)					184	153		5179				
v/s Ratio Prot					c0.06							
v/s Ratio Perm						0.03		0.26				
v/c Ratio					0.58	0.31		0.31				
Uniform Delay, d1					51.1	49.6		2.6				
Progression Factor					1.00	1.00		1.00				
Incremental Delay, d2					4.4	1.2		0.2				
Delay (s)					55.5	50.8		2.8				
Level of Service					E	D		A				
Approach Delay (s)		0.0			53.5			2.8			0.0	
Approach LOS		A			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	39.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



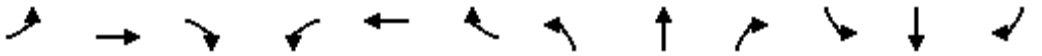
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	133	72	11	190	87	50	33	9	0	0	0
Future Volume (vph)	83	133	72	11	190	87	50	33	9	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5			4.5				
Lane Util. Factor	1.00	1.00			1.00			1.00				
Frpb, ped/bikes	1.00	0.92			0.93			0.99				
Flpb, ped/bikes	0.87	1.00			0.99			0.99				
Frt	1.00	0.95			0.96			0.99				
Flt Protected	0.95	1.00			1.00			0.97				
Satd. Flow (prot)	1545	1619			1645			1762				
Flt Permitted	0.56	1.00			0.99			0.97				
Satd. Flow (perm)	905	1619			1627			1762				
Peak-hour factor, PHF	0.77	0.77	0.77	0.90	0.90	0.90	0.85	0.85	0.85	0.92	0.92	0.92
Adj. Flow (vph)	108	173	94	12	211	97	59	39	11	0	0	0
RTOR Reduction (vph)	0	33	0	0	26	0	0	0	0	0	0	0
Lane Group Flow (vph)	108	234	0	0	294	0	0	109	0	0	0	0
Confl. Peds. (#/hr)	134		131	131		134	9		30			
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)	29.5	29.5			29.5			21.5				
Effective Green, g (s)	29.5	29.5			29.5			21.5				
Actuated g/C Ratio	0.49	0.49			0.49			0.36				
Clearance Time (s)	4.5	4.5			4.5			4.5				
Vehicle Extension (s)	3.0	3.0			3.0			3.0				
Lane Grp Cap (vph)	444	796			799			631				
v/s Ratio Prot		0.14										
v/s Ratio Perm	0.12				c0.18			0.06				
v/c Ratio	0.24	0.29			0.37			0.17				
Uniform Delay, d1	8.8	9.1			9.5			13.2				
Progression Factor	1.00	1.00			1.00			0.99				
Incremental Delay, d2	1.3	0.9			1.3			0.6				
Delay (s)	10.1	10.0			10.8			13.6				
Level of Service	B	B			B			B				
Approach Delay (s)		10.0			10.8			13.6			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	109	208	68	1167	0	0	0	0
Future Volume (vph)	0	0	0	0	109	208	68	1167	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5	4.5		4.5				
Lane Util. Factor					0.95	0.95		0.86				
Frpb, ped/bikes					0.99	0.96		1.00				
Flpb, ped/bikes					1.00	1.00		0.99				
Frt					0.95	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					1655	1445		6342				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					1655	1445		6342				
Peak-hour factor, PHF	0.92	0.92	0.92	0.84	0.84	0.84	0.88	0.88	0.88	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	130	248	77	1326	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	20	20	0	4	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	179	159	0	1399	0	0	0	0
Confl. Peds. (#/hr)				25		14	69		82			
Turn Type					NA	Perm	Perm	NA				
Protected Phases					8			2				
Permitted Phases						8	2					
Actuated Green, G (s)					19.1	19.1		91.9				
Effective Green, g (s)					19.1	19.1		91.9				
Actuated g/C Ratio					0.16	0.16		0.77				
Clearance Time (s)					4.5	4.5		4.5				
Vehicle Extension (s)					3.0	3.0		3.0				
Lane Grp Cap (vph)					263	229		4856				
v/s Ratio Prot					0.11							
v/s Ratio Perm						c0.11		0.22				
v/c Ratio					0.68	0.69		0.29				
Uniform Delay, d1					47.6	47.7		4.2				
Progression Factor					1.00	1.00		1.00				
Incremental Delay, d2					6.8	8.8		0.2				
Delay (s)					54.4	56.4		4.4				
Level of Service					D	E		A				
Approach Delay (s)		0.0			55.4			4.4			0.0	
Approach LOS		A			E			A			A	

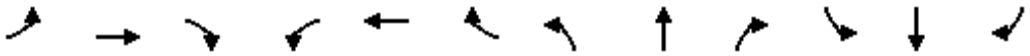
Intersection Summary			
HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	37.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	196	242	78	11	387	136	72	65	15	0	0	0
Future Volume (vph)	196	242	78	11	387	136	72	65	15	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5			4.5				
Lane Util. Factor	1.00	1.00			1.00			1.00				
Frpb, ped/bikes	1.00	0.87			0.86			0.98				
Flpb, ped/bikes	0.81	1.00			0.99			0.97				
Frt	1.00	0.96			0.97			0.99				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1437	1557			1536			1713				
Flt Permitted	0.41	1.00			0.99			0.98				
Satd. Flow (perm)	618	1557			1525			1713				
Peak-hour factor, PHF	0.96	0.96	0.96	0.91	0.91	0.91	0.88	0.88	0.88	0.92	0.92	0.92
Adj. Flow (vph)	204	252	81	12	425	149	82	74	17	0	0	0
RTOR Reduction (vph)	0	19	0	0	20	0	0	0	0	0	0	0
Lane Group Flow (vph)	204	314	0	0	566	0	0	173	0	0	0	0
Confl. Peds. (#/hr)	396		409	409		396	38		90			
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)	33.5	33.5			33.5			17.5				
Effective Green, g (s)	33.5	33.5			33.5			17.5				
Actuated g/C Ratio	0.56	0.56			0.56			0.29				
Clearance Time (s)	4.5	4.5			4.5			4.5				
Vehicle Extension (s)	3.0	3.0			3.0			3.0				
Lane Grp Cap (vph)	345	869			851			499				
v/s Ratio Prot		0.20										
v/s Ratio Perm	0.33				c0.37			0.10				
v/c Ratio	0.59	0.36			0.66			0.35				
Uniform Delay, d1	8.7	7.3			9.3			16.7				
Progression Factor	1.00	1.00			1.00			0.98				
Incremental Delay, d2	7.3	1.2			4.1			1.9				
Delay (s)	16.0	8.5			13.4			18.3				
Level of Service	B	A			B			B				
Approach Delay (s)		11.3			13.4			18.3			0.0	
Approach LOS		B			B			B			A	

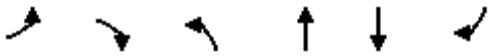
Intersection Summary			
HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	2	7	7	16	0	0	0	0	61	1110	73
Future Volume (vph)	0	2	7	7	16	0	0	0	0	61	1110	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.3			5.3						4.4	
Lane Util. Factor		1.00			1.00						0.86	
Frpb, ped/bikes		1.00			1.00						1.00	
Flpb, ped/bikes		1.00			1.00						1.00	
Frt		0.90			1.00						0.99	
Flt Protected		1.00			0.98						1.00	
Satd. Flow (prot)		1670			1834						6325	
Flt Permitted		1.00			0.89						1.00	
Satd. Flow (perm)		1670			1656						6325	
Peak-hour factor, PHF	0.56	0.56	0.56	0.48	0.48	0.48	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	0	4	12	15	33	0	0	0	0	66	1194	78
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	5	0	0	48	0	0	0	0	0	1334	0
Confl. Peds. (#/hr)	74					74				10		
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		8			4						2	
Permitted Phases				4						2		
Actuated Green, G (s)		9.0			9.0						101.3	
Effective Green, g (s)		9.0			9.0						101.3	
Actuated g/C Ratio		0.08			0.08						0.84	
Clearance Time (s)		5.3			5.3						4.4	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		125			124						5339	
v/s Ratio Prot		0.00										
v/s Ratio Perm					c0.03						0.21	
v/c Ratio		0.04			0.39						0.25	
Uniform Delay, d1		51.5			52.9						1.8	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		0.1			2.0						0.1	
Delay (s)		51.6			54.9						2.0	
Level of Service		D			D						A	
Approach Delay (s)		51.6			54.9			0.0			2.0	
Approach LOS		D			D			A			A	

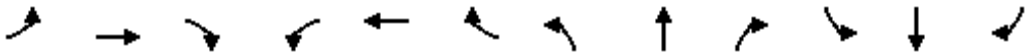
Intersection Summary			
HCM 2000 Control Delay	4.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.7
Intersection Capacity Utilization	40.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	55	0	24	1299	0	0
Future Volume (Veh/h)	55	0	24	1299	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.68	0.68	0.96	0.96	0.92	0.92
Hourly flow rate (vph)	81	0	25	1353	0	0
Pedestrians	53				2	
Lane Width (ft)	12.0				0.0	
Walking Speed (ft/s)	3.5				3.5	
Percent Blockage	5				0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	443	53	53			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	443	53	53			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	84	100	98			
cM capacity (veh/h)	507	953	1473			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4
Volume Total	81	218	387	387	387
Volume Left	81	25	0	0	0
Volume Right	0	0	0	0	0
cSH	507	1473	1700	1700	1700
Volume to Capacity	0.16	0.02	0.23	0.23	0.23
Queue Length 95th (ft)	14	1	0	0	0
Control Delay (s)	13.5	1.0	0.0	0.0	0.0
Lane LOS	B	A			
Approach Delay (s)	13.5	0.2			
Approach LOS	B				

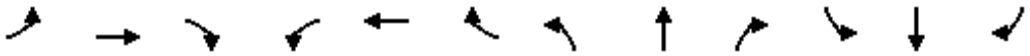
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	29.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	84	74	137	1456	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	84	74	137	1456	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.81	0.81	0.81	0.96	0.96	0.96	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	104	91	143	1517	0	0	0	0
Pedestrians		52			59			11			11	
Lane Width (ft)		0.0			12.0			12.0			0.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		0			6			1			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	871	1914	63	1873	1914	449	52			1576		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	871	1914	63	1873	1914	449	52			1576		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	100	100	0	83	91			100		
cM capacity (veh/h)	0	57	978	37	57	526	1552			391		

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	NB 3	NB 4
Volume Total	134	61	360	433	433	433
Volume Left	0	0	143	0	0	0
Volume Right	30	61	0	0	0	0
cSH	72	526	1552	1700	1700	1700
Volume to Capacity	1.87	0.12	0.09	0.25	0.25	0.25
Queue Length 95th (ft)	300	10	8	0	0	0
Control Delay (s)	533.6	12.7	3.5	0.0	0.0	0.0
Lane LOS	F	B	A			
Approach Delay (s)	371.6		0.8			
Approach LOS	F					

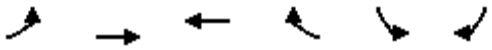
Intersection Summary				
Average Delay	39.7			
Intersection Capacity Utilization	38.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	44	99	109	0	0	0	0	0	1046	71
Future Volume (Veh/h)	0	0	44	99	109	0	0	0	0	0	1046	71
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.72	0.72	0.72	0.86	0.86	0.86	0.92	0.92	0.92	0.94	0.94	0.94
Hourly flow rate (vph)	0	0	61	115	127	0	0	0	0	0	1113	76
Pedestrians		14			16			7			15	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		1			2			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											288	
pX, platoon unblocked	0.97	0.97	0.97	0.97	0.97		0.97					
vC, conflicting volume	1244	1181	337	362	1219	31	1203			16		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1115	1051	184	210	1090	31	1073			16		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	92	82	37	100	100			100		
cM capacity (veh/h)	75	213	794	631	202	1006	620			1576		

Direction, Lane #	EB 1	WB 1	WB 2	SB 1	SB 2	SB 3	SB 4
Volume Total	61	77	165	318	318	318	235
Volume Left	0	77	38	0	0	0	0
Volume Right	61	0	0	0	0	0	76
cSH	794	631	240	1700	1700	1700	1700
Volume to Capacity	0.08	0.12	0.69	0.19	0.19	0.19	0.14
Queue Length 95th (ft)	6	10	112	0	0	0	0
Control Delay (s)	9.9	11.5	47.7	0.0	0.0	0.0	0.0
Lane LOS	A	B	E				
Approach Delay (s)	9.9	36.2		0.0			
Approach LOS	A	E					

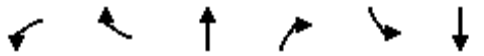
Intersection Summary				
Average Delay	6.3			
Intersection Capacity Utilization	38.2%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	80	69	0	5	5
Future Volume (Veh/h)	0	80	69	0	5	5
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.89	0.89	0.91	0.91	0.50	0.50
Hourly flow rate (vph)	0	90	76	0	10	10
Pedestrians		1	1		3	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	79				170	80
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	79				170	80
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	99
cM capacity (veh/h)	1515				817	976

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	90	76	20
Volume Left	0	0	10
Volume Right	0	0	10
cSH	1515	1700	890
Volume to Capacity	0.00	0.04	0.02
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.0	0.0	9.1
Lane LOS			A
Approach Delay (s)	0.0	0.0	9.1
Approach LOS			A

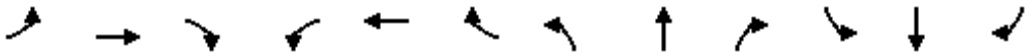
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	14.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	13	74	0	16	73
Future Volume (Veh/h)	1	13	74	0	16	73
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.70	0.70	0.91	0.91	0.82	0.82
Hourly flow rate (vph)	1	19	81	0	20	89
Pedestrians	3					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	213	84			84	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	213	84			84	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	98			99	
cM capacity (veh/h)	763	972			1508	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	20	81	109
Volume Left	1	0	20
Volume Right	19	0	0
cSH	959	1700	1508
Volume to Capacity	0.02	0.05	0.01
Queue Length 95th (ft)	2	0	1
Control Delay (s)	8.8	0.0	1.4
Lane LOS	A		A
Approach Delay (s)	8.8	0.0	1.4
Approach LOS	A		

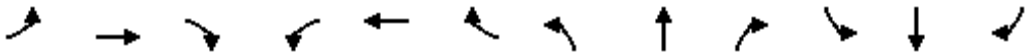
Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	21.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	136	73	11	194	89	51	34	9	0	0	0
Future Volume (Veh/h)	85	136	73	11	194	89	51	34	9	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.77	0.77	0.77	0.90	0.90	0.90	0.85	0.85	0.85	0.92	0.92	0.92
Hourly flow rate (vph)	110	177	95	12	216	99	60	40	11	0	0	0
Pedestrians		9			30			131			134	
Lane Width (ft)		12.0			12.0			12.0			0.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		1			3			12			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	449			403			874	1048	386	882	1046	408
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	449			403			874	1048	386	882	1046	408
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	90			99			69	77	98	100	100	100
cM capacity (veh/h)	1111			1012			195	177	563	176	178	637

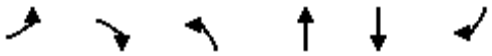
Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	110	272	327	111
Volume Left	110	0	12	60
Volume Right	0	95	99	11
cSH	1111	1700	1012	201
Volume to Capacity	0.10	0.16	0.01	0.55
Queue Length 95th (ft)	8	0	1	74
Control Delay (s)	8.6	0.0	0.4	43.2
Lane LOS	A		A	E
Approach Delay (s)	2.5		0.4	43.2
Approach LOS				E

Intersection Summary				
Average Delay	7.2			
Intersection Capacity Utilization	52.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	51	28	24	29	0	0	0	0	40	1184	99
Future Volume (vph)	0	51	28	24	29	0	0	0	0	40	1184	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.3			5.3						4.4	
Lane Util. Factor		1.00			1.00						0.86	
Frpb, ped/bikes		0.99			1.00						1.00	
Flpb, ped/bikes		1.00			1.00						1.00	
Frt		0.95			1.00						0.99	
Flt Protected		1.00			0.98						1.00	
Satd. Flow (prot)		1764			1820						6311	
Flt Permitted		1.00			0.69						1.00	
Satd. Flow (perm)		1764			1278						6311	
Peak-hour factor, PHF	0.69	0.69	0.69	0.81	0.81	0.81	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	0	74	41	30	36	0	0	0	0	46	1361	114
RTOR Reduction (vph)	0	21	0	0	0	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	94	0	0	66	0	0	0	0	0	1515	0
Confl. Peds. (#/hr)	199		1	1		199				22		
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		8			4						2	
Permitted Phases				4						2		
Actuated Green, G (s)		12.9			12.9						97.4	
Effective Green, g (s)		12.9			12.9						97.4	
Actuated g/C Ratio		0.11			0.11						0.81	
Clearance Time (s)		5.3			5.3						4.4	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		189			137						5122	
v/s Ratio Prot		c0.05										
v/s Ratio Perm					0.05						0.24	
v/c Ratio		0.50			0.48						0.30	
Uniform Delay, d1		50.5			50.4						2.8	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		2.1			2.7						0.1	
Delay (s)		52.6			53.1						2.9	
Level of Service		D			D						A	
Approach Delay (s)		52.6			53.1			0.0			2.9	
Approach LOS		D			D			A			A	

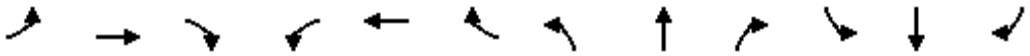
Intersection Summary			
HCM 2000 Control Delay	8.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.7
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	93	0	53	1404	0	0
Future Volume (Veh/h)	93	0	53	1404	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	106	0	59	1560	0	0
Pedestrians	75			1		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	3.5			3.5		
Percent Blockage	7			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	583	76	75			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	583	76	75			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	73	100	96			
cM capacity (veh/h)	394	900	1414			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4
Volume Total	106	282	446	446	446
Volume Left	106	59	0	0	0
Volume Right	0	0	0	0	0
cSH	394	1414	1700	1700	1700
Volume to Capacity	0.27	0.04	0.26	0.26	0.26
Queue Length 95th (ft)	27	3	0	0	0
Control Delay (s)	17.5	1.9	0.0	0.0	0.0
Lane LOS	C	A			
Approach Delay (s)	17.5	0.3			
Approach LOS	C				

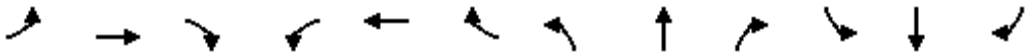
Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	33.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	111	212	69	1190	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	111	212	69	1190	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.84	0.84	0.84	0.88	0.88	0.88	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	132	252	78	1352	0	0	0	0
Pedestrians		69			82			25			14	
Lane Width (ft)		0.0			12.0			12.0			0.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		0			8			2			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	895	1659	94	1615	1659	434	69			1434		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	895	1659	94	1615	1659	434	69			1434		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	100	100	0	52	95			100		
cM capacity (veh/h)	0	85	922	56	85	525	1530			433		

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	NB 3	NB 4
Volume Total	216	168	271	386	386	386
Volume Left	0	0	78	0	0	0
Volume Right	84	168	0	0	0	0
cSH	125	525	1530	1700	1700	1700
Volume to Capacity	1.72	0.32	0.05	0.23	0.23	0.23
Queue Length 95th (ft)	407	34	4	0	0	0
Control Delay (s)	416.4	15.0	2.5	0.0	0.0	0.0
Lane LOS	F	C	A			
Approach Delay (s)	240.8		0.5			
Approach LOS	F					

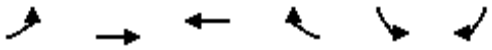
Intersection Summary				
Average Delay	51.3			
Intersection Capacity Utilization	36.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	159	139	49	0	0	0	0	0	1254	44
Future Volume (Veh/h)	0	0	159	139	49	0	0	0	0	0	1254	44
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.72	0.72	0.72	0.92	0.92	0.92	0.84	0.84	0.84
Hourly flow rate (vph)	0	0	199	193	68	0	0	0	0	0	1493	52
Pedestrians		22			32			7			26	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		2			3			0			2	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											288	
pX, platoon unblocked	0.95	0.95	0.95	0.95	0.95		0.95					
vC, conflicting volume	1601	1573	428	611	1599	58	1567			32		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1382	1353	151	343	1380	58	1347			32		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	75	51	47	100	100			100		
cM capacity (veh/h)	53	134	810	393	129	942	473			1530		

Direction, Lane #	EB 1	WB 1	WB 2	SB 1	SB 2	SB 3	SB 4
Volume Total	199	129	132	427	427	427	265
Volume Left	0	129	64	0	0	0	0
Volume Right	199	0	0	0	0	0	52
cSH	810	393	192	1700	1700	1700	1700
Volume to Capacity	0.25	0.33	0.69	0.25	0.25	0.25	0.16
Queue Length 95th (ft)	24	35	106	0	0	0	0
Control Delay (s)	10.9	18.6	57.3	0.0	0.0	0.0	0.0
Lane LOS	B	C	F				
Approach Delay (s)	10.9	38.2		0.0			
Approach LOS	B	E					

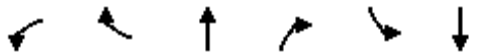
Intersection Summary				
Average Delay	6.1			
Intersection Capacity Utilization	36.8%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	85	78	0	126	117
Future Volume (Veh/h)	0	85	78	0	126	117
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.74	0.74	0.79	0.79	0.88	0.88
Hourly flow rate (vph)	0	115	99	0	143	133
Pedestrians		6			4	
Lane Width (ft)		12.0			12.0	
Walking Speed (ft/s)		3.5			3.5	
Percent Blockage		1			0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	103				218	109
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	103				218	109
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				81	86
cM capacity (veh/h)	1483				767	936

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	115	99	276
Volume Left	0	0	143
Volume Right	0	0	133
cSH	1483	1700	840
Volume to Capacity	0.00	0.06	0.33
Queue Length 95th (ft)	0	0	36
Control Delay (s)	0.0	0.0	11.4
Lane LOS			B
Approach Delay (s)	0.0	0.0	11.4
Approach LOS			B

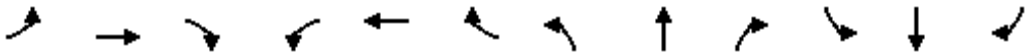
Intersection Summary			
Average Delay	6.4		
Intersection Capacity Utilization	26.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	6	5	156	5	12	73
Future Volume (Veh/h)	6	5	156	5	12	73
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.55	0.55	0.88	0.88	0.84	0.84
Hourly flow rate (vph)	11	9	177	6	14	87
Pedestrians	10					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	1					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	305	190			193	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	305	190			193	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	99			99	
cM capacity (veh/h)	673	844			1367	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	20	183	101
Volume Left	11	0	14
Volume Right	9	6	0
cSH	741	1700	1367
Volume to Capacity	0.03	0.11	0.01
Queue Length 95th (ft)	2	0	1
Control Delay (s)	10.0	0.0	1.1
Lane LOS	A		A
Approach Delay (s)	10.0	0.0	1.1
Approach LOS	A		

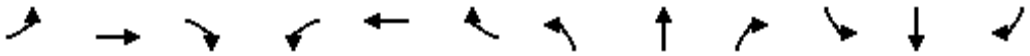
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	24.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	247	80	11	395	139	73	66	15	0	0	0
Future Volume (Veh/h)	200	247	80	11	395	139	73	66	15	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.96	0.96	0.96	0.91	0.91	0.91	0.88	0.88	0.88	0.92	0.92	0.92
Hourly flow rate (vph)	208	257	83	12	434	153	83	75	17	0	0	0
Pedestrians		38			90			409			396	
Lane Width (ft)		12.0			12.0			12.0			0.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		4			9			39			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	983			749			1696	2130	798	1748	2096	944
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	983			749			1696	2130	798	1748	2096	944
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	70			98			0	0	92	0	100	100
cM capacity (veh/h)	703			525			23	21	216	0	22	306

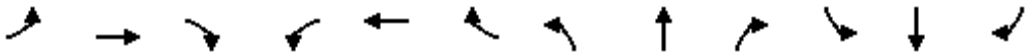
Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	208	340	599	175
Volume Left	208	0	12	83
Volume Right	0	83	153	17
cSH	703	1700	525	24
Volume to Capacity	0.30	0.20	0.02	7.26
Queue Length 95th (ft)	31	0	2	Err
Control Delay (s)	12.3	0.0	0.7	Err
Lane LOS	B		A	F
Approach Delay (s)	4.7		0.7	Err
Approach LOS				F

Intersection Summary			
Average Delay	1325.8		
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		



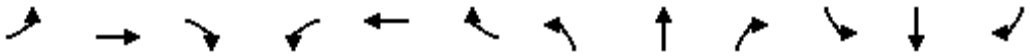
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	84	74	137	1456	0	0	0	0
Future Volume (vph)	0	0	0	0	84	74	137	1456	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5	4.5		4.5				
Lane Util. Factor					0.95	0.95		0.86				
Frpb, ped/bikes					1.00	0.97		1.00				
Flpb, ped/bikes					1.00	1.00		0.99				
Frt					0.99	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					1744	1454		6323				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					1744	1454		6323				
Peak-hour factor, PHF	0.92	0.92	0.92	0.81	0.81	0.81	0.96	0.96	0.96	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	104	91	143	1517	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	32	0	7	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	109	50	0	1653	0	0	0	0
Confl. Peds. (#/hr)				11		11	52		59			
Turn Type					NA	Perm	Perm	NA				
Protected Phases					8			2				
Permitted Phases						8	2					
Actuated Green, G (s)					12.9	12.9		98.1				
Effective Green, g (s)					12.9	12.9		98.1				
Actuated g/C Ratio					0.11	0.11		0.82				
Clearance Time (s)					4.5	4.5		4.5				
Vehicle Extension (s)					3.0	3.0		3.0				
Lane Grp Cap (vph)					187	156		5169				
v/s Ratio Prot					c0.06							
v/s Ratio Perm						0.03		0.26				
v/c Ratio					0.59	0.32		0.32				
Uniform Delay, d1					51.0	49.5		2.7				
Progression Factor					1.00	1.00		1.00				
Incremental Delay, d2					4.6	1.2		0.2				
Delay (s)					55.6	50.7		2.9				
Level of Service					E	D		A				
Approach Delay (s)		0.0			53.5			2.9			0.0	
Approach LOS		A			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	39.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



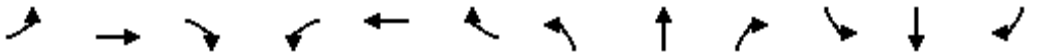
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	136	73	11	194	89	51	34	9	0	0	0
Future Volume (vph)	85	136	73	11	194	89	51	34	9	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5			4.5				
Lane Util. Factor	1.00	1.00			1.00			1.00				
Frpb, ped/bikes	1.00	0.92			0.93			0.99				
Flpb, ped/bikes	0.88	1.00			0.99			0.99				
Frt	1.00	0.95			0.96			0.99				
Flt Protected	0.95	1.00			1.00			0.97				
Satd. Flow (prot)	1548	1621			1646			1763				
Flt Permitted	0.55	1.00			0.99			0.97				
Satd. Flow (perm)	897	1621			1628			1763				
Peak-hour factor, PHF	0.77	0.77	0.77	0.90	0.90	0.90	0.85	0.85	0.85	0.92	0.92	0.92
Adj. Flow (vph)	110	177	95	12	216	99	60	40	11	0	0	0
RTOR Reduction (vph)	0	32	0	0	26	0	0	0	0	0	0	0
Lane Group Flow (vph)	110	240	0	0	301	0	0	111	0	0	0	0
Confl. Peds. (#/hr)	134		131	131		134	9		30			
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)	29.5	29.5			29.5			21.5				
Effective Green, g (s)	29.5	29.5			29.5			21.5				
Actuated g/C Ratio	0.49	0.49			0.49			0.36				
Clearance Time (s)	4.5	4.5			4.5			4.5				
Vehicle Extension (s)	3.0	3.0			3.0			3.0				
Lane Grp Cap (vph)	441	796			800			631				
v/s Ratio Prot		0.15										
v/s Ratio Perm	0.12				c0.18			0.06				
v/c Ratio	0.25	0.30			0.38			0.18				
Uniform Delay, d1	8.8	9.1			9.5			13.2				
Progression Factor	1.00	1.00			1.00			0.98				
Incremental Delay, d2	1.4	1.0			1.4			0.6				
Delay (s)	10.2	10.1			10.9			13.5				
Level of Service	B	B			B			B				
Approach Delay (s)		10.1			10.9			13.5			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	111	212	69	1190	0	0	0	0
Future Volume (vph)	0	0	0	0	111	212	69	1190	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5	4.5		4.5				
Lane Util. Factor					0.95	0.95		0.86				
Frpb, ped/bikes					0.99	0.96		1.00				
Flpb, ped/bikes					1.00	1.00		0.99				
Frt					0.95	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					1654	1445		6342				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					1654	1445		6342				
Peak-hour factor, PHF	0.92	0.92	0.92	0.84	0.84	0.84	0.88	0.88	0.88	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	132	252	78	1352	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	20	20	0	4	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	183	161	0	1426	0	0	0	0
Confl. Peds. (#/hr)				25		14	69		82			
Turn Type					NA	Perm	Perm	NA				
Protected Phases					8			2				
Permitted Phases						8	2					
Actuated Green, G (s)					19.3	19.3		91.7				
Effective Green, g (s)					19.3	19.3		91.7				
Actuated g/C Ratio					0.16	0.16		0.76				
Clearance Time (s)					4.5	4.5		4.5				
Vehicle Extension (s)					3.0	3.0		3.0				
Lane Grp Cap (vph)					266	232		4846				
v/s Ratio Prot					0.11							
v/s Ratio Perm						c0.11		0.22				
v/c Ratio					0.69	0.69		0.29				
Uniform Delay, d1					47.5	47.6		4.3				
Progression Factor					1.00	1.00		1.00				
Incremental Delay, d2					7.2	8.7		0.2				
Delay (s)					54.7	56.2		4.5				
Level of Service					D	E		A				
Approach Delay (s)		0.0			55.4			4.5			0.0	
Approach LOS		A			E			A			A	

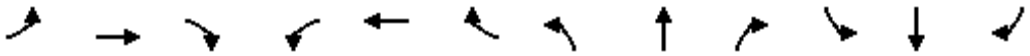
Intersection Summary			
HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	38.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	247	80	11	395	139	73	66	15	0	0	0
Future Volume (vph)	200	247	80	11	395	139	73	66	15	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5			4.5				
Lane Util. Factor	1.00	1.00			1.00			1.00				
Frpb, ped/bikes	1.00	0.87			0.86			0.98				
Flpb, ped/bikes	0.82	1.00			0.99			0.97				
Frt	1.00	0.96			0.97			0.99				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1445	1556			1535			1714				
Flt Permitted	0.40	1.00			0.99			0.98				
Satd. Flow (perm)	611	1556			1524			1714				
Peak-hour factor, PHF	0.96	0.96	0.96	0.91	0.91	0.91	0.88	0.88	0.88	0.92	0.92	0.92
Adj. Flow (vph)	208	257	83	12	434	153	83	75	17	0	0	0
RTOR Reduction (vph)	0	19	0	0	21	0	0	0	0	0	0	0
Lane Group Flow (vph)	208	321	0	0	578	0	0	175	0	0	0	0
Confl. Peds. (#/hr)	396		409	409		396	38		90			
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)	33.5	33.5			33.5			17.5				
Effective Green, g (s)	33.5	33.5			33.5			17.5				
Actuated g/C Ratio	0.56	0.56			0.56			0.29				
Clearance Time (s)	4.5	4.5			4.5			4.5				
Vehicle Extension (s)	3.0	3.0			3.0			3.0				
Lane Grp Cap (vph)	341	868			850			499				
v/s Ratio Prot		0.21										
v/s Ratio Perm	0.34				c0.38			0.10				
v/c Ratio	0.61	0.37			0.68			0.35				
Uniform Delay, d1	8.9	7.4			9.4			16.8				
Progression Factor	1.00	1.00			1.00			0.98				
Incremental Delay, d2	7.9	1.2			4.4			1.9				
Delay (s)	16.8	8.6			13.8			18.4				
Level of Service	B	A			B			B				
Approach Delay (s)		11.7			13.8			18.4			0.0	
Approach LOS		B			B			B			A	

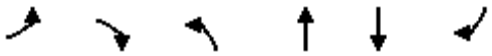
Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	21	8	9	22	0	0	0	0	320	1256	126
Future Volume (vph)	0	21	8	9	22	0	0	0	0	320	1256	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.3			5.3						4.4	
Lane Util. Factor		1.00			1.00						0.86	
Frpb, ped/bikes		1.00			1.00						1.00	
Flpb, ped/bikes		1.00			1.00						0.99	
Frt		0.96			1.00						0.99	
Flt Protected		1.00			0.99						0.99	
Satd. Flow (prot)		1795			1836						6236	
Flt Permitted		1.00			0.88						0.99	
Satd. Flow (perm)		1795			1645						6236	
Peak-hour factor, PHF	0.56	0.56	0.56	0.48	0.48	0.48	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	0	38	14	19	46	0	0	0	0	344	1351	135
RTOR Reduction (vph)	0	13	0	0	0	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	39	0	0	65	0	0	0	0	0	1824	0
Confl. Peds. (#/hr)	74					74				10		
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		8			4						2	
Permitted Phases				4						2		
Actuated Green, G (s)		9.5			9.5						100.8	
Effective Green, g (s)		9.5			9.5						100.8	
Actuated g/C Ratio		0.08			0.08						0.84	
Clearance Time (s)		5.3			5.3						4.4	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		142			130						5238	
v/s Ratio Prot		0.02										
v/s Ratio Perm					c0.04						0.29	
v/c Ratio		0.28			0.50						0.35	
Uniform Delay, d1		52.0			53.0						2.2	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		1.1			3.0						0.2	
Delay (s)		53.1			56.0						2.4	
Level of Service		D			E						A	
Approach Delay (s)		53.1			56.0			0.0			2.4	
Approach LOS		D			E			A			A	

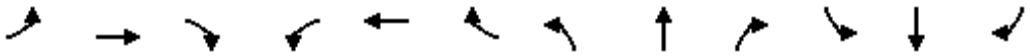
Intersection Summary			
HCM 2000 Control Delay	5.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.7
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	116	0	43	1301	0	0
Future Volume (Veh/h)	116	0	43	1301	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.68	0.68	0.96	0.96	0.92	0.92
Hourly flow rate (vph)	171	0	45	1355	0	0
Pedestrians	53				2	
Lane Width (ft)	12.0				0.0	
Walking Speed (ft/s)	3.5				3.5	
Percent Blockage	5				0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	484	53	53			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	484	53	53			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	64	100	97			
cM capacity (veh/h)	471	953	1473			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4
Volume Total	171	239	387	387	387
Volume Left	171	45	0	0	0
Volume Right	0	0	0	0	0
cSH	471	1473	1700	1700	1700
Volume to Capacity	0.36	0.03	0.23	0.23	0.23
Queue Length 95th (ft)	41	2	0	0	0
Control Delay (s)	16.9	1.6	0.0	0.0	0.0
Lane LOS	C	A			
Approach Delay (s)	16.9	0.3			
Approach LOS	C				

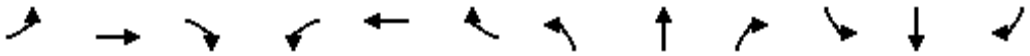
Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	32.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	124	80	283	1471	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	124	80	283	1471	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.81	0.81	0.81	0.96	0.96	0.96	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	153	99	295	1532	0	0	0	0
Pedestrians		52			59			11			11	
Lane Width (ft)		0.0			12.0			12.0			0.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		0			6			1			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1212	2233	63	2192	2233	453	52			1591		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1212	2233	63	2192	2233	453	52			1591		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	100	100	0	81	81			100		
cM capacity (veh/h)	0	32	978	19	32	523	1552			385		

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	NB 3	NB 4
Volume Total	186	66	514	438	438	438
Volume Left	0	0	295	0	0	0
Volume Right	33	66	0	0	0	0
cSH	39	523	1552	1700	1700	1700
Volume to Capacity	4.81	0.13	0.19	0.26	0.26	0.26
Queue Length 95th (ft)	Err	11	18	0	0	0
Control Delay (s)	Err	12.9	5.2	0.0	0.0	0.0
Lane LOS	F	B	A			
Approach Delay (s)	7383.6		1.5			
Approach LOS	F					

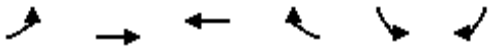
Intersection Summary				
Average Delay	896.3			
Intersection Capacity Utilization	42.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	58	119	187	0	0	0	0	0	1063	204
Future Volume (Veh/h)	0	0	58	119	187	0	0	0	0	0	1063	204
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.72	0.72	0.72	0.86	0.86	0.86	0.92	0.92	0.92	0.94	0.94	0.94
Hourly flow rate (vph)	0	0	81	138	217	0	0	0	0	0	1131	217
Pedestrians		14			16			7			15	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		1			2			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											288	
pX, platoon unblocked	0.97	0.97	0.97	0.97	0.97		0.97					
vC, conflicting volume	1377	1270	412	387	1378	31	1362			16		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1216	1104	217	191	1217	31	1200			16		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	89	78	0	100	100			100		
cM capacity (veh/h)	0	197	751	624	169	1006	550			1576		

Direction, Lane #	EB 1	WB 1	WB 2	SB 1	SB 2	SB 3	SB 4
Volume Total	81	92	263	323	323	323	379
Volume Left	0	92	46	0	0	0	0
Volume Right	81	0	0	0	0	0	217
cSH	751	624	193	1700	1700	1700	1700
Volume to Capacity	0.11	0.15	1.36	0.19	0.19	0.19	0.22
Queue Length 95th (ft)	9	13	380	0	0	0	0
Control Delay (s)	10.4	11.8	238.9	0.0	0.0	0.0	0.0
Lane LOS	B	B	F				
Approach Delay (s)	10.4	180.0		0.0			
Approach LOS	B	F					

Intersection Summary				
Average Delay	36.3			
Intersection Capacity Utilization	46.5%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	80	94	186	19	7
Future Volume (Veh/h)	0	80	94	186	19	7
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.89	0.89	0.91	0.91	0.50	0.50
Hourly flow rate (vph)	0	90	103	204	38	14
Pedestrians		1	1		3	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	310				299	209
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	310				299	209
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				94	98
cM capacity (veh/h)	1247				690	828

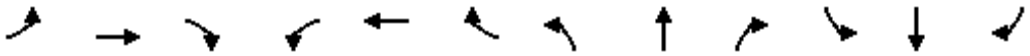
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	90	307	52
Volume Left	0	0	38
Volume Right	0	204	14
cSH	1247	1700	722
Volume to Capacity	0.00	0.18	0.07
Queue Length 95th (ft)	0	0	6
Control Delay (s)	0.0	0.0	10.4
Lane LOS			B
Approach Delay (s)	0.0	0.0	10.4
Approach LOS			B

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	26.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	29	82	19	29	73
Future Volume (Veh/h)	1	29	82	19	29	73
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.70	0.70	0.91	0.91	0.82	0.82
Hourly flow rate (vph)	1	41	90	21	35	89
Pedestrians	3					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	262	104			114	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	262	104			114	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	96			98	
cM capacity (veh/h)	707	949			1471	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	42	111	124
Volume Left	1	0	35
Volume Right	41	21	0
cSH	941	1700	1471
Volume to Capacity	0.04	0.07	0.02
Queue Length 95th (ft)	3	0	2
Control Delay (s)	9.0	0.0	2.3
Lane LOS	A		A
Approach Delay (s)	9.0	0.0	2.3
Approach LOS	A		

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	22.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	142	86	11	195	89	53	44	21	0	0	0
Future Volume (Veh/h)	85	142	86	11	195	89	53	44	21	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.77	0.77	0.77	0.90	0.90	0.90	0.85	0.85	0.85	0.92	0.92	0.92
Hourly flow rate (vph)	110	184	112	12	217	99	62	52	25	0	0	0
Pedestrians		9			30			131			134	
Lane Width (ft)		12.0			12.0			12.0			0.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		1			3			12			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	450			427			890	1065	401	910	1072	410
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	450			427			890	1065	401	910	1072	410
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	90			99			67	70	95	100	100	100
cM capacity (veh/h)	1110			991			190	173	552	153	172	636

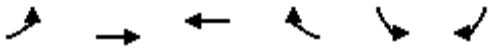
Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	110	296	328	139
Volume Left	110	0	12	62
Volume Right	0	112	99	25
cSH	1110	1700	991	207
Volume to Capacity	0.10	0.17	0.01	0.67
Queue Length 95th (ft)	8	0	1	103
Control Delay (s)	8.6	0.0	0.4	52.1
Lane LOS	A		A	F
Approach Delay (s)	2.3		0.4	52.1
Approach LOS				F

Intersection Summary				
Average Delay	9.6			
Intersection Capacity Utilization	54.6%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	74	259	13	29	2	42
Future Volume (Veh/h)	74	259	13	29	2	42
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.68	0.68	0.48	0.48	0.92	0.92
Hourly flow rate (vph)	109	381	27	60	2	46
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	236					
pX, platoon unblocked			1.00		1.00	1.00
vC, conflicting volume			490		414	300
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			490		413	299
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		100	94
cM capacity (veh/h)			1073		580	740

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	490	87	48
Volume Left	0	27	2
Volume Right	381	0	46
cSH	1700	1073	732
Volume to Capacity	0.29	0.03	0.07
Queue Length 95th (ft)	0	2	5
Control Delay (s)	0.0	2.8	10.3
Lane LOS		A	B
Approach Delay (s)	0.0	2.8	10.3
Approach LOS			B

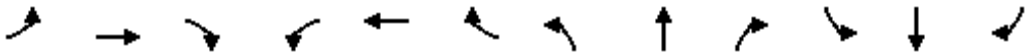
Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	29.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	280	112	0	28
Future Volume (Veh/h)	0	0	280	112	0	28
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.86	0.86	0.92	0.92
Hourly flow rate (vph)	0	0	326	130	0	30
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	456				391	228
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	456				391	228
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				100	96
cM capacity (veh/h)	1101				585	775

Direction, Lane #	WB 1	WB 2	SB 1
Volume Total	217	239	30
Volume Left	0	0	0
Volume Right	0	130	30
cSH	1700	1700	775
Volume to Capacity	0.13	0.14	0.04
Queue Length 95th (ft)	0	0	3
Control Delay (s)	0.0	0.0	9.8
Lane LOS			A
Approach Delay (s)	0.0		9.8
Approach LOS			A

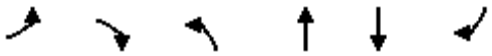
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	21.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	144	34	36	32	0	0	0	0	147	1244	121
Future Volume (vph)	0	144	34	36	32	0	0	0	0	147	1244	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.3			5.3						4.4	
Lane Util. Factor		1.00			1.00						0.86	
Frpb, ped/bikes		1.00			1.00						1.00	
Flpb, ped/bikes		1.00			1.00						0.99	
Frt		0.97			1.00						0.99	
Flt Protected		1.00			0.97						1.00	
Satd. Flow (prot)		1810			1814						6253	
Flt Permitted		1.00			0.44						1.00	
Satd. Flow (perm)		1810			812						6253	
Peak-hour factor, PHF	0.69	0.69	0.69	0.81	0.81	0.81	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	0	209	49	44	40	0	0	0	0	169	1430	139
RTOR Reduction (vph)	0	8	0	0	0	0	0	0	0	0	8	0
Lane Group Flow (vph)	0	250	0	0	84	0	0	0	0	0	1730	0
Confl. Peds. (#/hr)	199		1	1		199				22		
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		8			4						2	
Permitted Phases				4						2		
Actuated Green, G (s)		21.8			21.8						88.5	
Effective Green, g (s)		21.8			21.8						88.5	
Actuated g/C Ratio		0.18			0.18						0.74	
Clearance Time (s)		5.3			5.3						4.4	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		328			147						4611	
v/s Ratio Prot		c0.14										
v/s Ratio Perm					0.10						0.28	
v/c Ratio		0.76			0.57						0.38	
Uniform Delay, d1		46.6			44.8						5.7	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		10.0			5.3						0.2	
Delay (s)		56.6			50.1						5.9	
Level of Service		E			D						A	
Approach Delay (s)		56.6			50.1			0.0			5.9	
Approach LOS		E			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.7
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		

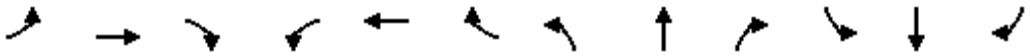
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	397	0	61	1416	0	0
Future Volume (Veh/h)	397	0	61	1416	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	451	0	68	1573	0	0
Pedestrians	75			1		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	3.5			3.5		
Percent Blockage	7			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	604	76	75			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	604	76	75			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	100	95			
cM capacity (veh/h)	380	900	1414			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4
Volume Total	451	293	449	449	449
Volume Left	451	68	0	0	0
Volume Right	0	0	0	0	0
cSH	380	1414	1700	1700	1700
Volume to Capacity	1.19	0.05	0.26	0.26	0.26
Queue Length 95th (ft)	455	4	0	0	0
Control Delay (s)	139.4	2.1	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	139.4	0.4			
Approach LOS	F				

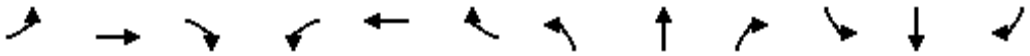
Intersection Summary			
Average Delay	30.3		
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	127	215	129	1207	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	127	215	129	1207	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.84	0.84	0.84	0.88	0.88	0.88	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	151	256	147	1372	0	0	0	0
Pedestrians		69			82			25			14	
Lane Width (ft)		0.0			12.0			12.0			0.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		0			8			2			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1052	1817	94	1773	1817	439	69			1454		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1052	1817	94	1773	1817	439	69			1454		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	100	100	0	51	90			100		
cM capacity (veh/h)	0	64	922	41	64	522	1530			425		

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	NB 3	NB 4
Volume Total	236	171	343	392	392	392
Volume Left	0	0	147	0	0	0
Volume Right	85	171	0	0	0	0
cSH	94	522	1530	1700	1700	1700
Volume to Capacity	2.51	0.33	0.10	0.23	0.23	0.23
Queue Length 95th (ft)	546	35	8	0	0	0
Control Delay (s)	783.2	15.2	3.7	0.0	0.0	0.0
Lane LOS	F	C	A			
Approach Delay (s)	461.2		0.8			
Approach LOS	F					

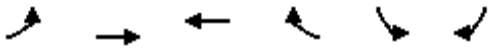
Intersection Summary				
Average Delay	98.1			
Intersection Capacity Utilization	38.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	227	244	110	0	0	0	0	0	1277	99
Future Volume (Veh/h)	0	0	227	244	110	0	0	0	0	0	1277	99
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.72	0.72	0.72	0.92	0.92	0.92	0.84	0.84	0.84
Hourly flow rate (vph)	0	0	284	339	153	0	0	0	0	0	1520	118
Pedestrians		22			32			7			26	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		2			3			0			2	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1704	1633	468	703	1692	58	1660			32		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1704	1633	468	703	1692	58	1660			32		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	46	0	0	100	100			100		
cM capacity (veh/h)	0	95	530	140	87	942	376			1530		

Direction, Lane #	EB 1	WB 1	WB 2	SB 1	SB 2	SB 3	SB 4
Volume Total	284	226	266	434	434	434	335
Volume Left	0	226	113	0	0	0	0
Volume Right	284	0	0	0	0	0	118
cSH	530	140	104	1700	1700	1700	1700
Volume to Capacity	0.54	1.61	2.55	0.26	0.26	0.26	0.20
Queue Length 95th (ft)	78	400	608	0	0	0	0
Control Delay (s)	19.3	361.2	791.4	0.0	0.0	0.0	0.0
Lane LOS	C	F	F				
Approach Delay (s)	19.3	593.8		0.0			
Approach LOS	C	F					

Intersection Summary				
Average Delay	123.3			
Intersection Capacity Utilization	56.9%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	85	117	76	194	129
Future Volume (Veh/h)	0	85	117	76	194	129
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.74	0.74	0.79	0.79	0.88	0.88
Hourly flow rate (vph)	0	115	148	96	220	147
Pedestrians		6			4	
Lane Width (ft)		12.0			12.0	
Walking Speed (ft/s)		3.5			3.5	
Percent Blockage		1			0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	248				315	206
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	248				315	206
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				67	82
cM capacity (veh/h)	1313				675	827

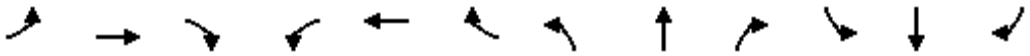
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	115	244	367
Volume Left	0	0	220
Volume Right	0	96	147
cSH	1313	1700	729
Volume to Capacity	0.00	0.14	0.50
Queue Length 95th (ft)	0	0	72
Control Delay (s)	0.0	0.0	14.8
Lane LOS			B
Approach Delay (s)	0.0	0.0	14.8
Approach LOS			B

Intersection Summary			
Average Delay		7.5	
Intersection Capacity Utilization		36.8%	ICU Level of Service
Analysis Period (min)		15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	6	86	200	13	17	73
Future Volume (Veh/h)	6	86	200	13	17	73
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.55	0.55	0.88	0.88	0.84	0.84
Hourly flow rate (vph)	11	156	227	15	20	87
Pedestrians	10					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	1					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	372	244			252	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	372	244			252	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	80			98	
cM capacity (veh/h)	614	787			1301	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	167	242	107
Volume Left	11	0	20
Volume Right	156	15	0
cSH	772	1700	1301
Volume to Capacity	0.22	0.14	0.02
Queue Length 95th (ft)	20	0	1
Control Delay (s)	10.9	0.0	1.6
Lane LOS	B		A
Approach Delay (s)	10.9	0.0	1.6
Approach LOS	B		

Intersection Summary			
Average Delay	3.9		
Intersection Capacity Utilization	30.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	250	85	11	401	139	85	115	76	0	0	0
Future Volume (Veh/h)	200	250	85	11	401	139	85	115	76	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.96	0.96	0.96	0.91	0.91	0.91	0.88	0.88	0.88	0.92	0.92	0.92
Hourly flow rate (vph)	208	260	89	12	441	153	97	131	86	0	0	0
Pedestrians		38			90			409			396	
Lane Width (ft)		12.0			12.0			12.0			0.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		4			9			39			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	990			758			1709	2144	804	1855	2112	952
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	990			758			1709	2144	804	1855	2112	952
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	70			98			0	0	60	0	100	100
cM capacity (veh/h)	698			521			23	20	214	0	21	303

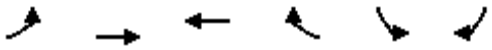
Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	208	349	606	314
Volume Left	208	0	12	97
Volume Right	0	89	153	86
cSH	698	1700	521	28
Volume to Capacity	0.30	0.21	0.02	11.11
Queue Length 95th (ft)	31	0	2	Err
Control Delay (s)	12.3	0.0	0.7	Err
Lane LOS	B		A	F
Approach Delay (s)	4.6		0.7	Err
Approach LOS				F

Intersection Summary			
Average Delay	2127.7		
Intersection Capacity Utilization	80.2%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	186	107	5	56	12	210
Future Volume (Veh/h)	186	107	5	56	12	210
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.68	0.68	0.48	0.48	0.92	0.92
Hourly flow rate (vph)	274	157	10	117	13	228
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	236					
pX, platoon unblocked			0.88		0.88	0.88
vC, conflicting volume			431		490	352
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			281		348	192
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		98	69
cM capacity (veh/h)			1124		564	746

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	431	127	241
Volume Left	0	10	13
Volume Right	157	0	228
cSH	1700	1124	733
Volume to Capacity	0.25	0.01	0.33
Queue Length 95th (ft)	0	1	36
Control Delay (s)	0.0	0.7	12.3
Lane LOS		A	B
Approach Delay (s)	0.0	0.7	12.3
Approach LOS			B

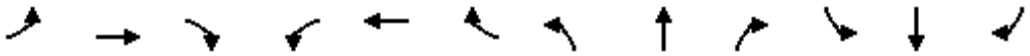
Intersection Summary			
Average Delay	3.8		
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	218	46	0	136
Future Volume (Veh/h)	0	0	218	46	0	136
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.72	0.72	0.92	0.92
Hourly flow rate (vph)	0	0	303	64	0	148
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	367				335	184
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	367				335	184
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				100	82
cM capacity (veh/h)	1188				635	827

Direction, Lane #	WB 1	WB 2	SB 1
Volume Total	202	165	148
Volume Left	0	0	0
Volume Right	0	64	148
cSH	1700	1700	827
Volume to Capacity	0.12	0.10	0.18
Queue Length 95th (ft)	0	0	16
Control Delay (s)	0.0	0.0	10.3
Lane LOS			B
Approach Delay (s)	0.0		10.3
Approach LOS			B

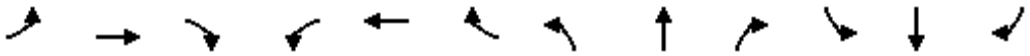
Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	22.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	124	80	283	1471	0	0	0	0
Future Volume (vph)	0	0	0	0	124	80	283	1471	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5	4.5		4.5				
Lane Util. Factor					0.95	0.95		0.86				
Frpb, ped/bikes					1.00	0.97		1.00				
Flpb, ped/bikes					1.00	1.00		0.98				
Frt					0.99	0.85		1.00				
Flt Protected					1.00	1.00		0.99				
Satd. Flow (prot)					1750	1454		6250				
Flt Permitted					1.00	1.00		0.99				
Satd. Flow (perm)					1750	1454		6250				
Peak-hour factor, PHF	0.92	0.92	0.92	0.81	0.81	0.81	0.96	0.96	0.96	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	153	99	295	1532	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	27	0	17	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	160	62	0	1810	0	0	0	0
Confl. Peds. (#/hr)				11		11	52		59			
Turn Type					NA	Perm	Perm	NA				
Protected Phases					8			2				
Permitted Phases						8	2					
Actuated Green, G (s)					16.4	16.4		94.6				
Effective Green, g (s)					16.4	16.4		94.6				
Actuated g/C Ratio					0.14	0.14		0.79				
Clearance Time (s)					4.5	4.5		4.5				
Vehicle Extension (s)					3.0	3.0		3.0				
Lane Grp Cap (vph)					239	198		4927				
v/s Ratio Prot					c0.09							
v/s Ratio Perm						0.04		0.29				
v/c Ratio					0.67	0.31		0.37				
Uniform Delay, d1					49.2	46.7		3.8				
Progression Factor					1.00	1.00		1.00				
Incremental Delay, d2					7.2	0.9		0.2				
Delay (s)					56.4	47.6		4.0				
Level of Service					E	D		A				
Approach Delay (s)		0.0			53.3			4.0			0.0	
Approach LOS		A			D			A			A	

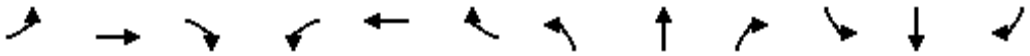
Intersection Summary			
HCM 2000 Control Delay	10.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



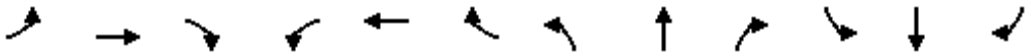
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	58	119	187	0	0	0	0	0	1063	204
Future Volume (vph)	0	0	58	119	187	0	0	0	0	0	1063	204
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.5	4.5	4.5						4.5	
Lane Util. Factor			1.00	0.95	0.95						0.86	
Frpb, ped/bikes			0.97	1.00	1.00						0.99	
Flpb, ped/bikes			1.00	0.99	1.00						1.00	
Frt			0.86	1.00	1.00						0.98	
Flt Protected			1.00	0.95	1.00						1.00	
Satd. Flow (prot)			1570	1658	1763						6187	
Flt Permitted			1.00	0.95	1.00						1.00	
Satd. Flow (perm)			1570	1658	1763						6187	
Peak-hour factor, PHF	0.72	0.72	0.72	0.86	0.86	0.86	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	0	0	81	138	217	0	0	0	0	0	1131	217
RTOR Reduction (vph)	0	0	46	46	12	0	0	0	0	0	15	0
Lane Group Flow (vph)	0	0	35	78	219	0	0	0	0	0	1333	0
Confl. Peds. (#/hr)	15		7	7		15				16		14
Turn Type			Perm	Perm	NA						NA	
Protected Phases					8						2	
Permitted Phases			4	8								
Actuated Green, G (s)			20.7	20.7	20.7						90.3	
Effective Green, g (s)			20.7	20.7	20.7						90.3	
Actuated g/C Ratio			0.17	0.17	0.17						0.75	
Clearance Time (s)			4.5	4.5	4.5						4.5	
Vehicle Extension (s)			3.0	3.0	3.0						3.0	
Lane Grp Cap (vph)			270	286	304						4655	
v/s Ratio Prot											c0.22	
v/s Ratio Perm			0.02	0.05	0.12							
v/c Ratio			0.13	0.27	0.72						0.29	
Uniform Delay, d1			42.0	43.1	46.9						4.7	
Progression Factor			1.10	1.54	1.29						0.97	
Incremental Delay, d2			0.2	0.5	7.9						0.1	
Delay (s)			46.4	66.8	68.4						4.7	
Level of Service			D	E	E						A	
Approach Delay (s)		46.4			67.9			0.0			4.7	
Approach LOS		D			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



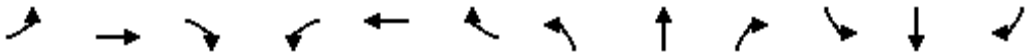
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	142	86	11	195	89	53	44	21	0	0	0
Future Volume (vph)	85	142	86	11	195	89	53	44	21	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5			4.5				
Lane Util. Factor	1.00	1.00			1.00			1.00				
Frpb, ped/bikes	1.00	0.91			0.93			0.99				
Flpb, ped/bikes	0.88	1.00			0.99			0.99				
Frt	1.00	0.94			0.96			0.98				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1549	1601			1647			1744				
Flt Permitted	0.55	1.00			0.99			0.98				
Satd. Flow (perm)	896	1601			1628			1744				
Peak-hour factor, PHF	0.77	0.77	0.77	0.90	0.90	0.90	0.85	0.85	0.85	0.92	0.92	0.92
Adj. Flow (vph)	110	184	112	12	217	99	62	52	25	0	0	0
RTOR Reduction (vph)	0	37	0	0	26	0	0	0	0	0	0	0
Lane Group Flow (vph)	110	259	0	0	302	0	0	139	0	0	0	0
Confl. Peds. (#/hr)	134		131	131		134	9		30			
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)	29.5	29.5			29.5			21.5				
Effective Green, g (s)	29.5	29.5			29.5			21.5				
Actuated g/C Ratio	0.49	0.49			0.49			0.36				
Clearance Time (s)	4.5	4.5			4.5			4.5				
Vehicle Extension (s)	3.0	3.0			3.0			3.0				
Lane Grp Cap (vph)	440	787			800			624				
v/s Ratio Prot		0.16										
v/s Ratio Perm	0.12				c0.19			0.08				
v/c Ratio	0.25	0.33			0.38			0.22				
Uniform Delay, d1	8.8	9.3			9.5			13.4				
Progression Factor	1.00	1.00			1.00			1.04				
Incremental Delay, d2	1.4	1.1			1.4			0.8				
Delay (s)	10.2	10.4			10.9			14.8				
Level of Service	B	B			B			B				
Approach Delay (s)		10.3			10.9			14.8			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



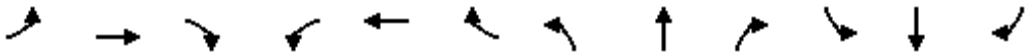
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	127	215	129	1207	0	0	0	0
Future Volume (vph)	0	0	0	0	127	215	129	1207	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5	4.5		4.5				
Lane Util. Factor					0.95	0.95		0.86				
Frpb, ped/bikes					0.99	0.96		1.00				
Flpb, ped/bikes					1.00	1.00		0.99				
Frt					0.96	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					1671	1445		6292				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					1671	1445		6292				
Peak-hour factor, PHF	0.92	0.92	0.92	0.84	0.84	0.84	0.88	0.88	0.88	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	151	256	147	1372	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	17	18	0	8	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	198	174	0	1511	0	0	0	0
Confl. Peds. (#/hr)				25		14	69		82			
Turn Type					NA	Perm	Perm	NA				
Protected Phases					8			2				
Permitted Phases						8	2					
Actuated Green, G (s)					20.5	20.5		90.5				
Effective Green, g (s)					20.5	20.5		90.5				
Actuated g/C Ratio					0.17	0.17		0.75				
Clearance Time (s)					4.5	4.5		4.5				
Vehicle Extension (s)					3.0	3.0		3.0				
Lane Grp Cap (vph)					285	246		4745				
v/s Ratio Prot					0.12							
v/s Ratio Perm						c0.12		0.24				
v/c Ratio					0.69	0.71		0.32				
Uniform Delay, d1					46.8	46.9		4.8				
Progression Factor					1.00	1.00		1.00				
Incremental Delay, d2					7.1	8.9		0.2				
Delay (s)					53.9	55.8		4.9				
Level of Service					D	E		A				
Approach Delay (s)		0.0			54.8			4.9			0.0	
Approach LOS		A			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	39.8%	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												
Traffic Volume (vph)	0	0	227	244	110	0	0	0	0	0	1277	99
Future Volume (vph)	0	0	227	244	110	0	0	0	0	0	1277	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.5	4.5	4.5						4.5	
Lane Util. Factor			1.00	0.95	0.95						0.86	
Frpb, ped/bikes			0.98	1.00	1.00						1.00	
Flpb, ped/bikes			1.00	0.99	1.00						1.00	
Frt			0.86	1.00	1.00						0.99	
Flt Protected			1.00	0.95	0.98						1.00	
Satd. Flow (prot)			1584	1672	1732						6317	
Flt Permitted			1.00	0.95	0.98						1.00	
Satd. Flow (perm)			1584	1672	1732						6317	
Peak-hour factor, PHF	0.80	0.80	0.80	0.72	0.72	0.72	0.92	0.92	0.92	0.84	0.84	0.84
Adj. Flow (vph)	0	0	284	339	153	0	0	0	0	0	1520	118
RTOR Reduction (vph)	0	0	26	26	26	0	0	0	0	0	21	0
Lane Group Flow (vph)	0	0	258	215	225	0	0	0	0	0	1617	0
Confl. Peds. (#/hr)	26		7	7		26				32		22
Turn Type			Perm	Perm	NA						NA	
Protected Phases					8						2	
Permitted Phases			4	8								
Actuated Green, G (s)			12.3	12.3	12.3						23.7	
Effective Green, g (s)			12.3	12.3	12.3						23.7	
Actuated g/C Ratio			0.27	0.27	0.27						0.53	
Clearance Time (s)			4.5	4.5	4.5						4.5	
Vehicle Extension (s)			3.0	3.0	3.0						3.0	
Lane Grp Cap (vph)			432	457	473						3326	
v/s Ratio Prot											c0.26	
v/s Ratio Perm			c0.16	0.13	0.13							
v/c Ratio			0.60	0.47	0.48						0.49	
Uniform Delay, d1			14.2	13.6	13.7						6.8	
Progression Factor			1.00	1.00	1.00						1.00	
Incremental Delay, d2			2.2	0.8	0.8						0.5	
Delay (s)			16.4	14.4	14.4						7.3	
Level of Service			B	B	B						A	
Approach Delay (s)		16.4			14.4			0.0			7.3	
Approach LOS		B			B			A			A	

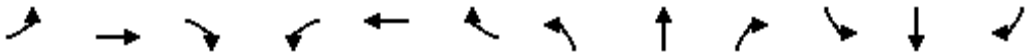
Intersection Summary			
HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	250	85	11	401	139	85	115	76	0	0	0
Future Volume (vph)	200	250	85	11	401	139	85	115	76	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5			4.5				
Lane Util. Factor	1.00	1.00			1.00			1.00				
Frpb, ped/bikes	1.00	0.86			0.86			0.95				
Flpb, ped/bikes	0.82	1.00			0.99			0.98				
Frt	1.00	0.96			0.97			0.96				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1455	1542			1538			1653				
Flt Permitted	0.39	1.00			0.99			0.98				
Satd. Flow (perm)	598	1542			1528			1653				
Peak-hour factor, PHF	0.96	0.96	0.96	0.91	0.91	0.91	0.88	0.88	0.88	0.92	0.92	0.92
Adj. Flow (vph)	208	260	89	12	441	153	97	131	86	0	0	0
RTOR Reduction (vph)	0	21	0	0	20	0	0	0	0	0	0	0
Lane Group Flow (vph)	208	328	0	0	586	0	0	314	0	0	0	0
Confl. Peds. (#/hr)	396		409	409		396	38		90			
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)	32.5	32.5			32.5			18.5				
Effective Green, g (s)	32.5	32.5			32.5			18.5				
Actuated g/C Ratio	0.54	0.54			0.54			0.31				
Clearance Time (s)	4.5	4.5			4.5			4.5				
Vehicle Extension (s)	3.0	3.0			3.0			3.0				
Lane Grp Cap (vph)	323	835			827			509				
v/s Ratio Prot		0.21										
v/s Ratio Perm	0.35				c0.38			0.19				
v/c Ratio	0.64	0.39			0.71			0.62				
Uniform Delay, d1	9.7	8.0			10.2			17.7				
Progression Factor	1.00	1.00			1.00			1.00				
Incremental Delay, d2	9.5	1.4			5.1			5.5				
Delay (s)	19.2	9.4			15.3			23.2				
Level of Service	B	A			B			C				
Approach Delay (s)		13.1			15.3			23.2			0.0	
Approach LOS		B			B			C			A	

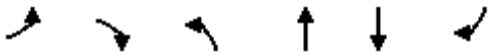
Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	8	8	9	22	0	0	0	0	267	1309	126
Future Volume (vph)	0	8	8	9	22	0	0	0	0	267	1309	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.3			5.3						4.4	
Lane Util. Factor		1.00			1.00						0.86	
Frpb, ped/bikes		1.00			1.00						1.00	
Flpb, ped/bikes		1.00			1.00						0.99	
Frt		0.93			1.00						0.99	
Flt Protected		1.00			0.99						0.99	
Satd. Flow (prot)		1737			1836						6253	
Flt Permitted		1.00			0.89						0.99	
Satd. Flow (perm)		1737			1660						6253	
Peak-hour factor, PHF	0.56	0.56	0.56	0.48	0.48	0.48	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	0	14	14	19	46	0	0	0	0	287	1408	135
RTOR Reduction (vph)	0	13	0	0	0	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	15	0	0	65	0	0	0	0	0	1825	0
Confl. Peds. (#/hr)	74					74				10		
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		8			4						2	
Permitted Phases				4						2		
Actuated Green, G (s)		9.4			9.4						100.9	
Effective Green, g (s)		9.4			9.4						100.9	
Actuated g/C Ratio		0.08			0.08						0.84	
Clearance Time (s)		5.3			5.3						4.4	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		136			130						5257	
v/s Ratio Prot		0.01										
v/s Ratio Perm					c0.04						0.29	
v/c Ratio		0.11			0.50						0.35	
Uniform Delay, d1		51.4			53.0						2.1	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		0.4			3.0						0.2	
Delay (s)		51.8			56.1						2.3	
Level of Service		D			E						A	
Approach Delay (s)		51.8			56.1			0.0			2.3	
Approach LOS		D			E			A			A	

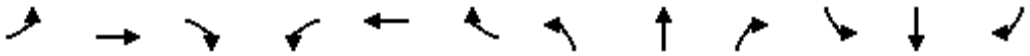
Intersection Summary			
HCM 2000 Control Delay	4.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.7
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	103	0	43	1314	0	0
Future Volume (Veh/h)	103	0	43	1314	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.68	0.68	0.96	0.96	0.92	0.92
Hourly flow rate (vph)	151	0	45	1369	0	0
Pedestrians	53				2	
Lane Width (ft)	12.0				0.0	
Walking Speed (ft/s)	3.5				3.5	
Percent Blockage	5				0	
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	487	53	53			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	487	53	53			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	68	100	97			
cM capacity (veh/h)	469	953	1473			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4
Volume Total	151	241	391	391	391
Volume Left	151	45	0	0	0
Volume Right	0	0	0	0	0
cSH	469	1473	1700	1700	1700
Volume to Capacity	0.32	0.03	0.23	0.23	0.23
Queue Length 95th (ft)	34	2	0	0	0
Control Delay (s)	16.3	1.6	0.0	0.0	0.0
Lane LOS	C	A			
Approach Delay (s)	16.3	0.3			
Approach LOS	C				

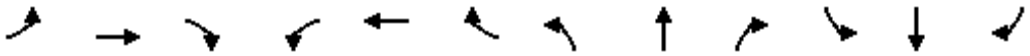
Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	32.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	54	0	0	124	80	270	1469	209	0	0	0
Future Volume (Veh/h)	66	54	0	0	124	80	270	1469	209	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.81	0.81	0.81	0.96	0.96	0.96	0.92	0.92	0.92
Hourly flow rate (vph)	72	59	0	0	153	99	281	1530	218	0	0	0
Pedestrians		52			59			11			11	
Lane Width (ft)		12.0			12.0			12.0			0.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		5			6			1			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1183	2421	63	2300	2312	562	52			1807		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1183	2421	63	2300	2312	562	52			1807		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	0	100	0	0	78	81			100		
cM capacity (veh/h)	0	23	930	0	27	444	1475			318		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4
Volume Total	131	252	536	510	510	473
Volume Left	72	0	281	0	0	0
Volume Right	0	99	0	0	0	218
cSH	0	43	1475	1700	1700	1700
Volume to Capacity	Err	5.84	0.19	0.30	0.30	0.28
Queue Length 95th (ft)	Err	Err	18	0	0	0
Control Delay (s)	Err	Err	5.1	0.0	0.0	0.0
Lane LOS	F	F	A			
Approach Delay (s)	Err	Err	1.3			
Approach LOS	F	F				

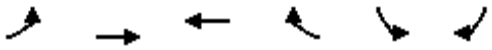
Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	58.2%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	17	54	114	187	0	0	0	0	195	1048	204
Future Volume (Veh/h)	0	17	54	114	187	0	0	0	0	195	1048	204
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.72	0.72	0.72	0.86	0.86	0.86	0.92	0.92	0.92	0.94	0.94	0.94
Hourly flow rate (vph)	0	24	75	133	217	0	0	0	0	207	1115	217
Pedestrians		14			16			7			15	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		1			2			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											288	
pX, platoon unblocked	0.96	0.96	0.96	0.96	0.96		0.96					
vC, conflicting volume	1775	1668	408	803	1776	31	1346			16		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1592	1480	166	578	1593	31	1144			16		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	76	91	46	0	100	100			87		
cM capacity (veh/h)	0	101	803	247	86	1006	573			1576		

Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3	SB 4
Volume Total	99	350	393	372	372	403
Volume Left	0	133	207	0	0	0
Volume Right	75	0	0	0	0	217
cSH	298	114	1576	1700	1700	1700
Volume to Capacity	0.33	3.07	0.13	0.22	0.22	0.24
Queue Length 95th (ft)	35	Err	11	0	0	0
Control Delay (s)	22.9	Err	4.6	0.0	0.0	0.0
Lane LOS	C	F	A			
Approach Delay (s)	22.9	Err	1.2			
Approach LOS	C	F				

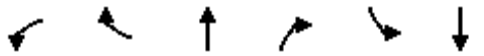
Intersection Summary				
Average Delay	1762.4			
Intersection Capacity Utilization	51.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	80	94	186	31	7
Future Volume (Veh/h)	0	80	94	186	31	7
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.89	0.89	0.91	0.91	0.50	0.50
Hourly flow rate (vph)	0	90	103	204	62	14
Pedestrians		1	1		3	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		3.5	3.5		3.5	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	310				299	209
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	310				299	209
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				91	98
cM capacity (veh/h)	1247				690	828

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	90	307	76
Volume Left	0	0	62
Volume Right	0	204	14
cSH	1247	1700	712
Volume to Capacity	0.00	0.18	0.11
Queue Length 95th (ft)	0	0	9
Control Delay (s)	0.0	0.0	10.7
Lane LOS			B
Approach Delay (s)	0.0	0.0	10.7
Approach LOS			B

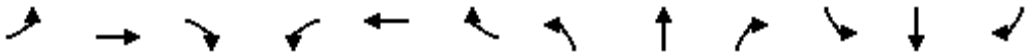
Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	26.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	29	82	19	29	73
Future Volume (Veh/h)	1	29	82	19	29	73
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.70	0.70	0.91	0.91	0.82	0.82
Hourly flow rate (vph)	1	41	90	21	35	89
Pedestrians	3					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	262	104			114	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	262	104			114	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	96			98	
cM capacity (veh/h)	707	949			1471	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	42	111	124
Volume Left	1	0	35
Volume Right	41	21	0
cSH	941	1700	1471
Volume to Capacity	0.04	0.07	0.02
Queue Length 95th (ft)	3	0	2
Control Delay (s)	9.0	0.0	2.3
Lane LOS	A		A
Approach Delay (s)	9.0	0.0	2.3
Approach LOS	A		

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	22.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	142	86	11	195	89	53	44	21	0	0	0
Future Volume (Veh/h)	85	142	86	11	195	89	53	44	21	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.77	0.77	0.77	0.90	0.90	0.90	0.85	0.85	0.85	0.92	0.92	0.92
Hourly flow rate (vph)	110	184	112	12	217	99	62	52	25	0	0	0
Pedestrians		9			30			131			134	
Lane Width (ft)		12.0			12.0			12.0			0.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		1			3			12			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	450			427			890	1065	401	910	1072	410
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	450			427			890	1065	401	910	1072	410
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	90			99			67	70	95	100	100	100
cM capacity (veh/h)	1110			991			190	173	552	153	172	636

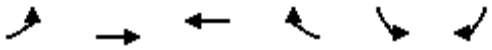
Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	110	296	328	139
Volume Left	110	0	12	62
Volume Right	0	112	99	25
cSH	1110	1700	991	207
Volume to Capacity	0.10	0.17	0.01	0.67
Queue Length 95th (ft)	8	0	1	103
Control Delay (s)	8.6	0.0	0.4	52.1
Lane LOS	A		A	F
Approach Delay (s)	2.3		0.4	52.1
Approach LOS				F

Intersection Summary				
Average Delay	9.6			
Intersection Capacity Utilization	54.6%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	71	219	13	29	2	42
Future Volume (Veh/h)	71	219	13	29	2	42
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.68	0.68	0.48	0.48	0.92	0.92
Hourly flow rate (vph)	104	322	27	60	2	46
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	236					
pX, platoon unblocked						
vC, conflicting volume			426		379	265
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			426		379	265
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		100	94
cM capacity (veh/h)			1133		608	774

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	426	87	48
Volume Left	0	27	2
Volume Right	322	0	46
cSH	1700	1133	765
Volume to Capacity	0.25	0.02	0.06
Queue Length 95th (ft)	0	2	5
Control Delay (s)	0.0	2.7	10.0
Lane LOS		A	B
Approach Delay (s)	0.0	2.7	10.0
Approach LOS			B

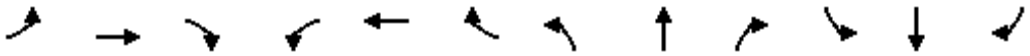
Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	27.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	66	192	280	99	6	20
Future Volume (Veh/h)	66	192	280	99	6	20
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.86	0.86	0.92	0.92
Hourly flow rate (vph)	72	209	326	115	7	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	441				736	384
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	441				736	384
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	94				98	97
cM capacity (veh/h)	1119				361	664

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	281	441	29
Volume Left	72	0	7
Volume Right	0	115	22
cSH	1119	1700	552
Volume to Capacity	0.06	0.26	0.05
Queue Length 95th (ft)	5	0	4
Control Delay (s)	2.6	0.0	11.9
Lane LOS	A		B
Approach Delay (s)	2.6	0.0	11.9
Approach LOS			B

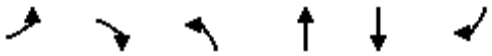
Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	47.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	82	34	36	32	0	0	0	0	125	1266	121
Future Volume (vph)	0	82	34	36	32	0	0	0	0	125	1266	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.3			5.3						4.4	
Lane Util. Factor		1.00			1.00						0.86	
Frpb, ped/bikes		1.00			1.00						1.00	
Flpb, ped/bikes		1.00			1.00						0.99	
Frt		0.96			1.00						0.99	
Flt Protected		1.00			0.97						1.00	
Satd. Flow (prot)		1782			1814						6264	
Flt Permitted		1.00			0.80						1.00	
Satd. Flow (perm)		1782			1482						6264	
Peak-hour factor, PHF	0.69	0.69	0.69	0.81	0.81	0.81	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	0	119	49	44	40	0	0	0	0	144	1455	139
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	11	0
Lane Group Flow (vph)	0	156	0	0	84	0	0	0	0	0	1727	0
Confl. Peds. (#/hr)	199		1	1		199				22		
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		8			4						2	
Permitted Phases				4						2		
Actuated Green, G (s)		36.7			36.7						73.6	
Effective Green, g (s)		36.7			36.7						73.6	
Actuated g/C Ratio		0.31			0.31						0.61	
Clearance Time (s)		5.3			5.3						4.4	
Lane Grp Cap (vph)		544			453						3841	
v/s Ratio Prot		c0.09										
v/s Ratio Perm					0.06						0.28	
v/c Ratio		0.29			0.19						0.45	
Uniform Delay, d1		31.7			30.7						12.4	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		1.3			0.9						0.4	
Delay (s)		33.0			31.6						12.8	
Level of Service		C			C						B	
Approach Delay (s)		33.0			31.6			0.0			12.8	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	15.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.7
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		

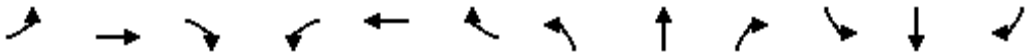
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	335	0	61	1479	0	0
Future Volume (Veh/h)	335	0	61	1479	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	381	0	68	1643	0	0
Pedestrians	75			1		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	3.5			3.5		
Percent Blockage	7			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	622	76	75			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	622	76	75			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	100	95			
cM capacity (veh/h)	370	900	1414			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4
Volume Total	381	303	469	469	469
Volume Left	381	68	0	0	0
Volume Right	0	0	0	0	0
cSH	370	1414	1700	1700	1700
Volume to Capacity	1.03	0.05	0.28	0.28	0.28
Queue Length 95th (ft)	316	4	0	0	0
Control Delay (s)	88.7	2.1	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	88.7	0.4			
Approach LOS	F				

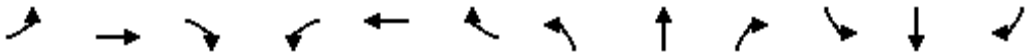
Intersection Summary			
Average Delay	16.5		
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	152	146	0	0	127	215	124	1195	153	0	0	0
Future Volume (Veh/h)	152	146	0	0	127	215	124	1195	153	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.84	0.84	0.84	0.88	0.88	0.88	0.92	0.92	0.92
Hourly flow rate (vph)	165	159	0	0	151	256	141	1358	174	0	0	0
Pedestrians		69			82			25			14	
Lane Width (ft)		12.0			12.0			12.0			0.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		7			8			2			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1036	1965	94	1914	1878	522	69			1614		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1036	1965	94	1914	1878	522	69			1614		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	0	100	0	0	44	90			100		
cM capacity (veh/h)	0	48	861	0	55	460	1429			369		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4
Volume Total	324	407	367	453	453	400
Volume Left	165	0	141	0	0	0
Volume Right	0	256	0	0	0	174
cSH	0	123	1429	1700	1700	1700
Volume to Capacity	Err	3.31	0.10	0.27	0.27	0.24
Queue Length 95th (ft)	Err	Err	8	0	0	0
Control Delay (s)	Err	Err	3.5	0.0	0.0	0.0
Lane LOS	F	F	A			
Approach Delay (s)	Err	Err	0.8			
Approach LOS	F	F				

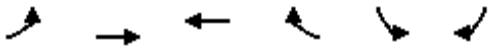
Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	69.2%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	93	208	214	110	0	0	0	0	201	1266	99
Future Volume (Veh/h)	0	93	208	214	110	0	0	0	0	201	1266	99
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.72	0.72	0.72	0.92	0.92	0.92	0.84	0.84	0.84
Hourly flow rate (vph)	0	116	260	297	153	0	0	0	0	239	1507	118
Pedestrians		22			32			7			26	
Lane Width (ft)		12.0			12.0			0.0			12.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		2			3			0			2	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											288	
pX, platoon unblocked	0.87	0.87	0.87	0.87	0.87		0.87					
vC, conflicting volume	2168	2098	465	1212	2157	58	1647			32		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1591	1510	0	490	1577	58	991			32		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	0	72	0	0	100	100			84		
cM capacity (veh/h)	0	83	922	0	75	942	590			1530		

Direction, Lane #	EB 1	WB 1	SB 1	SB 2	SB 3	SB 4
Volume Total	376	450	490	502	502	369
Volume Left	0	297	239	0	0	0
Volume Right	260	0	0	0	0	118
cSH	224	0	1530	1700	1700	1700
Volume to Capacity	1.68	Err	0.16	0.30	0.30	0.22
Queue Length 95th (ft)	618	Err	14	0	0	0
Control Delay (s)	361.8	Err	4.5	0.0	0.0	0.0
Lane LOS	F	F	A			
Approach Delay (s)	361.8	Err	1.2			
Approach LOS	F	F				

Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	69.0%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	85	117	76	257	129
Future Volume (Veh/h)	0	85	117	76	257	129
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.74	0.74	0.79	0.79	0.88	0.88
Hourly flow rate (vph)	0	115	148	96	292	147
Pedestrians		6			4	
Lane Width (ft)		12.0			12.0	
Walking Speed (ft/s)		3.5			3.5	
Percent Blockage		1			0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	248				315	206
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	248				315	206
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				57	82
cM capacity (veh/h)	1313				675	827

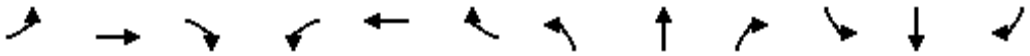
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	115	244	439
Volume Left	0	0	292
Volume Right	0	96	147
cSH	1313	1700	719
Volume to Capacity	0.00	0.14	0.61
Queue Length 95th (ft)	0	0	105
Control Delay (s)	0.0	0.0	17.5
Lane LOS			C
Approach Delay (s)	0.0	0.0	17.5
Approach LOS			C

Intersection Summary			
Average Delay	9.6		
Intersection Capacity Utilization	40.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	6	86	200	13	17	73
Future Volume (Veh/h)	6	86	200	13	17	73
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.55	0.55	0.88	0.88	0.84	0.84
Hourly flow rate (vph)	11	156	227	15	20	87
Pedestrians	10					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	3.5					
Percent Blockage	1					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	372	244			252	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	372	244			252	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	80			98	
cM capacity (veh/h)	614	787			1301	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	167	242	107
Volume Left	11	0	20
Volume Right	156	15	0
cSH	772	1700	1301
Volume to Capacity	0.22	0.14	0.02
Queue Length 95th (ft)	20	0	1
Control Delay (s)	10.9	0.0	1.6
Lane LOS	B		A
Approach Delay (s)	10.9	0.0	1.6
Approach LOS	B		

Intersection Summary			
Average Delay	3.9		
Intersection Capacity Utilization	30.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	250	85	11	401	139	85	115	76	0	0	0
Future Volume (Veh/h)	200	250	85	11	401	139	85	115	76	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.96	0.96	0.96	0.91	0.91	0.91	0.88	0.88	0.88	0.92	0.92	0.92
Hourly flow rate (vph)	208	260	89	12	441	153	97	131	86	0	0	0
Pedestrians		38			90			409			396	
Lane Width (ft)		12.0			12.0			12.0			0.0	
Walking Speed (ft/s)		3.5			3.5			3.5			3.5	
Percent Blockage		4			9			39			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	990			758			1709	2144	804	1855	2112	952
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	990			758			1709	2144	804	1855	2112	952
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	70			98			0	0	60	0	100	100
cM capacity (veh/h)	698			521			23	20	214	0	21	303

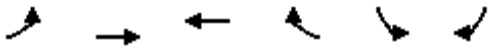
Direction, Lane #	EB 1	EB 2	WB 1	NB 1
Volume Total	208	349	606	314
Volume Left	208	0	12	97
Volume Right	0	89	153	86
cSH	698	1700	521	28
Volume to Capacity	0.30	0.21	0.02	11.11
Queue Length 95th (ft)	31	0	2	Err
Control Delay (s)	12.3	0.0	0.7	Err
Lane LOS	B		A	F
Approach Delay (s)	4.6		0.7	Err
Approach LOS				F

Intersection Summary			
Average Delay	2127.7		
Intersection Capacity Utilization	80.2%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	138	99	5	56	12	211
Future Volume (Veh/h)	138	99	5	56	12	211
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.81	0.81	0.92	0.92
Hourly flow rate (vph)	157	113	6	69	13	229
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	236					
pX, platoon unblocked			0.95		0.95	0.95
vC, conflicting volume			270		294	214
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			210		235	150
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		98	73
cM capacity (veh/h)			1297		714	854

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	270	75	242
Volume Left	0	6	13
Volume Right	113	0	229
cSH	1700	1297	845
Volume to Capacity	0.16	0.00	0.29
Queue Length 95th (ft)	0	0	30
Control Delay (s)	0.0	0.7	11.0
Lane LOS		A	B
Approach Delay (s)	0.0	0.7	11.0
Approach LOS			B

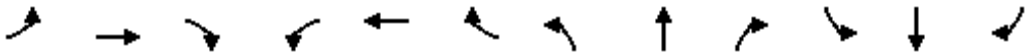
Intersection Summary			
Average Delay	4.6		
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	27	286	218	41	31	105
Future Volume (Veh/h)	27	286	218	41	31	105
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.72	0.72	0.92	0.92
Hourly flow rate (vph)	29	311	303	57	34	114
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	360				700	332
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	360				700	332
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				91	84
cM capacity (veh/h)	1199				395	710

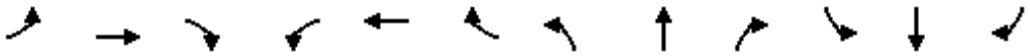
Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	340	360	148
Volume Left	29	0	34
Volume Right	0	57	114
cSH	1199	1700	600
Volume to Capacity	0.02	0.21	0.25
Queue Length 95th (ft)	2	0	24
Control Delay (s)	0.9	0.0	12.9
Lane LOS	A		B
Approach Delay (s)	0.9	0.0	12.9
Approach LOS			B

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	48.7%	ICU Level of Service	A
Analysis Period (min)	15		



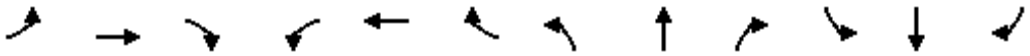
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	54	0	0	124	80	270	1469	209	0	0	0
Future Volume (vph)	66	54	0	0	124	80	270	1469	209	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5				
Lane Util. Factor		1.00			1.00			0.86				
Frpb, ped/bikes		1.00			0.99			0.98				
Flpb, ped/bikes		1.00			1.00			0.98				
Frt		1.00			0.95			0.98				
Flt Protected		0.97			1.00			0.99				
Satd. Flow (prot)		1813			1741			5971				
Flt Permitted		0.34			1.00			0.99				
Satd. Flow (perm)		631			1741			5971				
Peak-hour factor, PHF	0.92	0.92	0.92	0.81	0.81	0.81	0.96	0.96	0.96	0.92	0.92	0.92
Adj. Flow (vph)	72	59	0	0	153	99	281	1530	218	0	0	0
RTOR Reduction (vph)	0	0	0	0	20	0	0	11	0	0	0	0
Lane Group Flow (vph)	0	131	0	0	232	0	0	2018	0	0	0	0
Confl. Peds. (#/hr)				11		11	52		59			
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		21.5			21.5			89.5				
Effective Green, g (s)		21.5			21.5			89.5				
Actuated g/C Ratio		0.18			0.18			0.75				
Clearance Time (s)		4.5			4.5			4.5				
Vehicle Extension (s)		3.0			3.0			3.0				
Lane Grp Cap (vph)		113			311			4453				
v/s Ratio Prot					0.13							
v/s Ratio Perm		c0.21						0.34				
v/c Ratio		1.16			0.75			0.45				
Uniform Delay, d1		49.2			46.7			5.9				
Progression Factor		1.23			1.00			1.00				
Incremental Delay, d2		132.6			9.4			0.3				
Delay (s)		193.4			56.1			6.2				
Level of Service		F			E			A				
Approach Delay (s)		193.4			56.1			6.2			0.0	
Approach LOS		F			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	21.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.9%	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												
Traffic Volume (vph)	0	17	54	114	187	0	0	0	0	195	1048	204
Future Volume (vph)	0	17	54	114	187	0	0	0	0	195	1048	204
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5						4.5	
Lane Util. Factor		1.00			1.00						0.86	
Frpb, ped/bikes		0.98			1.00						0.99	
Flpb, ped/bikes		1.00			1.00						0.99	
Frt		0.90			1.00						0.98	
Flt Protected		1.00			0.98						0.99	
Satd. Flow (prot)		1640			1820						6128	
Flt Permitted		1.00			0.82						0.99	
Satd. Flow (perm)		1640			1521						6128	
Peak-hour factor, PHF	0.72	0.72	0.72	0.86	0.86	0.86	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	0	24	75	133	217	0	0	0	0	207	1115	217
RTOR Reduction (vph)	0	24	0	0	0	0	0	0	0	0	16	0
Lane Group Flow (vph)	0	75	0	0	350	0	0	0	0	0	1523	0
Confl. Peds. (#/hr)	15		7	7		15				16		14
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						2	
Permitted Phases				8						2		
Actuated Green, G (s)		34.0			34.0						77.0	
Effective Green, g (s)		34.0			34.0						77.0	
Actuated g/C Ratio		0.28			0.28						0.64	
Clearance Time (s)		4.5			4.5						4.5	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		464			430						3932	
v/s Ratio Prot		0.05										
v/s Ratio Perm					c0.23						0.25	
v/c Ratio		0.16			0.81						0.39	
Uniform Delay, d1		32.3			40.1						10.3	
Progression Factor		1.04			1.18						0.97	
Incremental Delay, d2		0.2			10.5						0.3	
Delay (s)		33.8			57.8						10.2	
Level of Service		C			E						B	
Approach Delay (s)		33.8			57.8			0.0			10.2	
Approach LOS		C			E			A			B	

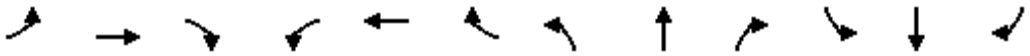
Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	142	86	11	195	89	53	44	21	0	0	0
Future Volume (vph)	85	142	86	11	195	89	53	44	21	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5			4.5				
Lane Util. Factor	1.00	1.00			1.00			1.00				
Frpb, ped/bikes	1.00	0.91			0.93			0.99				
Flpb, ped/bikes	0.88	1.00			0.99			0.99				
Frt	1.00	0.94			0.96			0.98				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1549	1601			1647			1744				
Flt Permitted	0.55	1.00			0.99			0.98				
Satd. Flow (perm)	896	1601			1628			1744				
Peak-hour factor, PHF	0.77	0.77	0.77	0.90	0.90	0.90	0.85	0.85	0.85	0.92	0.92	0.92
Adj. Flow (vph)	110	184	112	12	217	99	62	52	25	0	0	0
RTOR Reduction (vph)	0	37	0	0	26	0	0	0	0	0	0	0
Lane Group Flow (vph)	110	259	0	0	302	0	0	139	0	0	0	0
Confl. Peds. (#/hr)	134		131	131		134	9		30			
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)	29.5	29.5			29.5			21.5				
Effective Green, g (s)	29.5	29.5			29.5			21.5				
Actuated g/C Ratio	0.49	0.49			0.49			0.36				
Clearance Time (s)	4.5	4.5			4.5			4.5				
Vehicle Extension (s)	3.0	3.0			3.0			3.0				
Lane Grp Cap (vph)	440	787			800			624				
v/s Ratio Prot		0.16										
v/s Ratio Perm	0.12				c0.19			0.08				
v/c Ratio	0.25	0.33			0.38			0.22				
Uniform Delay, d1	8.8	9.3			9.5			13.4				
Progression Factor	1.00	1.00			1.00			1.10				
Incremental Delay, d2	1.4	1.1			1.4			0.8				
Delay (s)	10.2	10.4			10.9			15.6				
Level of Service	B	B			B			B				
Approach Delay (s)		10.3			10.9			15.6			0.0	
Approach LOS		B			B			B			A	

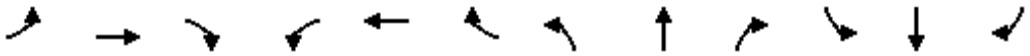
Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



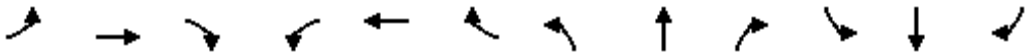
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	152	146	0	0	127	215	124	1195	153	0	0	0
Future Volume (vph)	152	146	0	0	127	215	124	1195	153	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5			4.5				
Lane Util. Factor		1.00			1.00			0.86				
Frpb, ped/bikes		1.00			0.98			0.97				
Flpb, ped/bikes		1.00			1.00			0.98				
Frt		1.00			0.92			0.98				
Flt Protected		0.98			1.00			1.00				
Satd. Flow (prot)		1816			1662			5975				
Flt Permitted		0.42			1.00			1.00				
Satd. Flow (perm)		791			1662			5975				
Peak-hour factor, PHF	0.92	0.92	0.92	0.84	0.84	0.84	0.88	0.88	0.88	0.92	0.92	0.92
Adj. Flow (vph)	165	159	0	0	151	256	141	1358	174	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	13	0	0	0	0
Lane Group Flow (vph)	0	324	0	0	404	0	0	1660	0	0	0	0
Confl. Peds. (#/hr)				25		14	69		82			
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Actuated Green, G (s)		48.5			48.5			62.5				
Effective Green, g (s)		48.5			48.5			62.5				
Actuated g/C Ratio		0.40			0.40			0.52				
Clearance Time (s)		4.5			4.5			4.5				
Vehicle Extension (s)		3.0			3.0			3.0				
Lane Grp Cap (vph)		319			671			3111				
v/s Ratio Prot					0.24							
v/s Ratio Perm		c0.41						0.28				
v/c Ratio		1.02			0.60			0.53				
Uniform Delay, d1		35.8			28.2			19.1				
Progression Factor		1.13			1.00			1.00				
Incremental Delay, d2		49.8			1.5			0.7				
Delay (s)		90.3			29.7			19.7				
Level of Service		F			C			B				
Approach Delay (s)		90.3			29.7			19.7			0.0	
Approach LOS		F			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	30.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
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												
Traffic Volume (vph)	0	93	208	214	110	0	0	0	0	201	1266	99
Future Volume (vph)	0	93	208	214	110	0	0	0	0	201	1266	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5						4.5	
Lane Util. Factor		1.00			1.00						0.86	
Frpb, ped/bikes		0.98			1.00						0.99	
Flpb, ped/bikes		1.00			1.00						0.99	
Frt		0.91			1.00						0.99	
Flt Protected		1.00			0.97						0.99	
Satd. Flow (prot)		1659			1796						6184	
Flt Permitted		1.00			0.50						0.99	
Satd. Flow (perm)		1659			921						6184	
Peak-hour factor, PHF	0.80	0.80	0.80	0.72	0.72	0.72	0.92	0.92	0.92	0.84	0.84	0.84
Adj. Flow (vph)	0	116	260	297	153	0	0	0	0	239	1507	118
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	0	8	0
Lane Group Flow (vph)	0	375	0	0	450	0	0	0	0	0	1856	0
Confl. Peds. (#/hr)	26		7	7		26				32		22
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		4			8						2	
Permitted Phases				8						2		
Actuated Green, G (s)		63.3			63.3						47.7	
Effective Green, g (s)		63.3			63.3						47.7	
Actuated g/C Ratio		0.53			0.53						0.40	
Clearance Time (s)		4.5			4.5						4.5	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		875			485						2458	
v/s Ratio Prot		0.23										
v/s Ratio Perm					c0.49						0.30	
v/c Ratio		0.43			0.93						0.76	
Uniform Delay, d1		17.3			26.2						31.1	
Progression Factor		0.96			1.02						0.93	
Incremental Delay, d2		0.3			23.6						2.2	
Delay (s)		16.9			50.2						31.0	
Level of Service		B			D						C	
Approach Delay (s)		16.9			50.2			0.0			31.0	
Approach LOS		B			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	32.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	70.3%	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												
Traffic Volume (vph)	200	250	85	11	401	139	85	115	76	0	0	0
Future Volume (vph)	200	250	85	11	401	139	85	115	76	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5			4.5				
Lane Util. Factor	1.00	1.00			1.00			1.00				
Frpb, ped/bikes	1.00	0.86			0.86			0.95				
Flpb, ped/bikes	0.82	1.00			0.99			0.98				
Frt	1.00	0.96			0.97			0.96				
Flt Protected	0.95	1.00			1.00			0.98				
Satd. Flow (prot)	1455	1542			1538			1653				
Flt Permitted	0.39	1.00			0.99			0.98				
Satd. Flow (perm)	598	1542			1528			1653				
Peak-hour factor, PHF	0.96	0.96	0.96	0.91	0.91	0.91	0.88	0.88	0.88	0.92	0.92	0.92
Adj. Flow (vph)	208	260	89	12	441	153	97	131	86	0	0	0
RTOR Reduction (vph)	0	21	0	0	20	0	0	0	0	0	0	0
Lane Group Flow (vph)	208	328	0	0	586	0	0	314	0	0	0	0
Confl. Peds. (#/hr)	396		409	409		396	38		90			
Heavy Vehicles (%)	2%	2%	2%	2%	2%	3%	2%	2%	2%	2%	2%	2%
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4			8			2					
Actuated Green, G (s)	32.5	32.5			32.5			18.5				
Effective Green, g (s)	32.5	32.5			32.5			18.5				
Actuated g/C Ratio	0.54	0.54			0.54			0.31				
Clearance Time (s)	4.5	4.5			4.5			4.5				
Vehicle Extension (s)	3.0	3.0			3.0			3.0				
Lane Grp Cap (vph)	323	835			827			509				
v/s Ratio Prot		0.21										
v/s Ratio Perm	0.35				c0.38			0.19				
v/c Ratio	0.64	0.39			0.71			0.62				
Uniform Delay, d1	9.7	8.0			10.2			17.7				
Progression Factor	1.00	1.00			1.00			0.96				
Incremental Delay, d2	9.5	1.4			5.1			5.4				
Delay (s)	19.2	9.4			15.3			22.5				
Level of Service	B	A			B			C				
Approach Delay (s)		13.1			15.3			22.5			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	16.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Appendix H
Raw Traffic Count Data

Project ID: 16-9175-002
Location: Spring St & Armstead Pl_Georgia Tech Parking Deck Entrance
City: Atlanta

Day: Tuesday
Date: 4/12/2016

Peak Start Times	
AM	7:00 AM
MD	12:00 AM
PM	4:00 PM

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Spring St Northbound					Spring St Southbound					ad Pl_Georgia Tech Parking Deck E Eastbound					ead Pl_Georgia Tech Parking Deck En Westbound					
Start Time	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Int. Total
7:00 AM	0	0	0	1	0	7	159	23	10	189	0	0	0	0	0	1	4	0	1	5	194
7:15 AM	0	0	0	0	0	12	162	21	17	195	0	0	4	0	4	4	5	0	5	9	208
7:30 AM	0	0	0	0	0	12	219	32	15	263	0	1	1	0	2	1	6	0	1	7	272
7:45 AM	0	0	0	0	0	13	215	34	32	262	0	1	1	0	2	5	6	0	6	11	275
Total	0	0	0	1	0	44	755	110	74	909	0	2	6	0	8	11	21	0	13	32	949
8:00 AM	0	0	0	0	0	12	238	19	31	269	0	0	2	0	2	3	9	0	2	12	283
8:15 AM	0	0	0	0	0	15	289	19	14	323	0	0	1	0	1	0	2	0	2	2	326
8:30 AM	0	0	0	0	0	17	267	15	19	299	0	1	1	0	2	0	2	0	3	2	303
8:45 AM	0	0	0	0	0	16	294	19	10	329	0	1	3	0	4	4	3	0	3	7	340
Total	0	0	0	0	0	60	1088	72	74	1220	0	2	7	0	9	7	16	0	10	23	1252
BREAK																					
4:00 PM	0	0	0	0	0	5	382	13	33	400	0	11	7	0	18	3	4	0	1	7	425
4:15 PM	0	0	0	2	0	19	291	13	54	323	0	3	3	1	6	4	4	0	3	8	337
4:30 PM	0	0	0	1	0	12	310	15	52	337	0	18	10	0	28	5	3	0	4	8	373
4:45 PM	0	0	0	0	0	8	239	12	31	259	0	9	13	0	22	4	4	0	1	8	289
Total	0	0	0	3	0	44	1222	53	170	1319	0	41	33	1	74	16	15	0	9	31	1424
5:00 PM	0	0	0	0	0	10	336	19	34	365	0	6	2	0	8	9	3	0	7	12	385
5:15 PM	0	0	0	0	0	10	234	19	43	263	0	17	11	0	28	4	10	0	3	14	305
5:30 PM	0	0	0	1	0	15	257	25	55	297	0	10	6	0	16	8	8	0	6	16	329
5:45 PM	0	0	0	0	0	4	334	34	67	372	0	17	8	0	25	3	7	0	6	10	407
Total	0	0	0	1	0	39	1161	97	199	1297	0	50	27	0	77	24	28	0	22	52	1426
Grand Total	0	0	0	5	0	187	4226	332	517	4745	0	95	73	1	168	58	80	0	54	138	5051
Apprch %	0.0	0.0	0.0	0.0		3.9	89.1	7.0	10.9		0.0	56.5	43.5	0.6		42.0	58.0	0.0	39.1		
Total %	0.0	0.0	0.0	0.1	0.0	3.7	83.7	6.6	10.2	93.9	0.0	1.9	1.4	0.0	3.3	1.1	1.6	0.0	1.1	2.7	
Cars, PU, Vans	0	0	0	5	0	187	4151	332	517	4670	0	95	73	1	168	58	80	0	54	138	4976
% Cars, PU, Vans	0.0	0.0	0.0	100.0	0.0	100.0	98.2	100.0	100.0	98.4	0.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	98.5
Heavy Trucks	0	0	0		0	0	75	0		75	0	0	0		0	0	0	0		0	75
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5

Project ID: 16-9175-002
Location: Spring St & Armstead Pl_Ge
City: Atlanta

PEAK HOURS

Day: Tuesday
Date: 4/12/2016

AM

	Spring St Northbound				Spring St Southbound				Pl_Georgia Tech Parking Dec Eastbound				Pl_Georgia Tech Parking Dec Westbound				
Start Time	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
8:00 AM	0	0	0	0	12	238	19	269	0	0	2	2	3	9	0	12	283
8:15 AM	0	0	0	0	15	289	19	323	0	0	1	1	0	2	0	2	326
8:30 AM	0	0	0	0	17	267	15	299	0	1	1	2	0	2	0	2	303
8:45 AM	0	0	0	0	16	294	19	329	0	1	3	4	4	3	0	7	340
Total Volume	0	0	0	0	60	1088	72	1220	0	2	7	9	7	16	0	23	1252
% App. Total	0.0	0.0	0.0	0	4.9	89.2	5.9	100	0.0	22.2	77.8	100	30.4	69.6	0.0	100	
PHF				0.000				0.927				0.563				0.479	
Cars, PU, Vans	0	0	0	0	60	1072	72	1204	0	2	7	9	7	16	0	23	1236
% Cars, PU, Vans	0.0	0.0	0.0	0.0	100.0	98.5	100.0	98.7	0.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	98.7
Heavy Trucks	0	0	0	0	0	16	0	16	0	0	0	0	0	0	0	0	16
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	1.5	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3

PM

	Spring St Northbound				Spring St Southbound				Pl_Georgia Tech Parking Dec Eastbound				Pl_Georgia Tech Parking Dec Westbound				
Start Time	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
5:00 PM	0	0	0	0	10	336	19	365	0	6	2	8	9	3	0	12	385
5:15 PM	0	0	0	0	10	234	19	263	0	17	11	28	4	10	0	14	305
5:30 PM	0	0	0	0	15	257	25	297	0	10	6	16	8	8	0	16	329
5:45 PM	0	0	0	0	4	334	34	372	0	17	8	25	3	7	0	10	407
Total Volume	0	0	0	0	39	1161	97	1297	0	50	27	77	24	28	0	52	1426
% App. Total	0.0	0.0	0.0	0	3.0	89.5	7.5	100	0.0	64.9	35.1	100	46.2	53.8	0.0	100	
PHF				0.000				0.872				0.688				0.813	
Cars, PU, Vans	0	0	0	0	39	1143	97	1279	0	50	27	77	24	28	0	52	1408
% Cars, PU, Vans	0.0	0.0	0.0	0.0	100.0	98.4	100.0	98.6	0.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	98.7
Heavy Trucks	0	0	0	0	0	18	0	18	0	0	0	0	0	0	0	0	18
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	1.6	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3

Project ID: 16-9175-003
Location: West Peachtree St & Armstead Pl
City: Atlanta

Day: Tuesday
Date: 4/12/2016

Peak Start Times	
AM	7:00 AM
MD	12:00 AM
PM	4:00 PM

Groups Printed - Cars, PU, Vans - Heavy Trucks

	West Peachtree St Northbound					West Peachtree St Southbound					Armstead Pl Eastbound					Armstead Pl Westbound					
Start Time	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Int. Total
7:00 AM	6	161	0	0	167	0	0	0	0	0	5	0	0	5	5	0	0	0	0	0	172
7:15 AM	7	209	0	0	216	0	0	0	1	0	11	0	0	7	11	0	0	0	0	0	227
7:30 AM	7	261	0	1	268	0	0	0	0	0	11	0	0	11	11	0	0	0	0	0	279
7:45 AM	12	271	0	3	283	0	0	0	0	0	13	0	0	7	13	0	0	0	0	0	296
Total	32	902	0	4	934	0	0	0	1	0	40	0	0	30	40	0	0	0	0	0	974
8:00 AM	13	324	0	0	337	0	0	0	0	0	7	0	0	10	7	0	0	0	0	0	344
8:15 AM	2	325	0	0	327	0	0	0	1	0	11	0	0	19	11	0	0	0	0	0	338
8:30 AM	2	324	0	0	326	0	0	0	1	0	20	0	0	12	20	0	0	0	0	0	346
8:45 AM	7	300	0	0	307	0	0	0	0	0	16	0	0	12	16	0	0	0	0	0	323
Total	24	1273	0	0	1297	0	0	0	2	0	54	0	0	53	54	0	0	0	0	0	1351
BREAK																					
4:00 PM	8	252	0	3	260	0	0	0	0	0	14	0	0	15	14	0	0	0	0	0	274
4:15 PM	6	292	0	3	298	0	0	0	2	0	24	0	0	13	24	0	0	0	0	0	322
4:30 PM	11	311	0	1	322	0	0	0	0	0	27	0	0	17	27	0	0	0	0	0	349
4:45 PM	7	270	0	1	277	0	0	0	0	0	19	0	0	27	19	0	0	0	0	0	296
Total	32	1125	0	8	1157	0	0	0	2	0	84	0	0	72	84	0	0	0	0	0	1241
5:00 PM	12	295	0	1	307	0	0	0	0	0	18	0	0	19	18	0	0	0	0	0	325
5:15 PM	14	377	0	0	391	0	0	0	0	0	26	0	0	20	26	0	0	0	0	0	417
5:30 PM	16	381	0	0	397	0	0	0	0	0	24	0	0	25	24	0	0	0	0	0	421
5:45 PM	10	323	0	0	333	0	0	0	0	0	23	0	0	11	23	0	0	0	0	0	356
Total	52	1376	0	1	1428	0	0	0	0	0	91	0	0	75	91	0	0	0	0	0	1519
Grand Total	140	4676	0	13	4816	0	0	0	5	0	269	0	0	230	269	0	0	0	0	0	5085
Apprch %	2.9	97.1	0.0	0.3		0.0	0.0	0.0	0.0		100.0	0.0	0.0	85.5		0.0	0.0	0.0	0.0		
Total %	2.8	92.0	0.0	0.3	94.7	0.0	0.0	0.0	0.1	0.0	5.3	0.0	0.0	4.5	5.3	0.0	0.0	0.0	0.0	0.0	
Cars, PU, Vans	140	4563	0	13	4703	0	0	0	5	0	269	0	0	230	269	0	0	0	0	0	4972
% Cars, PU, Vans	100.0	97.6	0.0	100.0	97.7	0.0	0.0	0.0	100.0	0.0	100.0	0.0	0.0	100.0	100.0	0.0	0.0	0.0	0.0	0.0	97.8
Heavy Trucks	0	113	0		113	0	0	0		0	0	0	0		0	0	0	0		0	113
%Heavy Trucks	0.0	2.4	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2

Project ID: 16-9175-003
Location: West Peachtree St & Armste
City: Atlanta

PEAK HOURS

Day: Tuesday
Date: 4/12/2016

AM

	West Peachtree St Northbound				West Peachtree St Southbound				Armstead Pl Eastbound				Armstead Pl Westbound				
Start Time	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
8:00 AM	13	324	0	337	0	0	0	0	7	0	0	7	0	0	0	0	344
8:15 AM	2	325	0	327	0	0	0	0	11	0	0	11	0	0	0	0	338
8:30 AM	2	324	0	326	0	0	0	0	20	0	0	20	0	0	0	0	346
8:45 AM	7	300	0	307	0	0	0	0	16	0	0	16	0	0	0	0	323
Total Volume	24	1273	0	1297	0	0	0	0	54	0	0	54	0	0	0	0	1351
% App. Total	1.9	98.1	0.0	100	0.0	0.0	0.0	0	100.0	0.0	0.0	100	0.0	0.0	0.0	0	
PHF				0.962				0.000				0.675				0.000	
Cars, PU, Vans	24	1246	0	1270	0	0	0	0	54	0	0	54	0	0	0	0	1324
% Cars, PU, Vans	100.0	97.9	0.0	97.9	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	98.0
Heavy Trucks	0	27	0	27	0	0	0	0	0	0	0	0	0	0	0	0	27
%Heavy Trucks	0.0	2.1	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0

PM

	West Peachtree St Northbound				West Peachtree St Southbound				Armstead Pl Eastbound				Armstead Pl Westbound				
Start Time	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
5:00 PM	12	295	0	307	0	0	0	0	18	0	0	18	0	0	0	0	325
5:15 PM	14	377	0	391	0	0	0	0	26	0	0	26	0	0	0	0	417
5:30 PM	16	381	0	397	0	0	0	0	24	0	0	24	0	0	0	0	421
5:45 PM	10	323	0	333	0	0	0	0	23	0	0	23	0	0	0	0	356
Total Volume	52	1376	0	1428	0	0	0	0	91	0	0	91	0	0	0	0	1519
% App. Total	3.6	96.4	0.0	100	0.0	0.0	0.0	0	100.0	0.0	0.0	100	0.0	0.0	0.0	0	
PHF				0.899				0.000				0.875				0.000	
Cars, PU, Vans	52	1353	0	1405	0	0	0	0	91	0	0	91	0	0	0	0	1496
% Cars, PU, Vans	100.0	98.3	0.0	98.4	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	98.5
Heavy Trucks	0	23	0	23	0	0	0	0	0	0	0	0	0	0	0	0	23
%Heavy Trucks	0.0	1.7	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5

Project ID: 16-9175-004
Location: West Peachtree St & 4th St
City: Atlanta

Day: Tuesday
Date: 4/12/2016

Peak Start Times	
AM	7:00 AM
MD	12:00 AM
PM	4:00 PM

Groups Printed - Cars, PU, Vans - Heavy Trucks

	West Peachtree St Northbound					West Peachtree St Southbound					4th St Eastbound					4th St Westbound					
Start Time	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Int. Total
7:00 AM	30	195	0	1	225	0	0	0	2	0	0	0	0	4	0	0	9	8	6	17	242
7:15 AM	36	249	0	1	285	0	0	0	1	0	0	0	0	9	0	0	17	7	9	24	309
7:30 AM	32	303	0	3	335	0	0	0	1	0	0	0	0	11	0	0	13	11	16	24	359
7:45 AM	37	326	0	2	363	0	0	0	0	0	0	0	0	9	0	0	16	19	19	35	398
Total	135	1073	0	7	1208	0	0	0	4	0	0	0	0	33	0	0	55	45	50	100	1308
8:00 AM	36	358	0	1	394	0	0	0	3	0	0	0	0	14	0	0	22	26	19	48	442
8:15 AM	27	379	0	5	406	0	0	0	5	0	0	0	0	20	0	0	21	13	11	34	440
8:30 AM	34	364	0	3	398	0	0	0	3	0	0	0	0	9	0	0	23	15	10	38	436
8:45 AM	28	331	0	6	359	0	0	0	9	0	0	0	0	15	0	0	16	22	15	38	397
Total	125	1432	0	15	1557	0	0	0	20	0	0	0	0	58	0	0	82	76	55	158	1715
BREAK																					
4:00 PM	22	205	0	13	227	0	0	0	6	0	0	0	0	16	0	0	40	42	18	82	309
4:15 PM	25	235	0	5	260	0	0	0	3	0	0	0	0	7	0	0	29	53	15	82	342
4:30 PM	18	243	0	11	261	0	0	0	4	0	0	0	0	21	0	0	23	62	17	85	346
4:45 PM	18	222	0	3	240	0	0	0	9	0	0	0	0	13	0	0	25	39	19	64	304
Total	83	905	0	32	988	0	0	0	22	0	0	0	0	57	0	0	117	196	69	313	1301
5:00 PM	22	222	0	5	244	0	0	0	3	0	0	0	0	17	0	0	31	63	32	94	338
5:15 PM	17	333	0	11	350	0	0	0	5	0	0	0	0	18	0	0	22	51	16	73	423
5:30 PM	11	339	0	4	350	0	0	0	2	0	0	0	0	22	0	0	38	46	15	84	434
5:45 PM	18	273	0	5	291	0	0	0	4	0	0	0	0	12	0	0	18	48	19	66	357
Total	68	1167	0	25	1235	0	0	0	14	0	0	0	0	69	0	0	109	208	82	317	1552
Grand Total	411	4577	0	79	4988	0	0	0	60	0	0	0	0	217	0	0	363	525	256	888	5876
Apprch %	8.2	91.8	0.0	1.6		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	40.9	59.1	28.8		
Total %	7.0	77.9	0.0	1.3	84.9	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	6.2	8.9	4.4	15.1	
Cars, PU, Vans	410	4463	0	79	4873	0	0	0	60	0	0	0	0	217	0	0	361	525	256	886	5759
% Cars, PU, Vans	99.8	97.5	0.0	100.0	97.7	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	99.4	100.0	100.0	99.8	98.0
Heavy Trucks	1	114	0		115	0	0	0		0	0	0	0		0	0	2	0		2	117
%Heavy Trucks	0.2	2.5	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.2	2.0

Project ID: 16-9175-004
Location: West Peachtree St & 4th St
City: Atlanta

PEAK HOURS

Day: Tuesday
Date: 4/12/2016

AM

	West Peachtree St Northbound				West Peachtree St Southbound				4th St Eastbound				4th St Westbound				
Start Time	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
7:45 AM	37	326	0	363	0	0	0	0	0	0	0	0	0	16	19	35	398
8:00 AM	36	358	0	394	0	0	0	0	0	0	0	0	0	22	26	48	442
8:15 AM	27	379	0	406	0	0	0	0	0	0	0	0	0	21	13	34	440
8:30 AM	34	364	0	398	0	0	0	0	0	0	0	0	0	23	15	38	436
Total Volume	134	1427	0	1561	0	0	0	0	0	0	0	0	0	82	73	155	1716
% App. Total	8.6	91.4	0.0	100	0.0	0.0	0.0	0	0.0	0.0	0.0	0	0.0	52.9	47.1	100	
PHF				0.961				0.000				0.000				0.807	
Cars, PU, Vans	134	1397	0	1531	0	0	0	0	0	0	0	0	0	81	73	154	1685
% Cars, PU, Vans	100.0	97.9	0.0	98.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	98.8	100.0	99.4	98.2
Heavy Trucks	0	30	0	30	0	0	0	0	0	0	0	0	0	1	0	1	31
%Heavy Trucks	0.0	2.1	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.6	1.8

PM

	West Peachtree St Northbound				West Peachtree St Southbound				4th St Eastbound				4th St Westbound				
Start Time	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
5:00 PM	22	222	0	244	0	0	0	0	0	0	0	0	0	31	63	94	338
5:15 PM	17	333	0	350	0	0	0	0	0	0	0	0	0	22	51	73	423
5:30 PM	11	339	0	350	0	0	0	0	0	0	0	0	0	38	46	84	434
5:45 PM	18	273	0	291	0	0	0	0	0	0	0	0	0	18	48	66	357
Total Volume	68	1167	0	1235	0	0	0	0	0	0	0	0	0	109	208	317	1552
% App. Total	5.5	94.5	0.0	100	0.0	0.0	0.0	0	0.0	0.0	0.0	0	0.0	34.4	65.6	100	
PHF				0.882				0.000				0.000				0.843	
Cars, PU, Vans	68	1144	0	1212	0	0	0	0	0	0	0	0	0	109	208	317	1529
% Cars, PU, Vans	100.0	98.0	0.0	98.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	100.0	100.0	98.5
Heavy Trucks	0	23	0	23	0	0	0	0	0	0	0	0	0	0	0	0	23
%Heavy Trucks	0.0	2.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5

Project ID: 16-9175-005
Location: Spring St & 4th St
City: Atlanta

Day: Tuesday
Date: 4/12/2016

Peak Start Times	
AM	7:00 AM
MD	12:00 AM
PM	4:00 PM

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Spring St Northbound					Spring St Southbound					4th St Eastbound					4th St Westbound					
Start Time	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Int. Total
7:00 AM	0	0	0	2	0	0	143	11	5	154	0	0	7	0	7	33	15	0	4	48	209
7:15 AM	0	0	0	2	0	0	169	7	7	176	0	0	3	3	3	22	15	0	4	37	216
7:30 AM	0	0	0	2	0	0	202	13	1	215	0	0	12	4	12	28	17	0	4	45	272
7:45 AM	0	0	0	3	0	0	214	13	6	227	0	0	9	8	9	26	28	0	1	54	290
Total	0	0	0	9	0	0	728	44	19	772	0	0	31	15	31	109	75	0	13	184	987
8:00 AM	0	0	0	1	0	0	224	19	2	243	0	0	9	2	9	24	35	0	1	59	311
8:15 AM	0	0	0	2	0	0	262	19	2	281	0	0	8	5	8	29	26	0	2	55	344
8:30 AM	0	0	0	1	0	0	269	10	3	279	0	0	11	1	11	22	22	0	6	44	334
8:45 AM	0	0	0	3	0	0	270	22	8	292	0	0	15	6	15	22	24	0	7	46	353
Total	0	0	0	7	0	0	1025	70	15	1095	0	0	43	14	43	97	107	0	16	204	1342
BREAK																					
4:00 PM	0	0	0	0	0	0	371	9	8	380	0	0	49	6	49	45	19	0	11	64	493
4:15 PM	0	0	0	1	0	0	294	14	6	308	0	0	32	8	32	35	14	0	3	49	389
4:30 PM	0	0	0	4	0	0	310	10	9	320	0	0	49	8	49	36	7	0	13	43	412
4:45 PM	0	0	0	2	0	0	254	10	3	264	0	0	26	0	26	20	8	0	5	28	318
Total	0	0	0	7	0	0	1229	43	26	1272	0	0	156	22	156	136	48	0	32	184	1612
5:00 PM	0	0	0	1	0	0	314	18	4	332	0	0	35	4	35	38	9	0	16	47	414
5:15 PM	0	0	0	0	0	0	254	10	6	264	0	0	42	8	42	30	10	0	3	40	346
5:30 PM	0	0	0	4	0	0	259	11	6	270	0	0	22	3	22	39	11	0	6	50	342
5:45 PM	0	0	0	2	0	0	336	13	3	349	0	0	36	6	36	36	9	0	9	45	430
Total	0	0	0	7	0	0	1163	52	19	1215	0	0	135	21	135	143	39	0	34	182	1532
Grand Total	0	0	0	30	0	0	4145	209	79	4354	0	0	365	72	365	485	269	0	95	754	5473
Apprch %	0.0	0.0	0.0	0.0		0.0	95.2	4.8	1.8		0.0	0.0	100.0	19.7		64.3	35.7	0.0	12.6		
Total %	0.0	0.0	0.0	0.5	0.0	0.0	75.7	3.8	1.4	79.6	0.0	0.0	6.7	1.3	6.7	8.9	4.9	0.0	1.7	13.8	
Cars, PU, Vans	0	0	0	30	0	0	4072	208	79	4280	0	0	365	72	365	482	269	0	95	751	5396
% Cars, PU, Vans	0.0	0.0	0.0	100.0	0.0	0.0	98.2	99.5	100.0	98.3	0.0	0.0	100.0	100.0	100.0	99.4	100.0	0.0	100.0	99.6	98.6
Heavy Trucks	0	0	0		0	0	73	1		74	0	0	0		0	3	0	0		3	77
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.5	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.4	1.4

Project ID: 16-9175-005
Location: Spring St & 4th St
City: Atlanta

PEAK HOURS

Day: Tuesday
Date: 4/12/2016

AM

	Spring St Northbound				Spring St Southbound				4th St Eastbound				4th St Westbound				
Start Time	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
8:00 AM	0	0	0	0	0	224	19	243	0	0	9	9	24	35	0	59	311
8:15 AM	0	0	0	0	0	262	19	281	0	0	8	8	29	26	0	55	344
8:30 AM	0	0	0	0	0	269	10	279	0	0	11	11	22	22	0	44	334
8:45 AM	0	0	0	0	0	270	22	292	0	0	15	15	22	24	0	46	353
Total Volume	0	0	0	0	0	1025	70	1095	0	0	43	43	97	107	0	204	1342
% App. Total	0.0	0.0	0.0	0	0.0	93.6	6.4	100	0.0	0.0	100.0	100	47.5	52.5	0.0	100	
PHF				0.000				0.938				0.717				0.864	
Cars, PU, Vans	0	0	0	0	0	1010	70	1080	0	0	43	43	96	107	0	203	1326
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	98.5	100.0	98.6	0.0	0.0	100.0	100.0	99.0	100.0	0.0	99.5	98.8
Heavy Trucks	0	0	0	0	0	15	0	15	0	0	0	0	1	0	0	1	16
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	1.5	0.0	1.4	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.5	1.2

PM

	Spring St Northbound				Spring St Southbound				4th St Eastbound				4th St Westbound				
Start Time	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
4:00 PM	0	0	0	0	0	371	9	380	0	0	49	49	45	19	0	64	493
4:15 PM	0	0	0	0	0	294	14	308	0	0	32	32	35	14	0	49	389
4:30 PM	0	0	0	0	0	310	10	320	0	0	49	49	36	7	0	43	412
4:45 PM	0	0	0	0	0	254	10	264	0	0	26	26	20	8	0	28	318
Total Volume	0	0	0	0	0	1229	43	1272	0	0	156	156	136	48	0	184	1612
% App. Total	0.0	0.0	0.0	0	0.0	96.6	3.4	100	0.0	0.0	100.0	100	73.9	26.1	0.0	100	
PHF				0.000				0.837				0.796				0.719	
Cars, PU, Vans	0	0	0	0	0	1208	43	1251	0	0	156	156	136	48	0	184	1591
% Cars, PU, Vans	0.0	0.0	0.0	0.0	0.0	98.3	100.0	98.3	0.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	98.7
Heavy Trucks	0	0	0	0	0	21	0	21	0	0	0	0	0	0	0	0	21
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	1.7	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3

Project ID: 16-9175-006
Location: Georgia Tech Parking Deck Entrance_Williams St & 4th St
City: Atlanta

Day: Tuesday
Date: 4/12/2016

Peak Start Times	
AM	7:00 AM
MD	12:00 AM
PM	4:00 PM

Groups Printed - Cars, PU, Vans - Heavy Trucks

	a Tech Parking Deck Entrance_Willia Northbound					a Tech Parking Deck Entrance_Willia Southbound					4th St Eastbound					4th St Westbound					
Start Time	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Int. Total
7:00 AM	0	0	0	2	0	0	0	0	0	0	0	9	0	0	9	2	4	0	0	6	15
7:15 AM	0	0	0	0	0	0	0	1	0	1	0	7	0	0	7	0	14	0	0	14	22
7:30 AM	0	0	0	1	0	1	0	0	0	1	0	10	1	0	11	1	17	0	1	18	30
7:45 AM	0	0	0	2	0	2	0	3	2	5	0	22	0	1	22	0	19	0	1	19	46
Total	0	0	0	5	0	3	0	4	2	7	0	48	1	1	49	3	54	0	2	57	113
8:00 AM	0	0	0	0	0	1	0	1	1	2	0	22	0	0	22	0	17	0	0	17	41
8:15 AM	0	0	0	0	0	1	0	0	0	1	0	21	0	0	21	1	15	0	0	16	38
8:30 AM	0	0	0	0	0	1	0	1	0	2	0	13	0	0	13	0	17	0	0	17	32
8:45 AM	0	0	0	1	0	2	0	4	0	6	0	12	0	0	12	1	19	0	0	20	38
Total	0	0	0	1	0	5	0	6	1	11	0	68	0	0	68	2	68	0	0	70	149
BREAK																					
4:00 PM	0	0	0	4	0	18	0	19	2	37	0	18	0	0	18	0	22	0	1	22	77
4:15 PM	0	0	0	1	0	30	0	22	0	52	0	22	0	4	22	0	23	0	0	23	97
4:30 PM	0	0	0	1	0	40	0	28	1	68	0	22	0	0	22	0	19	0	0	19	109
4:45 PM	0	0	0	2	0	25	0	32	0	57	0	11	0	0	11	0	24	0	0	24	92
Total	0	0	0	8	0	113	0	101	3	214	0	73	0	4	73	0	88	0	1	88	375
5:00 PM	0	0	0	1	0	29	0	33	3	62	0	28	0	2	28	0	10	0	0	10	100
5:15 PM	0	0	0	2	0	16	0	27	3	43	0	17	0	0	17	0	17	0	2	17	77
5:30 PM	0	0	0	0	0	23	0	21	0	44	0	20	0	0	20	0	18	0	0	18	82
5:45 PM	0	0	0	3	0	17	0	17	0	34	1	31	0	1	32	0	16	0	0	16	82
Total	0	0	0	6	0	85	0	98	6	183	1	96	0	3	97	0	61	0	2	61	341
Grand Total	0	0	0	20	0	206	0	209	12	415	1	285	1	8	287	5	271	0	5	276	978
Apprch %	0.0	0.0	0.0	0.0		49.6	0.0	50.4	2.9		0.3	99.3	0.3	2.8		1.8	98.2	0.0	1.8		
Total %	0.0	0.0	0.0	2.0	0.0	21.1	0.0	21.4	1.2	42.4	0.1	29.1	0.1	0.8	29.3	0.5	27.7	0.0	0.5	28.2	
Cars, PU, Vans	0	0	0	20	0	206	0	209	12	415	1	285	1	8	287	5	270	0	5	275	977
% Cars, PU, Vans	0.0	0.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.6	0.0	100.0	99.6	99.9
Heavy Trucks	0	0	0		0	0	0	0		0	0	0	0		0	0	1	0		1	1
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.1

Project ID: 16-9175-006
Location: Georgia Tech Parking Deck
City: Atlanta

PEAK HOURS

Day: Tuesday
Date: 4/12/2016

AM

	ch Parking Deck Entrance_ Northbound				ech Parking Deck Entrance_V Southbound				4th St Eastbound				4th St Westbound				
Start Time	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
7:45 AM	0	0	0	0	2	0	3	5	0	22	0	22	0	19	0	19	46
8:00 AM	0	0	0	0	1	0	1	2	0	22	0	22	0	17	0	17	41
8:15 AM	0	0	0	0	1	0	0	1	0	21	0	21	1	15	0	16	38
8:30 AM	0	0	0	0	1	0	1	2	0	13	0	13	0	17	0	17	32
Total Volume	0	0	0	0	5	0	5	10	0	78	0	78	1	68	0	69	157
% App. Total	0.0	0.0	0.0	0	50.0	0.0	50.0	100	0.0	100.0	0.0	100	1.4	98.6	0.0	100	
PHF				0.000				0.500				0.886				0.908	
Cars, PU, Vans	0	0	0	0	5	0	5	10	0	78	0	78	1	68	0	69	157
% Cars, PU, Vans	0.0	0.0	0.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	0.0	100.0	100.0	100.0	0.0	100.0	100.0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

PM

	ch Parking Deck Entrance_ Northbound				ech Parking Deck Entrance_V Southbound				4th St Eastbound				4th St Westbound				
Start Time	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
4:15 PM	0	0	0	0	30	0	22	52	0	22	0	22	0	23	0	23	97
4:30 PM	0	0	0	0	40	0	28	68	0	22	0	22	0	19	0	19	109
4:45 PM	0	0	0	0	25	0	32	57	0	11	0	11	0	24	0	24	92
5:00 PM	0	0	0	0	29	0	33	62	0	28	0	28	0	10	0	10	100
Total Volume	0	0	0	0	124	0	115	239	0	83	0	83	0	76	0	76	398
% App. Total	0.0	0.0	0.0	0	51.9	0.0	48.1	100	0.0	100.0	0.0	100	0.0	100.0	0.0	100	
PHF				0.000				0.879				0.741				0.792	
Cars, PU, Vans	0	0	0	0	124	0	115	239	0	83	0	83	0	76	0	76	398
% Cars, PU, Vans	0.0	0.0	0.0	0.0	100.0	0.0	100.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	100.0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Project ID: 16-9175-007
Location: Williams St & Georgia Tech Parking Deck Entrance
City: Atlanta

Day: Tuesday
Date: 4/12/2016

Peak Start Times	
AM	7:00 AM
MD	12:00 AM
PM	4:00 PM

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Williams St Northbound					Williams St Southbound					Georgia Tech Parking Deck Entrance Eastbound					Georgia Tech Parking Deck Entrance Westbound					
Start Time	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Int. Total
7:00 AM	0	4	1	0	5	4	9	0	0	13	0	0	0	0	0	0	0	2	0	2	20
7:15 AM	0	11	1	0	12	3	7	0	0	10	0	0	0	0	0	0	0	1	1	1	23
7:30 AM	0	14	0	0	14	3	11	0	0	14	0	0	0	0	0	0	0	1	0	1	29
7:45 AM	0	20	0	0	20	3	21	0	0	24	0	0	0	0	0	0	0	1	1	1	45
Total	0	49	2	0	51	13	48	0	0	61	0	0	0	0	0	0	0	5	2	5	117
8:00 AM	0	17	0	0	17	5	22	0	0	27	0	0	0	0	0	0	0	5	1	5	49
8:15 AM	0	17	0	0	17	2	19	0	0	21	0	0	0	0	0	1	0	2	0	3	41
8:30 AM	0	19	0	0	19	6	10	0	0	16	0	0	0	0	0	0	0	5	1	5	40
8:45 AM	0	23	0	0	23	1	11	0	0	12	0	0	0	0	0	1	0	3	0	4	39
Total	0	76	0	0	76	14	62	0	0	76	0	0	0	0	0	2	0	15	2	17	169
BREAK																					
4:00 PM	1	42	0	0	43	2	22	0	0	24	0	0	0	0	0	1	0	1	4	2	69
4:15 PM	1	39	1	0	41	3	12	0	0	15	0	0	0	0	0	1	0	1	2	2	58
4:30 PM	0	31	2	0	33	4	16	0	0	20	0	0	0	0	0	1	0	1	1	2	55
4:45 PM	1	38	2	0	41	3	22	0	0	25	0	0	0	0	0	3	0	2	3	5	71
Total	3	150	5	0	158	12	72	0	0	84	0	0	0	0	0	6	0	5	10	11	253
5:00 PM	1	45	0	0	46	2	22	0	0	24	0	0	0	0	0	1	0	1	4	2	72
5:15 PM	1	37	1	0	39	3	12	0	0	15	0	0	0	0	0	1	0	1	2	2	56
5:30 PM	0	31	2	0	33	4	16	0	0	20	0	0	0	0	0	0	0	1	1	1	54
5:45 PM	1	37	2	0	40	3	21	0	0	24	0	0	0	0	0	3	0	2	3	5	69
Total	3	150	5	0	158	12	71	0	0	83	0	0	0	0	0	5	0	5	10	10	251
Grand Total	6	425	12	0	443	51	253	0	0	304	0	0	0	0	0	13	0	30	24	43	790
Apprch %	1.4	95.9	2.7	0.0		16.8	83.2	0.0	0.0		0.0	0.0	0.0	0.0		30.2	0.0	69.8	55.8		
Total %	0.8	53.8	1.5	0.0	56.1	6.5	32.0	0.0	0.0	38.5	0.0	0.0	0.0	0.0	0.0	1.6	0.0	3.8	3.0	5.4	
Cars, PU, Vans	6	424	12	0	442	51	253	0	0	304	0	0	0	0	0	13	0	30	24	43	789
% Cars, PU, Vans	100.0	99.8	100.0	0.0	99.8	100.0	100.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	100.0	100.0	99.9
Heavy Trucks	0	1	0		1	0	0	0		0	0	0	0		0	0	0	0		0	1
%Heavy Trucks	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1

Project ID: 16-9175-007
Location: Williams St & Georgia Tech
City: Atlanta

PEAK HOURS

Day: Tuesday
Date: 4/12/2016

AM

	Williams St Northbound				Williams St Southbound				rgia Tech Parking Deck Entra Eastbound				rgia Tech Parking Deck Entra Westbound				
Start Time	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
7:45 AM	0	20	0	20	3	21	0	24	0	0	0	0	0	0	1	1	45
8:00 AM	0	17	0	17	5	22	0	27	0	0	0	0	0	0	5	5	49
8:15 AM	0	17	0	17	2	19	0	21	0	0	0	0	1	0	2	3	41
8:30 AM	0	19	0	19	6	10	0	16	0	0	0	0	0	0	5	5	40
Total Volume	0	73	0	73	16	72	0	88	0	0	0	0	1	0	13	14	175
% App. Total	0.0	100.0	0.0	100	18.2	81.8	0.0	100	0.0	0.0	0.0	0	7.1	0.0	92.9	100	
PHF				0.913				0.815				0.000				0.700	
Cars, PU, Vans	0	73	0	73	16	72	0	88	0	0	0	0	1	0	13	14	175
% Cars, PU, Vans	0.0	100.0	0.0	100.0	100.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	100.0	100.0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

PM

	Williams St Northbound				Williams St Southbound				rgia Tech Parking Deck Entra Eastbound				rgia Tech Parking Deck Entra Westbound				
Start Time	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
4:15 PM	1	39	1	41	3	12	0	15	0	0	0	0	1	0	1	2	58
4:30 PM	0	31	2	33	4	16	0	20	0	0	0	0	1	0	1	2	55
4:45 PM	1	38	2	41	3	22	0	25	0	0	0	0	3	0	2	5	71
5:00 PM	1	45	0	46	2	22	0	24	0	0	0	0	1	0	1	2	72
Total Volume	3	153	5	161	12	72	0	84	0	0	0	0	6	0	5	11	256
% App. Total	1.9	95.0	3.1	100	14.3	85.7	0.0	100	0.0	0.0	0.0	0	54.5	0.0	45.5	100	
PHF				0.875				0.840				0.000				0.550	
Cars, PU, Vans	3	153	5	161	12	72	0	84	0	0	0	0	6	0	5	11	256
% Cars, PU, Vans	100.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	100.0	0.0	100.0	100.0	100.0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Project ID: 16-9175-001
Location: Williams St & 5th St
City: Atlanta

Day: Tuesday
Date: 4/12/2016

Peak Start Times	
AM	7:00 AM
MD	12:00 AM
PM	4:00 PM

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Williams St Northbound					Williams St Southbound					5th St Eastbound					5th St Westbound					
Start Time	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Left	Thru	Rgt	Peds	App. Total	Int. Total
7:00 AM	2	1	3	7	6	0	0	0	7	0	6	12	10	0	28	3	21	17	3	41	75
7:15 AM	7	5	2	4	14	0	0	0	14	0	11	10	10	3	31	1	30	14	1	45	90
7:30 AM	9	6	2	16	17	0	0	0	25	0	22	20	14	2	56	2	29	11	4	42	115
7:45 AM	10	11	3	61	24	0	0	0	49	0	19	24	21	1	64	3	36	24	7	63	151
Total	28	23	10	88	61	0	0	0	95	0	58	66	55	6	179	9	116	66	15	191	431
8:00 AM	12	7	1	32	20	0	0	0	22	0	22	44	27	2	93	1	48	18	3	67	180
8:15 AM	12	5	4	23	21	0	0	0	18	0	16	26	17	4	59	3	46	27	4	76	156
8:30 AM	10	12	2	26	24	0	0	0	27	0	21	28	15	1	64	4	43	18	6	65	153
8:45 AM	16	9	2	50	27	0	0	0	67	0	24	35	13	2	72	3	53	24	17	80	179
Total	50	33	9	131	92	0	0	0	134	0	83	133	72	9	288	11	190	87	30	288	668
BREAK																					
4:00 PM	10	22	4	55	36	0	0	0	57	0	35	45	16	3	96	2	48	22	17	72	204
4:15 PM	24	23	5	108	52	0	0	0	92	0	38	48	23	9	109	0	63	21	20	84	245
4:30 PM	14	9	4	169	27	0	0	0	103	0	46	55	12	17	113	3	69	24	23	96	236
4:45 PM	25	26	4	71	55	0	0	0	82	0	45	45	13	5	103	0	73	21	21	94	252
Total	73	80	17	403	170	0	0	0	334	0	164	193	64	34	421	5	253	88	81	346	937
5:00 PM	23	14	6	97	43	0	0	0	107	0	49	55	23	10	127	2	102	21	27	125	295
5:15 PM	12	24	3	82	39	0	0	0	84	0	44	66	13	5	123	2	86	40	20	128	290
5:30 PM	16	13	2	88	31	0	0	0	84	0	58	58	19	8	135	3	95	48	19	146	312
5:45 PM	21	14	4	142	39	0	0	0	121	0	45	63	23	15	131	4	104	27	24	135	305
Total	72	65	15	409	152	0	0	0	396	0	196	242	78	38	516	11	387	136	90	534	1202
Grand Total	223	201	51	1031	475	0	0	0	959	0	501	634	269	87	1404	36	946	377	216	1359	3238
Apprch %	46.9	42.3	10.7	217.1		0.0	0.0	0.0	0.0		35.7	45.2	19.2	6.2		2.6	69.6	27.7	15.9		
Total %	6.9	6.2	1.6	31.8	14.7	0.0	0.0	0.0	29.6	0.0	15.5	19.6	8.3	2.7	43.4	1.1	29.2	11.6	6.7	42.0	
Cars, PU, Vans	223	201	51	1031	475	0	0	0	959	0	501	632	269	87	1402	36	946	370	216	1352	3229
% Cars, PU, Vans	100.0	100.0	100.0	100.0	100.0	0.0	0.0	0.0	100.0	0.0	100.0	99.7	100.0	100.0	99.9	100.0	100.0	98.1	100.0	99.5	99.7
Heavy Trucks	0	0	0		0	0	0	0		0	0	2	0		2	0	0	7		7	9
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.1	0.0	0.0	1.9	0.0	0.5	0.3

Project ID: 16-9175-001
Location: Williams St & 5th St
City: Atlanta

PEAK HOURS

Day: Tuesday
Date: 4/12/2016

AM

	Williams St Northbound				Williams St Southbound				5th St Eastbound				5th St Westbound				
Start Time	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
8:00 AM	12	7	1	20	0	0	0	0	22	44	27	93	1	48	18	67	180
8:15 AM	12	5	4	21	0	0	0	0	16	26	17	59	3	46	27	76	156
8:30 AM	10	12	2	24	0	0	0	0	21	28	15	64	4	43	18	65	153
8:45 AM	16	9	2	27	0	0	0	0	24	35	13	72	3	53	24	80	179
Total Volume	50	33	9	92	0	0	0	0	83	133	72	288	11	190	87	288	668
% App. Total	54.3	35.9	9.8	100	0.0	0.0	0.0	0	28.8	46.2	25.0	100	3.8	66.0	30.2	100	
PHF				0.852				0.000				0.774				0.900	
Cars, PU, Vans	50	33	9	92	0	0	0	0	83	132	72	287	11	190	86	287	666
% Cars, PU, Vans	100.0	100.0	100.0	100.0	0.0	0.0	0.0	0.0	100.0	99.2	100.0	99.7	100.0	100.0	98.9	99.7	99.7
Heavy Trucks	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.3	0.0	0.0	1.1	0.3	0.3

PM

	Williams St Northbound				Williams St Southbound				5th St Eastbound				5th St Westbound				
Start Time	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Left	Thru	Rgt	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
5:00 PM	23	14	6	43	0	0	0	0	49	55	23	127	2	102	21	125	295
5:15 PM	12	24	3	39	0	0	0	0	44	66	13	123	2	86	40	128	290
5:30 PM	16	13	2	31	0	0	0	0	58	58	19	135	3	95	48	146	312
5:45 PM	21	14	4	39	0	0	0	0	45	63	23	131	4	104	27	135	305
Total Volume	72	65	15	152	0	0	0	0	196	242	78	516	11	387	136	534	1202
% App. Total	47.4	42.8	9.9	100	0.0	0.0	0.0	0	38.0	46.9	15.1	100	2.1	72.5	25.5	100	
PHF				0.884				0.000				0.956				0.914	
Cars, PU, Vans	72	65	15	152	0	0	0	0	196	242	78	516	11	387	132	530	1198
% Cars, PU, Vans	100.0	100.0	100.0	100.0	0.0	0.0	0.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	97.1	99.3	99.7
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	4
%Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.7	0.3