Transportation Analysis

Gardner 42 DRI #2775

Locust Grove, Georgia

Report Prepared:

February 2018

Prepared for:

Scannell Properties

Prepared by:

Kimley-Horn and Associates, Inc.
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Alpharetta, GA 30009
Project #019139016

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EXECUTIVE SUMMARY

This report presents the analysis of the anticipated traffic impacts of the proposed *Gardner 42* development located in the City of Locust Grove, Georgia. The approximate 120.13-acre site is located north of the intersection of SR 42 and Market Place Boulevard, and is bordered by SR 42 to the east and I-75 to the west. The proposed development will be a total of two (2) industrial warehouse facilities with a total of approximately 2,010,008 SF of warehousing space.

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 500,000 SF of an industrial development. The DRI trigger for this development is the submittal of the Rezoning Application with the City of Locust Grove, combined with the proposed development exceeding 500,000 gross square feet for industrial developments within a developing suburbs area. The DRI was formally triggered with the filing of the Initial DRI Information (Form 1) on January 10, 2018 by the City of Locust Grove.

The present zoning classification of the project site is Residential Agriculture (RA) and General Commercial (C-2). The proposed zoning classification is Light Manufacturing (M-1). The proposed project is expected to be completed by 2020, and will consist of the following land uses and densities:

Warehouse Square Footage: 2,010,008 SF (total in 2 buildings)

Capacity analyses were performed throughout the study network for the Existing 2017 conditions, the Projected 2020 No-Build conditions, and the Projected 2020 Build conditions.

- Existing 2017 conditions represent traffic volumes at six (6) intersections that were collected between November 2017 and January 2018 by performing AM and PM peak hour turning movement counts.

- Projected 2020 No-Build conditions represent the existing traffic volumes grown for three (3) years at 2.0 percent per year throughout the study network, plus the addition of the estimated project trips generated by the Locust Grove – Clayco DRI #2584.

- Projected 2020 Build conditions represent the Projected 2020 No-Build conditions, plus the addition of the project trips that are anticipated to be generated by the *Gardner 42* development.

Based on the **Existing 2017** conditions (*present conditions; i.e. excludes the background traffic growth, the estimated project trips from the Locust Grove – Clayco DRI #2584 and the estimated project trips from the Gardner 42 DRI*), all but two (2) study intersections are projected to operate within the acceptable level-of-service (LOS) standard of D during the AM and PM peak hours. The eastbound approach at the unsignalized intersection of SR 42 at Bethlehem Road (Intersection #1) operates at LOS F during the AM and PM peak hours. Additionally, the eastbound approach at the unsignalized intersection of SR 42 at Market Place Boulevard (Intersection #2) operates at LOS F during the PM peak hour. It should be noted that it is not uncommon for the side-street stop-controlled approach to experience long delays when there is heavy major street volume.

Based on the **Projected 2020 No-Build** conditions (*includes background traffic growth and the estimated project trips from the Locust Grove - Clayco DRI #2584, but excludes the estimated project trips from the Gardner 42 DRI*), all but two (2) study intersections are projected to operate at or above their acceptable level-of-service standard during the AM and PM peak hours for the Projected 2020 No-Build conditions. The eastbound approach of the unsignalized intersection of SR 42 at Bethlehem Road (Intersection #1) is projected to continue to operate at LOS F during both the AM and PM peak hours.

Additionally, the eastbound approach at the intersection of SR 42 at Market Place Boulevard (Intersection #2) is projected to continue to operate at LOS F during the PM peak hour. It should be noted that it is not uncommon for the side-street stop-controlled approach to experience long delays when there is heavy major street volume.

Based on the **Existing 2017** and **Projected 2020 No-Build** conditions, the following improvements are recommended:

- Intersection #1: SR 42 at Bethlehem Road
  - If warranted, install a traffic signal or roundabout.
  - Along SR 42, construct one (1) northbound left-turn lane with 310 feet of storage and 100 feet of taper per GDOT minimum design requirements for a 55 MPH road.
  - Along Bethlehem Road, construct one (1) eastbound right-turn lane with 100 feet of storage and 50 feet of taper.
- Intersection #2: SR 42 at Market Place Boulevard
  - If warranted, install a traffic signal or roundabout.

Based on the **Projected 2020 Build** conditions (*includes both the background traffic growth and the estimated project trips from the Locust Grove – Clayco DRI #2584, and the estimated project trips from Gardner 42 DRI*), all but two (2) study intersections are projected to operate at or above their acceptable overall level-of-service standard during the AM and PM peak hours for the Projected 2020 Build conditions. The eastbound approach of the unsignalized intersection of SR 42 at Bethlehem Road (Intersection #1) is projected to continue to operate at LOS F during both the AM and PM peak hours. Additionally, the eastbound approach of SR 42 at Market Place Boulevard (Intersection #2) is projected to operate at LOS E and LOS F during the AM and PM peak hours, respectively.

With the improvements recommended in the Projected 2020 No-Build conditions, the intersections of SR 42 at Bethlehem Road (Intersection #1) and SR 42 at Market Place Boulevard (Intersection #2) are projected to operate at or above the acceptable overall level-of-service standard during the AM and PM peak hours.

The following site-access improvements are recommended to serve the traffic associated with the *Gardner 42* development:

- Intersection #7: SR 42 at Proposed Driveway 1
  - Along SR 42, construct one (1) northbound left-turn lane with 310 feet of storage and 100 feet of taper per GDOT minimum design requirements for a 55 MPH road.
  - Along SR 42, construct one (1) southbound right-turn lane with 250 feet of storage and 100 feet of taper per GDOT minimum design requirements for a 55 MPH road.
  - On the site, construct one (1) eastbound left-turn lane and one (1) eastbound right-turn lane exiting the site onto SR 42, and one (1) ingress lane entering the site.
- Intersection #8: SR 42 at Proposed Driveway 2
  - Along SR 42, construct one (1) northbound left-turn lane with 310 feet of storage and 100 feet of taper per GDOT minimum design requirements for a 55 MPH road.
  - Along SR 42, construct one (1) southbound right-turn lane with 250 feet of storage and 100 feet of taper per GDOT minimum design requirements for a 55 MPH road.
  - On the site, construct one (1) eastbound left-turn lane and one (1) eastbound right-turn lane exiting the site onto SR 42, and one (1) ingress lane entering the site.

1.0 PROJECT DESCRIPTION

1.1 Introduction

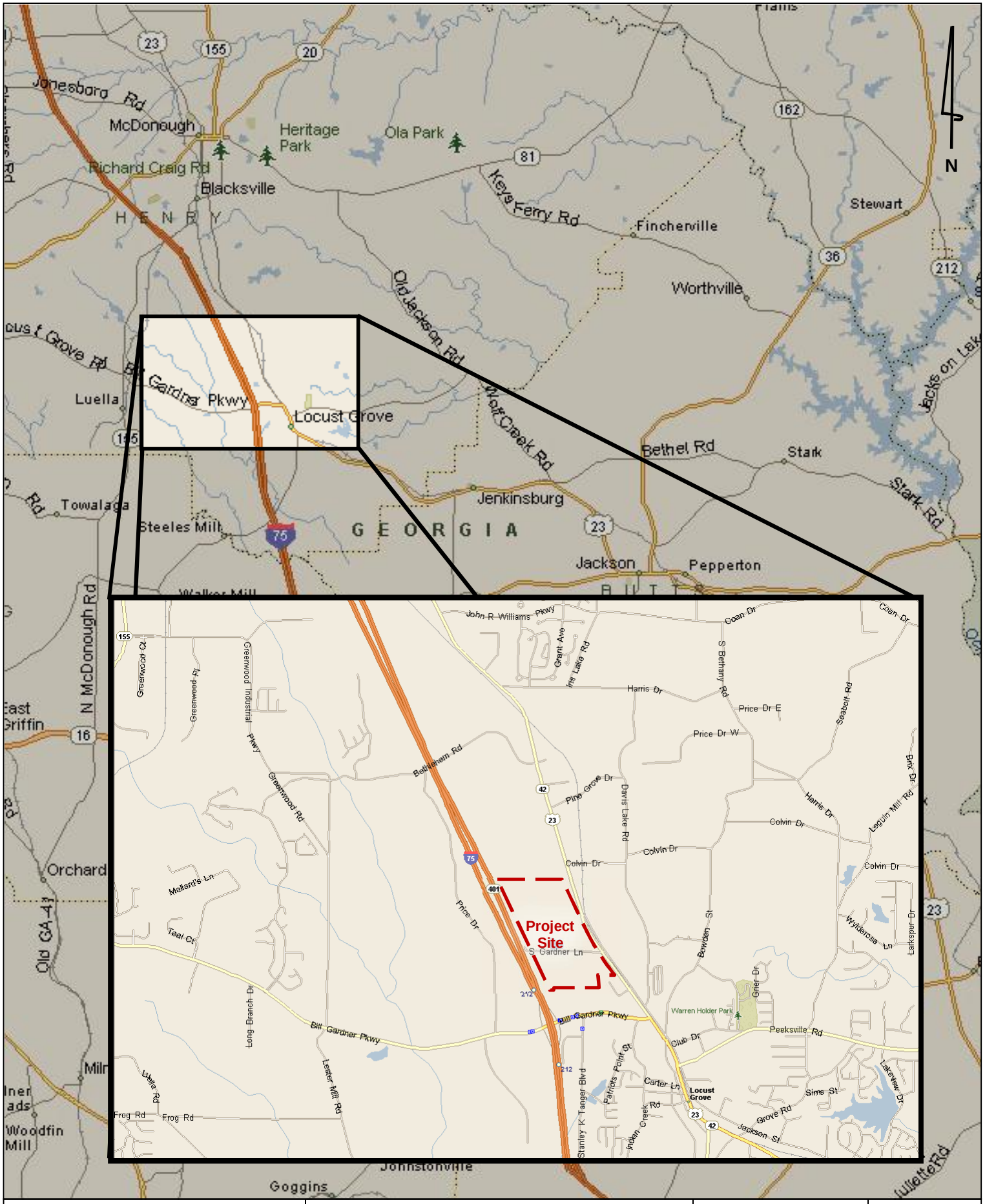
This report presents the analysis of the anticipated traffic impacts of the proposed *Gardner 42* development located in the City of Locust Grove, Georgia. The approximate 120.13-acre site is located north of the intersection of SR 42 and Market Place Boulevard, and is bordered by SR 42 to the east and I-75 to the west. The proposed development will be a total of two (2) industrial warehouse facilities with a total of approximately 2,010,008 SF of warehousing space.

The project will exceed 500,000 square feet for industrial developments within a developing suburbs area; therefore, the proposed development is a Development of Regional Impact (DRI) and is subject to Georgia Regional Transportation Authority (GRTA) and Atlanta Regional Commission (ARC) review.

Figure 1 provides the site location of the *Gardner 42* development. **Figure 2** and **Figure 3** provide an aerial view of the project site and surrounding area. Photographs taken within the vicinity of the proposed site driveways are provided in **Appendix A**. The City of Locust Grove Zoning Map and the *Atlanta Region's Plan Unified Growth Policy Map* are included in **Appendix B**.

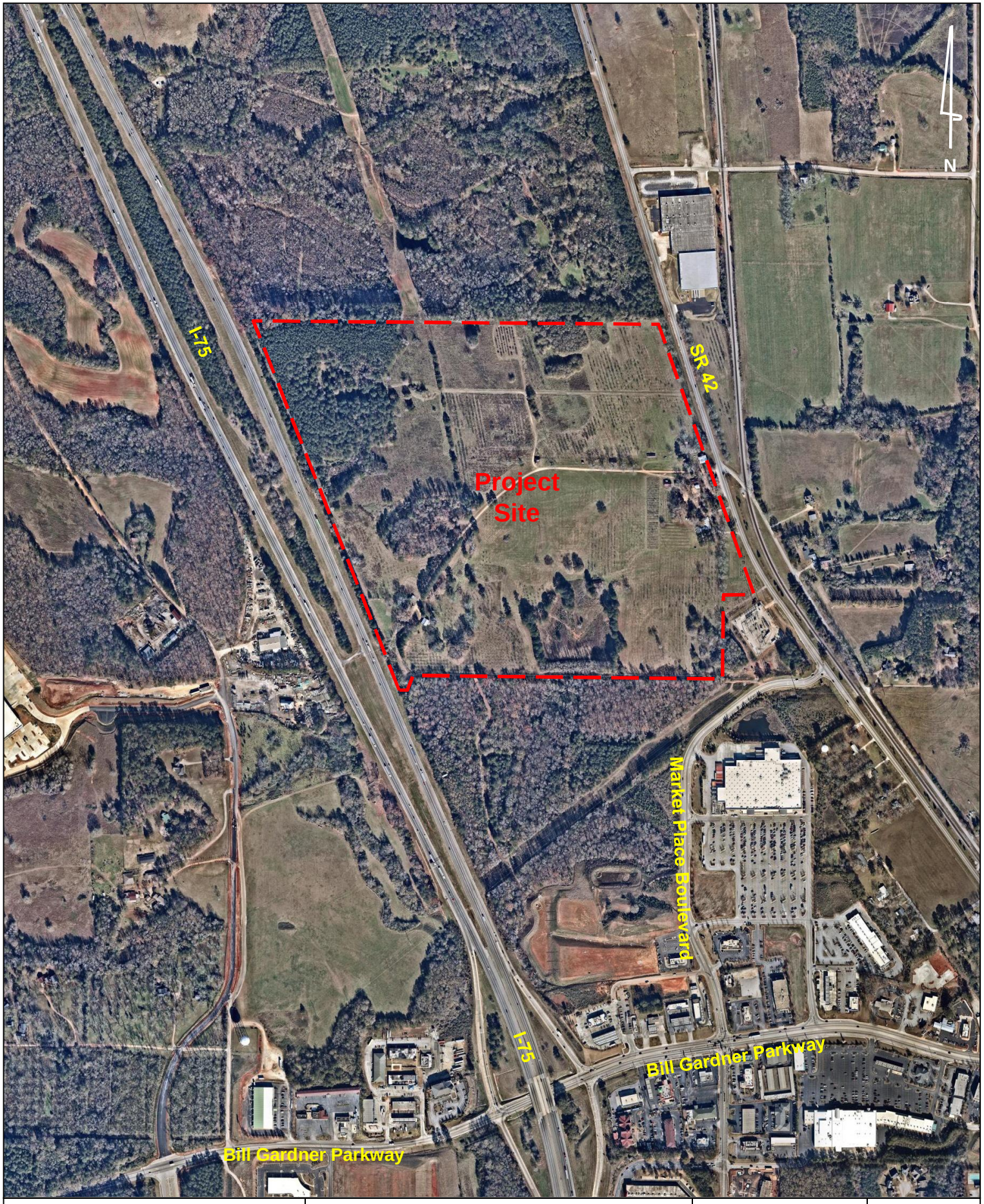
The proposed project is expected to be completed by 2020, and this analysis will consider the full build-out of the proposed site in 2020. A summary of the proposed land-use and density is provided below in **Table 1**.

Table 1: Proposed Land Uses	
ITE Code 150: Warehousing	2,010,008 SF



Kimley»Horn	***Gardner 42*** ***DRI #2775*** ***Transportation Analysis***	**Site Location Map**	**Figure 1** **Page 4**

Kimley»Horn	*Gardner 42* *DRI #2775* *Transportation Analysis*	Site Aerial (zoomed out)	Figure 2
			Page 5



Kimley»Horn	*Gardner 42* *DRI #2775* *Transportation Analysis*	**Site Aerial (zoomed in)**	**Figure 3**
			Page 6

1.2 Site Plan Review

The proposed development is located on an approximately 120.13-acre site in the City of Locust Grove, GA. The project site is located north of the intersection of SR 42 and Market Place Boulevard, and is bordered by SR 42 to the east and I-75 to the west. The proposed development will be a total of two (2) industrial warehouse facilities with a total of approximately 2,010,008 SF of warehousing space. The site is currently undeveloped.

The current zoning for the project site is Residential-Agricultural (RA) and General Commercial (C-2) and the proposed zoning is Industrial (M-1).

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

As currently envisioned, the proposed development will be served by two (2) full-movement driveways along SR 42. SR 42 is a two-lane, undivided, minor arterial with a posted speed limit of 55 mph. A summary of the proposed site access points follows:

1. Proposed Driveway 1 – a proposed full-movement driveway located on SR 42 approximately 1,900 feet north of the intersection of SR 42 at Market Place Boulevard. Proposed Driveway 1 is proposed as a side-street stop-controlled full-movement driveway.
2. Proposed Driveway 2 – a proposed full movement driveway located on SR 42 approximately 1,100 feet north of the intersection of SR 42 at Market Place Boulevard, and 800 feet south of Proposed Driveway 1. Proposed Driveway 2 is proposed as a side-street stop-controlled full-movement driveway.

The proposed site access point provides vehicular access to the entire development. Internal private drive aisles throughout the site provide access to all buildings and parking facilities. See referenced site plan in **Appendix B** for a visual representation of vehicular access and circulation throughout the proposed development. The site driveways and internal roadways provide access to all parking on the site. Parking will be provided through the development as follows:

Employee parking required:	401
Employee parking provided:	836
Trailer parking required:	203
Trailer parking provided:	650

1.4 Bicycle and Pedestrian Facilities

Pedestrian facilities (sidewalks) do not currently exist along the project site frontage or in the vicinity of the project. Bicycle facilities do not currently exist along the project site frontage. There are no pedestrian or bicycle projects programmed in the vicinity of the project site that will be completed prior to the buildout of the *Gardner 42* development. According to the DRI site plan, no pedestrian or bicycle facilities are proposed.

1.5 Transit Facilities

There are no direct transit routes located within the vicinity of the project; therefore, no alternative mode reductions were taken.

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 2.0 percent per year background traffic growth rate was used for all roadways.

In addition to the background growth, the project trips associated with the following development was incorporated into the background traffic:

- Locust Grove - Clayco DRI #2584 (approved in 2016) – 1,002,998 SF warehouse

2.2 Traffic Data Collection

Weekday peak hour turning movement counts were collected on between November 2017 and January 2018 at the study intersections during the AM and PM peak periods. Peak hours for all intersections are shown in **Table 2**.

Table 2: Peak Hour Summary

Intersection	AM Peak Hour	PM Peak Hour
Thursday, January 25, 2018		
1. SR 42 at Bethlehem Road	7:15 AM - 8:15 AM	5:00 PM - 6:00 PM
Wednesday, November 15, 2017		
2. SR 42 at Market Place Boulevard.	7:15 AM - 8:15 AM	5:00 PM - 6:00 PM
3. SR 42 at Bill Gardner Parkway	7:15 AM - 8:15 AM	5:00 PM - 6:00 PM
4. Bill Gardner Parkway at Tanger Boulevard / Market Place Boulevard	7:15 AM - 8:15 AM	5:00 PM - 6:00 PM
5. Bill Gardner Parkway at I-75 NB Ramps	7:15 AM - 8:15 AM	4:45 PM – 5:45 PM
6. Bill Gardner Parkway at I-75 SB Ramps	7:00 AM - 8:00 AM	5:00 PM - 6:00 PM

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*.

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, 10th Edition*. Gross trips generated are displayed below in **Table 3**.

Table 3: Gross Trip Generation

Land Use	Density	ITE Code	Daily Traffic		AM Peak Hour		PM Peak Hour	
			Enter	Exit	Enter	Exit	Enter	Exit
*** Heavy Vehicle (Truck) Trips:**								
Warehousing	2,010,008 SF	*150*	403	403	52	15	18	49
Employee (Car) Trips:								
Warehousing	2,010,008 SF	*150*	1,208	1,208	154	46	55	147
Total New Trips			**1,611**	**1,611**	**206**	**61**	**73**	**196**

** Note: Truck percentage assumed to be 25% per GRTA*

3.2 Trip Distribution

The directional distribution and assignment of new project trips were 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), Henry County, and the City of Locust Grove staff. (See *Section 5.0 Trip Distribution and Assignment*).

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 the intersection during 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. The study area was agreed upon during methodology discussions with GRTA, ARC, Henry County, and the City of Locust Grove staff, and includes the following six (6) existing intersections described in **Table 4**. The study network under build-out conditions also includes all the proposed site driveways.

The existing study network includes four (4) signalized intersections and two (2) side-street stop-controlled intersections as noted in **Table 4**. The study intersections are shown in **Figure 4.**

Table 4: Intersection Control Summary	
Intersection	**Control**
1. SR 42 at Bethlehem Road	Stop Control
2. SR 42 at Market Place Boulevard	Stop Control
3. SR 42 at Bill Gardner Parkway	Signal
4. Bill Gardner Parkway at Tanger Boulevard / Market Place Boulevard	Signal
5. Bill Gardner Parkway at I-75 NB Ramps	Signal
6. Bill Gardner Parkway at I-75 SB Ramps	Signal

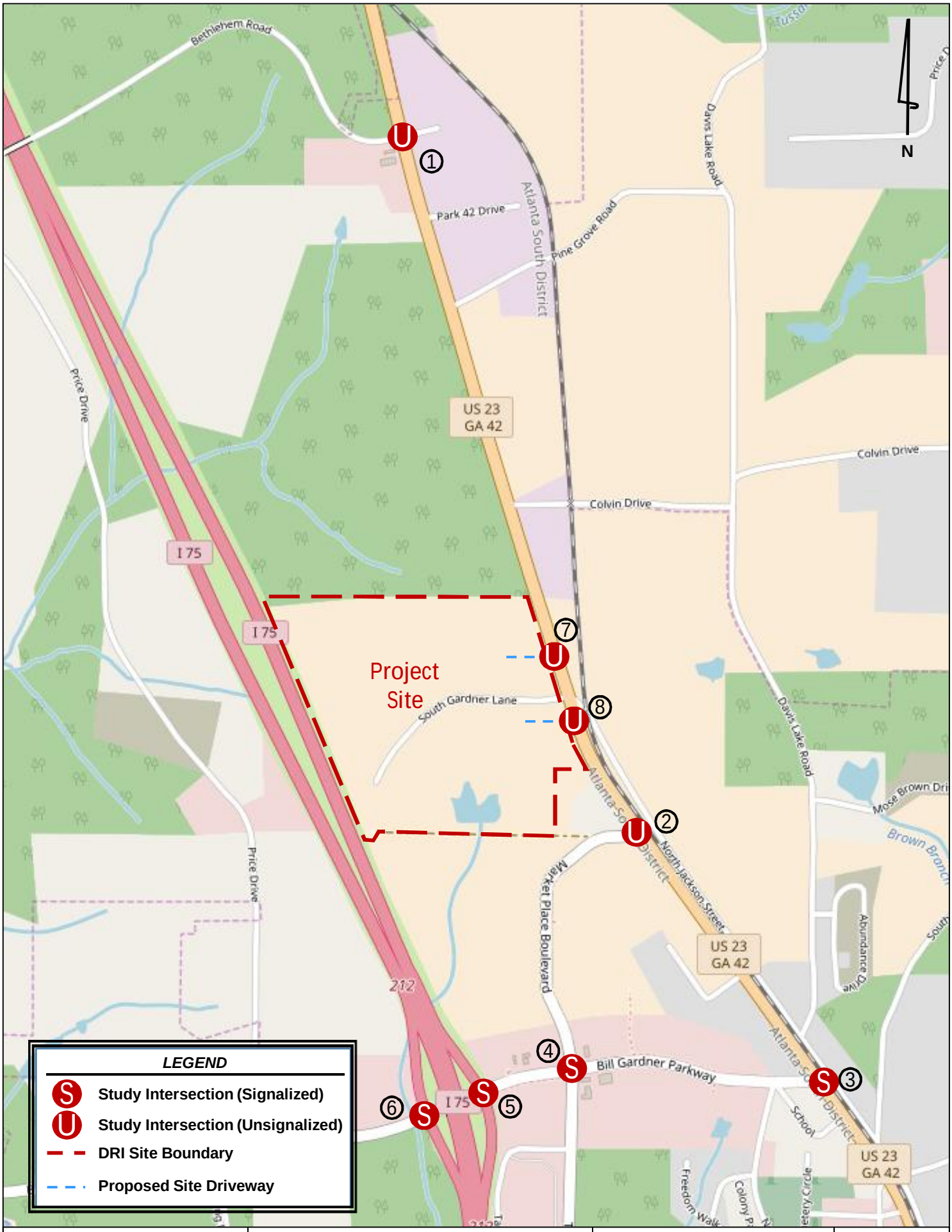
Each of the intersections listed in **Table 4** were analyzed for the Existing 2017 conditions, the Projected 2020 No-Build conditions, and the Projected 2020 Build conditions. The Projected 2020 No-Build conditions represent the existing traffic volumes grown for three (3) years at 2.0 percent per year throughout the study network, plus the project trips anticipated with *Locust Grove – Clayco DRI #2584*.

The Projected 2020 Build conditions add the project trips associated with the *Gardner 42* development to the Projected 2020 No-Build conditions.

3.5 Existing Roadway Facilities

Roadway classification descriptions and estimated Average Daily Traffic (ADT) for the entire study area are provided in **Table 5** (bolded roadway runs adjacent to the site).

Table 5: Roadway Classifications				
Roadway	**No. of Lanes**	**Posted Speed Limit (MPH)**	**Average Daily Traffic (ADT)**	**Functional Classification**
SR 42	**2**	**55**	**14,500 (north of Bethlehem Road)**	**Minor Arterial**
Bethlehem Road	2	45	1,180 (west of SR 42)	Local Road
Bill Gardner Parkway	2	35	21,300 (west of SR 42)	Minor Arterial
I-75	6	70	89,000 (north of Bill Gardner Parkway)	Interstate



Kimley»Horn	*Gardner 42* DRI # 2775 Transportation Analysis	Study Intersections	Figure 4 Page 11

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, 10th Edition, 2017*, using equations where available. Trip generation for this proposed development is calculated based upon the following land use: Warehousing (ITE 150).

Truck percentage was assumed to be 25% of the total volume in accordance with GRTA standard practice.

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

Table 6: Net New Trip Generation

	Daily Traffic			AM Peak Hour		PM Peak Hour	
	Total	**Enter**	**Exit**	**Enter**	**Exit**	**Enter**	**Exit**
Gross Project Trips	**3,222**	**1,611**	**1,611**	**206**	**61**	**73**	**196**
*Heavy Vehicle (Truck) Trips**	*806*	*403*	*403*	*52*	*15*	*18*	*49*
Employee (Car) Trips	*2,416*	*1,208*	*1,208*	*154*	*46*	*55*	*147*
Alternative Mode Reduction	*- 0*	*- 0*	*- 0*	*- 0*	*- 0*	*- 0*	*- 0*
Pass-by Reduction	*- 0*	*- 0*	*- 0*	*- 0*	*- 0*	*- 0*	*- 0*
Total Trips	**3,222**	**1,611**	**1,611**	**206**	**61**	**73**	**196**

** Truck percentage per GRTA standard practice*

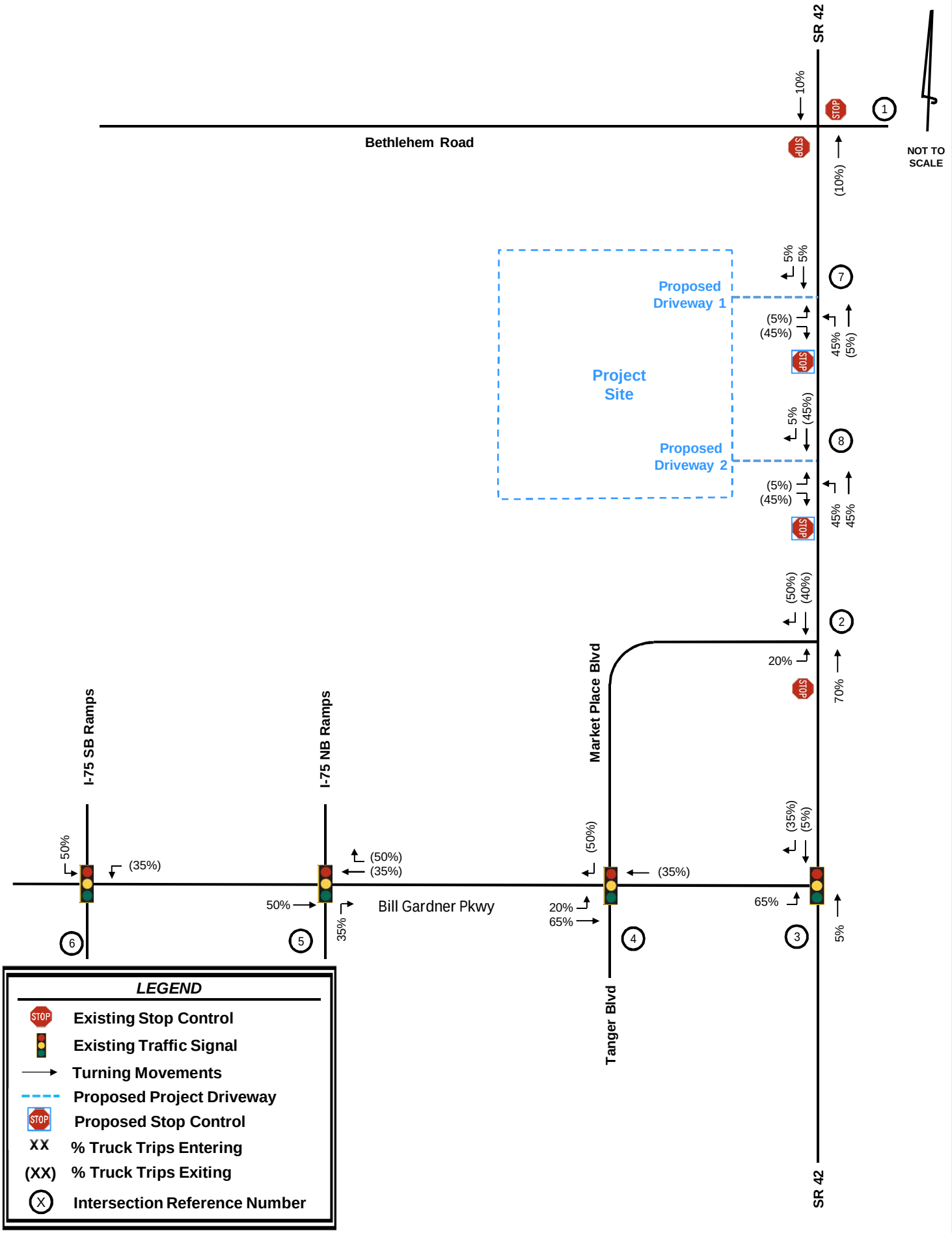
A more detailed trip generation analysis summary table is provided in **Appendix D**.

5.0 TRIP DISTRIBUTION AND ASSIGNMENT

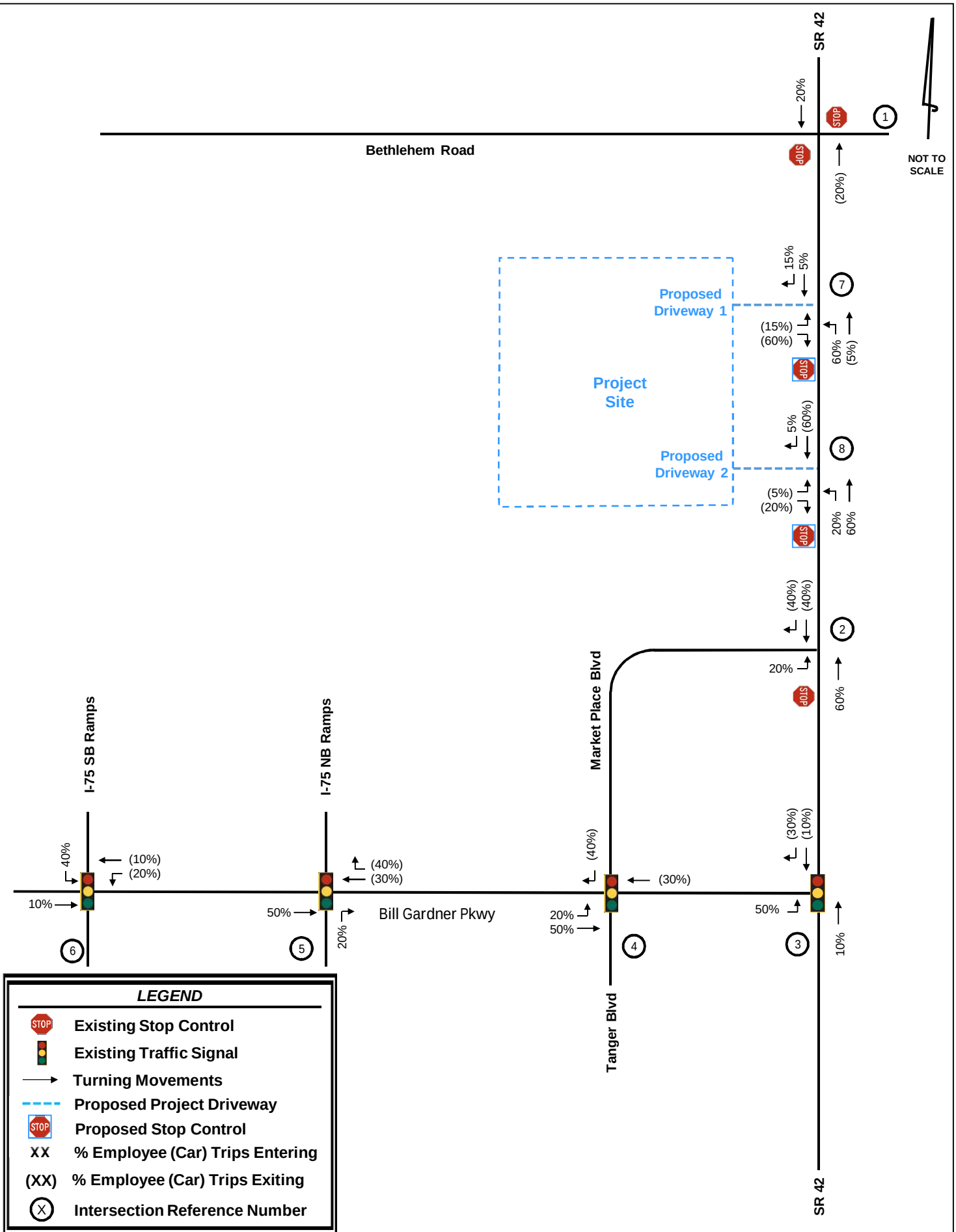
New trips were distributed onto the roadway network using the percentages developed as described in *Section 3.2* of this report, and as agreed to during methodology discussions with GRTA, ARC, Henry County, and the City of Locust Grove staff.

Figure 5a and **Figure 5b** displays the anticipated distribution and assignment of truck trips and employee (car) 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 *Gardner 42* development, are shown on **Figure 6**.

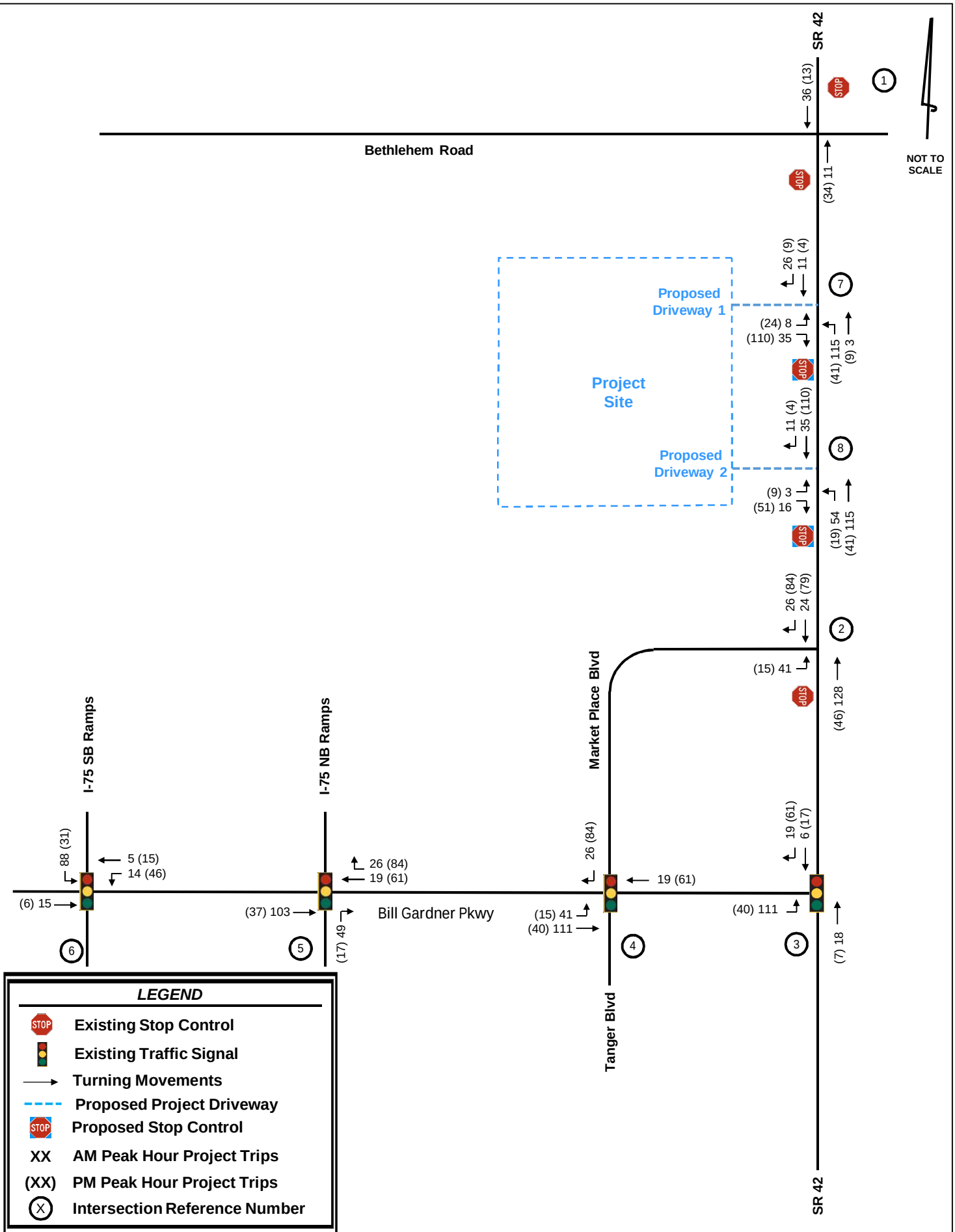
Detailed intersection volume worksheets are provided in **Appendix E**.



Kimley»Horn	*Gardner 42* DRI #2775 Transportation Analysis	Truck Trip Distribution and Assignment	Figure 5a Page 13



Kimley»Horn	*Gardner 42* DRI #2775 Transportation Analysis	Employee (Car) Trip Distribution and Assignment	Figure 5b Page 14



Kimley»Horn	*Gardner 42* DRI #2775 Transportation Analysis	Project Trips	Figure 6 Page 15

6.0 TRAFFIC ANALYSIS

6.1 Existing 2017 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 2017 conditions are shown in **Table 7**. Detailed *Synchro* analysis reports are available upon request.

Table 7: Existing 2017 Level-of-Service Summary
LOS (delay in seconds)

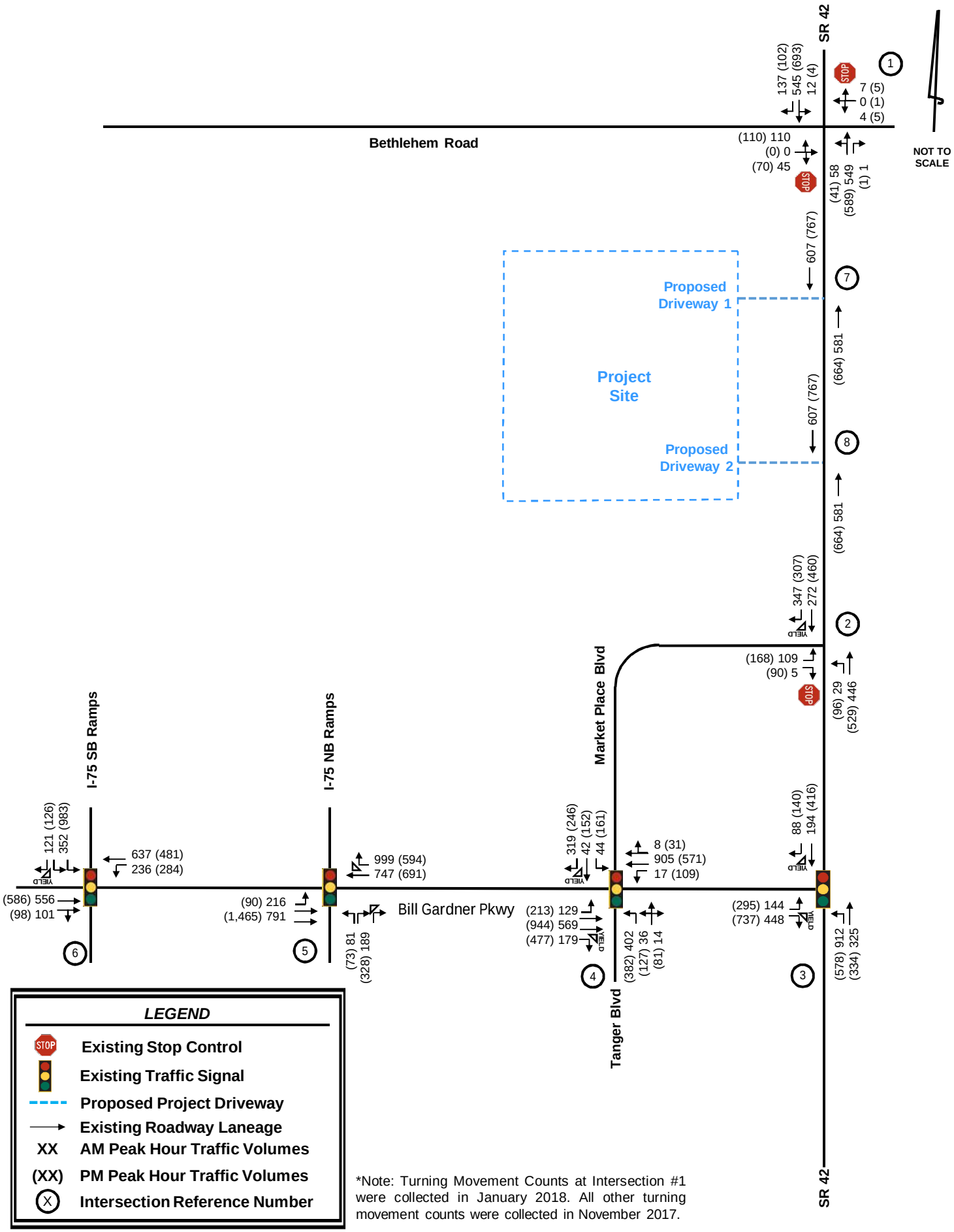
#	Intersection	Control	Approach/ Movement	LOS Std.	AM Peak Hour	PM Peak Hour
1	SR 42 at Bethlehem Road	TWSC	NB Left	D	A (8.9)	A (9.3)
			SB Left	D	B (10.8)	A (8.7)
			EB	D	F (197.0)*	F (213.2)*
			WB	D	E (35.3)*	E (38.1)*
2	SR 42 at Market Place Boulevard	TWSC	NB Left	D	A (7.9)	A (8.7)
			EB	D	C (21.9)	F (99.8)*
3	SR 42 at Bill Gardner Parkway	Signal	Overall	D	C (20.9)	D (35.3)
4	Bill Gardner Parkway at Tanger Boulevard / Market Place Boulevard	Signal	Overall	D	D (43.2)	C (34.7)
5	Bill Gardner Parkway at I-75 NB Ramps	Signal	Overall	D	A (3.9)	A (8.9)
6	Bill Gardner Parkway at I-75 SB Ramps	Signal	Overall	D	C (23.6)	D (40.3)

**Note: It is not uncommon for vehicles at a side-street stop approach to experience significant delay when turning onto a major roadway*

As shown in **Table 7**, two (2) out of seven (7) study intersections currently operate below the acceptable level-of-service (LOS) standard of D during the AM and PM peak hours.

The peak hour LOS standard for the eastbound and westbound approaches at the intersection of SR 42 at Bethlehem Road (Intersection #1) becomes LOS E for the AM and PM peak hours for future No-Build and Build scenarios, per GRTA letter of understanding.

The peak hour LOS standard for the eastbound approach at the intersection of SR 42 at Market Place Boulevard (Intersection #2) becomes LOS E for the PM peak hour for the future No-Build and Build scenarios, per GRTA letter of understanding.



*Note: Turning Movement Counts at Intersection #1 were collected in January 2018. All other turning movement counts were collected in November 2017.

6.2 Projected 2020 No-Build Conditions

To account for growth in the vicinity of the proposed development, the existing traffic volumes were increased for three (3) years at 2.0 percent per year throughout the study network. Additionally, the estimated project trips from *Locust Grove – Clayco DRI #2584* were included. These volumes were entered into *Synchro 9.0*, and capacity analyses were performed.

The Projected 2020 No-Build conditions were analyzed using existing roadway geometry and existing intersection control types. The intersection laneage and traffic volumes for the Projected 2020 No-Build conditions are shown in **Figure 8**. The results of the capacity analyses for the Projected 2020 No-Build are shown in **Table 8**. Detailed *Synchro* analysis reports are available upon request.

Table 8: Projected 2020 No-Build Level-of-Service Summary
LOS (delay in seconds)

#	Intersection	Control	Approach/ Movement	LOS Std.	AM Peak Hour	PM Peak Hour
1	SR 42 at Bethlehem Road	TWSC*	NB Left	D	A (9.0)	A (9.4)
			SB Left	D	B (11.0)	A (8.8)
			EB	E	F (262.8)*	F (285.8)*
			WB	E	E (39.0)	E (43.0)
2	SR 42 at Market Place Boulevard	TWSC	NB Left	D	A (8.0)	A (8.9)
			EB	D/E	C (24.8)	F (154.8)*
3	SR 42 at Bill Gardner Parkway	Signal	Overall	D	C (27.2)	D (50.8)
4	Bill Gardner Parkway at Tanger Boulevard / Market Place Boulevard	Signal	Overall	D	D (48.8)	D (43.1)
5	Bill Gardner Parkway at I-75 NB Ramps	Signal	Overall	D	A (5.2)	A (9.5)
6	Bill Gardner Parkway at I-75 SB Ramps	Signal	Overall	D	C (24.5)	D (44.1)

**Note: It is not uncommon for vehicles at a side-street stop approach to experience significant delay when turning onto a major roadway*

As shown in **Table 8**, all but two (2) study intersections are projected to operate at or above their acceptable level-of-service standard during the AM and PM peak hours for the Projected 2020 No-Build conditions. The eastbound approach of the unsignalized intersection of SR 42 at Bethlehem Road (Intersection #1) is projected to continue to operate at LOS F during both the AM and PM peak hours. Additionally, the eastbound approach of the unsignalized intersection of SR 42 at Market Place Boulevard (Intersection #2) is projected to continue to operate at LOS F during the PM peak hour.

Based on the Existing 2017 conditions and Projected 2020 No-Build conditions, the following improvements are recommended:

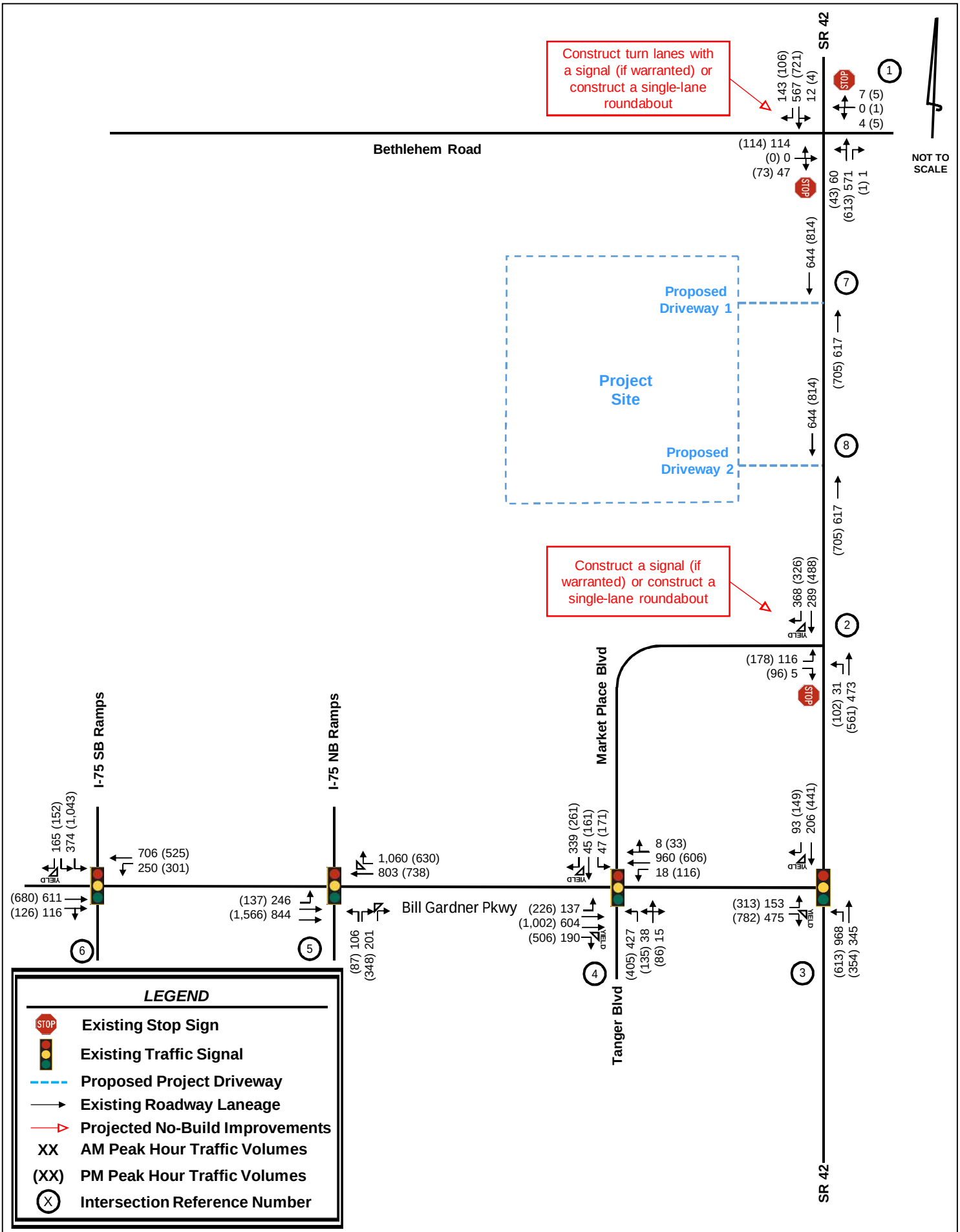
- Intersection #1: SR 42 at Bethlehem Road
  - If warranted, install a traffic signal or roundabout.
  - Along SR 42, construct one (1) northbound left-turn lane with 310 feet of storage and 100 feet of taper per GDOT minimum design requirements for a 55 MPH road.
  - Along Bethlehem Road, construct one (1) eastbound right-turn lane with 100 feet of storage and 50 feet of taper.
- Intersection #2: SR 42 at Market Place Boulevard
  - If warranted, install a traffic signal or roundabout.

The results of the capacity analysis for the Projected 2020 No-Build Improved conditions are shown in **Table 9**.

Table 9: Projected 2020 No-Build Improved Level-of-Service Summary
LOS (delay in seconds)

#	Intersection	Control	Approach/ Movement	LOS Std.	AM Peak Hour	PM Peak Hour
1	SR 42 at Bethlehem Road	Signal	Overall	D	B (12.3)	B (11.0)
2	SR 42 at Market Place Boulevard	Signal	Overall	D	A (9.0)	B (12.4)

**Note: A roundabout at either of these locations is also projected to operate at an acceptable LOS*



Kimley»Horn	*Gardner 42* DRI #2775 Transportation Analysis	Projected 2020 No-Build Conditions	Figure 8 Page 20

6.3 Projected 2020 Build Conditions

The traffic associated with the proposed *Gardner 42* development was added to the Projected 2020 No-Build volumes. These volumes were then entered into *Synchro 9.0*, and capacity analyses were performed.

The intersection laneage and traffic volumes used for the Projected 2020 Build conditions are shown in **Figure 9**. The results of the capacity analyses for the Projected 2020 Build conditions are shown in **Table 10**. Detailed *Synchro* analysis reports are available upon request.

Table 10: Projected 2020 No-Build Level-of-Service Summary
LOS (delay in seconds)

#	Intersection	Control	Approach/ Movement	LOS Std.	AM Peak Hour	PM Peak Hour
1	SR 42 at Bethlehem Road	TWSC	NB Left	D	A (9.2)	A (9.4)
			SB Left	D	B (11.0)	A (8.9)
			EB	E	F (318.6)*	F (331.4)*
			WB	E	E (42.1)	E (46.5)
2	SR 42 at Market Place Boulevard	TWSC	NB Left	D	A (8.0)	A (9.2)
			EB	D/E	F (52.3)*	F (283.0)*
3	SR 42 at Bill Gardner Parkway	Signal	Overall	D	D (48.6)	D (54.9)
4	Bill Gardner Parkway at Tanger Boulevard / Market Place Boulevard	Signal	Overall	D	D (54.6)	D (46.0)
5	Bill Gardner Parkway at I-75 NB Ramps	Signal	Overall	D	A (6.0)	A (9.9)
6	Bill Gardner Parkway at I-75 SB Ramps	Signal	Overall	D	C (26.5)	D (45.1)
7	SR 42 at Proposed Driveway #1	TWSC	NB Left	D	B (10.3)	B (10.5)
			EB	D	C (21.4)	D (29.8)
8	SR 42 at Proposed Driveway #2	TWSC	NB Left	D	B (10.5)	B (11.7)
			EB	D	C (21.0)	D (29.5)

**Note: It is not uncommon for vehicles at a side-street stop approach to experience significant delay when turning onto a major roadway*

As shown in **Table 10**, all but two (2) study intersections are projected to operate at or above their acceptable level-of-service standard during the AM and PM peak hours for the Projected 2020 No-Build conditions. The eastbound approach of the unsignalized intersection of SR 42 at Bethlehem Road (Intersection #1) is projected to continue to operate at LOS F during both the AM and PM peak hours. Additionally, the eastbound approach of the unsignalized intersection of SR 42 at Market Place Boulevard (Intersection #2) is projected to operate at LOS E and LOS F during the AM and PM peak hours, respectively

With the improvements recommended in the Projected 2020 No-Build conditions, the intersections of SR 42 at Bethlehem Road (Intersection #1) and SR 42 at Market Place Boulevard (Intersection #2) are projected to operate at acceptable overall level-of-service standard during the AM and PM peak hours.

The results of the capacity analysis for the Projected 2020 Build Improved conditions is shown in **Table 11**.

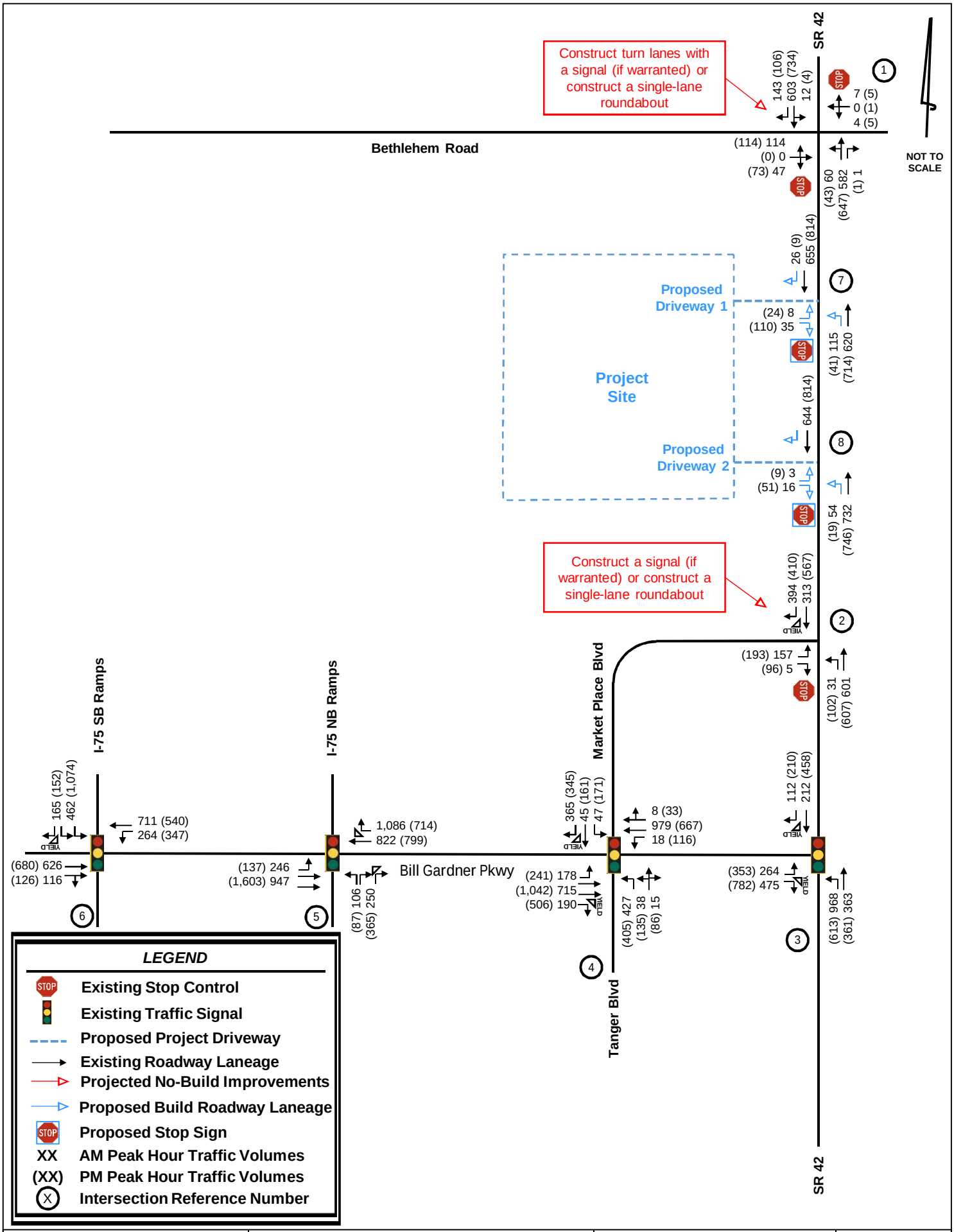
Table 11: Projected 2020 Build Improved Level-of-Service Summary *LOS (delay in seconds)*						
#	**Intersection**	**Control**	**Approach/ Movement**	**LOS Std.**	**AM Peak Hour**	**PM Peak Hour**
1	SR 42 at Bethlehem Road	Signal	Overall	D	B (12.6)	B (11.1)
2	SR 42 at Market Place Boulevard	Signal	Overall	D	B (11.0)	B (12.9)

**Note: A roundabout at either of these locations is also projected to operate at an acceptable LOS*

In addition to the above system improvements to serve the background road network traffic, the following site-access improvements are recommended to serve the traffic associated with the *Gardner 42* development:

The following site-access improvements are recommended to serve the traffic associated with the *Gardner 42* development:

- Intersection #7: SR 42 at Proposed Driveway 1
  - Along SR 42, construct one (1) northbound left-turn lane with 310 feet of storage and 100 feet of taper per GDOT minimum design requirements for a 55 MPH road.
  - Along SR 42, construct one (1) southbound right-turn lane with 250 feet of storage and 100 feet of taper per GDOT minimum design requirements for a 55 MPH road.
  - On the site, construct one (1) eastbound left-turn lane and one (1) eastbound right-turn lane exiting the site onto SR 42 and one (1) ingress lane entering the site.
- Intersection #8: SR 42 at Proposed Driveway 2
  - Along SR 42, construct one (1) northbound left-turn lane with 310 feet of storage and 100 feet of taper per GDOT minimum design requirements for a 55 MPH road.
  - Along SR 42, construct one (1) southbound right-turn lane with 250 feet of storage and 100 feet of taper per GDOT minimum design requirements for a 55 MPH road.
  - On the site, construct one (1) eastbound left-turn lane and one (1) eastbound right-turn lane exiting the site onto SR 42 and one (1) ingress lane entering the site.



Kimley»Horn	*Gardner 42* **DRI #2775** **Transportation Analysis**	**Projected 2020 Build Conditions**	**Figure 9** **Page 23**

7.0 INGRESS/EGRESS ANALYSIS

Vehicular access to the proposed *Gardner 42* development is proposed at two (2) locations. The site driveway location is discussed in *Section 1.3*.

The proposed site driveways provide vehicular access to the entire development. Internal private roadways throughout the site provide access throughout the project site.

Capacity analyses were performed for the proposed site driveway intersections 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 2020 Build conditions, the proposed site driveway intersection is anticipated to operate at an acceptable level-of-service.

8.0 IDENTIFICATION OF PROGRAMMED PROJECTS

According to ARC's Transportation Improvement Program, the Regional Transportation Plan (Atlanta Region's Plan), GDOT's construction work programs, City of Locust Grove'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 12** below.

Table 12: Programmed Improvements

#	Year	Project ID	Project Description
1	2030	HE-126B	Widen the section of Bill Gardner Parkway from Lester Mill Road to I-75 southbound from two lanes to six lanes
2	2040	AR-955	New I-75 interchange at Bethlehem Road
3	2030	AR-318	I-75 Commercial Vehicle Lanes from I-475 to SR 155

Fact sheets for projects can be found in **Appendix F**.

9.0 INTERNAL CIRCULATION ANALYSIS

Internal roadways throughout the site provide vehicular access to all buildings and parking on the site. The proposed site driveway will provide access to buildings on the site. A detailed copy of the proposed site plan with internal site roadways is provided in **Appendix C** and a full-sized site plan is attached to the report.

Site Photos

Kimley»Horn
11720 Amber Park Drive
Suite 600
Alpharetta, GA 30009

Scannell Properties

Photograph Sheet

KHA Job No.: 019039016
KHA Rep.: HDF
Date: February 12th, 2018
Page: 1 of 3

Site Name: Gardner 42 DRI #2775

Photo No. 1

Comments:
Looking east from Proposed Site Driveway #1

Photo No. 2

Comments:
Looking north from Proposed Site Driveway #1

Kimley»Horn
11720 Amber Park Drive
Suite 600
Alpharetta, GA 30009

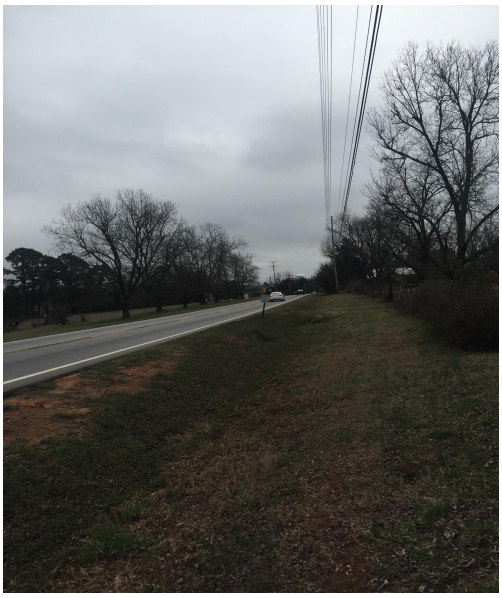
Scannell Properties

Photograph Sheet

KHA Job No.: 019039016
KHA Rep.: HDF
Date: February 12th, 2018
Page: 2 of 3

Site Name: Gardner 42 DRI #2775

Photo No. 3



Comments:
Looking south from Proposed Site Driveway #1

Photo No. 4

Comments:
Lookingeast from Proposed Site Driveway #2

Kimley»Horn
11720 Amber Park Drive
Suite 600
Alpharetta, GA 30009

Scannell Properties

Photograph Sheet

KHA Job No.: 019039016
KHA Rep.: HDF
Date: February 12th, 2018

Site Name: Gardner 42 DRI #2775

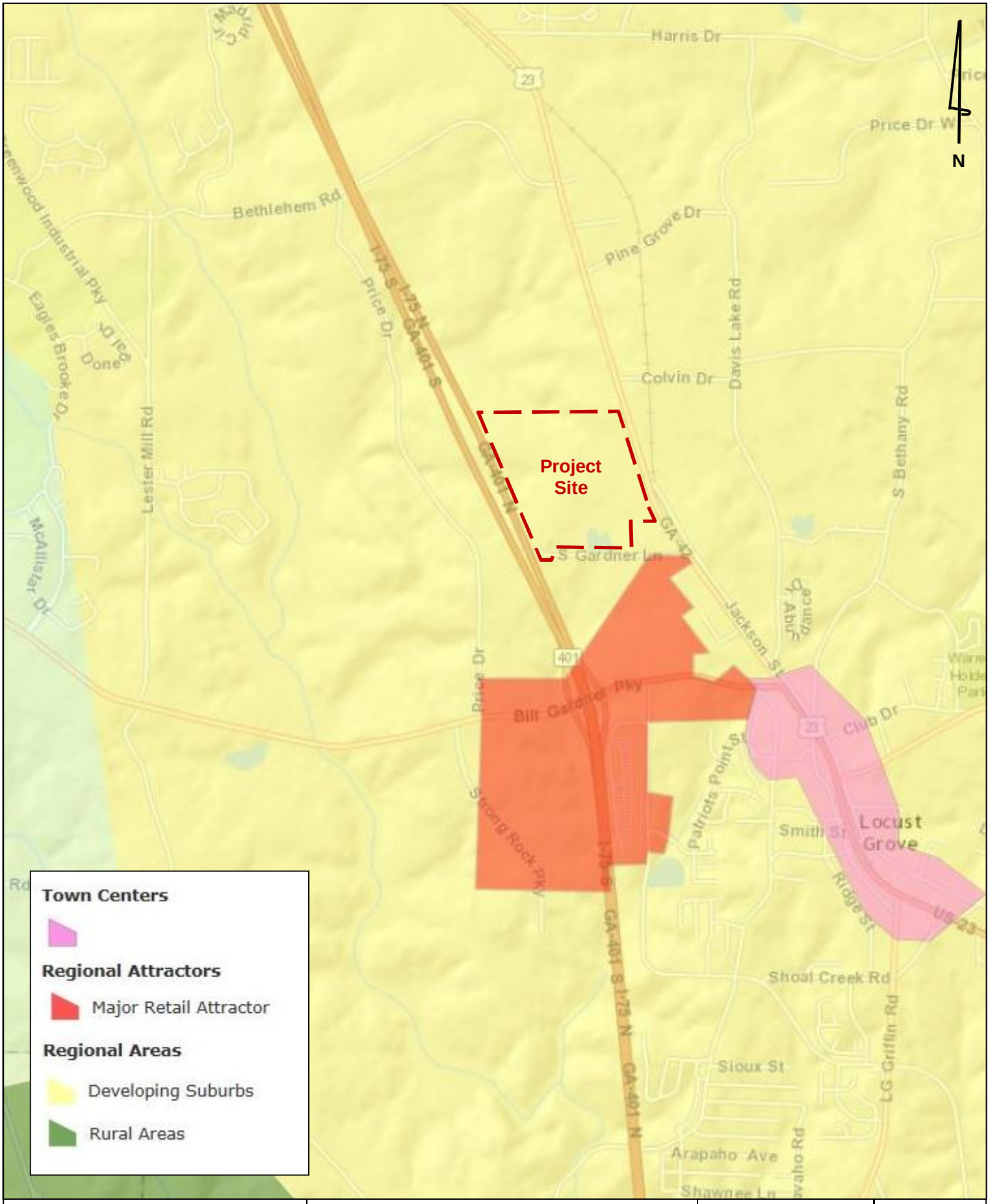
Photo No. 5

Comments:
Looking north from Proposed Site Driveway #2

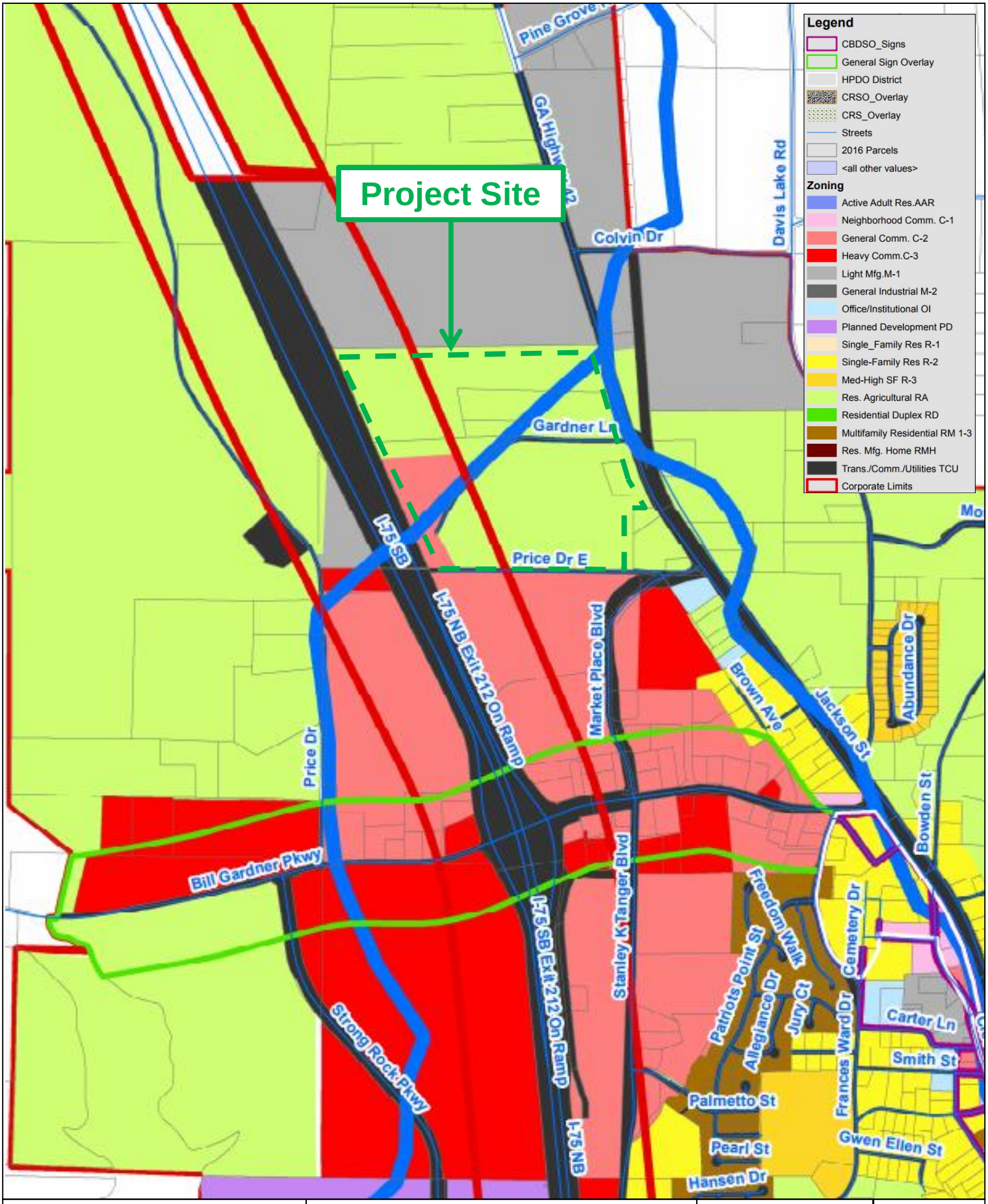
Photo No. 6

Comments:
Looking south from Proposed Site Driveway #2

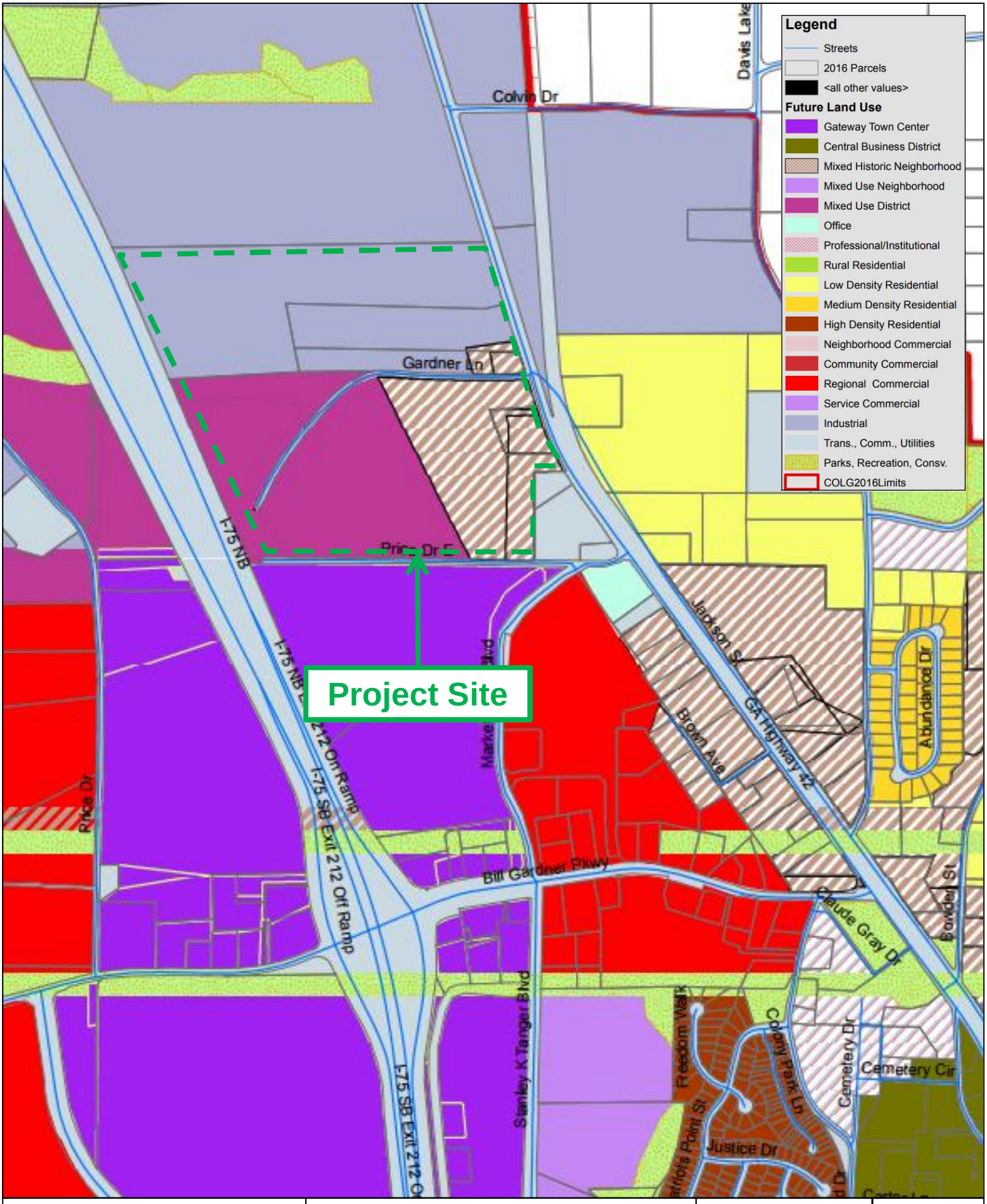
Land Use and Zoning Maps



Kimley»Horn	*Gardner 42* *DRI #2775* *Transportation Analysis*	**ARC Unified Growth Policy Map**	**Appendix B**

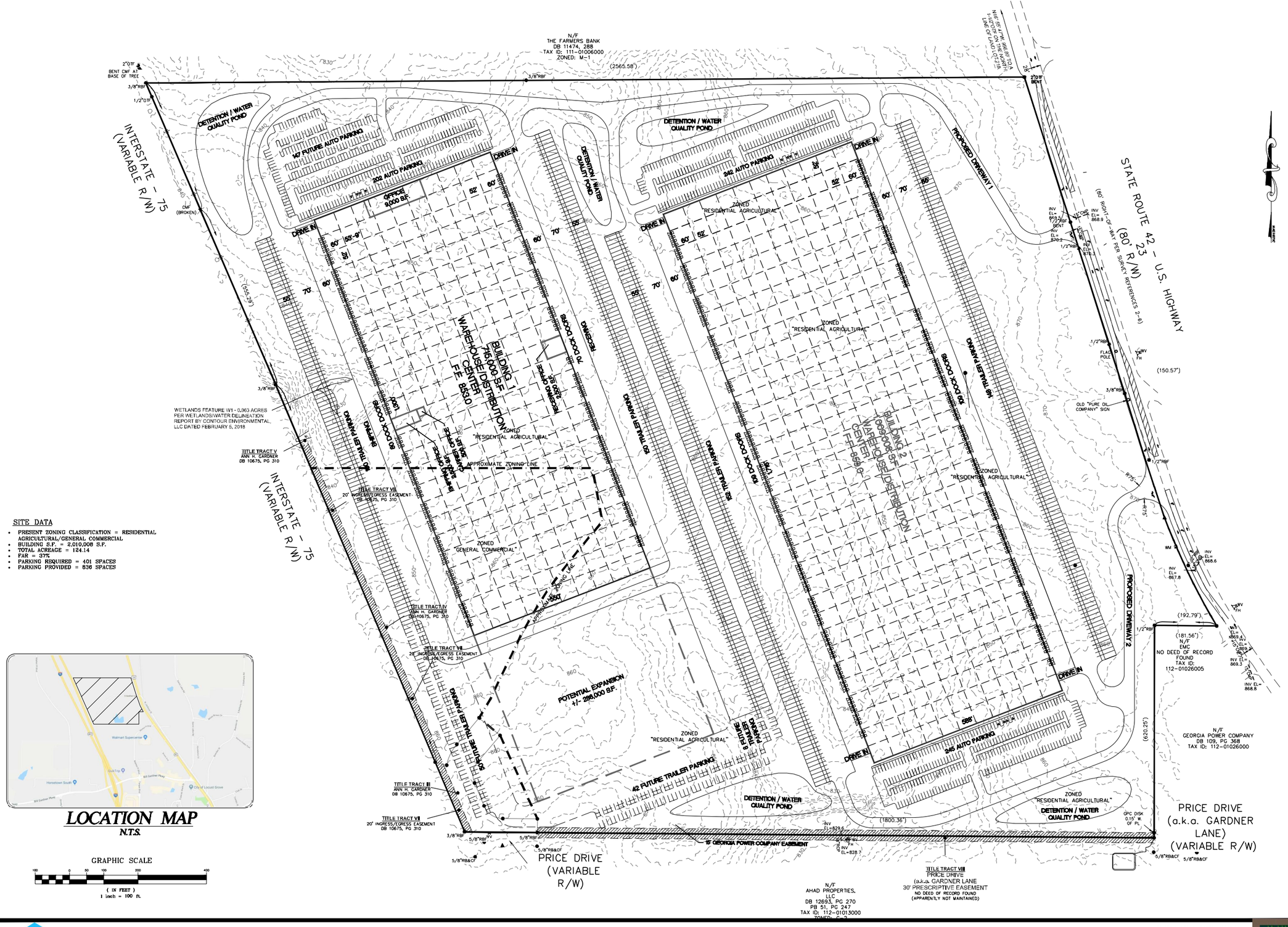


Kimley»Horn	*Gardner 42* *DRI #2775* *Transportation Analysis*	**Current Zoning Map of Locust Grove, GA**	**Appendix B**



Kimley»Horn	*Gardner 42* *DRI #2775* *Transportation Analysis*	**Future Land Use Map of Locust Grove, GA**	**Appendix B**

Proposed Site Plan



SITE DATA

- PRESENT ZONING CLASSIFICATION = RESIDENTIAL AGRICULTURAL/GENERAL COMMERCIAL
- BUILDING S.F. = 2,010,008 S.F.
- TOTAL ACREAGE = 124.14
- FAR = 37%
- PARKING REQUIRED = 401 SPACES
- PARKING PROVIDED = 836 SPACES

LOCATION MAP
N.T.S.

GRAPHIC SCALE

100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

SCANNELL PROPERTIES

DEVELOPER
SCANNELL PROPERTIES
294 GROVE LANE EAST,
SUITE 140
WAYZATA, MN 55391

CONTACT: DANIEL MADRIGAL
(763) 331-8853

TRAFFIC ENGINEER
KIMLEY-HORN
11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GA 30009

CONTACT: JOHN WALKER, P.E.
(470) 273-3181

DRI PLAN

SCANNELL PROPERTIES
LOCUST GROVE, GA

DRI #2775 – GARDNER 42 SITE, FEBRUARY 23, 2018

REVISIONS	
2/23/18	PULL DRI PLAN

CIVIL ENGINEER
EBERLY & ASSOCIATES, INC.
1852 CENTURY PLACE, SUITE 202
ATLANTA, GEORGIA 30345

CONTACT: WILLIAM GREER, P.E.
(770) 452-7849

TEL 770.452.7849 FAX 770.452.0086
1852 CENTURY PLACE, SUITE 202
ATLANTA, GEORGIA 30345
WWW.EBERLY.NET
LAND PLANNING
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE

E&A EBERLY & ASSOCIATES

Trip Generation Analysis

Trip Generation Analysis (10th Ed.)
Gardner 42 DRI #2775
Locust Grove, GA

Land Use	Intensity	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Proposed Site Traffic								
150 Warehousing	2,010,008 s.f.	3,222	267	206	61	269	73	196
Gross Trips		**3,222**	**267**	**206**	**61**	**269**	**73**	**196**
Truck Trips (25% Warehousing Trips)		806	67	52	15	67	18	49
Mixed-Use Reductions		*0*				*0*	*0*	*0*
Alternative Mode Reductions		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Adjusted Residential Trips		806	67	52	15	67	18	49
Car Trips (75% Warehousing Trips)		2,416	200	154	46	202	55	147
Mixed-Use Reductions		*0*				*0*	*0*	*0*
Alternative Mode Reductions		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Adjusted Hotel Trips		2,416	200	154	46	202	55	147
Mixed-Use Reductions - TOTAL		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Alternative Mode Reductions - TOTAL		*0*	*0*	*0*	*0*	*0*	*0*	*0*
New Trips		**3,222**	**267**	**206**	**61**	**269**	**73**	**196**
Driveway Volumes		**3,222**	**267**	**206**	**61**	**269**	**73**	**196**

k:\alp_tpto\019139016 gardner 42 traffic - locust grove, ga - nov 2017\dri phase ii - traffic study\analysis\[gardner 42_analysis.xls]trip generation

APPENDIX E

Intersection Volume Worksheets

INTERSECTION VOLUME DEVELOPMENT

Intersection #1: SR 42 @ Bethlehem Road
AM PEAK HOUR

Description	SR 42 Northbound			SR 42 Southbound			Bethlehem Road Eastbound			Bethlehem Road Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2018 Traffic Volumes	58	549	1	12	545	137	110	0	45	4	0	7
Pedestrians												
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles	0	18	0	12	9	0	1	0	1	4	0	7
Heavy Vehicle %	2%	3%	2%	100%	2%	2%	2%	0%	2%	100%	0%	100%
Peak Hour Factor		0.91			0.91			0.91			0.91	
Adjustment												
Adjusted 2018 Volumes	58	549	1	12	545	137	110	0	45	4	0	7
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040
Locust Grove Phase I Warehouse (Truck Trips)												
Locust Grove Phase I Warehouse (Car Trips)												
2020 Background Traffic	60	571	1	12	567	143	114	0	47	4	0	7
2020 No-Build Heavy Vehicle %	2%	3%	2%	100%	2%	2%	2%	0%	2%	100%	0%	100%
Project Trips (Future Development Only)												
Trip Distribution IN					10%							
Trip Distribution OUT		10%										
Truck Trips	0	2	0	0	5	0	0	0	0	0	0	0
Trip Distribution IN					20%							
Trip Distribution OUT		20%										
Car Trips	0	9	0	0	31	0	0	0	0	0	0	0
Total Project Trips	0	11	0	0	36	0	0	0	0	0	0	0
2020 Buildout Total	60	582	1	12	603	143	114	0	47	4	0	7
2020 Build Heavy Vehicle %	2%	4%	2%	100%	3%	2%	2%	0%	2%	100%	0%	100%

PM PEAK HOUR

Description	SR 42 Northbound			SR 42 Southbound			Bethlehem Road Eastbound			Bethlehem Road Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2018 Traffic Volumes	41	589	1	4	693	102	110	0	70	5	1	5
Pedestrians												
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles	0	8	1	0	15	1	1	0	0	2	0	3
Heavy Vehicle %	2%	2%	100%	2%	2%	2%	2%	0%	2%	40%	2%	60%
Peak Hour Factor		0.97			0.97			0.97			0.97	
Adjustment												
Adjusted 2018 Volumes	41	589	1	4	693	102	110	0	70	5	1	5
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040
Locust Grove Phase I Warehouse (Truck Trips)												
Locust Grove Phase I Warehouse (Car Trips)												
2020 Background Traffic	43	613	1	4	721	106	114	0	73	5	1	5
2020 No-Build Heavy Vehicle %	2%	2%	100%	2%	2%	2%	2%	0%	2%	42%	2%	62%
Project Trips (Future Development Only)												
Trip Distribution IN					10%							
Trip Distribution OUT		10%										
Truck Trips	0	5	0	0	2	0	0	0	0	0	0	0
Trip Distribution IN					20%							
Trip Distribution OUT		20%										
Car Trips	0	29	0	0	11	0	0	0	0	0	0	0
Total Project Trips	0	34	0	0	13	0	0	0	0	0	0	0
2020 Buildout Total	43	647	1	4	734	106	114	0	73	5	1	5
2020 Build Heavy Vehicle %	2%	3%	100%	2%	2%	2%	2%	0%	2%	42%	2%	62%

INTERSECTION VOLUME DEVELOPMENT

Intersection #2: SR 42 @ Market Place Boulevard
AM PEAK HOUR

Description	SR 42 Northbound			SR 42 Southbound			Market Place Boulevard Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2017 Traffic Volumes	29	446			272	347	109		5			
Pedestrians												
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles	0	23			11	10	4		0			
Heavy Vehicle %	2%	5%	0%	0%	4%	3%	4%	0%	2%	0%	0%	0%
Peak Hour Factor		0.92			0.92			0.92			0.92	
Adjustment												
Adjusted 2017 Volumes	29	446	0	0	272	347	109	0	5	0	0	0
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061
Locust Grove Phase I Warehouse (Truck Trips)												
Locust Grove Phase I Warehouse (Car Trips)												
2020 Background Traffic	31	473	0	0	289	368	116	0	5	0	0	0
2020 No-Build Heavy Vehicle %	2%	5%	0%	0%	4%	3%	4%	0%	2%	0%	0%	0%
Project Trips (Future Development Only)												
Trip Distribution IN		70%					20%					
Trip Distribution OUT					40%	50%						
Truck Trips	0	36	0	0	6	8	10	0	0	0	0	0
Trip Distribution IN		60%					20%					
Trip Distribution OUT					40%	40%						
Car Trips	0	92	0	0	18	18	31	0	0	0	0	0
Total Project Trips	0	128	0	0	24	26	41	0	0	0	0	0
2020 Buildout Total	31	601	0	0	313	394	157	0	5	0	0	0
2020 Build Heavy Vehicle %	2%	10%	0%	0%	6%	5%	9%	0%	2%	0%	0%	0%

PM PEAK HOUR

Description	SR 42 Northbound			SR 42 Southbound			Market Place Boulevard Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2017 Traffic Volumes	96	529			460	307	168		90			
Pedestrians												
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles	1	7			10	0	1		0	0	0	
Heavy Vehicle %	2%	2%	0%	0%	2%	2%	2%	0%	2%	0%	0%	0%
Peak Hour Factor		0.93			0.93			0.93			0.93	
Adjustment												
Adjusted 2017 Volumes	96	529	0	0	460	307	168	0	90	0	0	0
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061
Locust Grove Phase I Warehouse (Truck Trips)												
Locust Grove Phase I Warehouse (Car Trips)												
2020 Background Traffic	102	561	0	0	488	326	178	0	96	0	0	0
2020 No-Build Heavy Vehicle %	2%	2%	0%	0%	2%	2%	2%	0%	2%	0%	0%	0%
Project Trips (Future Development Only)												
Trip Distribution IN		70%					20%					
Trip Distribution OUT					40%	50%						
Truck Trips	0	13	0	0	20	25	4	0	0	0	0	0
Trip Distribution IN		60%					20%					
Trip Distribution OUT					40%	40%						
Car Trips	0	33	0	0	59	59	11	0	0	0	0	0
Total Project Trips	0	46	0	0	79	84	15	0	0	0	0	0
2020 Buildout Total	102	607	0	0	567	410	193	0	96	0	0	0
2020 Build Heavy Vehicle %	2%	4%	0%	0%	5%	8%	4%	0%	2%	0%	0%	0%

INTERSECTION VOLUME DEVELOPMENT

Intersection #3: SR 42 @ Bill Gardner Parkway
AM PEAK HOUR

Description	SR 42 Northbound			SR 42 Southbound			Bill Gardner Parkway Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2017 Traffic Volumes	912	325			194	88	144		448			
Pedestrians												
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles	19	11			10	7	16		15			
Heavy Vehicle %	2%	3%	0%	0%	5%	8%	11%	0%	3%	0%	0%	0%
Peak Hour Factor		0.97			0.97			0.97			0.97	
Adjustment												
Adjusted 2017 Volumes	912	325	0	0	194	88	144	0	448	0	0	0
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061
Locust Grove Phase I Warehouse (Truck Trips)												
Locust Grove Phase I Warehouse (Car Trips)												
2020 Background Traffic	968	345	0	0	206	93	153	0	475	0	0	0
2020 No-Build Heavy Vehicle %	2%	3%	0%	0%	5%	8%	11%	0%	3%	0%	0%	0%
Project Trips (Future Development Only)												
Trip Distribution IN		5%					65%					
Trip Distribution OUT					5%	35%						
Truck Trips	0	3	0	0	1	5	34	0	0	0	0	0
Trip Distribution IN		10%					50%					
Trip Distribution OUT					10%	30%						
Car Trips	0	15	0	0	5	14	77	0	0	0	0	0
Total Project Trips	0	18	0	0	6	19	111	0	0	0	0	0
2020 Buildout Total	968	363	0	0	212	112	264	0	475	0	0	0
2020 Build Heavy Vehicle %	2%	4%	0%	0%	5%	11%	19%	0%	3%	0%	0%	0%

PM PEAK HOUR

Description	SR 42 Northbound			SR 42 Southbound			Bill Gardner Parkway Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2017 Traffic Volumes	578	334			416	140	295		737			
Pedestrians												
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles	19	9			5	5	6		7			
Heavy Vehicle %	3%	3%	0%	0%	2%	4%	2%	0%	2%	0%	0%	0%
Peak Hour Factor		0.93			0.93			0.93			0.93	
Adjustment												
Adjusted 2017 Volumes	578	334	0	0	416	140	295	0	737	0	0	0
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061
Locust Grove Phase I Warehouse (Truck Trips)												
Locust Grove Phase I Warehouse (Car Trips)												
2020 Background Traffic	613	354	0	0	441	149	313	0	782	0	0	0
2020 No-Build Heavy Vehicle %	3%	3%	0%	0%	2%	4%	2%	0%	2%	0%	0%	0%
Project Trips (Future Development Only)												
Trip Distribution IN		5%					65%					
Trip Distribution OUT					5%	35%						
Truck Trips	0	1	0	0	2	17	12	0	0	0	0	0
Trip Distribution IN		10%					50%					
Trip Distribution OUT					10%	30%						
Car Trips	0	6	0	0	15	44	28	0	0	0	0	0
Total Project Trips	0	7	0	0	17	61	40	0	0	0	0	0
2020 Buildout Total	613	361	0	0	458	210	353	0	782	0	0	0
2020 Build Heavy Vehicle %	3%	3%	0%	0%	2%	11%	5%	0%	2%	0%	0%	0%

INTERSECTION VOLUME DEVELOPMENT

Intersection #4: Bill Gardner Parkway @ Tanger Blvd / Market Place Blvd

AM PEAK HOUR

Description	Tanger Blvd Northbound			Market Place Blvd Southbound			Bill Gardner Parkway Eastbound			Bill Gardner Parkway Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2017 Traffic Volumes	402	36	14	44	42	319	129	569	179	17	905	8
Pedestrians												
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles	7	2	2	3	1	6	7	27	4	0	17	0
Heavy Vehicle %	2%	6%	14%	7%	2%	2%	5%	5%	2%	2%	2%	2%
Peak Hour Factor		0.93			0.93			0.93			0.93	
Adjustment												
Adjusted 2017 Volumes	402	36	14	44	42	319	129	569	179	17	905	8
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061
Locust Grove Phase I Warehouse (Truck Trips)												
Locust Grove Phase I Warehouse (Car Trips)												
2020 Background Traffic	427	38	15	47	45	339	137	604	190	18	960	8
2020 No-Build Heavy Vehicle %	2%	6%	14%	7%	2%	2%	5%	5%	2%	2%	2%	2%
Project Trips (Future Development Only)												
Trip Distribution IN							20%	65%				
Trip Distribution OUT						50%					35%	
Truck Trips	0	0	0	0	0	8	10	34	0	0	5	0
Trip Distribution IN							20%	50%				
Trip Distribution OUT						40%					30%	
Car Trips	0	0	0	0	0	18	31	77	0	0	14	0
Total Project Trips	0	0	0	0	0	26	41	111	0	0	19	0
2020 Buildout Total	427	38	15	47	45	365	178	715	190	18	979	8
2020 Build Heavy Vehicle %	2%	6%	14%	7%	2%	4%	10%	9%	2%	2%	2%	2%

PM PEAK HOUR

Description	Tanger Blvd Northbound			Market Place Blvd Southbound			Bill Gardner Parkway Eastbound			Bill Gardner Parkway Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2017 Traffic Volumes	382	127	81	161	152	246	213	944	477	109	571	31
Pedestrians												
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles	1	0	1	1	2	4	3	15	1	1	17	0
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%
Peak Hour Factor		0.98			0.98			0.98			0.98	
Adjustment												
Adjusted 2017 Volumes	382	127	81	161	152	246	213	944	477	109	571	31
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061
Locust Grove Phase I Warehouse (Truck Trips)												
Locust Grove Phase I Warehouse (Car Trips)												
2020 Background Traffic	405	135	86	171	161	261	226	1,002	506	116	606	33
2020 No-Build Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%
Project Trips (Future Development Only)												
Trip Distribution IN							20%	65%				
Trip Distribution OUT						50%					35%	
Truck Trips	0	0	0	0	0	25	4	12	0	0	17	0
Trip Distribution IN							20%	50%				
Trip Distribution OUT						40%					30%	
Car Trips	0	0	0	0	0	59	11	28	0	0	44	0
Total Project Trips	0	0	0	0	0	84	15	40	0	0	61	0
2020 Buildout Total	405	135	86	171	161	345	241	1,042	506	116	667	33
2020 Build Heavy Vehicle %	2%	2%	2%	2%	2%	9%	4%	3%	2%	2%	5%	2%

INTERSECTION VOLUME DEVELOPMENT

Intersection #5: Bill Gardner Parkway @ I-75 NB Ramp
AM PEAK HOUR

Description	I-75 NB Ramp Northbound Left	Through	Right	Southbound Left	Through	Right	Bill Gardner Parkway Eastbound Left	Through	Right	Bill Gardner Parkway Westbound Left	Through	Right
Observed 2017 Traffic Volumes	81		189				216	791			747	999
Pedestrians												
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles	3		7				2	17			8	8
Heavy Vehicle %	4%	0%	4%	0%	0%	0%	2%	2%	0%	0%	2%	2%
Peak Hour Factor		0.95			0.95			0.95			0.95	
Adjustment												
Adjusted 2017 Volumes	81	0	189	0	0	0	216	791	0	0	747	999
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061
Locust Grove Phase I Warehouse (Truck Trips)	8						5	1			1	
Locust Grove Phase I Warehouse (Car Trips)	12						12	4			9	
2020 Background Traffic	106	0	201	0	0	0	246	844	0	0	803	1,060
2020 No-Build Heavy Vehicle %	11%	0%	4%	0%	0%	0%	4%	2%	0%	0%	2%	2%
Project Trips (Future Development Only)												
Trip Distribution IN			35%					50%				
Trip Distribution OUT											35%	50%
Truck Trips	0	0	18	0	0	0	0	26	0	0	5	8
Trip Distribution IN			20%					50%				
Trip Distribution OUT											30%	40%
Car Trips	0	0	31	0	0	0	0	77	0	0	14	18
Total Project Trips	0	0	49	0	0	0	0	103	0	0	19	26
2020 Buildout Total	106	0	250	0	0	0	246	947	0	0	822	1,086
2020 Build Heavy Vehicle %	11%	0%	10%	0%	0%	0%	4%	5%	0%	0%	3%	3%

PM PEAK HOUR

Description	I-75 NB Ramp Northbound Left	Through	Right	Southbound Left	Through	Right	Bill Gardner Parkway Eastbound Left	Through	Right	Bill Gardner Parkway Westbound Left	Through	Right
Observed 2017 Traffic Volumes	73		328				90	1,465			691	594
Pedestrians												
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles	5		7				0	2			12	7
Heavy Vehicle %	7%	0%	2%	0%	0%	0%	2%	2%	0%	0%	2%	2%
Peak Hour Factor		0.96			0.96			0.96			0.96	
Adjustment												
Adjusted 2017 Volumes	73	0	328	0	0	0	90	1465	0	0	691	594
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061
Locust Grove Phase I Warehouse (Truck Trips)	4						11	1			1	
Locust Grove Phase I Warehouse (Car Trips)	6						30	10			4	
2020 Background Traffic	87	0	348	0	0	0	137	1,566	0	0	738	630
2020 No-Build Heavy Vehicle %	11%	0%	2%	0%	0%	0%	9%	2%	0%	0%	2%	2%
Project Trips (Future Development Only)												
Trip Distribution IN			35%					50%				
Trip Distribution OUT											35%	50%
Truck Trips	0	0	6	0	0	0	0	9	0	0	17	25
Trip Distribution IN			20%					50%				
Trip Distribution OUT											30%	40%
Car Trips	0	0	11	0	0	0	0	28	0	0	44	59
Total Project Trips	0	0	17	0	0	0	0	37	0	0	61	84
2020 Buildout Total	87	0	365	0	0	0	137	1,603	0	0	799	714
2020 Build Heavy Vehicle %	11%	0%	4%	0%	0%	0%	9%	3%	0%	0%	4%	5%

INTERSECTION VOLUME DEVELOPMENT

Intersection #6: Bill Gardner Parkway @ I-75 SB Ramp
AM PEAK HOUR

Description	Northbound			I-75 SB Ramp Southbound			Bill Gardner Parkway Eastbound			Bill Gardner Parkway Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2017 Traffic Volumes				352		121		556	101	236	637	
Pedestrians												
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles				9		1		7	1	8	5	
Heavy Vehicle %	0%	0%	0%	3%	0%	2%	0%	2%	2%	3%	2%	0%
Peak Hour Factor		0.87			0.87			0.87			0.87	
Adjustment												
Adjusted 2017 Volumes	0	0	0	352	0	121	0	556	101	236	637	0
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061
Locust Grove Phase I Warehouse (Truck Trips)						10		5	4		9	
Locust Grove Phase I Warehouse (Car Trips)						27		16	5		21	
2020 Background Traffic	0	0	0	374	0	165	0	611	116	250	706	0
2020 No-Build Heavy Vehicle %	0%	0%	0%	3%	0%	8%	0%	3%	5%	3%	3%	0%
Project Trips (Future Development Only)												
Trip Distribution IN				50%								
Trip Distribution OUT										35%		
Truck Trips	0	0	0	26	0	0	0	0	0	5	0	0
Trip Distribution IN				40%				10%				
Trip Distribution OUT										20%	10%	
Car Trips	0	0	0	62	0	0	0	15	0	9	5	0
Total Project Trips	0	0	0	88	0	0	0	15	0	14	5	0
2020 Buildout Total	0	0	0	462	0	165	0	626	116	264	711	0
2020 Build Heavy Vehicle %	0%	0%	0%	8%	0%	8%	0%	3%	5%	5%	3%	0%

PM PEAK HOUR

Description	Northbound			I-75 SB Ramp Southbound			Bill Gardner Parkway Eastbound			Bill Gardner Parkway Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2017 Traffic Volumes				983		126		586	98	284	481	
Pedestrians												
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles				2		3		1	0	6	5	
Heavy Vehicle %	0%	0%	0%	2%	0%	2%	0%	2%	2%	2%	2%	0%
Peak Hour Factor		0.94			0.94			0.94			0.94	
Adjustment												
Adjusted 2017 Volumes	0	0	0	983	0	126	0	586	98	284	481	0
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061
Locust Grove Phase I Warehouse (Truck Trips)						5		12	9		5	
Locust Grove Phase I Warehouse (Car Trips)						13		40	13		10	
2020 Background Traffic	0	0	0	1,043	0	152	0	674	126	301	525	0
2020 No-Build Heavy Vehicle %	0%	0%	0%	2%	0%	5%	0%	4%	9%	2%	3%	0%
Project Trips (Future Development Only)												
Trip Distribution IN				50%								
Trip Distribution OUT										35%		
Truck Trips	0	0	0	9	0	0	0	0	0	17	0	0
Trip Distribution IN				40%				10%				
Trip Distribution OUT										20%	10%	
Car Trips	0	0	0	22	0	0	0	6	0	29	15	0
Total Project Trips	0	0	0	31	0	0	0	6	0	46	15	0
2020 Buildout Total	0	0	0	1,074	0	152	0	680	126	347	540	0
2020 Build Heavy Vehicle %	0%	0%	0%	3%	0%	5%	0%	4%	9%	7%	3%	0%

INTERSECTION VOLUME DEVELOPMENT

Intersection #7: SR 42 @ Proposed Driveway 1

AM PEAK HOUR

Description	SR 42 Northbound			SR 42 Southbound			Proposed Driveway 1 Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2017 Traffic Volumes		581			607							
Pedestrians												
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles		23			0							
Heavy Vehicle %	0%	4%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor		0.92			0.92			0.92			0.92	
Adjustment												
Adjusted 2017 Volumes	0	581	0	0	607	0	0	0	0	0	0	0
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061
Locust Grove Phase I Warehouse (Truck Trips)												
Locust Grove Phase I Warehouse (Car Trips)												
2020 Background Traffic	0	617	0	0	644	0	0	0	0	0	0	0
2020 No-Build Heavy Vehicle %	0%	4%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Project Trips (Future Development Only)												
Trip Distribution IN	45%				5%	5%						
Trip Distribution OUT		5%					5%		45%			
Truck Trips	23	1	0	0	3	3	1	0	7	0	0	0
Trip Distribution IN	60%				5%	15%						
Trip Distribution OUT		5%					15%		60%			
Car Trips	92	2	0	0	8	23	7	0	28	0	0	0
Total Project Trips	115	3	0	0	11	26	8	0	35	0	0	0
2020 Buildout Total	115	620	0	0	655	26	8	0	35	0	0	0
2020 Build Heavy Vehicle %	20%	4%	0%	0%	2%	12%	13%	0%	20%	0%	0%	0%

PM PEAK HOUR

Description	SR 42 Northbound			SR 42 Southbound			Proposed Driveway 1 Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2017 Traffic Volumes		664			767							
Pedestrians												
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles		8			0							
Heavy Vehicle %	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor		0.93			0.93			0.93			0.93	
Adjustment												
Adjusted 2017 Volumes	0	664	0	0	767	0	0	0	0	0	0	0
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061
Locust Grove Phase I Warehouse (Truck Trips)												
Locust Grove Phase I Warehouse (Car Trips)												
2020 Background Traffic	0	705	0	0	814	0	0	0	0	0	0	0
2020 No-Build Heavy Vehicle %	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Project Trips (Future Development Only)												
Trip Distribution IN	45%				5%	5%						
Trip Distribution OUT		5%					5%		45%			
Truck Trips	8	2	0	0	1	1	2	0	22	0	0	0
Trip Distribution IN	60%				5%	15%						
Trip Distribution OUT		5%					15%		60%			
Car Trips	33	7	0	0	3	8	22	0	88	0	0	0
Total Project Trips	41	9	0	0	4	9	24	0	110	0	0	0
2020 Buildout Total	41	714	0	0	818	9	24	0	110	0	0	0
2020 Build Heavy Vehicle %	20%	2%	0%	0%	2%	11%	8%	0%	20%	0%	0%	0%

INTERSECTION VOLUME DEVELOPMENT

Intersection #8: SR 42 @ Proposed Driveway 2
AM PEAK HOUR

Description	SR 42 Northbound			SR 42 Southbound			Proposed Driveway 2 Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2017 Traffic Volumes		581			607							
Pedestrians												
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles		23			0							
Heavy Vehicle %	0%	4%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor		0.92			0.92			0.92			0.92	
Adjustment												
Adjusted 2017 Volumes	0	581	0	0	607	0	0	0	0	0	0	0
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061
Locust Grove Phase I Warehouse (Truck Trips)												
Locust Grove Phase I Warehouse (Car Trips)												
2020 Background Traffic	0	617	0	0	644	0	0	0	0	0	0	0
2020 No-Build Heavy Vehicle %	0%	4%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Project Trips (Future Development Only)												
Trip Distribution IN	45%	45%				5%						
Trip Distribution OUT					45%		5%		45%			
Truck Trips	23	23	0	0	7	3	1	0	7	0	0	0
Trip Distribution IN	20%	60%				5%						
Trip Distribution OUT					60%		5%		20%			
Car Trips	31	92	0	0	28	8	2	0	9	0	0	0
Total Project Trips	54	115	0	0	35	11	3	0	16	0	0	0
2020 Buildout Total	54	732	0	0	679	11	3	0	16	0	0	0
2020 Build Heavy Vehicle %	43%	6%	0%	0%	3%	27%	33%	0%	44%	0%	0%	0%

PM PEAK HOUR

Description	SR 42 Northbound			SR 42 Southbound			Proposed Driveway 2 Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2017 Traffic Volumes		664			767							
Pedestrians												
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles		8			0							
Heavy Vehicle %	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor		0.93			0.93			0.93			0.93	
Adjustment												
Adjusted 2017 Volumes	0	664	0	0	767	0	0	0	0	0	0	0
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061
Locust Grove Phase I Warehouse (Truck Trips)												
Locust Grove Phase I Warehouse (Car Trips)												
2020 Background Traffic	0	705	0	0	814	0	0	0	0	0	0	0
2020 No-Build Heavy Vehicle %	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Project Trips (Future Development Only)												
Trip Distribution IN	45%	45%				5%						
Trip Distribution OUT					45%		5%		45%			
Truck Trips	8	8	0	0	22	1	2	0	22	0	0	0
Trip Distribution IN	20%	60%				5%						
Trip Distribution OUT					60%		5%		20%			
Car Trips	11	33	0	0	88	3	7	0	29	0	0	0
Total Project Trips	19	41	0	0	110	4	9	0	51	0	0	0
2020 Buildout Total	19	746	0	0	924	4	9	0	51	0	0	0
2020 Build Heavy Vehicle %	42%	3%	0%	0%	4%	25%	22%	0%	43%	0%	0%	0%

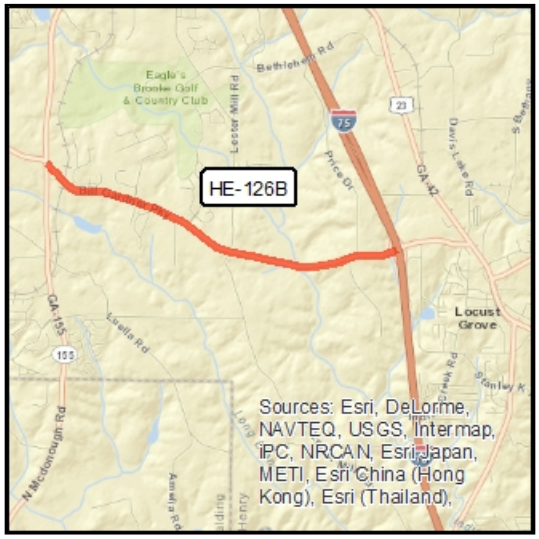
APPENDIX F

Future Roadway Project Fact Sheets

HE-126B

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

Short Title	BILL GARDNER PARKWAY WIDENING AT SR 155 TO LESTER MILL ROAD (4 LANES) AND FROM LESTER MILL ROAD TO I-75 SOUTH (6 LANES)
GDOT Project No.	0000562
Federal ID No.	
Status	Long Range
Service Type	Roadway / General Purpose Capacity
Sponsor	Henry County
Jurisdiction	Henry County
Analysis Level	In the Region's Air Quality Conformity Analysis



Existing Thru Lane	2	**LCI**		**Network Year**	2030
Planned Thru Lane	6-Apr	**Flex**		**Corridor Length**	3.4 miles

Detailed Description and Justification

Widening of the section from SR 155 to Lester Mill Road from 2 to 4 lanes and the section from Lester Mill Road to I-75 South from 2 to 6 lanes.

Phase Status & Funding Information		Status	FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
					FEDERAL	STATE	BONDS	LOCAL/PRIVATE
ALL	General Federal Aid 2024-2040		LR 2024-2030	**$18,000,000**	$14,400,000	$0,000	$0,000	$3,600,000
				$18,000,000	**$14,400,000**	**$0,000**	**$0,000**	**$3,600,000**

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

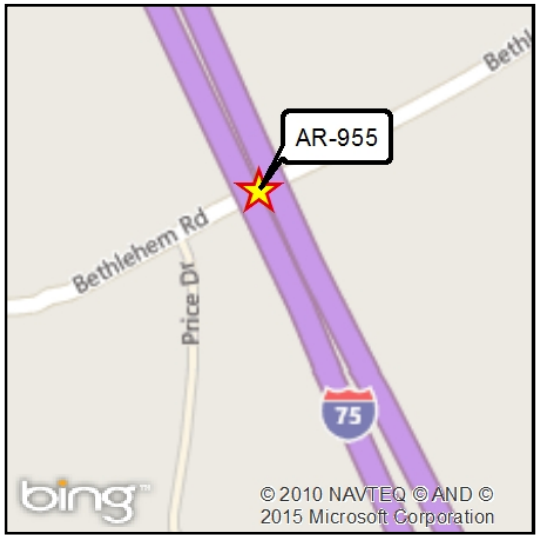
? For additional information about this project, please call (404) 463-3100 or email transportation@atlantaregional.com.

Report Generated: 09/19/2017

AR-955

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

Short Title	I-75 SOUTH - NEW INTERCHANGE AT BETHLEHEM ROAD
GDOT Project No.	TBD
Federal ID No.	
Status	Long Range
Service Type	Roadway / Interchange Capacity
Sponsor	GDOT
Jurisdiction	Henry County
Analysis Level	In the Region's Air Quality Conformity Analysis



Existing Thru Lane	N/A	**LCI**		**Network Year**	2040
Planned Thru Lane	N/A	**Flex**		**Corridor Length**	N/A miles

Detailed Description and Justification

New I-75 interchange intended to relieve freight congestion along the SR 155 and SR 42 industrial/distribution corridors.

Phase Status & Funding Information		Status	FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
					FEDERAL	STATE	BONDS	LOCAL/PRIVATE
ALL	General Federal Aid 2024-2040		LR 2031-2040	**$25,000,000**	$20,000,000	$5,000,000	$0,000	$0,000
				$25,000,000	**$20,000,000**	**$5,000,000**	**$0,000**	**$0,000**

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

AR-318

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

Short Title	I-75 COMMERCIAL VEHICLE LANES (NORTHBOUND DIRECTION ONLY) FROM I-475 TO SR 155
GDOT Project No.	0014203
Federal ID No.	
Status	Programmed
Service Type	Roadway / General Purpose Capacity
Sponsor	GDOT
Jurisdiction	Henry County
Analysis Level	In the Region's Air Quality Conformity Analysis

Existing Thru Lane	0	**LCI**		**Network Year**	2030
Planned Thru Lane	2	**Flex**		**Corridor Length**	0 miles

Detailed Description and Justification

This project is part of the Governor's Major Mobility Investment Program. It proposes to add two new barrier-separated lanes to I-75 in the northbound direction, designated for commercial vehicles only. Tolling is not anticipated and the exact northern terminus will be determined during project development. I-75 between Atlanta and Macon serves as an important freight and motorist corridor that supports critical coastal port truck traffic and travelers from southern Georgia and Florida. As the percentage of truck traffic continues to grow, the increase in truck volume can and will accentuate operational differences, leading to less efficient traffic streams and increased delays. For example, compared to cars, trucks cannot accelerate as quickly on long grades. Providing a dedicated system of lanes separated from existing general purpose lanes is expected to enhance mobility both traffic streams.

Phase Status & Funding Information		Status	FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
					FEDERAL	STATE	BONDS	LOCAL/PRIVATE
PE	Transportation Funding Act (HB 170)	AUTH	2017	**$977,865**	~~$0,000~~	~~$977,865~~	~~$0,000~~	~~$0,000~~
PE	National Highway Performance Program (NHPP)		2021	**$1,174,215**	$939,372	$234,843	$0,000	$0,000
PE	National Highway Performance Program (NHPP)		2022	**$3,430,363**	$2,744,290	$686,073	$0,000	$0,000
PE	National Highway Performance Program (NHPP)		2023	**$7,496,448**	$5,997,158	$1,499,290	$0,000	$0,000
PE	General Federal Aid 2024-2040		LR 2024-2030	**$4,241,772**	$3,393,418	$848,354	$0,000	$0,000
ROW	National Highway Performance Program (NHPP)		2018	**$1,034,524**	$827,619	$206,905	$0,000	$0,000
ROW	Repurposed Earmark		2018	**$1,120,226**	$896,181	$224,045	$0,000	$0,000
ROW	National Highway Performance Program (NHPP)		2023	**$4,486,216**	$3,588,973	$897,243	$0,000	$0,000
ROW	General Federal Aid 2024-2040		LR 2024-2030	**$4,603,179**	$3,682,543	$920,636	$0,000	$0,000
CST	General Federal Aid 2024-2040		LR 2024-2030	**$58,953,255**	$47,162,604	$11,790,651	$0,000	$0,000

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

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CST	General Federal Aid 2024-2040		LR 2031-2040	**$187,065,980**	$149,652,784	$37,413,196	$0,000	$0,000
CST	General Federal Aid 2041+		LR 2041+	**$449,182,311**	$359,345,849	$89,836,462	$0,000	$0,000
				$723,766,354	**$578,230,791**	**$145,535,563**	**$0,000**	**$0,000**

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

Raw Traffic Count Data

Prepared by National Data & Surveying Services

SR 42 & Bethlehem Rd

Peak Hour Turning Movement Count

ID: 18-09047-001
City: Locust Grove

Day: Thursday
Date: 01/25/2018

PEAK HOURS

AM	07:15 AM - 08:15 AM
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:30 PM - 06:30 PM

SR 42 — SOUTHBOUND

AM	137	545	12	0	666	AM
NOON	0	0	0	0	0	NOON
PM	102	693	3	1	705	PM

Bethlehem Rd — EASTBOUND

AM	NOON	PM		
195	0	144	⇦	
0	0	0	↶	0
110	0	110	↱	0
0	0	0	→	1
45	0	70	↳	0
AM	NOON	PM		

WESTBOUND — Bethlehem Rd

PM	NOON	AM		
5	0	7	↰	0
1	0	0	←	1
5	0	4	↰	0
0	0	0	↶	0
4	0	13	⇨	
PM	NOON	AM		

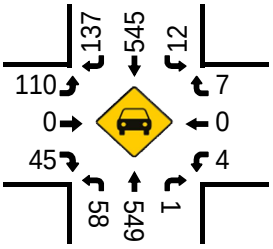
CONTROL: 2-Way Stop(EB/WB)

TEV	1468	0	1621
	AM	NOON	PM
PHF	0.91		0.96

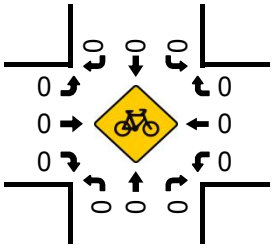
PM	768	0	41	589	1	PM
NOON	0	0	0	0	0	NOON
AM	594	0	58	549	1	AM

NORTHBOUND — SR 42

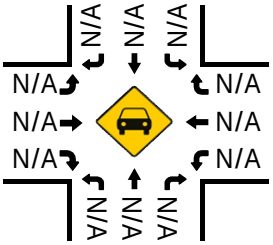
Total Vehicles (AM)



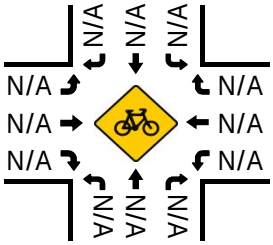
Bikes (AM)



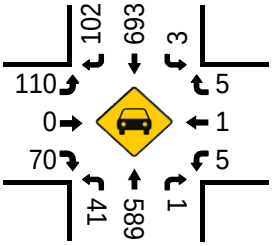
Total Vehicles (Noon)



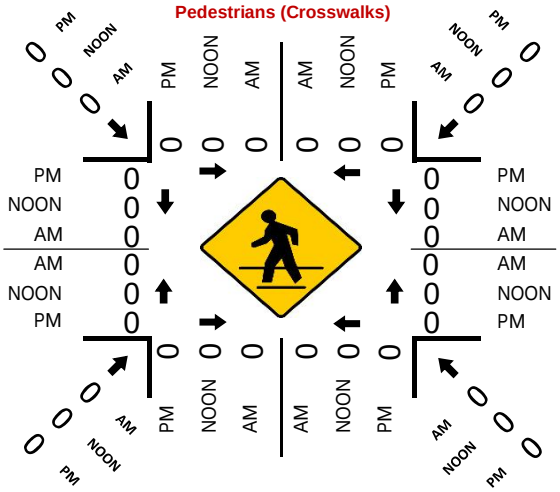
Bikes (NOON)



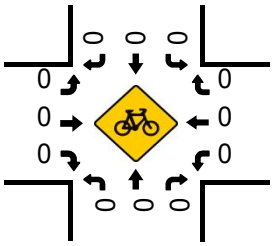
Total Vehicles (PM)



Pedestrians (Crosswalks)



Bikes (PM)



Greater Traffic Company

File Name : Market Place
Site Code : 00000001
Start Date : 11/15/2017
Page No : 1

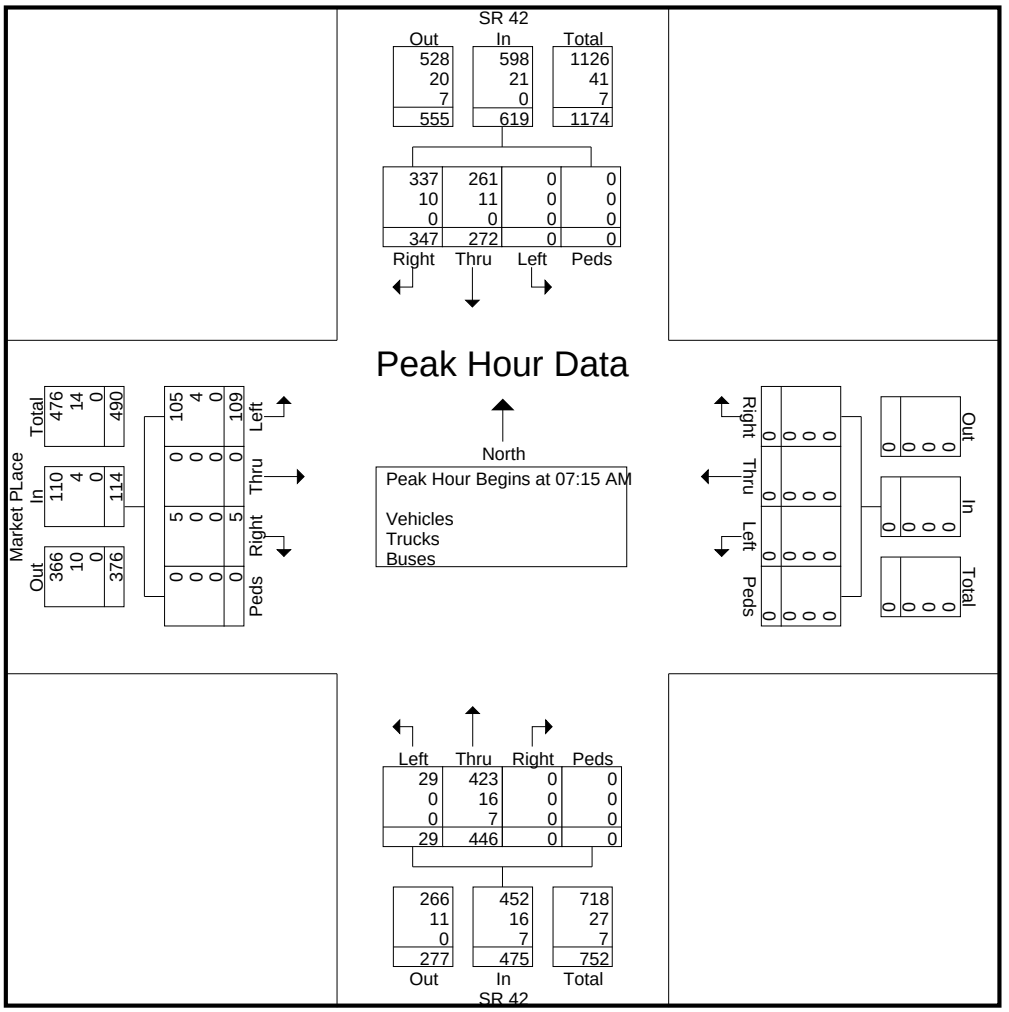
Groups Printed- Vehicles - Trucks - Buses

	SR 42 Northbound					SR 42 Southbound					Market PLace Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	4	85	0	0	89	0	44	73	0	117	22	0	2	0	24	0	0	0	0	0	230
07:15 AM	2	103	0	0	105	0	60	93	0	153	24	0	1	0	25	0	0	0	0	0	283
07:30 AM	7	113	0	0	120	0	71	114	0	185	24	0	1	0	25	0	0	0	0	0	330
07:45 AM	13	112	0	0	125	0	79	95	0	174	28	0	2	0	30	0	0	0	0	0	329
Total	26	413	0	0	439	0	254	375	0	629	98	0	6	0	104	0	0	0	0	0	1172
08:00 AM	7	118	0	0	125	0	62	45	0	107	33	0	1	0	34	0	0	0	0	0	266
08:15 AM	11	93	0	0	104	0	68	41	0	109	23	0	0	0	23	0	0	0	0	0	236
08:30 AM	5	95	0	0	100	0	63	43	0	106	21	0	2	0	23	0	0	0	0	0	229
08:45 AM	6	72	0	0	78	0	52	37	0	89	26	0	0	0	26	0	0	0	0	0	193
Total	29	378	0	0	407	0	245	166	0	411	103	0	3	0	106	0	0	0	0	0	924
*** BREAK ***																					
04:30 PM	9	110	0	0	119	0	93	62	0	155	33	0	9	0	42	0	0	0	0	0	316
04:45 PM	10	123	0	0	133	0	103	79	0	182	37	0	24	0	61	0	0	0	0	0	376
Total	19	233	0	0	252	0	196	141	0	337	70	0	33	0	103	0	0	0	0	0	692
05:00 PM	13	119	0	0	132	0	110	81	0	191	42	0	21	0	63	0	0	0	0	0	386
05:15 PM	21	147	0	0	168	0	137	84	0	221	36	0	18	0	54	0	0	0	0	0	443
05:30 PM	31	138	0	0	169	0	94	68	0	162	49	0	19	0	68	0	0	0	0	0	399
05:45 PM	31	125	0	0	156	0	119	74	0	193	41	0	32	0	73	0	0	0	0	0	422
Total	96	529	0	0	625	0	460	307	0	767	168	0	90	0	258	0	0	0	0	0	1650
06:00 PM	22	100	0	0	122	0	96	68	0	164	51	0	29	0	80	0	0	0	0	0	366
06:15 PM	12	110	0	0	122	0	87	72	0	159	40	0	14	0	54	0	0	0	0	0	335
Grand Total	204	1763	0	0	1967	0	1338	1129	0	2467	530	0	175	0	705	0	0	0	0	0	5139
Apprch %	10.4	89.6	0	0		0	54.2	45.8	0		75.2	0	24.8	0		0	0	0	0		
Total %	4	34.3	0	0	38.3	0	26	22	0	48	10.3	0	3.4	0	13.7	0	0	0	0	0	
Vehicles	201	1699	0	0	1900	0	1285	1112	0	2397	520	0	174	0	694	0	0	0	0	0	4991
% Vehicles	98.5	96.4	0	0	96.6	0	96	98.5	0	97.2	98.1	0	99.4	0	98.4	0	0	0	0	0	97.1
Trucks	3	52	0	0	55	0	53	17	0	70	9	0	1	0	10	0	0	0	0	0	135
% Trucks	1.5	2.9	0	0	2.8	0	4	1.5	0	2.8	1.7	0	0.6	0	1.4	0	0	0	0	0	2.6
Buses	0	12	0	0	12	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	13
% Buses	0	0.7	0	0	0.6	0	0	0	0	0	0.2	0	0	0	0.1	0	0	0	0	0	0.3

Greater Traffic Company

File Name : Market Place
Site Code : 00000001
Start Date : 11/15/2017
Page No : 2

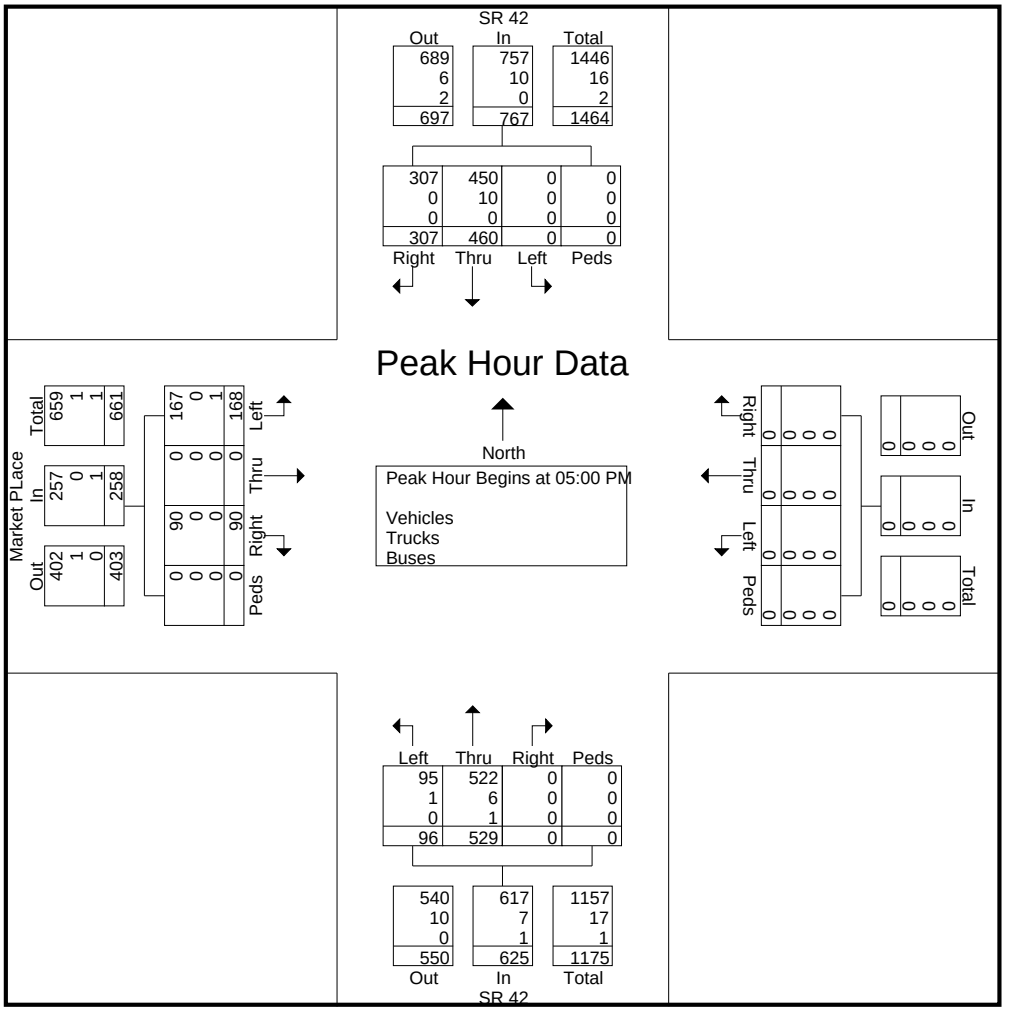
	SR 42 Northbound					SR 42 Southbound					Market PLace Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	2	103	0	0	105	0	60	93	0	153	24	0	1	0	25	0	0	0	0	0	283
07:30 AM	7	113	0	0	120	0	71	**114**	0	**185**	24	0	1	0	25	0	0	0	0	0	**330**
07:45 AM	**13**	112	0	0	**125**	0	**79**	95	0	174	28	0	**2**	0	30	0	0	0	0	0	329
08:00 AM	7	**118**	0	0	125	0	62	45	0	107	**33**	0	1	0	**34**	0	0	0	0	0	266
Total Volume	29	446	0	0	475	0	272	347	0	619	109	0	5	0	114	0	0	0	0	0	1208
% App. Total	6.1	93.9	0	0		0	43.9	56.1	0		95.6	0	4.4	0		0	0	0	0		
PHF	.558	.945	.000	.000	.950	.000	.861	.761	.000	.836	.826	.000	.625	.000	.838	.000	.000	.000	.000	.000	.915
Vehicles	29	423	0	0	452	0	261	337	0	598	105	0	5	0	110	0	0	0	0	0	1160
% Vehicles																					
Trucks	0	16	0	0	16	0	11	10	0	21	4	0	0	0	4	0	0	0	0	0	41
% Trucks	0	3.6	0	0	3.4	0	4.0	2.9	0	3.4	3.7	0	0	0	3.5	0	0	0	0	0	3.4
Buses	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
% Buses	0	1.6	0	0	1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6



Greater Traffic Company

File Name : Market Place
Site Code : 00000001
Start Date : 11/15/2017
Page No : 3

	SR 42 Northbound					SR 42 Southbound					Market PLace Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	13	119	0	0	132	0	110	81	0	191	42	0	21	0	63	0	0	0	0	0	386
05:15 PM	21	**147**	0	0	168	0	**137**	**84**	0	**221**	36	0	18	0	54	0	0	0	0	0	**443**
05:30 PM	**31**	138	0	0	**169**	0	94	68	0	162	**49**	0	19	0	68	0	0	0	0	0	399
05:45 PM	31	125	0	0	156	0	119	74	0	193	41	0	**32**	0	**73**	0	0	0	0	0	422
Total Volume	96	529	0	0	625	0	460	307	0	767	168	0	90	0	258	0	0	0	0	0	1650
% App. Total	15.4	84.6	0	0		0	60	40	0		65.1	0	34.9	0		0	0	0	0		
PHF	.774	.900	.000	.000	.925	.000	.839	.914	.000	.868	.857	.000	.703	.000	.884	.000	.000	.000	.000	.000	.931
Vehicles	95	522	0	0	617	0	450	307	0	757	167	0	90	0	257	0	0	0	0	0	1631
% Vehicles																					
Trucks	1	6	0	0	7	0	10	0	0	10	0	0	0	0	0	0	0	0	0	0	17
% Trucks	1.0	1.1	0	0	1.1	0	2.2	0	0	1.3	0	0	0	0	0	0	0	0	0	0	1.0
Buses	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
% Buses	0	0.2	0	0	0.2	0	0	0	0	0	0.6	0	0	0	0.4	0	0	0	0	0	0.1



Greater Traffic Company

File Name : Bill Gardner
Site Code : 00000001
Start Date : 11/15/2017
Page No : 1

Groups Printed- Vehicles - Trucks - Buses

	SR 42 Northbound					SR 42 Southbound					Bill Gardner Pkwy Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	226	57	0	0	283	0	22	10	0	32	33	0	70	0	103	0	0	0	0	0	418
07:15 AM	240	82	0	0	322	0	44	16	0	60	32	0	106	0	138	0	0	0	0	0	520
07:30 AM	234	73	0	0	307	0	44	22	0	66	32	0	107	0	139	0	0	0	0	0	512
07:45 AM	210	79	0	0	289	0	68	24	0	92	43	0	113	0	156	0	0	0	0	0	537
Total	910	291	0	0	1201	0	178	72	0	250	140	0	396	0	536	0	0	0	0	0	1987
08:00 AM	228	91	0	0	319	0	38	26	0	64	37	0	122	0	159	0	0	0	0	0	542
08:15 AM	206	72	0	0	278	0	45	26	0	71	38	0	101	0	139	0	0	0	0	0	488
08:30 AM	217	75	0	0	292	0	45	29	0	74	26	0	77	0	103	0	0	0	0	0	469
08:45 AM	166	56	0	0	222	0	35	15	0	50	26	0	100	0	126	0	0	0	0	0	398
Total	817	294	0	0	1111	0	163	96	0	259	127	0	400	0	527	0	0	0	0	0	1897
*** BREAK ***																					
04:30 PM	158	63	0	0	221	0	84	35	0	119	55	0	204	0	259	0	0	0	0	0	599
04:45 PM	136	65	0	0	201	0	84	28	0	112	64	0	211	0	275	0	0	0	0	0	588
Total	294	128	0	0	422	0	168	63	0	231	119	0	415	0	534	0	0	0	0	0	1187
05:00 PM	141	64	0	0	205	0	119	36	0	155	59	0	204	0	263	0	0	0	0	0	623
05:15 PM	145	95	0	0	240	0	101	43	0	144	82	0	206	0	288	0	0	0	0	0	672
05:30 PM	144	86	0	0	230	0	96	27	0	123	80	0	180	0	260	0	0	0	0	0	613
05:45 PM	148	89	0	0	237	0	100	34	0	134	74	0	147	0	221	0	0	0	0	0	592
Total	578	334	0	0	912	0	416	140	0	556	295	0	737	0	1032	0	0	0	0	0	2500
06:00 PM	135	68	0	0	203	0	113	30	0	143	62	0	180	0	242	0	0	0	0	0	588
06:15 PM	168	69	0	0	237	0	75	25	0	100	58	0	218	0	276	0	0	0	0	0	613
Grand Total	2902	1184	0	0	4086	0	1113	426	0	1539	801	0	2346	0	3147	0	0	0	0	0	8772
Apprch %	71	29	0	0		0	72.3	27.7	0		25.5	0	74.5	0		0	0	0	0		
Total %	33.1	13.5	0	0	46.6	0	12.7	4.9	0	17.5	9.1	0	26.7	0	35.9	0	0	0	0	0	
Vehicles	2826	1149	0	0	3975	0	1087	394	0	1481	758	0	2296	0	3054	0	0	0	0	0	8510
% Vehicles	97.4	97	0	0	97.3	0	97.7	92.5	0	96.2	94.6	0	97.9	0	97	0	0	0	0	0	97
Trucks	75	28	0	0	103	0	25	31	0	56	38	0	47	0	85	0	0	0	0	0	244
% Trucks	2.6	2.4	0	0	2.5	0	2.2	7.3	0	3.6	4.7	0	2	0	2.7	0	0	0	0	0	2.8
Buses	1	7	0	0	8	0	1	1	0	2	5	0	3	0	8	0	0	0	0	0	18
% Buses	0	0.6	0	0	0.2	0	0.1	0.2	0	0.1	0.6	0	0.1	0	0.3	0	0	0	0	0	0.2

Greater Traffic Company

File Name : Bill Gardner
Site Code : 00000001
Start Date : 11/15/2017
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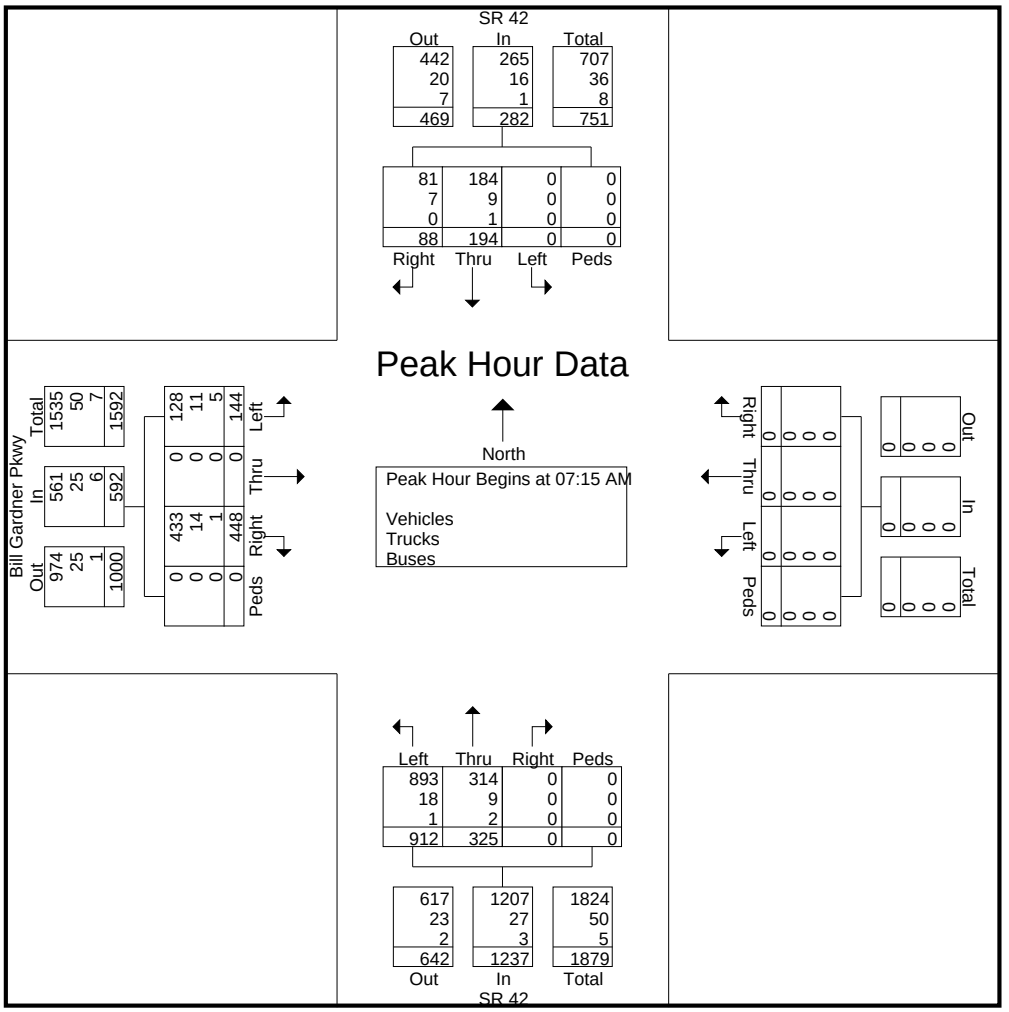
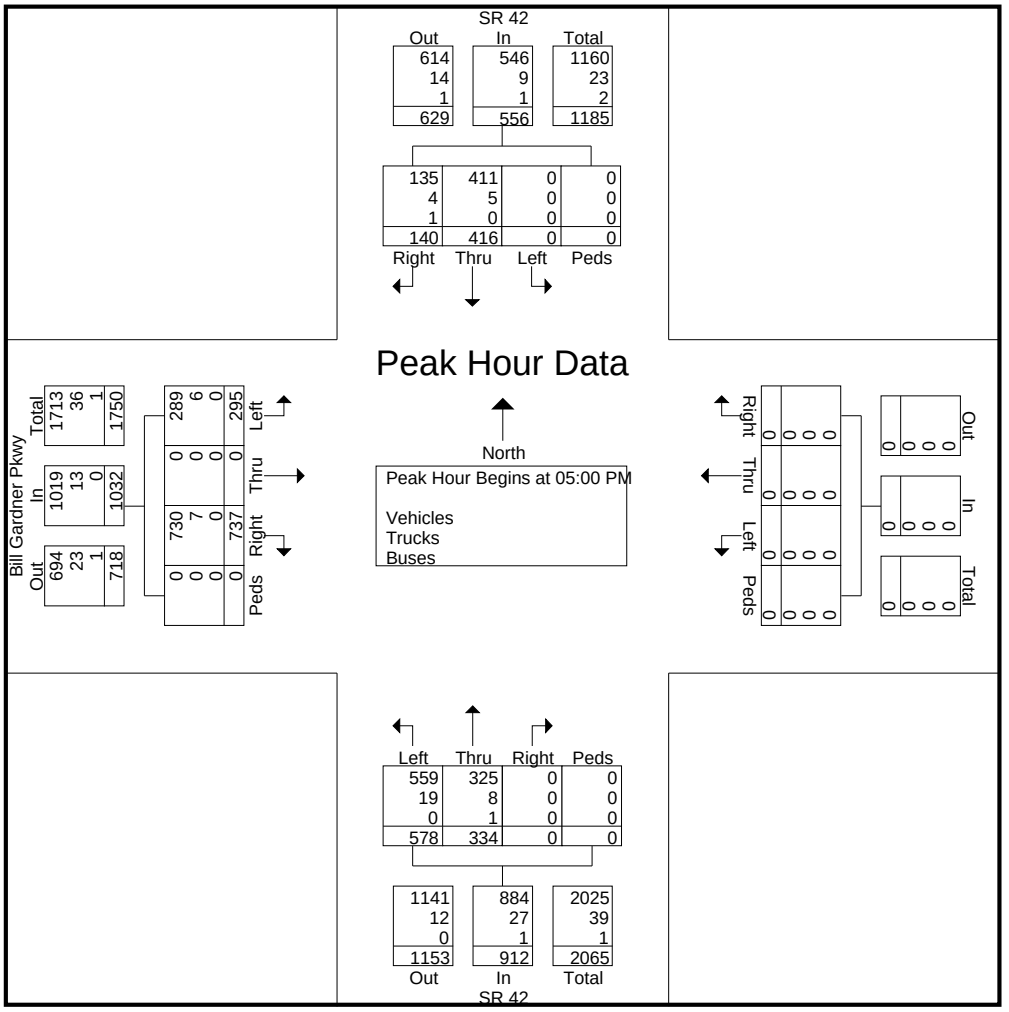
	SR 42 Northbound					SR 42 Southbound					Bill Gardner Pkwy Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	**240**	82	0	0	**322**	0	44	16	0	60	32	0	106	0	138	0	0	0	0	0	520
07:30 AM	234	73	0	0	307	0	44	22	0	66	32	0	107	0	139	0	0	0	0	0	512
07:45 AM	210	79	0	0	289	0	**68**	24	0	**92**	**43**	0	113	0	156	0	0	0	0	0	537
08:00 AM	228	**91**	0	0	319	0	38	**26**	0	64	37	0	**122**	0	**159**	0	0	0	0	0	**542**
Total Volume	912	325	0	0	1237	0	194	88	0	282	144	0	448	0	592	0	0	0	0	0	2111
% App. Total	73.7	26.3	0	0		0	68.8	31.2	0		24.3	0	75.7	0		0	0	0	0		
PHF	.950	.893	.000	.000	.960	.000	.713	.846	.000	.766	.837	.000	.918	.000	.931	.000	.000	.000	.000	.000	.974
Vehicles	893	314	0	0	1207	0	184	81	0	265	128	0	433	0	561	0	0	0	0	0	2033
% Vehicles																					
Trucks	18	9	0	0	27	0	9	7	0	16	11	0	14	0	25	0	0	0	0	0	68
% Trucks	2.0	2.8	0	0	2.2	0	4.6	8.0	0	5.7	7.6	0	3.1	0	4.2	0	0	0	0	0	3.2
Buses	1	2	0	0	3	0	1	0	0	1	5	0	1	0	6	0	0	0	0	0	10
% Buses	0.1	0.6	0	0	0.2	0	0.5	0	0	0.4	3.5	0	0.2	0	1.0	0	0	0	0	0	0.5



Greater Traffic Company

File Name : Bill Gardner
Site Code : 00000001
Start Date : 11/15/2017
Page No : 3

	SR 42 Northbound					SR 42 Southbound					Bill Gardner Pkwy Eastbound					Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	141	64	0	0	205	0	**119**	36	0	**155**	59	0	204	0	263	0	0	0	0	0	623
05:15 PM	145	**95**	0	0	**240**	0	101	**43**	0	144	**82**	0	**206**	0	**288**	0	0	0	0	0	**672**
05:30 PM	144	86	0	0	230	0	96	27	0	123	80	0	180	0	260	0	0	0	0	0	613
05:45 PM	**148**	89	0	0	237	0	100	34	0	134	74	0	147	0	221	0	0	0	0	0	592
Total Volume	578	334	0	0	912	0	416	140	0	556	295	0	737	0	1032	0	0	0	0	0	2500
% App. Total	63.4	36.6	0	0		0	74.8	25.2	0		28.6	0	71.4	0		0	0	0	0		
PHF	.976	.879	.000	.000	.950	.000	.874	.814	.000	.897	.899	.000	.894	.000	.896	.000	.000	.000	.000	.000	.930
Vehicles	559	325	0	0	884	0	411	135	0	546	289	0	730	0	1019	0	0	0	0	0	2449
% Vehicles																					
Trucks	19	8	0	0	27	0	5	4	0	9	6	0	7	0	13	0	0	0	0	0	49
% Trucks	3.3	2.4	0	0	3.0	0	1.2	2.9	0	1.6	2.0	0	0.9	0	1.3	0	0	0	0	0	2.0
Buses	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
% Buses	0	0.3	0	0	0.1	0	0	0.7	0	0.2	0	0	0	0	0	0	0	0	0	0	0.1



Greater Traffic Company

File Name : Tanger Blvd
Site Code : 00000001
Start Date : 11/15/2017
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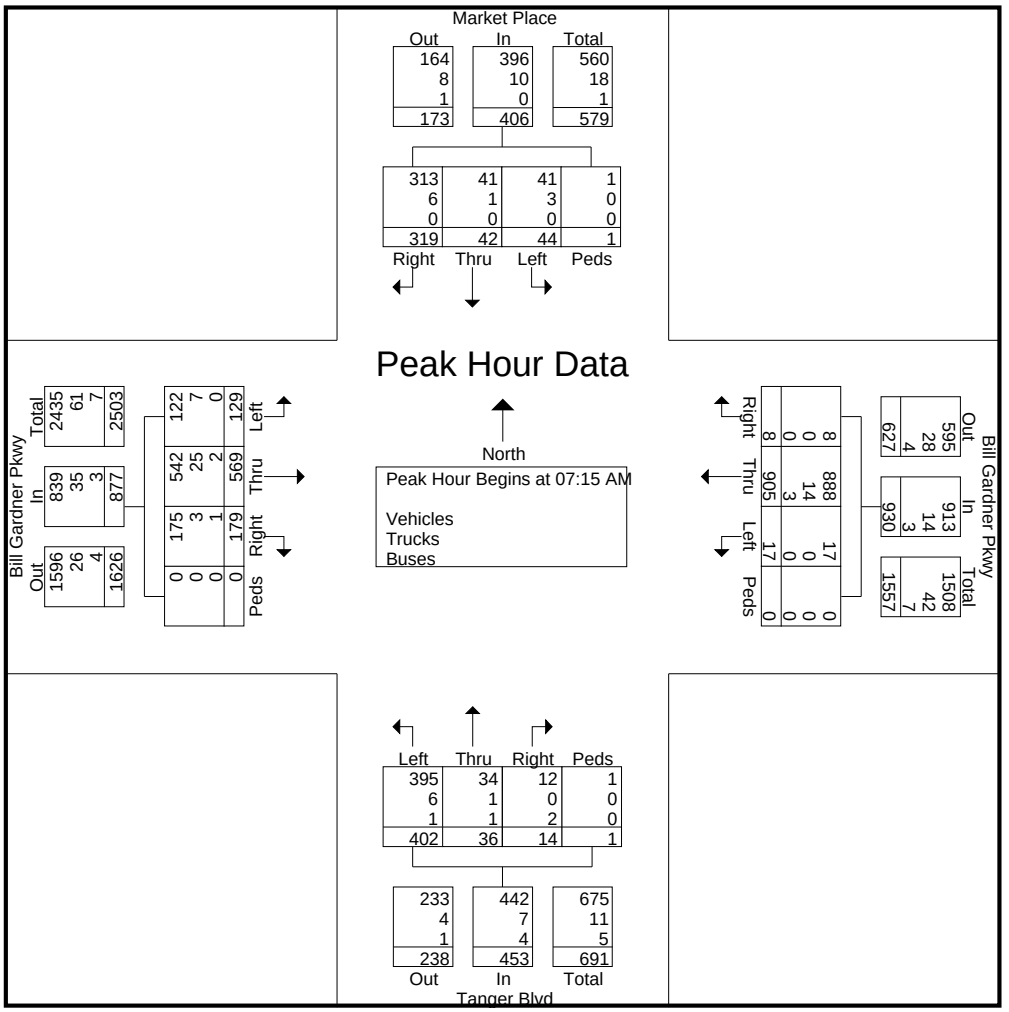
Groups Printed- Vehicles - Trucks - Buses

	Tanger Blvd Northbound					Market Place Southbound					Bill Gardner Pkwy Eastbound					Bill Gardner Pkwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	80	4	5	0	89	4	3	68	0	75	24	93	29	0	146	2	247	3	0	252	562
07:15 AM	101	6	3	1	111	9	5	103	0	117	32	133	32	0	197	1	237	2	0	240	665
07:30 AM	131	11	1	0	143	8	13	98	0	119	25	132	45	0	202	4	249	3	0	256	720
07:45 AM	90	12	3	0	105	13	16	80	1	110	43	166	56	0	265	3	212	1	0	216	696
Total	402	33	12	1	448	34	37	349	1	421	124	524	162	0	810	10	945	9	0	964	2643
08:00 AM	80	7	7	0	94	14	8	38	0	60	29	138	46	0	213	9	207	2	0	218	585
08:15 AM	57	11	7	0	75	10	10	36	0	56	23	110	47	0	180	11	220	3	0	234	545
08:30 AM	52	15	13	0	80	7	10	40	0	57	34	103	57	0	194	7	173	7	0	187	518
08:45 AM	63	14	8	1	86	8	10	34	0	52	25	108	56	0	189	8	149	7	0	164	491
Total	252	47	35	1	335	39	38	148	0	225	111	459	206	0	776	35	749	19	0	803	2139
*** BREAK ***																					
04:30 PM	96	25	23	0	144	23	41	58	0	122	59	189	92	0	340	28	144	9	0	181	787
04:45 PM	107	29	21	0	157	33	52	72	0	157	57	210	121	0	388	23	128	14	0	165	867
Total	203	54	44	0	301	56	93	130	0	279	116	399	213	0	728	51	272	23	0	346	1654
05:00 PM	94	36	20	0	150	44	37	53	0	134	61	235	100	0	396	25	140	5	0	170	850
05:15 PM	93	36	21	0	150	35	38	54	0	127	44	256	123	0	423	28	134	6	0	168	868
05:30 PM	97	24	22	0	143	47	35	74	0	156	55	232	132	0	419	25	139	8	0	172	890
05:45 PM	98	31	18	0	147	35	42	65	0	142	53	221	122	0	396	31	158	12	0	201	886
Total	382	127	81	0	590	161	152	246	0	559	213	944	477	0	1634	109	571	31	0	711	3494
06:00 PM	88	35	17	0	140	36	36	65	0	137	49	202	96	0	347	27	116	7	0	150	774
06:15 PM	90	23	23	0	136	32	32	50	1	115	60	209	93	0	362	22	127	6	0	155	768
Grand Total	1417	319	212	2	1950	358	388	988	2	1736	673	2737	1247	0	4657	254	2780	95	0	3129	11472
Apprch %	72.7	16.4	10.9	0.1		20.6	22.4	56.9	0.1		14.5	58.8	26.8	0		8.1	88.8	3	0		
Total %	12.4	2.8	1.8	0	17	3.1	3.4	8.6	0	15.1	5.9	23.9	10.9	0	40.6	2.2	24.2	0.8	0	27.3	
Vehicles	1392	317	207	2	1918	351	385	965	2	1703	652	2657	1234	0	4543	252	2699	94	0	3045	11209
% Vehicles	98.2	99.4	97.6	100	98.4	98	99.2	97.7	100	98.1	96.9	97.1	99	0	97.6	99.2	97.1	98.9	0	97.3	97.7
Trucks	21	1	3	0	25	7	1	22	0	30	19	75	11	0	105	1	78	1	0	80	240
% Trucks	1.5	0.3	1.4	0	1.3	2	0.3	2.2	0	1.7	2.8	2.7	0.9	0	2.3	0.4	2.8	1.1	0	2.6	2.1
Buses	4	1	2	0	7	0	2	1	0	3	2	5	2	0	9	1	3	0	0	4	23
% Buses	0.3	0.3	0.9	0	0.4	0	0.5	0.1	0	0.2	0.3	0.2	0.2	0	0.2	0.4	0.1	0	0	0.1	0.2

Greater Traffic Company

File Name : Tanger Blvd
Site Code : 00000001
Start Date : 11/15/2017
Page No : 2

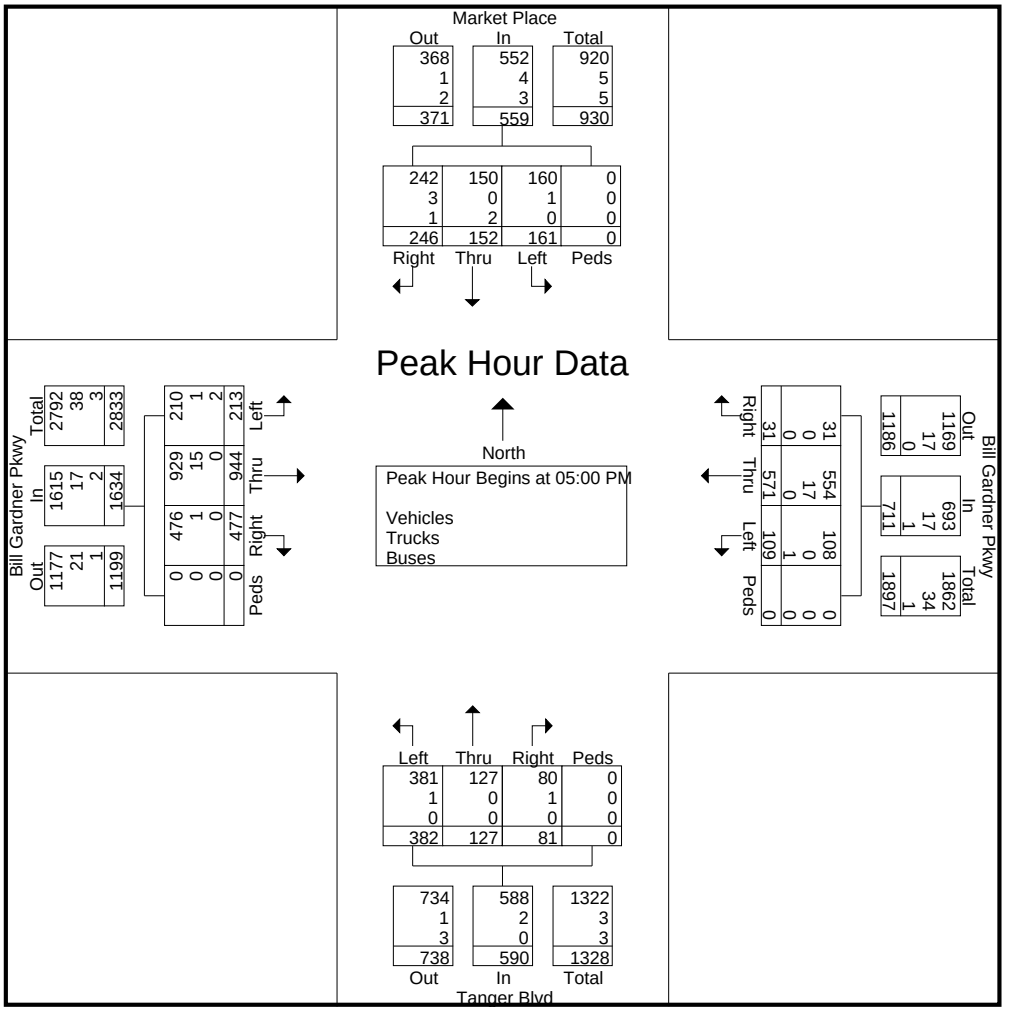
	Tanger Blvd Northbound					Market Place Southbound					Bill Gardner Pkwy Eastbound					Bill Gardner Pkwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	101	6	3	**1**	111	9	5	**103**	0	117	32	133	32	0	197	1	237	2	0	240	665
07:30 AM	**131**	11	1	0	**143**	8	13	98	0	**119**	25	132	45	0	202	4	**249**	**3**	0	**256**	**720**
07:45 AM	90	**12**	3	0	105	13	**16**	80	**1**	110	**43**	**166**	**56**	0	**265**	3	212	1	0	216	696
08:00 AM	80	7	**7**	0	94	**14**	8	38	0	60	29	138	46	0	213	**9**	207	2	0	218	585
Total Volume	402	36	14	1	453	44	42	319	1	406	129	569	179	0	877	17	905	8	0	930	2666
% App. Total	88.7	7.9	3.1	0.2		10.8	10.3	78.6	0.2		14.7	64.9	20.4	0		1.8	97.3	0.9	0		
PHF	.767	.750	.500	.250	.792	.786	.656	.774	.250	.853	.750	.857	.799	.000	.827	.472	.909	.667	.000	.908	.926
Vehicles	395	34	12	1	442	41	41	313	1	396	122	542	175	0	839	17	888	8	0	913	2590
% Vehicles																					
Trucks	6	1	0	0	7	3	1	6	0	10	7	25	3	0	35	0	14	0	0	14	66
% Trucks	1.5	2.8	0	0	1.5	6.8	2.4	1.9	0	2.5	5.4	4.4	1.7	0	4.0	0	1.5	0	0	1.5	2.5
Buses	1	1	2	0	4	0	0	0	0	0	0	2	1	0	3	0	3	0	0	3	10
% Buses	0.2	2.8	14.3	0	0.9	0	0	0	0	0	0	0.4	0.6	0	0.3	0	0.3	0	0	0.3	0.4



Greater Traffic Company

File Name : Tanger Blvd
Site Code : 00000001
Start Date : 11/15/2017
Page No : 3

	Tanger Blvd Northbound					Market Place Southbound					Bill Gardner Pkwy Eastbound					Bill Gardner Pkwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	94	**36**	20	0	**150**	44	37	53	0	134	**61**	235	100	0	396	25	140	5	0	170	850
05:15 PM	93	36	21	0	150	35	38	54	0	127	44	**256**	123	0	**423**	28	134	6	0	168	868
05:30 PM	97	24	**22**	0	143	**47**	35	**74**	0	**156**	55	232	**132**	0	419	25	139	8	0	172	**890**
05:45 PM	**98**	31	18	0	147	35	**42**	65	0	142	53	221	122	0	396	**31**	**158**	**12**	0	**201**	886
Total Volume	382	127	81	0	590	161	152	246	0	559	213	944	477	0	1634	109	571	31	0	711	3494
% App. Total	64.7	21.5	13.7	0		28.8	27.2	44	0		13	57.8	29.2	0		15.3	80.3	4.4	0		
PHF	.974	.882	.920	.000	.983	.856	.905	.831	.000	.896	.873	.922	.903	.000	.966	.879	.903	.646	.000	.884	.981
Vehicles	381	127	80	0	588	160	150	242	0	552	210	929	476	0	1615	108	554	31	0	693	3448
% Vehicles																					
Trucks	1	0	1	0	2	1	0	3	0	4	1	15	1	0	17	0	17	0	0	17	40
% Trucks	0.3	0	1.2	0	0.3	0.6	0	1.2	0	0.7	0.5	1.6	0.2	0	1.0	0	3.0	0	0	2.4	1.1
Buses	0	0	0	0	0	0	2	1	0	3	2	0	0	0	2	1	0	0	0	1	6
% Buses	0	0	0	0	0	0	1.3	0.4	0	0.5	0.9	0	0	0	0.1	0.9	0	0	0	0.1	0.2



Prepared by National Data & Surveying Services

I-75 NB Ramp & Bill Gardner Pkwy

Peak Hour Turning Movement Count

ID: 17-09601-003
City: Locust Grove

Day: Wednesday
Date: 11/15/2017

PEAK HOURS

AM	07:15 AM - 08:15 AM
NOON	NONE
PM	04:45 PM - 05:45 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:30 PM - 06:30 PM

I-75 NB Ramp — SOUTHBOUND

	L	T	R	U	Total	
AM	0	0	0	0	1215	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	686	PM

Bill Gardner Pkwy — EASTBOUND

	L	T	R	U
AM	828	0	764	
NOON	0	0	0	
PM	216	0	90	
	791	0	1465	
	0	0	0	

Bill Gardner Pkwy — WESTBOUND

	L	T	R	U
PM	594	0	999	
NOON	691	0	747	
AM	0	0	0	
	0	0	0	
	1793	0	980	

I-75 NB Ramp — NORTHBOUND

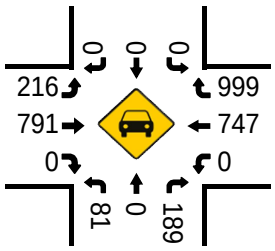
	L	T	R	U	Total	
PM	0	0	73	2	328	PM
NOON	0	0	0	0	0	NOON
AM	0	0	81	0	189	AM

CONTROL

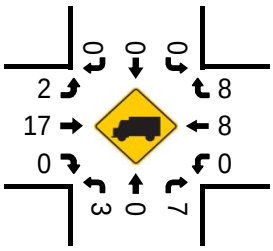
Signalized

TEV	3023 AM	0 NOON	3243 PM
PHF	0.95		0.96

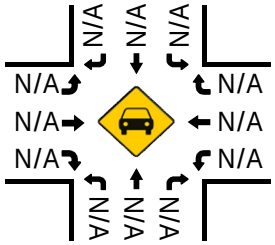
Total Vehicles (AM)



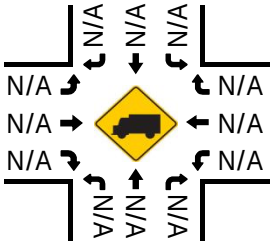
HT (AM)



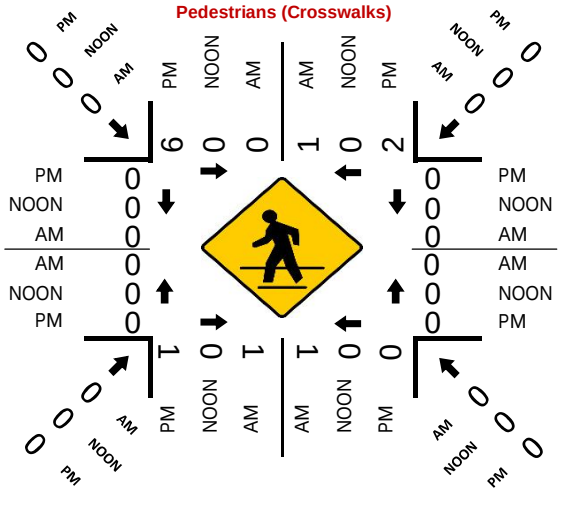
Total Vehicles (Noon)



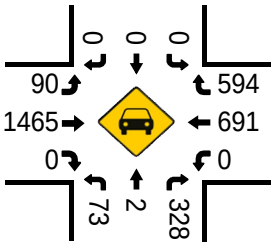
HT (NOON)



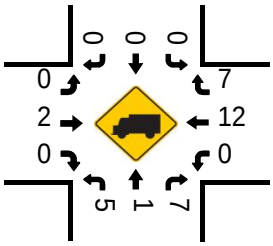
Pedestrians (Crosswalks)



Total Vehicles (PM)



HT (PM)



Prepared by National Data & Surveying Services

I-75 SB Ramp & Bill Gardner Pkwy

Peak Hour Turning Movement Count

ID: 17-09601-002
City: Locust Grove

Day: Wednesday
Date: 11/15/2017

PEAK HOURS

AM	07:00 AM - 08:00 AM
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:30 PM - 06:30 PM

I-75 SB Ramp — SOUTHBOUND

	L	T	R	U	Approach
AM	121	1	352	0	0 AM
NOON	0	0	0	0	0 NOON
PM	126	0	983	0	0 PM

EASTBOUND — Bill Gardner Pkwy

	L	T	R	U	Approach
AM	0	0	0	0	0 AM
NOON	0	0	0	0	0 NOON
PM	0	0	0	0	0 PM
AM	758	0	607		AM
NOON	0	0	0		NOON
PM	556	0	586		PM
AM	101	0	98		AM
NOON	0	0	0		NOON
PM	382	0	0	0	PM
NOON	0	0	0	0	NOON
AM	338	0	0	0	AM

WESTBOUND — Bill Gardner Pkwy

	L	T	R	U	Approach
PM	0	0	0		PM
NOON	481	0	637		NOON
AM	284	0	236		AM
PM	0	0	0		PM
NOON	1569	0	908		NOON
AM	0	0	0	0	AM
PM	0	0	0	0	PM
NOON	0	0	0	0	NOON
AM	0	0	0	0	AM

NORTHBOUND — I-75 SB Ramp

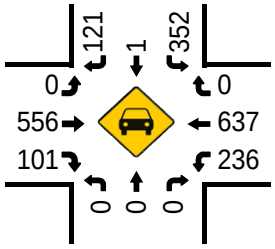
	L	T	R	U	Approach
PM	1	0	2	0	0 PM
NOON	0	0	0	0	0 NOON
AM	0	0	0	0	0 AM

CONTROL

Signalized

TEV	2004 AM	0 NOON	2558 PM
PHF	0.87		0.94

Total Vehicles (AM)



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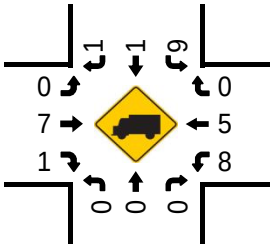
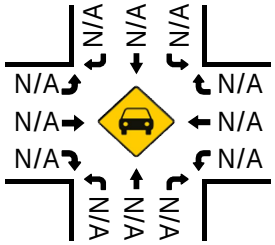
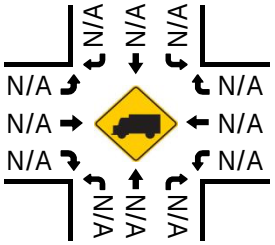


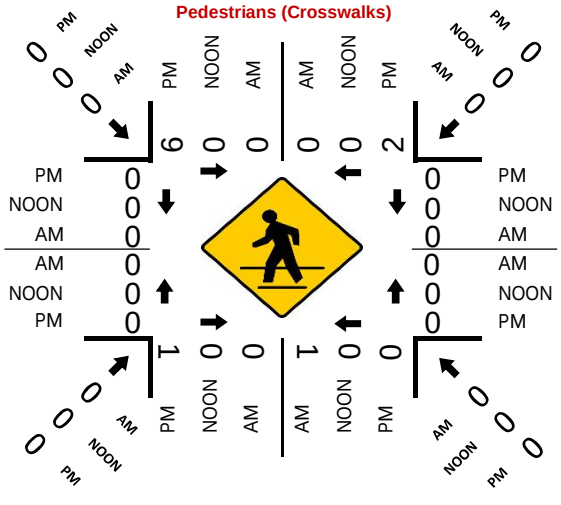
Total Vehicles (Noon)



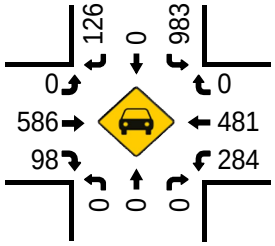
HT (NOON)



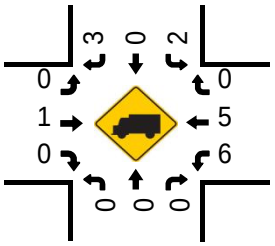
Pedestrians (Crosswalks)



Total Vehicles (PM)



HT (PM)



APPENDIX H

Synchro Analysis Reports

Intersection	
Int Delay, s/veh	21.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	110	0	45	4	0	7	58	549	1	12	545	137
Future Vol, veh/h	110	0	45	4	0	7	58	549	1	12	545	137
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	135	-	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	0	2	100	0	100	2	3	2	100	2	2
Mvmt Flow	121	0	49	4	0	8	64	603	1	13	599	151

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1360	1356	599	1381	1356	603	599	0	0	603	0	0
Stage 1	625	625	-	731	731	-	-	-	-	-	-	-
Stage 2	735	731	-	650	625	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.5	6.22	8.1	6.5	7.2	4.12	-	-	5.1	-	-
Critical Hdwy Stg 1	6.12	5.5	-	7.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.5	-	7.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4	3.318	4.4	4	4.2	2.218	-	-	3.1	-	-
Pot Cap-1 Maneuver	126	151	502	76	151	357	978	-	-	634	-	-
Stage 1	473	480	-	293	430	-	-	-	-	-	-	-
Stage 2	411	430	-	329	480	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 111	131	502	62	131	357	978	-	-	634	-	-
Mov Cap-2 Maneuver	~ 111	131	-	62	131	-	-	-	-	-	-	-
Stage 1	426	463	-	264	387	-	-	-	-	-	-	-
Stage 2	362	387	-	286	463	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	197	35.3	0.9	0.2
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	978	-	-	143	131	634	-	-
HCM Lane V/C Ratio	0.065	-	-	1.191	0.092	0.021	-	-
HCM Control Delay (s)	8.9	0	-	197	35.3	10.8	0	-
HCM Lane LOS	A	A	-	F	E	B	A	-
HCM 95th %tile Q(veh)	0.2	-	-	9.9	0.3	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	109	5	29	446	272	347
Future Vol, veh/h	109	5	29	446	272	347
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	220	0	250	-	-	175
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	2	2	5	4	3
Mvmt Flow	118	5	32	485	296	377

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	844	296	296	0	-	0
Stage 1	296	-	-	-	-	-
Stage 2	548	-	-	-	-	-
Critical Hdwy	6.44	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	331	743	1265	-	-	-
Stage 1	750	-	-	-	-	-
Stage 2	575	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	323	743	1265	-	-	-
Mov Cap-2 Maneuver	323	-	-	-	-	-
Stage 1	750	-	-	-	-	-
Stage 2	560	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21.9	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1265	-	323	743	-	-
HCM Lane V/C Ratio	0.025	-	0.367	0.007	-	-
HCM Control Delay (s)	7.9	-	22.5	9.9	-	-
HCM Lane LOS	A	-	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	1.6	0	-	-

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	144	448	912	325	194	88
Future Volume (veh/h)	144	448	912	325	194	88
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1712	1845	1863	1845	1810	1759
Adj Flow Rate, veh/h	148	50	940	335	200	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	11	3	2	3	5	8
Cap, veh/h	177	170	1044	1486	825	682
Arrive On Green	0.11	0.11	0.30	0.81	0.46	0.00
Sat Flow, veh/h	1630	1568	1774	1845	1810	1495
Grp Volume(v), veh/h	148	50	940	335	200	0
Grp Sat Flow(s),veh/h/ln	1630	1568	1774	1845	1810	1495
Q Serve(g_s), s	11.6	3.8	33.6	5.6	8.8	0.0
Cycle Q Clear(g_c), s	11.6	3.8	33.6	5.6	8.8	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	177	170	1044	1486	825	682
V/C Ratio(X)	0.84	0.29	0.90	0.23	0.24	0.00
Avail Cap(c_a), veh/h	435	419	1202	1486	825	682
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.8	53.4	9.5	3.0	21.6	0.0
Incr Delay (d2), s/veh	8.6	0.8	8.6	0.4	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	3.4	18.4	2.9	4.5	0.0
LnGrp Delay(d),s/veh	65.4	54.2	18.1	3.4	22.3	0.0
LnGrp LOS	E	D	B	A	C	
Approach Vol, veh/h	198			1275	200	
Approach Delay, s/veh	62.6			14.2	22.3	
Approach LOS	E			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		110.6		19.4	45.4	65.2		
Change Period (Y+Rc), s		5.9		* 5.3	6.5	5.9		
Max Green Setting (Gmax), s		84.1		* 35	50.5	27.1		
Max Q Clear Time (g_c+I1), s		7.6		13.6	35.6	10.8		
Green Ext Time (p_c), s		7.3		0.5	3.4	4.9		

Intersection Summary	
HCM 2010 Ctrl Delay	20.9
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	569	179	17	905	8	402	36	14	44	42	319
Future Volume (veh/h)	129	569	179	17	905	8	402	36	14	44	42	319
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1863	1863	1863	1900	1863	1838	1900	1776	1863	1863
Adj Flow Rate, veh/h	139	612	54	18	973	8	473	0	0	47	45	186
Adj No. of Lanes	1	2	1	1	2	0	2	1	0	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	5	5	2	2	2	2	2	6	6	7	2	2
Cap, veh/h	241	1234	568	336	1318	11	901	467	0	226	249	211
Arrive On Green	0.04	0.24	0.24	0.07	0.37	0.37	0.25	0.00	0.00	0.13	0.13	0.13
Sat Flow, veh/h	1723	3438	1583	1774	3598	30	3548	1838	0	1691	1863	1583
Grp Volume(v), veh/h	139	612	54	18	479	502	473	0	0	47	45	186
Grp Sat Flow(s),veh/h/ln	1723	1719	1583	1774	1770	1858	1774	1838	0	1691	1863	1583
Q Serve(g_s), s	6.5	20.0	3.4	0.8	30.5	30.5	14.9	0.0	0.0	3.2	2.8	15.0
Cycle Q Clear(g_c), s	6.5	20.0	3.4	0.8	30.5	30.5	14.9	0.0	0.0	3.2	2.8	15.0
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	241	1234	568	336	649	681	901	467	0	226	249	211
V/C Ratio(X)	0.58	0.50	0.10	0.05	0.74	0.74	0.53	0.00	0.00	0.21	0.18	0.88
Avail Cap(c_a), veh/h	254	1234	568	336	649	681	901	467	0	273	301	256
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	0.50	0.50	0.50	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.6	39.2	33.0	23.0	35.8	35.8	41.8	0.0	0.0	50.2	50.0	55.3
Incr Delay (d2), s/veh	2.8	1.4	0.3	0.2	3.8	3.6	2.2	0.0	0.0	0.5	0.3	24.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	9.7	1.6	0.4	15.6	16.3	7.6	0.0	0.0	1.5	1.5	8.0
LnGrp Delay(d),s/veh	31.4	40.6	33.3	23.2	39.6	39.4	43.9	0.0	0.0	50.7	50.4	79.9
LnGrp LOS	C	D	C	C	D	D	D			D	D	E
Approach Vol, veh/h		805			999			473			278	
Approach Delay, s/veh		38.5			39.2			43.9			70.2	
Approach LOS		D			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.0	53.6		23.4	15.0	52.6		39.0
Change Period (Y+Rc), s	5.5	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	8.5	43.0		21.0	9.0	43.0		33.0
Max Q Clear Time (g_c+I1), s	8.5	32.5		17.0	2.8	22.0		16.9
Green Ext Time (p_c), s	0.0	6.9		0.4	0.0	11.0		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	43.2
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	216	791	0	0	747	999	81	0	189	0	0	0
Future Volume (veh/h)	216	791	0	0	747	999	81	0	189	0	0	0
Number	1	6	16	5	2	12	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1827	0	1827			
Adj Flow Rate, veh/h	227	833	0	0	786	0	85	0	0			
Adj No. of Lanes	1	2	0	0	1	1	1	0	2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	2	2	0	0	2	2	4	0	4			
Cap, veh/h	660	3011	0	0	1418	1205	107	0	168			
Arrive On Green	0.09	1.00	0.00	0.00	1.00	0.00	0.06	0.00	0.00			
Sat Flow, veh/h	1774	3632	0	0	1863	1583	1740	0	2733			
Grp Volume(v), veh/h	227	833	0	0	786	0	85	0	0			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1863	1583	1740	0	1367			
Q Serve(g_s), s	3.8	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0			
Cycle Q Clear(g_c), s	3.8	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	660	3011	0	0	1418	1205	107	0	168			
V/C Ratio(X)	0.34	0.28	0.00	0.00	0.55	0.00	0.79	0.00	0.00			
Avail Cap(c_a), veh/h	733	3011	0	0	1418	1205	274	0	431			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00			
Upstream Filter(I)	0.83	0.83	0.00	0.00	0.49	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	2.3	0.0	0.0	0.0	0.0	0.0	60.2	0.0	0.0			
Incr Delay (d2), s/veh	0.3	0.2	0.0	0.0	0.8	0.0	12.4	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.7	0.1	0.0	0.0	0.3	0.0	3.4	0.0	0.0			
LnGrp Delay(d),s/veh	2.5	0.2	0.0	0.0	0.8	0.0	72.6	0.0	0.0			
LnGrp LOS	A	A			A		E					
Approach Vol, veh/h		1060			786			85				
Approach Delay, s/veh		0.7			0.8			72.6				
Approach LOS		A			A			E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	11.7	104.8		13.5		116.5		
Change Period (Y+Rc), s	5.6	* 5.9		5.5		* 5.9		
Max Green Setting (Gmax), s	11.4	* 81		20.5		* 98		
Max Q Clear Time (g_c+I1), s	5.8	2.0		8.3		2.0		
Green Ext Time (p_c), s	0.3	54.5		0.1		61.9		

Intersection Summary	
HCM 2010 Ctrl Delay	3.9
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	556	101	236	637	0	0	0	0	352	0	121
Future Volume (veh/h)	0	556	101	236	637	0	0	0	0	352	0	121
Number	1	6	16	5	2	12				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1845	1863	0				1845	0	1863
Adj Flow Rate, veh/h	0	639	103	271	732	0				405	0	-40
Adj No. of Lanes	0	2	0	1	1	0				2	0	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87				0.87	0.87	0.87
Percent Heavy Veh, %	0	2	2	3	2	0				3	0	2
Cap, veh/h	0	1259	203	781	1434	0				493	0	229
Arrive On Green	0.00	0.41	0.41	0.63	1.00	0.00				0.14	0.00	0.00
Sat Flow, veh/h	0	3147	492	1757	1863	0				3408	0	1583
Grp Volume(v), veh/h	0	370	372	271	732	0				405	0	-40
Grp Sat Flow(s),veh/h/ln	0	1770	1776	1757	1863	0				1704	0	1583
Q Serve(g_s), s	0.0	20.2	20.3	0.0	0.0	0.0				15.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	20.2	20.3	0.0	0.0	0.0				15.0	0.0	0.0
Prop In Lane	0.00		0.28	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	730	732	781	1434	0				493	0	229
V/C Ratio(X)	0.00	0.51	0.51	0.35	0.51	0.00				0.82	0.00	-0.17
Avail Cap(c_a), veh/h	0	730	732	781	1434	0				815	0	379
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.78	0.78	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	28.4	28.4	8.6	0.0	0.0				54.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.5	2.5	0.2	1.0	0.0				4.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.4	10.4	3.0	0.4	0.0				7.4	0.0	0.0
LnGrp Delay(d),s/veh	0.0	30.9	30.9	8.8	1.0	0.0				58.9	0.0	0.0
LnGrp LOS		C	C	A	A					E		
Approach Vol, veh/h		742			1003						365	
Approach Delay, s/veh		30.9			3.1						65.3	
Approach LOS		C			A						E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		106.3			47.3	59.0		23.7
Change Period (Y+Rc), s		* 6.2			* 6.2	* 5.4		4.9
Max Green Setting (Gmax), s		* 89			* 29	* 54		31.1
Max Q Clear Time (g_c+I1), s		2.0			2.0	22.3		17.0
Green Ext Time (p_c), s		20.2			13.5	12.0		1.8

Intersection Summary		
HCM 2010 Ctrl Delay		23.6
HCM 2010 LOS		C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	24.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	110	0	70	5	1	5	41	589	1	4	693	102
Future Vol, veh/h	110	0	70	5	1	5	41	589	1	4	693	102
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	135	-	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	0	2	40	2	60	2	2	100	2	2	2
Mvmt Flow	113	0	72	5	1	5	42	607	1	4	714	105

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1418	1415	714	1451	1415	607	714	0	0	607	0	0
Stage 1	723	723	-	692	692	-	-	-	-	-	-	-
Stage 2	695	692	-	759	723	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.5	6.22	7.5	6.52	6.8	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.5	-	6.5	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.5	-	6.5	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4	3.318	3.86	4.018	3.84	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	114	139	431	89	137	405	886	-	-	971	-	-
Stage 1	417	434	-	379	445	-	-	-	-	-	-	-
Stage 2	433	448	-	346	431	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 105	128	431	70	126	405	886	-	-	971	-	-
Mov Cap-2 Maneuver	~ 105	128	-	70	126	-	-	-	-	-	-	-
Stage 1	387	431	-	352	413	-	-	-	-	-	-	-
Stage 2	396	416	-	286	428	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	213.2	38.1	0.6	0
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	886	-	-	149	120	971	-	-
HCM Lane V/C Ratio	0.048	-	-	1.245	0.095	0.004	-	-
HCM Control Delay (s)	9.3	0	-	213.2	38.1	8.7	0	-
HCM Lane LOS	A	A	-	F	E	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	10.9	0.3	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	16.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	168	90	96	529	460	307
Future Vol, veh/h	168	90	96	529	460	307
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	220	0	250	-	-	175
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	181	97	103	569	495	330

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1270	495	495	0	-	0
Stage 1	495	-	-	-	-	-
Stage 2	775	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	186	575	1069	-	-	-
Stage 1	613	-	-	-	-	-
Stage 2	454	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 168	575	1069	-	-	-
Mov Cap-2 Maneuver	~ 168	-	-	-	-	-
Stage 1	613	-	-	-	-	-
Stage 2	410	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	99.8	1.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1069	-	168	575	-	-
HCM Lane V/C Ratio	0.097	-	1.075	0.168	-	-
HCM Control Delay (s)	8.7	-	146.6	12.5	-	-
HCM Lane LOS	A	-	F	B	-	-
HCM 95th %tile Q(veh)	0.3	-	9.1	0.6	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	295	737	578	334	416	140
Future Volume (veh/h)	295	737	578	334	416	140
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1845	1845	1863	1827
Adj Flow Rate, veh/h	317	297	622	359	447	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	3	3	2	4
Cap, veh/h	371	331	692	1321	913	761
Arrive On Green	0.21	0.21	0.19	0.72	0.49	0.00
Sat Flow, veh/h	1774	1583	1757	1845	1863	1553
Grp Volume(v), veh/h	317	297	622	359	447	0
Grp Sat Flow(s),veh/h/ln	1774	1583	1757	1845	1863	1553
Q Serve(g_s), s	25.8	27.4	25.0	10.3	24.1	0.0
Cycle Q Clear(g_c), s	25.8	27.4	25.0	10.3	24.1	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	371	331	692	1321	913	761
V/C Ratio(X)	0.85	0.90	0.90	0.27	0.49	0.00
Avail Cap(c_a), veh/h	600	535	845	1321	913	761
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.65	0.65	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	57.1	57.8	17.6	7.5	25.6	0.0
Incr Delay (d2), s/veh	4.5	8.0	11.0	0.5	1.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.1	22.8	15.1	5.4	12.9	0.0
LnGrp Delay(d),s/veh	61.7	65.7	28.6	8.0	27.5	0.0
LnGrp LOS	E	E	C	A	C	
Approach Vol, veh/h	614			981	447	
Approach Delay, s/veh	63.6			21.0	27.5	
Approach LOS	E			C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		113.3		36.7	33.9	79.4		
Change Period (Y+Rc), s		5.9		* 5.3	5.1	5.9		
Max Green Setting (Gmax), s		88.1		* 51	41.9	41.1		
Max Q Clear Time (g_c+I1), s		12.3		29.4	27.0	26.1		
Green Ext Time (p_c), s		11.9		2.0	1.8	6.9		

Intersection Summary	
HCM 2010 Ctrl Delay	35.3
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	944	477	109	571	31	382	127	81	161	152	246
Future Volume (veh/h)	213	944	477	109	571	31	382	127	81	161	152	246
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1846	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	217	963	182	111	583	30	297	260	74	164	155	49
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	1	1	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	3	3	2	2	2	2	2	2
Cap, veh/h	451	1576	705	352	1456	75	382	300	86	200	210	179
Arrive On Green	0.17	0.89	0.89	0.07	0.43	0.43	0.22	0.22	0.22	0.11	0.11	0.11
Sat Flow, veh/h	1774	3539	1583	1774	3394	174	1774	1395	397	1774	1863	1583
Grp Volume(v), veh/h	217	963	182	111	301	312	297	0	334	164	155	49
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1753	1815	1774	0	1793	1774	1863	1583
Q Serve(g_s), s	10.7	9.8	2.5	5.0	17.7	17.8	23.7	0.0	27.0	13.6	12.1	4.2
Cycle Q Clear(g_c), s	10.7	9.8	2.5	5.0	17.7	17.8	23.7	0.0	27.0	13.6	12.1	4.2
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.22	1.00		1.00
Lane Grp Cap(c), veh/h	451	1576	705	352	752	779	382	0	386	200	210	179
V/C Ratio(X)	0.48	0.61	0.26	0.32	0.40	0.40	0.78	0.00	0.87	0.82	0.74	0.27
Avail Cap(c_a), veh/h	505	1576	705	352	752	779	402	0	406	284	298	253
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.79	0.79	0.79	0.56	0.56	0.56	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.6	5.1	4.7	20.6	29.5	29.5	55.5	0.0	56.8	65.0	64.4	60.9
Incr Delay (d2), s/veh	0.6	1.4	0.7	1.3	0.9	0.9	14.4	0.0	22.0	14.4	7.6	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	4.6	1.1	2.6	8.8	9.1	13.2	0.0	15.7	7.5	6.7	1.9
LnGrp Delay(d),s/veh	20.2	6.5	5.4	21.9	30.4	30.4	69.9	0.0	78.8	79.4	72.0	62.1
LnGrp LOS	C	A	A	C	C	C	E		E	E	E	E
Approach Vol, veh/h		1362			724			631			368	
Approach Delay, s/veh		8.5			29.1			74.6			74.0	
Approach LOS		A			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.4	70.4		22.9	16.0	72.8		38.3
Change Period (Y+Rc), s	5.5	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	13.5	51.0		24.0	10.0	58.0		34.0
Max Q Clear Time (g_c+I1), s	12.7	19.8		15.6	7.0	11.8		29.0
Green Ext Time (p_c), s	0.3	26.2		1.4	0.1	36.3		3.3

Intersection Summary	
HCM 2010 Ctrl Delay	34.7
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	1465	0	0	691	594	73	0	328	0	0	0
Future Volume (veh/h)	90	1465	0	0	691	594	73	0	328	0	0	0
Number	1	6	16	5	2	12	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1776	0	1863			
Adj Flow Rate, veh/h	94	1526	0	0	720	0	76	0	235			
Adj No. of Lanes	1	2	0	0	1	1	1	0	2			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	0	0	2	2	7	0	2			
Cap, veh/h	661	2909	0	0	1389	1180	173	0	284			
Arrive On Green	0.08	1.00	0.00	0.00	1.00	0.00	0.10	0.00	0.10			
Sat Flow, veh/h	1774	3632	0	0	1863	1583	1691	0	2787			
Grp Volume(v), veh/h	94	1526	0	0	720	0	76	0	235			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1863	1583	1691	0	1393			
Q Serve(g_s), s	1.7	0.0	0.0	0.0	0.0	0.0	6.3	0.0	12.4			
Cycle Q Clear(g_c), s	1.7	0.0	0.0	0.0	0.0	0.0	6.3	0.0	12.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	661	2909	0	0	1389	1180	173	0	284			
V/C Ratio(X)	0.14	0.52	0.00	0.00	0.52	0.00	0.44	0.00	0.83			
Avail Cap(c_a), veh/h	762	2909	0	0	1389	1180	333	0	548			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.60	0.60	0.00	0.00	0.79	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	3.1	0.0	0.0	0.0	0.0	0.0	63.3	0.0	66.0			
Incr Delay (d2), s/veh	0.1	0.4	0.0	0.0	1.1	0.0	1.8	0.0	6.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.8	0.2	0.0	0.0	0.4	0.0	3.0	0.0	5.0			
LnGrp Delay(d),s/veh	3.2	0.4	0.0	0.0	1.1	0.0	65.1	0.0	72.1			
LnGrp LOS	A	A			A		E		E			
Approach Vol, veh/h		1620			720			311				
Approach Delay, s/veh		0.6			1.1			70.4				
Approach LOS		A			A			E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	11.5	117.7		20.8		129.2		
Change Period (Y+Rc), s	5.6	* 5.9		5.5		* 5.9		
Max Green Setting (Gmax), s	14.4	* 89		29.5		* 1.1E2		
Max Q Clear Time (g_c+I1), s	3.7	2.0		14.4		2.0		
Green Ext Time (p_c), s	0.1	78.0		0.9		93.7		

Intersection Summary	
HCM 2010 Ctrl Delay	8.9
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	586	98	284	481	0	0	0	0	983	0	126
Future Volume (veh/h)	0	586	98	284	481	0	0	0	0	983	0	126
Number	1	6	16	5	2	12				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1900	1863	1863	0				1863	0	1863
Adj Flow Rate, veh/h	0	623	94	302	512	0				1046	0	57
Adj No. of Lanes	0	2	0	1	1	0				2	0	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	2	2	2	2	0				2	0	2
Cap, veh/h	0	897	135	575	1087	0				1179	0	542
Arrive On Green	0.00	0.29	0.29	0.51	1.00	0.00				0.34	0.00	0.34
Sat Flow, veh/h	0	3179	465	1774	1863	0				3442	0	1583
Grp Volume(v), veh/h	0	357	360	302	512	0				1046	0	57
Grp Sat Flow(s),veh/h/ln	0	1770	1781	1774	1863	0				1721	0	1583
Q Serve(g_s), s	0.0	26.9	27.0	3.5	0.0	0.0				43.1	0.0	3.7
Cycle Q Clear(g_c), s	0.0	26.9	27.0	3.5	0.0	0.0				43.1	0.0	3.7
Prop In Lane	0.00		0.26	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	514	518	575	1087	0				1179	0	542
V/C Ratio(X)	0.00	0.69	0.70	0.53	0.47	0.00				0.89	0.00	0.11
Avail Cap(c_a), veh/h	0	514	518	575	1087	0				1448	0	666
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.84	0.84	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	47.3	47.3	25.5	0.0	0.0				46.6	0.0	33.6
Incr Delay (d2), s/veh	0.0	7.5	7.5	2.9	1.2	0.0				6.6	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	14.3	14.4	7.0	0.4	0.0				21.6	0.0	1.6
LnGrp Delay(d),s/veh	0.0	54.8	54.8	28.4	1.2	0.0				53.2	0.0	33.8
LnGrp LOS		D	D	C	A					D		C
Approach Vol, veh/h		717			814						1103	
Approach Delay, s/veh		54.8			11.3						52.2	
Approach LOS		D			B						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		93.7			44.7	49.0		56.3
Change Period (Y+Rc), s		* 6.2			* 6.2	* 5.4		4.9
Max Green Setting (Gmax), s		* 77			* 27	* 44		63.1
Max Q Clear Time (g_c+I1), s		2.0			5.5	29.0		45.1
Green Ext Time (p_c), s		11.1			8.1	7.4		6.3

Intersection Summary	
HCM 2010 Ctrl Delay	40.3
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	28.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	114	0	47	4	0	7	60	571	1	12	567	143
Future Vol, veh/h	114	0	47	4	0	7	60	571	1	12	567	143
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	135	-	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	0	2	100	0	100	2	3	2	100	2	2
Mvmt Flow	125	0	52	4	0	8	66	627	1	13	623	157

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1412	1408	623	1434	1408	627	623	0	0	627	0	0
Stage 1	649	649	-	759	759	-	-	-	-	-	-	-
Stage 2	763	759	-	675	649	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.5	6.22	8.1	6.5	7.2	4.12	-	-	5.1	-	-
Critical Hdwy Stg 1	6.12	5.5	-	7.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.5	-	7.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4	3.318	4.4	4	4.2	2.218	-	-	3.1	-	-
Pot Cap-1 Maneuver	~ 116	140	486	69	140	345	958	-	-	618	-	-
Stage 1	458	469	-	281	418	-	-	-	-	-	-	-
Stage 2	397	418	-	317	469	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 101	120	486	55	120	345	958	-	-	618	-	-
Mov Cap-2 Maneuver	~ 101	120	-	55	120	-	-	-	-	-	-	-
Stage 1	409	451	-	251	374	-	-	-	-	-	-	-
Stage 2	347	374	-	273	451	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	262.8	39	0.9	0.2
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	958	-	-	131	118	618	-	-
HCM Lane V/C Ratio	0.069	-	-	1.351	0.102	0.021	-	-
HCM Control Delay (s)	9	0	-	262.8	39	11	0	-
HCM Lane LOS	A	A	-	F	E	B	A	-
HCM 95th %tile Q(veh)	0.2	-	-	11.5	0.3	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	116	5	31	473	289	368
Future Vol, veh/h	116	5	31	473	289	368
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	220	0	250	-	-	175
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	2	2	5	4	3
Mvmt Flow	126	5	34	514	314	400

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	896	314	314	0	-	0
Stage 1	314	-	-	-	-	-
Stage 2	582	-	-	-	-	-
Critical Hdwy	6.44	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	308	726	1246	-	-	-
Stage 1	736	-	-	-	-	-
Stage 2	555	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	300	726	1246	-	-	-
Mov Cap-2 Maneuver	300	-	-	-	-	-
Stage 1	736	-	-	-	-	-
Stage 2	540	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	24.8	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1246	-	300	726	-	-
HCM Lane V/C Ratio	0.027	-	0.42	0.007	-	-
HCM Control Delay (s)	8	-	25.4	10	-	-
HCM Lane LOS	A	-	D	B	-	-
HCM 95th %tile Q(veh)	0.1	-	2	0	-	-

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	153	475	968	345	206	93
Future Volume (veh/h)	153	475	968	345	206	93
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1712	1845	1863	1845	1810	1759
Adj Flow Rate, veh/h	158	56	998	356	212	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	11	3	2	3	5	8
Cap, veh/h	187	180	1044	1474	739	610
Arrive On Green	0.11	0.11	0.34	0.80	0.41	0.00
Sat Flow, veh/h	1630	1568	1774	1845	1810	1495
Grp Volume(v), veh/h	158	56	998	356	212	0
Grp Sat Flow(s),veh/h/ln	1630	1568	1774	1845	1810	1495
Q Serve(g_s), s	12.4	4.3	39.4	6.2	10.2	0.0
Cycle Q Clear(g_c), s	12.4	4.3	39.4	6.2	10.2	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	187	180	1044	1474	739	610
V/C Ratio(X)	0.84	0.31	0.96	0.24	0.29	0.00
Avail Cap(c_a), veh/h	435	419	1129	1474	739	610
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.4	52.8	11.7	3.3	25.8	0.0
Incr Delay (d2), s/veh	8.3	0.8	16.6	0.4	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	3.8	23.4	3.3	5.3	0.0
LnGrp Delay(d),s/veh	64.7	53.6	28.3	3.6	26.8	0.0
LnGrp LOS	E	D	C	A	C	
Approach Vol, veh/h	214			1354	212	
Approach Delay, s/veh	61.8			21.8	26.8	
Approach LOS	E			C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		109.8		20.2	50.8	59.0		
Change Period (Y+Rc), s		5.9		* 5.3	6.5	5.9		
Max Green Setting (Gmax), s		84.1		* 35	50.5	27.1		
Max Q Clear Time (g_c+I1), s		8.2		14.4	41.4	12.2		
Green Ext Time (p_c), s		7.8		0.6	2.9	5.0		

Intersection Summary	
HCM 2010 Ctrl Delay	27.2
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	137	604	190	18	960	8	427	38	15	47	45	339
Future Volume (veh/h)	137	604	190	18	960	8	427	38	15	47	45	339
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1863	1863	1863	1900	1863	1838	1900	1776	1863	1863
Adj Flow Rate, veh/h	147	649	57	19	1032	8	502	0	0	51	48	218
Adj No. of Lanes	1	2	1	1	2	0	2	1	0	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	5	5	2	2	2	2	2	6	6	7	2	2
Cap, veh/h	217	1170	539	298	1237	10	901	467	0	257	283	241
Arrive On Green	0.02	0.11	0.11	0.07	0.34	0.34	0.25	0.00	0.00	0.15	0.15	0.15
Sat Flow, veh/h	1723	3438	1583	1774	3600	28	3548	1838	0	1691	1863	1583
Grp Volume(v), veh/h	147	649	57	19	507	533	502	0	0	51	48	218
Grp Sat Flow(s),veh/h/ln	1723	1719	1583	1774	1770	1858	1774	1838	0	1691	1863	1583
Q Serve(g_s), s	7.1	23.2	4.2	0.8	34.3	34.3	16.0	0.0	0.0	3.4	2.9	17.6
Cycle Q Clear(g_c), s	7.1	23.2	4.2	0.8	34.3	34.3	16.0	0.0	0.0	3.4	2.9	17.6
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	217	1170	539	298	608	639	901	467	0	257	283	241
V/C Ratio(X)	0.68	0.55	0.11	0.06	0.83	0.83	0.56	0.00	0.00	0.20	0.17	0.91
Avail Cap(c_a), veh/h	223	1170	539	298	608	639	901	467	0	273	301	256
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	0.38	0.38	0.38	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.4	48.4	39.9	25.0	39.2	39.2	42.2	0.0	0.0	48.2	48.0	54.2
Incr Delay (d2), s/veh	7.3	1.8	0.4	0.2	5.3	5.1	2.5	0.0	0.0	0.4	0.3	31.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	11.4	1.9	0.4	17.7	18.5	8.1	0.0	0.0	1.6	1.5	9.8
LnGrp Delay(d),s/veh	39.7	50.2	40.3	25.2	44.6	44.3	44.6	0.0	0.0	48.6	48.2	85.7
LnGrp LOS	D	D	D	C	D	D	D			D	D	F
Approach Vol, veh/h		853			1059			502			317	
Approach Delay, s/veh		47.7			44.1			44.6			74.1	
Approach LOS		D			D			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.5	50.7		25.8	15.0	50.2		39.0
Change Period (Y+Rc), s	5.5	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	9.5	43.0		21.0	9.0	43.0		33.0
Max Q Clear Time (g_c+I1), s	9.1	36.3		19.6	2.8	25.2		18.0
Green Ext Time (p_c), s	0.0	5.0		0.2	0.0	10.6		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	48.8
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	246	844	0	0	803	1060	106	0	201	0	0	0
Future Volume (veh/h)	246	844	0	0	803	1060	106	0	201	0	0	0
Number	1	6	16	5	2	12	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1827	1863	0	0	1863	1863	1712	0	1827			
Adj Flow Rate, veh/h	259	888	0	0	845	0	112	0	13			
Adj No. of Lanes	1	2	0	0	1	1	1	0	2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	4	2	0	0	2	2	11	0	4			
Cap, veh/h	596	2933	0	0	1357	1153	136	0	228			
Arrive On Green	0.11	1.00	0.00	0.00	0.97	0.00	0.08	0.00	0.08			
Sat Flow, veh/h	1740	3632	0	0	1863	1583	1630	0	2733			
Grp Volume(v), veh/h	259	888	0	0	845	0	112	0	13			
Grp Sat Flow(s),veh/h/ln	1740	1770	0	0	1863	1583	1630	0	1367			
Q Serve(g_s), s	5.1	0.0	0.0	0.0	4.6	0.0	8.8	0.0	0.6			
Cycle Q Clear(g_c), s	5.1	0.0	0.0	0.0	4.6	0.0	8.8	0.0	0.6			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	596	2933	0	0	1357	1153	136	0	228			
V/C Ratio(X)	0.43	0.30	0.00	0.00	0.62	0.00	0.82	0.00	0.06			
Avail Cap(c_a), veh/h	649	2933	0	0	1357	1153	257	0	431			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00			
Upstream Filter(I)	0.79	0.79	0.00	0.00	0.40	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	3.2	0.0	0.0	0.0	0.6	0.0	58.6	0.0	54.9			
Incr Delay (d2), s/veh	0.4	0.2	0.0	0.0	0.9	0.0	11.6	0.0	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.4	0.1	0.0	0.0	2.1	0.0	4.4	0.0	0.2			
LnGrp Delay(d),s/veh	3.5	0.2	0.0	0.0	1.5	0.0	70.2	0.0	55.0			
LnGrp LOS	A	A			A		E		D			
Approach Vol, veh/h		1147			845			125				
Approach Delay, s/veh		1.0			1.5			68.6				
Approach LOS		A			A			E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	13.0	100.6		16.4		113.6		
Change Period (Y+Rc), s	5.6	* 5.9		5.5		* 5.9		
Max Green Setting (Gmax), s	11.4	* 81		20.5		* 98		
Max Q Clear Time (g_c+I1), s	7.1	6.6		10.8		2.0		
Green Ext Time (p_c), s	0.3	56.6		0.2		68.2		

Intersection Summary	
HCM 2010 Ctrl Delay	5.2
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	611	116	250	706	0	0	0	0	374	0	165
Future Volume (veh/h)	0	611	116	250	706	0	0	0	0	374	0	165
Number	1	6	16	5	2	12				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1839	1900	1845	1845	0				1845	0	1759
Adj Flow Rate, veh/h	0	702	122	287	811	0				430	0	57
Adj No. of Lanes	0	2	0	1	1	0				2	0	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87				0.87	0.87	0.87
Percent Heavy Veh, %	0	3	3	3	3	0				3	0	8
Cap, veh/h	0	1228	213	736	1403	0				525	0	230
Arrive On Green	0.00	0.41	0.41	0.61	1.00	0.00				0.15	0.00	0.15
Sat Flow, veh/h	0	3070	517	1757	1845	0				3408	0	1495
Grp Volume(v), veh/h	0	412	412	287	811	0				430	0	57
Grp Sat Flow(s),veh/h/ln	0	1747	1748	1757	1845	0				1704	0	1495
Q Serve(g_s), s	0.0	23.6	23.6	0.0	0.0	0.0				15.9	0.0	4.4
Cycle Q Clear(g_c), s	0.0	23.6	23.6	0.0	0.0	0.0				15.9	0.0	4.4
Prop In Lane	0.00		0.30	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	720	721	736	1403	0				525	0	230
V/C Ratio(X)	0.00	0.57	0.57	0.39	0.58	0.00				0.82	0.00	0.25
Avail Cap(c_a), veh/h	0	720	721	736	1403	0				815	0	358
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.70	0.70	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	29.4	29.4	10.9	0.0	0.0				53.2	0.0	48.4
Incr Delay (d2), s/veh	0.0	3.3	3.3	0.2	1.2	0.0				5.1	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	12.0	12.0	3.6	0.5	0.0				7.8	0.0	1.9
LnGrp Delay(d),s/veh	0.0	32.6	32.7	11.2	1.2	0.0				58.3	0.0	49.2
LnGrp LOS		C	C	B	A					E		D
Approach Vol, veh/h		824			1098						487	
Approach Delay, s/veh		32.7			3.8						57.2	
Approach LOS		C			A						E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		105.1			46.1	59.0		24.9
Change Period (Y+Rc), s		* 6.2			* 6.2	* 5.4		4.9
Max Green Setting (Gmax), s		* 89			* 29	* 54		31.1
Max Q Clear Time (g_c+I1), s		2.0			2.0	25.6		17.9
Green Ext Time (p_c), s		25.0			15.4	12.8		2.1

Intersection Summary	
HCM 2010 Ctrl Delay	24.5
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	32.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	114	0	73	5	1	5	43	613	1	4	721	106
Future Vol, veh/h	114	0	73	5	1	5	43	613	1	4	721	106
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	135	-	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	0	2	42	2	62	2	2	100	2	2	2
Mvmt Flow	118	0	75	5	1	5	44	632	1	4	743	109

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1476	1473	743	1510	1473	632	743	0	0	632	0	0
Stage 1	752	752	-	721	721	-	-	-	-	-	-	-
Stage 2	724	721	-	789	752	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.5	6.22	7.52	6.52	6.82	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.5	-	6.52	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.5	-	6.52	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4	3.318	3.878	4.018	3.858	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 104	128	415	80	127	388	864	-	-	951	-	-
Stage 1	402	421	-	362	432	-	-	-	-	-	-	-
Stage 2	417	435	-	330	418	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 95	117	415	61	116	388	864	-	-	951	-	-
Mov Cap-2 Maneuver	~ 95	117	-	61	116	-	-	-	-	-	-	-
Stage 1	370	418	-	333	398	-	-	-	-	-	-	-
Stage 2	378	401	-	268	415	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	285.8	43	0.6	0
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	864	-	-	136	106	951	-	-
HCM Lane V/C Ratio	0.051	-	-	1.418	0.107	0.004	-	-
HCM Control Delay (s)	9.4	0	-	285.8	43	8.8	0	-
HCM Lane LOS	A	A	-	F	E	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	12.8	0.3	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	24.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	178	96	102	561	488	326
Future Vol, veh/h	178	96	102	561	488	326
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	220	0	250	-	-	175
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	191	103	110	603	525	351

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1348	525	525	0	-	0
Stage 1	525	-	-	-	-	-
Stage 2	823	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	~ 166	552	1042	-	-	-
Stage 1	593	-	-	-	-	-
Stage 2	431	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 148	552	1042	-	-	-
Mov Cap-2 Maneuver	~ 148	-	-	-	-	-
Stage 1	593	-	-	-	-	-
Stage 2	386	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	154.8	1.4	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1042	-	148	552	-	-
HCM Lane V/C Ratio	0.105	-	1.293	0.187	-	-
HCM Control Delay (s)	8.9	-	231.3	13	-	-
HCM Lane LOS	A	-	F	B	-	-
HCM 95th %tile Q(veh)	0.4	-	11.6	0.7	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	313	782	613	354	441	149
Future Volume (veh/h)	313	782	613	354	441	149
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1845	1845	1863	1827
Adj Flow Rate, veh/h	337	371	659	381	474	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	3	3	2	4
Cap, veh/h	453	404	663	1236	664	554
Arrive On Green	0.26	0.26	0.28	0.67	0.36	0.00
Sat Flow, veh/h	1774	1583	1757	1845	1863	1553
Grp Volume(v), veh/h	337	371	659	381	474	0
Grp Sat Flow(s),veh/h/ln	1774	1583	1757	1845	1863	1553
Q Serve(g_s), s	26.2	34.2	41.4	12.9	32.9	0.0
Cycle Q Clear(g_c), s	26.2	34.2	41.4	12.9	32.9	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	453	404	663	1236	664	554
V/C Ratio(X)	0.74	0.92	0.99	0.31	0.71	0.00
Avail Cap(c_a), veh/h	600	535	663	1236	664	554
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.59	0.59	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	51.3	54.3	32.8	10.3	41.6	0.0
Incr Delay (d2), s/veh	2.1	11.6	33.3	0.6	6.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.1	28.2	33.2	6.8	18.2	0.0
LnGrp Delay(d),s/veh	53.4	65.9	66.1	10.9	48.1	0.0
LnGrp LOS	D	E	E	B	D	
Approach Vol, veh/h	708			1040	474	
Approach Delay, s/veh	59.9			45.9	48.1	
Approach LOS	E			D	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		106.4		43.6	47.0	59.4		
Change Period (Y+Rc), s		5.9		* 5.3	5.1	5.9		
Max Green Setting (Gmax), s		88.1		* 51	41.9	41.1		
Max Q Clear Time (g_c+I1), s		14.9		36.2	43.4	34.9		
Green Ext Time (p_c), s		13.0		2.1	0.0	3.7		

Intersection Summary	
HCM 2010 Ctrl Delay	50.8
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	226	1002	506	116	606	33	405	135	86	171	161	261
Future Volume (veh/h)	226	1002	506	116	606	33	405	135	86	171	161	261
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1846	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	231	1022	194	118	618	31	315	275	79	174	164	76
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	1	1	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	3	3	2	2	2	2	2	2
Cap, veh/h	429	1536	687	274	1405	70	391	307	88	211	221	188
Arrive On Green	0.12	0.58	0.58	0.07	0.41	0.41	0.22	0.22	0.22	0.12	0.12	0.12
Sat Flow, veh/h	1774	3539	1583	1774	3399	170	1774	1392	400	1774	1863	1583
Grp Volume(v), veh/h	231	1022	194	118	319	330	315	0	354	174	164	76
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1753	1816	1774	0	1792	1774	1863	1583
Q Serve(g_s), s	11.3	29.7	9.3	5.6	19.5	19.6	25.2	0.0	28.8	14.4	12.8	6.7
Cycle Q Clear(g_c), s	11.3	29.7	9.3	5.6	19.5	19.6	25.2	0.0	28.8	14.4	12.8	6.7
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.22	1.00		1.00
Lane Grp Cap(c), veh/h	429	1536	687	274	725	751	391	0	395	211	221	188
V/C Ratio(X)	0.54	0.67	0.28	0.43	0.44	0.44	0.81	0.00	0.90	0.82	0.74	0.40
Avail Cap(c_a), veh/h	475	1536	687	274	725	751	402	0	406	284	298	253
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.74	0.74	0.34	0.34	0.34	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.3	24.2	19.9	24.9	31.5	31.5	55.4	0.0	56.8	64.6	63.8	61.2
Incr Delay (d2), s/veh	0.8	1.7	0.8	1.7	0.7	0.6	16.1	0.0	25.4	15.6	8.2	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	14.9	4.2	2.8	9.6	10.0	14.2	0.0	17.0	8.0	7.1	3.0
LnGrp Delay(d),s/veh	23.1	26.0	20.7	26.6	32.2	32.2	71.5	0.0	82.2	80.2	72.0	63.1
LnGrp LOS	C	C	C	C	C	C	E		F	F	E	E
Approach Vol, veh/h		1447			767			669			414	
Approach Delay, s/veh		24.8			31.3			77.2			73.8	
Approach LOS		C			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.1	68.0		23.8	16.0	71.1		39.1
Change Period (Y+Rc), s	5.5	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	13.5	51.0		24.0	10.0	58.0		34.0
Max Q Clear Time (g_c+I1), s	13.3	21.6		16.4	7.6	31.7		30.8
Green Ext Time (p_c), s	0.2	25.7		1.5	0.1	23.2		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	43.1
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	137	1566	0	0	738	630	87	0	348	0	0	0
Future Volume (veh/h)	137	1566	0	0	738	630	87	0	348	0	0	0
Number	1	6	16	5	2	12	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1743	1863	0	0	1863	1863	1712	0	1863			
Adj Flow Rate, veh/h	143	1631	0	0	769	0	91	0	277			
Adj No. of Lanes	1	2	0	0	1	1	1	0	2			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	9	2	0	0	2	2	11	0	2			
Cap, veh/h	590	2854	0	0	1358	1154	192	0	328			
Arrive On Green	0.08	1.00	0.00	0.00	1.00	0.00	0.12	0.00	0.12			
Sat Flow, veh/h	1660	3632	0	0	1863	1583	1630	0	2787			
Grp Volume(v), veh/h	143	1631	0	0	769	0	91	0	277			
Grp Sat Flow(s),veh/h/ln	1660	1770	0	0	1863	1583	1630	0	1393			
Q Serve(g_s), s	3.3	0.0	0.0	0.0	0.0	0.0	7.8	0.0	14.6			
Cycle Q Clear(g_c), s	3.3	0.0	0.0	0.0	0.0	0.0	7.8	0.0	14.6			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	590	2854	0	0	1358	1154	192	0	328			
V/C Ratio(X)	0.24	0.57	0.00	0.00	0.57	0.00	0.47	0.00	0.85			
Avail Cap(c_a), veh/h	683	2854	0	0	1358	1154	321	0	548			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.48	0.48	0.00	0.00	0.75	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	3.8	0.0	0.0	0.0	0.0	0.0	61.8	0.0	64.8			
Incr Delay (d2), s/veh	0.1	0.4	0.0	0.0	1.3	0.0	1.8	0.0	6.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.5	0.2	0.0	0.0	0.5	0.0	3.6	0.0	5.9			
LnGrp Delay(d),s/veh	3.9	0.4	0.0	0.0	1.3	0.0	63.7	0.0	71.0			
LnGrp LOS	A	A			A		E		E			
Approach Vol, veh/h		1774			769			368				
Approach Delay, s/veh		0.7			1.3			69.2				
Approach LOS		A			A			E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	11.6	115.3		23.1		126.9		
Change Period (Y+Rc), s	5.6	* 5.9		5.5		* 5.9		
Max Green Setting (Gmax), s	14.4	* 89		29.5		* 1.1E2		
Max Q Clear Time (g_c+I1), s	5.3	2.0		16.6		2.0		
Green Ext Time (p_c), s	0.2	80.8		1.0		97.8		

Intersection Summary	
HCM 2010 Ctrl Delay	9.5
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	674	126	301	525	0	0	0	0	1043	0	152
Future Volume (veh/h)	0	674	126	301	525	0	0	0	0	1043	0	152
Number	1	6	16	5	2	12				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1813	1900	1863	1845	0				1863	0	1810
Adj Flow Rate, veh/h	0	717	124	320	559	0				1110	0	81
Adj No. of Lanes	0	2	0	1	1	0				2	0	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	4	4	2	3	0				2	0	5
Cap, veh/h	0	854	148	503	1044	0				1240	0	554
Arrive On Green	0.00	0.29	0.29	0.48	1.00	0.00				0.36	0.00	0.36
Sat Flow, veh/h	0	3029	508	1774	1845	0				3442	0	1538
Grp Volume(v), veh/h	0	420	421	320	559	0				1110	0	81
Grp Sat Flow(s),veh/h/ln	0	1723	1724	1774	1845	0				1721	0	1538
Q Serve(g_s), s	0.0	34.3	34.4	11.6	0.0	0.0				45.7	0.0	5.3
Cycle Q Clear(g_c), s	0.0	34.3	34.4	11.6	0.0	0.0				45.7	0.0	5.3
Prop In Lane	0.00		0.29	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	501	501	503	1044	0				1240	0	554
V/C Ratio(X)	0.00	0.84	0.84	0.64	0.54	0.00				0.90	0.00	0.15
Avail Cap(c_a), veh/h	0	501	501	503	1044	0				1448	0	647
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.79	0.79	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	49.9	49.9	31.0	0.0	0.0				45.3	0.0	32.4
Incr Delay (d2), s/veh	0.0	15.5	15.5	4.8	1.6	0.0				7.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	18.5	18.5	9.6	0.5	0.0				23.0	0.0	2.3
LnGrp Delay(d),s/veh	0.0	65.4	65.4	35.8	1.6	0.0				52.6	0.0	32.6
LnGrp LOS		E	E	D	A					D		C
Approach Vol, veh/h		841			879						1191	
Approach Delay, s/veh		65.4			14.0						51.2	
Approach LOS		E			B						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		91.1			42.1	49.0		58.9
Change Period (Y+Rc), s		* 6.2			* 6.2	* 5.4		4.9
Max Green Setting (Gmax), s		* 77			* 27	* 44		63.1
Max Q Clear Time (g_c+I1), s		2.0			13.6	36.4		47.7
Green Ext Time (p_c), s		12.7			6.7	4.9		6.4

Intersection Summary	
HCM 2010 Ctrl Delay	44.1
HCM 2010 LOS	D

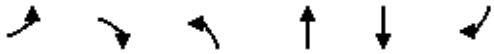
Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	0	47	4	0	7	60	571	1	12	567	143
Future Volume (veh/h)	114	0	47	4	0	7	60	571	1	12	567	143
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	950	1900	1863	1845	1863	1900	1827	1863
Adj Flow Rate, veh/h	125	0	3	4	0	8	66	627	1	13	623	123
Adj No. of Lanes	0	1	1	0	1	0	1	1	1	0	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	2	0	0	0	2	3	2	2	2	2
Cap, veh/h	202	0	321	42	9	27	470	1343	1152	39	1304	1152
Arrive On Green	0.20	0.00	0.20	0.20	0.00	0.20	0.73	0.73	0.73	0.73	0.73	0.73
Sat Flow, veh/h	720	0	1583	23	43	131	712	1845	1583	15	1791	1583
Grp Volume(v), veh/h	125	0	3	12	0	0	66	627	1	636	0	123
Grp Sat Flow(s),veh/h/ln	720	0	1583	197	0	0	712	1845	1583	1806	0	1583
Q Serve(g_s), s	0.0	0.0	0.2	0.3	0.0	0.0	5.5	18.2	0.0	0.0	0.0	3.0
Cycle Q Clear(g_c), s	24.0	0.0	0.2	24.4	0.0	0.0	24.4	18.2	0.0	18.9	0.0	3.0
Prop In Lane	1.00		1.00	0.33		0.67	1.00		1.00	0.02		1.00
Lane Grp Cap(c), veh/h	202	0	321	77	0	0	470	1343	1152	1343	0	1152
V/C Ratio(X)	0.62	0.00	0.01	0.16	0.00	0.00	0.14	0.47	0.00	0.47	0.00	0.11
Avail Cap(c_a), veh/h	246	0	371	101	0	0	470	1343	1152	1343	0	1152
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.92	0.92	0.92	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.9	0.0	41.4	43.5	0.0	0.0	12.5	7.3	4.8	7.4	0.0	5.2
Incr Delay (d2), s/veh	3.3	0.0	0.0	0.9	0.0	0.0	0.6	1.1	0.0	1.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.0	0.1	0.4	0.0	0.0	1.2	9.6	0.0	9.8	0.0	1.4
LnGrp Delay(d),s/veh	54.2	0.0	41.4	44.4	0.0	0.0	13.1	8.4	4.8	8.6	0.0	5.4
LnGrp LOS	D		D	D			B	A	A	A		A
Approach Vol, veh/h		128			12			694			759	
Approach Delay, s/veh		53.9			44.4			8.8			8.1	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		99.1		30.9		99.1		30.9
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		90.5		30.5		90.5		30.5
Max Q Clear Time (g_c+I1), s		26.4		26.0		20.9		26.4
Green Ext Time (p_c), s		11.1		0.2		11.2		0.2

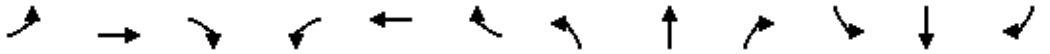
Intersection Summary	
HCM 2010 Ctrl Delay	12.3
HCM 2010 LOS	B



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	116	5	31	473	289	368
Future Volume (veh/h)	116	5	31	473	289	368
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1863	1863	1810	1827	1845
Adj Flow Rate, veh/h	126	1	34	514	314	303
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	2	2	5	4	3
Cap, veh/h	153	139	706	1525	1540	1322
Arrive On Green	0.09	0.09	0.84	0.84	0.84	0.84
Sat Flow, veh/h	1740	1583	803	1810	1827	1568
Grp Volume(v), veh/h	126	1	34	514	314	303
Grp Sat Flow(s),veh/h/ln	1740	1583	803	1810	1827	1568
Q Serve(g_s), s	9.3	0.1	1.1	8.1	4.2	4.9
Cycle Q Clear(g_c), s	9.3	0.1	5.3	8.1	4.2	4.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	153	139	706	1525	1540	1322
V/C Ratio(X)	0.82	0.01	0.05	0.34	0.20	0.23
Avail Cap(c_a), veh/h	422	384	706	1525	1540	1322
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.93	0.93	0.91	0.91
Uniform Delay (d), s/veh	58.3	54.1	2.4	2.2	1.9	2.0
Incr Delay (d2), s/veh	10.5	0.0	0.1	0.6	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.0	0.3	4.2	2.2	2.2
LnGrp Delay(d),s/veh	68.8	54.1	2.6	2.8	2.2	2.4
LnGrp LOS	E	D	A	A	A	A
Approach Vol, veh/h	127			548	617	
Approach Delay, s/veh	68.7			2.8	2.3	
Approach LOS	E			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		114.1		15.9		114.1		
Change Period (Y+Rc), s		4.5		4.5		4.5		
Max Green Setting (Gmax), s		89.5		31.5		89.5		
Max Q Clear Time (g_c+I1), s		10.1		11.3		6.9		
Green Ext Time (p_c), s		7.0		0.3		7.0		

Intersection Summary	
HCM 2010 Ctrl Delay	9.0
HCM 2010 LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	0	73	5	1	5	43	613	1	4	721	106
Future Volume (veh/h)	114	0	73	5	1	5	43	613	1	4	721	106
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1289	1900	1863	1863	950	1900	1863	1863
Adj Flow Rate, veh/h	118	0	7	5	1	5	44	632	1	4	743	90
Adj No. of Lanes	0	1	1	0	1	0	1	1	1	0	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	2	2	2	2	2	2	100	2	2	2
Cap, veh/h	186	0	236	43	12	16	476	1474	639	26	1469	1253
Arrive On Green	0.15	0.00	0.15	0.15	0.15	0.15	0.79	0.79	0.79	0.79	0.79	0.79
Sat Flow, veh/h	930	0	1583	53	80	111	656	1863	807	2	1857	1583
Grp Volume(v), veh/h	118	0	7	11	0	0	44	632	1	747	0	90
Grp Sat Flow(s),veh/h/ln	930	0	1583	244	0	0	656	1863	807	1860	0	1583
Q Serve(g_s), s	0.0	0.0	0.6	0.2	0.0	0.0	3.8	16.1	0.0	0.0	0.0	1.9
Cycle Q Clear(g_c), s	19.9	0.0	0.6	20.0	0.0	0.0	24.7	16.1	0.0	21.0	0.0	1.9
Prop In Lane	1.00		1.00	0.45		0.45	1.00		1.00	0.01		1.00
Lane Grp Cap(c), veh/h	186	0	236	71	0	0	476	1474	639	1495	0	1253
V/C Ratio(X)	0.63	0.00	0.03	0.15	0.00	0.00	0.09	0.43	0.00	0.50	0.00	0.07
Avail Cap(c_a), veh/h	272	0	332	135	0	0	476	1474	639	1495	0	1253
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.87	0.87	0.87	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.8	0.0	54.6	55.9	0.0	0.0	9.8	4.9	3.3	5.5	0.0	3.5
Incr Delay (d2), s/veh	3.5	0.0	0.1	1.0	0.0	0.0	0.3	0.8	0.0	1.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	0.0	0.3	0.4	0.0	0.0	0.7	8.6	0.0	11.1	0.0	0.9
LnGrp Delay(d),s/veh	66.3	0.0	54.6	56.9	0.0	0.0	10.1	5.7	3.3	6.7	0.0	3.6
LnGrp LOS	E		D	E			B	A	A	A		A
Approach Vol, veh/h		125			11			677			837	
Approach Delay, s/veh		65.7			56.9			6.0			6.3	
Approach LOS		E			E			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		123.2		26.8		123.2		26.8
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		109.5		31.5		109.5		31.5
Max Q Clear Time (g_c+I1), s		26.7		21.9		23.0		22.0
Green Ext Time (p_c), s		12.5		0.4		12.5		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	11.0
HCM 2010 LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	178	96	102	561	488	326
Future Volume (veh/h)	178	96	102	561	488	326
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	191	8	110	603	525	274
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	218	194	553	1522	1522	1294
Arrive On Green	0.12	0.12	0.82	0.82	0.82	0.82
Sat Flow, veh/h	1774	1583	678	1863	1863	1583
Grp Volume(v), veh/h	191	8	110	603	525	274
Grp Sat Flow(s),veh/h/ln	1774	1583	678	1863	1863	1583
Q Serve(g_s), s	15.9	0.7	7.4	13.1	10.8	5.7
Cycle Q Clear(g_c), s	15.9	0.7	18.2	13.1	10.8	5.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	218	194	553	1522	1522	1294
V/C Ratio(X)	0.88	0.04	0.20	0.40	0.34	0.21
Avail Cap(c_a), veh/h	491	438	553	1522	1522	1294
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.86	0.86	0.88	0.88
Uniform Delay (d), s/veh	64.7	58.0	5.8	3.7	3.5	3.0
Incr Delay (d2), s/veh	10.7	0.1	0.7	0.7	0.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	0.3	1.5	7.0	5.6	2.6
LnGrp Delay(d),s/veh	75.4	58.1	6.5	4.4	4.0	3.4
LnGrp LOS	E	E	A	A	A	A
Approach Vol, veh/h	199			713	799	
Approach Delay, s/veh	74.7			4.7	3.8	
Approach LOS	E			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		127.1		22.9		127.1		
Change Period (Y+Rc), s		4.5		4.5		4.5		
Max Green Setting (Gmax), s		99.5		41.5		99.5		
Max Q Clear Time (g_c+I1), s		20.2		17.9		12.8		
Green Ext Time (p_c), s		11.5		0.5		11.6		

Intersection Summary	
HCM 2010 Ctrl Delay	12.4
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	33.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	114	0	47	4	0	7	60	582	1	12	603	143
Future Vol, veh/h	114	0	47	4	0	7	60	582	1	12	603	143
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	135	-	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	0	2	100	0	100	2	4	2	100	3	2
Mvmt Flow	125	0	52	4	0	8	66	640	1	13	663	157

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1464	1460	663	1486	1460	640	663	0	0	640	0	0
Stage 1	689	689	-	771	771	-	-	-	-	-	-	-
Stage 2	775	771	-	715	689	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.5	6.22	8.1	6.5	7.2	4.12	-	-	5.1	-	-
Critical Hdwy Stg 1	6.12	5.5	-	7.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.5	-	7.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4	3.318	4.4	4	4.2	2.218	-	-	3.1	-	-
Pot Cap-1 Maneuver	~ 106	130	461	63	130	338	926	-	-	610	-	-
Stage 1	436	450	-	276	413	-	-	-	-	-	-	-
Stage 2	391	413	-	300	450	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 92	111	461	50	111	338	926	-	-	610	-	-
Mov Cap-2 Maneuver	~ 92	111	-	50	111	-	-	-	-	-	-	-
Stage 1	388	432	-	245	367	-	-	-	-	-	-	-
Stage 2	340	367	-	256	432	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 318.6	42.1	0.9	0.2
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	926	-	-	120	109	610	-	-
HCM Lane V/C Ratio	0.071	-	-	1.474	0.111	0.022	-	-
HCM Control Delay (s)	9.2	0	-	$ 318.6	42.1	11	0	-
HCM Lane LOS	A	A	-	F	E	B	A	-
HCM 95th %tile Q(veh)	0.2	-	-	12.4	0.4	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	157	5	31	601	313	394
Future Vol, veh/h	157	5	31	601	313	394
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	220	0	250	-	-	175
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	9	2	2	10	6	5
Mvmt Flow	171	5	34	653	340	428

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1061	340	340	0	-	0
Stage 1	340	-	-	-	-	-
Stage 2	721	-	-	-	-	-
Critical Hdwy	6.49	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.49	-	-	-	-	-
Critical Hdwy Stg 2	5.49	-	-	-	-	-
Follow-up Hdwy	3.581	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	240	702	1219	-	-	-
Stage 1	705	-	-	-	-	-
Stage 2	469	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	233	702	1219	-	-	-
Mov Cap-2 Maneuver	233	-	-	-	-	-
Stage 1	705	-	-	-	-	-
Stage 2	456	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	52.3	0.4	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1219	-	233	702	-	-
HCM Lane V/C Ratio	0.028	-	0.732	0.008	-	-
HCM Control Delay (s)	8	-	53.6	10.2	-	-
HCM Lane LOS	A	-	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	5	0	-	-

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	264	475	968	363	212	112
Future Volume (veh/h)	264	475	968	363	212	112
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1597	1845	1863	1827	1810	1712
Adj Flow Rate, veh/h	272	94	998	374	219	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	19	3	2	4	5	11
Cap, veh/h	299	309	952	1310	504	405
Arrive On Green	0.20	0.20	0.39	0.72	0.28	0.00
Sat Flow, veh/h	1521	1568	1774	1827	1810	1455
Grp Volume(v), veh/h	272	94	998	374	219	0
Grp Sat Flow(s),veh/h/ln	1521	1568	1774	1827	1810	1455
Q Serve(g_s), s	22.7	6.7	50.5	9.5	12.9	0.0
Cycle Q Clear(g_c), s	22.7	6.7	50.5	9.5	12.9	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	299	309	952	1310	504	405
V/C Ratio(X)	0.91	0.30	1.05	0.29	0.43	0.00
Avail Cap(c_a), veh/h	406	419	952	1310	504	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.69	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	51.1	44.6	18.8	6.5	38.5	0.0
Incr Delay (d2), s/veh	14.7	0.4	42.7	0.5	2.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.8	6.1	45.1	5.0	6.8	0.0
LnGrp Delay(d),s/veh	65.8	45.0	61.5	7.1	41.2	0.0
LnGrp LOS	E	D	F	A	D	
Approach Vol, veh/h	366			1372	219	
Approach Delay, s/veh	60.4			46.7	41.2	
Approach LOS	E			D	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		99.1		30.9	57.0	42.1		
Change Period (Y+Rc), s		5.9		* 5.3	6.5	5.9		
Max Green Setting (Gmax), s		84.1		* 35	50.5	27.1		
Max Q Clear Time (g_c+I1), s		11.5		24.7	52.5	14.9		
Green Ext Time (p_c), s		7.8		0.8	0.0	4.4		

Intersection Summary	
HCM 2010 Ctrl Delay	48.6
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	178	715	190	18	979	8	427	38	15	47	45	365
Future Volume (veh/h)	178	715	190	18	979	8	427	38	15	47	45	365
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1743	1863	1863	1863	1900	1863	1838	1900	1776	1863	1827
Adj Flow Rate, veh/h	191	769	57	19	1053	8	502	0	0	51	48	247
Adj No. of Lanes	1	2	1	1	2	0	2	1	0	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	10	9	2	2	2	2	2	6	6	7	2	4
Cap, veh/h	202	1095	524	249	1191	9	901	467	0	273	301	251
Arrive On Green	0.02	0.11	0.11	0.07	0.33	0.33	0.25	0.00	0.00	0.16	0.16	0.16
Sat Flow, veh/h	1645	3312	1583	1774	3600	27	3548	1838	0	1691	1863	1553
Grp Volume(v), veh/h	191	769	57	19	518	543	502	0	0	51	48	247
Grp Sat Flow(s),veh/h/ln	1645	1656	1583	1774	1770	1858	1774	1838	0	1691	1863	1553
Q Serve(g_s), s	9.5	29.1	4.2	0.8	36.0	36.0	16.0	0.0	0.0	3.4	2.9	20.6
Cycle Q Clear(g_c), s	9.5	29.1	4.2	0.8	36.0	36.0	16.0	0.0	0.0	3.4	2.9	20.6
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	202	1095	524	249	585	615	901	467	0	273	301	251
V/C Ratio(X)	0.94	0.70	0.11	0.08	0.88	0.88	0.56	0.00	0.00	0.19	0.16	0.98
Avail Cap(c_a), veh/h	202	1095	524	249	585	615	901	467	0	273	301	251
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	0.13	0.13	0.13	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	51.7	40.6	27.0	41.1	41.1	42.2	0.0	0.0	47.1	46.9	54.3
Incr Delay (d2), s/veh	45.5	3.5	0.4	0.1	3.0	2.8	2.5	0.0	0.0	0.3	0.2	52.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	13.9	1.9	0.4	18.0	18.9	8.1	0.0	0.0	1.6	1.5	12.5
LnGrp Delay(d),s/veh	80.9	55.2	41.0	27.1	44.1	44.0	44.6	0.0	0.0	47.4	47.1	106.7
LnGrp LOS	F	E	D	C	D	D	D			D	D	F
Approach Vol, veh/h		1017			1080			502			346	
Approach Delay, s/veh		59.2			43.7			44.6			89.7	
Approach LOS		E			D			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.0	49.0		27.0	15.0	49.0		39.0
Change Period (Y+Rc), s	5.5	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	9.5	43.0		21.0	9.0	43.0		33.0
Max Q Clear Time (g_c+I1), s	11.5	38.0		22.6	2.8	31.1		18.0
Green Ext Time (p_c), s	0.0	4.1		0.0	0.0	8.5		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	54.6
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	246	947	0	0	822	1086	106	0	250	0	0	0
Future Volume (veh/h)	246	947	0	0	822	1086	106	0	250	0	0	0
Number	1	6	16	5	2	12	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1827	1810	0	0	1845	1845	1712	0	1727			
Adj Flow Rate, veh/h	259	997	0	0	865	0	112	0	64			
Adj No. of Lanes	1	2	0	0	1	1	1	0	2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	4	5	0	0	3	3	11	0	10			
Cap, veh/h	583	2844	0	0	1340	1139	139	0	220			
Arrive On Green	0.12	1.00	0.00	0.00	0.97	0.00	0.09	0.00	0.09			
Sat Flow, veh/h	1740	3529	0	0	1845	1568	1630	0	2584			
Grp Volume(v), veh/h	259	997	0	0	865	0	112	0	64			
Grp Sat Flow(s),veh/h/ln	1740	1719	0	0	1845	1568	1630	0	1292			
Q Serve(g_s), s	5.2	0.0	0.0	0.0	5.5	0.0	8.8	0.0	3.0			
Cycle Q Clear(g_c), s	5.2	0.0	0.0	0.0	5.5	0.0	8.8	0.0	3.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	583	2844	0	0	1340	1139	139	0	220			
V/C Ratio(X)	0.44	0.35	0.00	0.00	0.65	0.00	0.81	0.00	0.29			
Avail Cap(c_a), veh/h	636	2844	0	0	1340	1139	257	0	407			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00			
Upstream Filter(I)	0.72	0.72	0.00	0.00	0.34	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	3.3	0.0	0.0	0.0	0.7	0.0	58.4	0.0	55.8			
Incr Delay (d2), s/veh	0.4	0.2	0.0	0.0	0.8	0.0	10.4	0.0	0.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.4	0.1	0.0	0.0	2.5	0.0	4.4	0.0	1.1			
LnGrp Delay(d),s/veh	3.7	0.2	0.0	0.0	1.5	0.0	68.8	0.0	56.5			
LnGrp LOS	A	A			A		E		E			
Approach Vol, veh/h		1256			865			176				
Approach Delay, s/veh		0.9			1.5			64.3				
Approach LOS		A			A			E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	13.1	100.3		16.6		113.4		
Change Period (Y+Rc), s	5.6	* 5.9		5.5		* 5.9		
Max Green Setting (Gmax), s	11.4	* 81		20.5		* 98		
Max Q Clear Time (g_c+I1), s	7.2	7.5		10.8		2.0		
Green Ext Time (p_c), s	0.3	59.9		0.3		74.0		

Intersection Summary	
HCM 2010 Ctrl Delay	6.0
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	626	116	264	711	0	0	0	0	462	0	165
Future Volume (veh/h)	0	626	116	264	711	0	0	0	0	462	0	165
Number	1	6	16	5	2	12				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1839	1900	1810	1845	0				1759	0	1759
Adj Flow Rate, veh/h	0	720	120	303	817	0				531	0	18
Adj No. of Lanes	0	2	0	1	1	0				2	0	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87				0.87	0.87	0.87
Percent Heavy Veh, %	0	3	3	5	3	0				8	0	8
Cap, veh/h	0	1236	206	658	1339	0				614	0	282
Arrive On Green	0.00	0.41	0.41	0.54	1.00	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	3091	500	1723	1845	0				3250	0	1495
Grp Volume(v), veh/h	0	419	421	303	817	0				531	0	18
Grp Sat Flow(s),veh/h/ln	0	1747	1751	1723	1845	0				1625	0	1495
Q Serve(g_s), s	0.0	24.1	24.2	0.0	0.0	0.0				20.6	0.0	1.3
Cycle Q Clear(g_c), s	0.0	24.1	24.2	0.0	0.0	0.0				20.6	0.0	1.3
Prop In Lane	0.00		0.29	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	720	722	658	1339	0				614	0	282
V/C Ratio(X)	0.00	0.58	0.58	0.46	0.61	0.00				0.86	0.00	0.06
Avail Cap(c_a), veh/h	0	720	722	658	1339	0				778	0	358
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.67	0.67	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	29.5	29.5	15.5	0.0	0.0				51.1	0.0	43.3
Incr Delay (d2), s/veh	0.0	3.4	3.4	0.3	1.4	0.0				9.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	12.3	12.4	5.0	0.5	0.0				10.0	0.0	0.5
LnGrp Delay(d),s/veh	0.0	33.0	33.0	15.9	1.4	0.0				60.3	0.0	43.4
LnGrp LOS		C	C	B	A					E		D
Approach Vol, veh/h		840			1120						549	
Approach Delay, s/veh		33.0			5.3						59.7	
Approach LOS		C			A						E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		100.5			41.5	59.0		29.5
Change Period (Y+Rc), s		* 6.2			* 6.2	* 5.4		4.9
Max Green Setting (Gmax), s		* 89			* 29	* 54		31.1
Max Q Clear Time (g_c+I1), s		2.0			2.0	26.2		22.6
Green Ext Time (p_c), s		25.5			15.5	12.9		2.0

Intersection Summary	
HCM 2010 Ctrl Delay	26.5
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	35	115	620	655	26
Future Vol, veh/h	8	35	115	620	655	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	310	-	-	250
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	13	20	20	4	2	12
Mvmt Flow	9	38	125	674	712	28

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1636	712	712	0	-	0
Stage 1	712	-	-	-	-	-
Stage 2	924	-	-	-	-	-
Critical Hdwy	6.53	6.4	4.3	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.48	2.38	-	-	-
Pot Cap-1 Maneuver	104	404	810	-	-	-
Stage 1	467	-	-	-	-	-
Stage 2	370	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	88	404	810	-	-	-
Mov Cap-2 Maneuver	88	-	-	-	-	-
Stage 1	467	-	-	-	-	-
Stage 2	313	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21.4	1.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	810	-	88	404	-	-
HCM Lane V/C Ratio	0.154	-	0.099	0.094	-	-
HCM Control Delay (s)	10.3	-	50.3	14.8	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.5	-	0.3	0.3	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	16	54	732	679	11
Future Vol, veh/h	3	16	54	732	679	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	310	-	-	250
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	33	44	43	6	3	27
Mvmt Flow	3	17	59	796	738	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1651	738	738	0	-	0
Stage 1	738	-	-	-	-	-
Stage 2	913	-	-	-	-	-
Critical Hdwy	6.73	6.64	4.53	-	-	-
Critical Hdwy Stg 1	5.73	-	-	-	-	-
Critical Hdwy Stg 2	5.73	-	-	-	-	-
Follow-up Hdwy	3.797	3.696	2.587	-	-	-
Pot Cap-1 Maneuver	91	356	708	-	-	-
Stage 1	422	-	-	-	-	-
Stage 2	345	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	83	356	708	-	-	-
Mov Cap-2 Maneuver	83	-	-	-	-	-
Stage 1	422	-	-	-	-	-
Stage 2	316	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21	0.7	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	708	-	83	356	-	-
HCM Lane V/C Ratio	0.083	-	0.039	0.049	-	-
HCM Control Delay (s)	10.5	-	50.1	15.6	-	-
HCM Lane LOS	B	-	F	C	-	-
HCM 95th %tile Q(veh)	0.3	-	0.1	0.2	-	-

Intersection	
Int Delay, s/veh	36.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	114	0	73	5	1	5	43	647	1	4	734	106
Future Vol, veh/h	114	0	73	5	1	5	43	647	1	4	734	106
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	135	-	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	0	2	42	2	62	2	3	100	2	2	2
Mvmt Flow	118	0	75	5	1	5	44	667	1	4	757	109

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1524	1521	757	1559	1521	667	757	0	0	667	0	0
Stage 1	765	765	-	756	756	-	-	-	-	-	-	-
Stage 2	759	756	-	803	765	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.5	6.22	7.52	6.52	6.82	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.5	-	6.52	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.5	-	6.52	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4	3.318	3.878	4.018	3.858	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 97	120	408	74	118	369	854	-	-	923	-	-
Stage 1	396	415	-	345	416	-	-	-	-	-	-	-
Stage 2	399	419	-	324	412	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 88	109	408	56	107	369	854	-	-	923	-	-
Mov Cap-2 Maneuver	~ 88	109	-	56	107	-	-	-	-	-	-	-
Stage 1	364	411	-	317	382	-	-	-	-	-	-	-
Stage 2	360	385	-	262	408	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 331.4	46.5	0.6	0
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	854	-	-	127	98	923	-	-
HCM Lane V/C Ratio	0.052	-	-	1.518	0.116	0.004	-	-
HCM Control Delay (s)	9.4	0	-	$ 331.4	46.5	8.9	0	-
HCM Lane LOS	A	A	-	F	E	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	13.6	0.4	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	41.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	193	96	102	607	567	410
Future Vol, veh/h	193	96	102	607	567	410
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	220	0	250	-	-	175
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	4	2	2	4	5	8
Mvmt Flow	208	103	110	653	610	441

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1482	610	610	0	-	0
Stage 1	610	-	-	-	-	-
Stage 2	872	-	-	-	-	-
Critical Hdwy	6.44	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	~ 136	494	969	-	-	-
Stage 1	538	-	-	-	-	-
Stage 2	406	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 121	494	969	-	-	-
Mov Cap-2 Maneuver	~ 121	-	-	-	-	-
Stage 1	538	-	-	-	-	-
Stage 2	360	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	283	1.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	969	-	121	494	-	-
HCM Lane V/C Ratio	0.113	-	1.715	0.209	-	-
HCM Control Delay (s)	9.2	-	$ 416.7	14.2	-	-
HCM Lane LOS	A	-	F	B	-	-
HCM 95th %tile Q(veh)	0.4	-	15.8	0.8	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	353	782	613	361	458	210
Future Volume (veh/h)	353	782	613	361	458	210
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1863	1845	1845	1863	1712
Adj Flow Rate, veh/h	380	379	659	388	492	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	5	2	3	3	2	11
Cap, veh/h	450	413	644	1225	654	511
Arrive On Green	0.26	0.26	0.28	0.66	0.35	0.00
Sat Flow, veh/h	1723	1583	1757	1845	1863	1455
Grp Volume(v), veh/h	380	379	659	388	492	0
Grp Sat Flow(s),veh/h/ln	1723	1583	1757	1845	1863	1455
Q Serve(g_s), s	31.4	34.9	41.9	13.4	34.9	0.0
Cycle Q Clear(g_c), s	31.4	34.9	41.9	13.4	34.9	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	450	413	644	1225	654	511
V/C Ratio(X)	0.84	0.92	1.02	0.32	0.75	0.00
Avail Cap(c_a), veh/h	582	535	644	1225	654	511
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.55	0.55	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	52.5	53.8	34.9	10.7	42.9	0.0
Incr Delay (d2), s/veh	5.1	11.0	41.5	0.7	7.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.5	28.6	34.1	7.0	19.5	0.0
LnGrp Delay(d),s/veh	57.6	64.9	76.4	11.4	50.8	0.0
LnGrp LOS	E	E	F	B	D	
Approach Vol, veh/h	759			1047	492	
Approach Delay, s/veh	61.2			52.3	50.8	
Approach LOS	E			D	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		105.5		44.5	47.0	58.5		
Change Period (Y+Rc), s		5.9		* 5.3	5.1	5.9		
Max Green Setting (Gmax), s		88.1		* 51	41.9	41.1		
Max Q Clear Time (g_c+I1), s		15.4		36.9	43.9	36.9		
Green Ext Time (p_c), s		13.6		2.3	0.0	2.7		

Intersection Summary	
HCM 2010 Ctrl Delay	54.9
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	241	1042	506	116	667	33	405	135	86	171	161	345
Future Volume (veh/h)	241	1042	506	116	667	33	405	135	86	171	161	345
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1845	1863	1863	1812	1900	1863	1863	1900	1863	1863	1743
Adj Flow Rate, veh/h	246	1063	194	118	681	31	315	275	79	174	164	173
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	1	1	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	3	2	2	5	5	2	2	2	2	2	9
Cap, veh/h	388	1460	660	250	1298	59	391	307	88	242	254	202
Arrive On Green	0.13	0.55	0.55	0.07	0.39	0.39	0.22	0.22	0.22	0.14	0.14	0.14
Sat Flow, veh/h	1740	3505	1583	1774	3354	153	1774	1392	400	1774	1863	1482
Grp Volume(v), veh/h	246	1063	194	118	349	363	315	0	354	174	164	173
Grp Sat Flow(s),veh/h/ln	1740	1752	1583	1774	1721	1785	1774	0	1792	1774	1863	1482
Q Serve(g_s), s	12.8	34.0	9.8	5.8	23.4	23.4	25.2	0.0	28.8	14.1	12.5	17.1
Cycle Q Clear(g_c), s	12.8	34.0	9.8	5.8	23.4	23.4	25.2	0.0	28.8	14.1	12.5	17.1
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.22	1.00		1.00
Lane Grp Cap(c), veh/h	388	1460	660	250	666	691	391	0	395	242	254	202
V/C Ratio(X)	0.63	0.73	0.29	0.47	0.52	0.53	0.81	0.00	0.90	0.72	0.65	0.86
Avail Cap(c_a), veh/h	417	1460	660	250	666	691	402	0	406	284	298	237
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.72	0.72	0.72	0.32	0.32	0.32	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	27.1	21.7	28.0	35.4	35.4	55.4	0.0	56.8	62.0	61.4	63.3
Incr Delay (d2), s/veh	2.0	2.3	0.8	2.1	1.0	0.9	16.1	0.0	25.4	8.3	4.7	24.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	16.7	4.4	3.0	11.3	11.8	14.2	0.0	17.0	7.5	6.8	8.4
LnGrp Delay(d),s/veh	26.6	29.4	22.5	30.0	36.3	36.3	71.5	0.0	82.2	70.4	66.1	87.6
LnGrp LOS	C	C	C	C	D	D	E		F	E	E	F
Approach Vol, veh/h		1503			830			669			511	
Approach Delay, s/veh		28.1			35.4			77.2			74.8	
Approach LOS		C			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	20.5	64.0		26.4	16.0	68.5		39.1
Change Period (Y+Rc), s	5.5	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	15.5	51.0		24.0	10.0	58.0		34.0
Max Q Clear Time (g_c+I1), s	14.8	25.4		19.1	7.8	36.0		30.8
Green Ext Time (p_c), s	0.2	23.2		1.3	0.1	20.2		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	46.0
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	137	1603	0	0	799	714	87	0	365	0	0	0
Future Volume (veh/h)	137	1603	0	0	799	714	87	0	365	0	0	0
Number	1	6	16	5	2	12	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1743	1845	0	0	1827	1810	1712	0	1827			
Adj Flow Rate, veh/h	143	1670	0	0	832	0	91	0	302			
Adj No. of Lanes	1	2	0	0	1	1	1	0	2			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	9	3	0	0	4	5	11	0	4			
Cap, veh/h	556	2788	0	0	1312	1105	210	0	352			
Arrive On Green	0.08	1.00	0.00	0.00	1.00	0.00	0.13	0.00	0.13			
Sat Flow, veh/h	1660	3597	0	0	1827	1538	1630	0	2733			
Grp Volume(v), veh/h	143	1670	0	0	832	0	91	0	302			
Grp Sat Flow(s),veh/h/ln	1660	1752	0	0	1827	1538	1630	0	1367			
Q Serve(g_s), s	3.4	0.0	0.0	0.0	0.0	0.0	7.7	0.0	16.2			
Cycle Q Clear(g_c), s	3.4	0.0	0.0	0.0	0.0	0.0	7.7	0.0	16.2			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	556	2788	0	0	1312	1105	210	0	352			
V/C Ratio(X)	0.26	0.60	0.00	0.00	0.63	0.00	0.43	0.00	0.86			
Avail Cap(c_a), veh/h	649	2788	0	0	1312	1105	321	0	538			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.45	0.45	0.00	0.00	0.62	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	4.1	0.0	0.0	0.0	0.0	0.0	60.3	0.0	64.0			
Incr Delay (d2), s/veh	0.1	0.4	0.0	0.0	1.5	0.0	1.4	0.0	8.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.5	0.2	0.0	0.0	0.5	0.0	3.6	0.0	6.5			
LnGrp Delay(d),s/veh	4.3	0.4	0.0	0.0	1.5	0.0	61.7	0.0	72.6			
LnGrp LOS	A	A			A		E		E			
Approach Vol, veh/h		1813			832			393				
Approach Delay, s/veh		0.7			1.5			70.1				
Approach LOS		A			A			E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	11.6	113.6		24.8		125.2		
Change Period (Y+Rc), s	5.6	* 5.9		5.5		* 5.9		
Max Green Setting (Gmax), s	14.4	* 89		29.5		* 1.1E2		
Max Q Clear Time (g_c+I1), s	5.4	2.0		18.2		2.0		
Green Ext Time (p_c), s	0.2	82.3		1.1		100.0		

Intersection Summary	
HCM 2010 Ctrl Delay	9.9
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	680	126	347	540	0	0	0	0	1074	0	152
Future Volume (veh/h)	0	680	126	347	540	0	0	0	0	1074	0	152
Number	1	6	16	5	2	12				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1813	1900	1776	1845	0				1845	0	1810
Adj Flow Rate, veh/h	0	723	123	369	574	0				1143	0	81
Adj No. of Lanes	0	2	0	1	1	0				2	0	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	4	4	7	3	0				3	0	5
Cap, veh/h	0	856	146	462	1023	0				1265	0	571
Arrive On Green	0.00	0.29	0.29	0.46	1.00	0.00				0.37	0.00	0.37
Sat Flow, veh/h	0	3037	501	1691	1845	0				3408	0	1538
Grp Volume(v), veh/h	0	423	423	369	574	0				1143	0	81
Grp Sat Flow(s),veh/h/ln	0	1723	1725	1691	1845	0				1704	0	1538
Q Serve(g_s), s	0.0	34.6	34.6	19.5	0.0	0.0				47.6	0.0	5.2
Cycle Q Clear(g_c), s	0.0	34.6	34.6	19.5	0.0	0.0				47.6	0.0	5.2
Prop In Lane	0.00		0.29	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	501	501	462	1023	0				1265	0	571
V/C Ratio(X)	0.00	0.84	0.84	0.80	0.56	0.00				0.90	0.00	0.14
Avail Cap(c_a), veh/h	0	501	501	462	1023	0				1434	0	647
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.73	0.73	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	50.0	50.0	34.5	0.0	0.0				44.6	0.0	31.3
Incr Delay (d2), s/veh	0.0	15.9	15.9	10.0	1.6	0.0				8.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	18.6	18.7	13.4	0.5	0.0				23.8	0.0	2.3
LnGrp Delay(d),s/veh	0.0	65.9	65.9	44.5	1.6	0.0				52.7	0.0	31.5
LnGrp LOS		E	E	D	A					D		C
Approach Vol, veh/h		846			943						1224	
Approach Delay, s/veh		65.9			18.4						51.3	
Approach LOS		E			B						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		89.4			40.4	49.0		60.6
Change Period (Y+Rc), s		* 6.2			* 6.2	* 5.4		4.9
Max Green Setting (Gmax), s		* 77			* 27	* 44		63.1
Max Q Clear Time (g_c+I1), s		2.0			21.5	36.6		49.6
Green Ext Time (p_c), s		13.5			3.4	4.7		6.1

Intersection Summary	
HCM 2010 Ctrl Delay	45.1
HCM 2010 LOS	D

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	24	110	41	714	818	9
Future Vol, veh/h	24	110	41	714	818	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	310	-	-	250
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	8	20	20	2	2	11
Mvmt Flow	26	118	44	768	880	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1736	880	880	0	-	0
Stage 1	880	-	-	-	-	-
Stage 2	856	-	-	-	-	-
Critical Hdwy	6.48	6.4	4.3	-	-	-
Critical Hdwy Stg 1	5.48	-	-	-	-	-
Critical Hdwy Stg 2	5.48	-	-	-	-	-
Follow-up Hdwy	3.572	3.48	2.38	-	-	-
Pot Cap-1 Maneuver	93	321	697	-	-	-
Stage 1	396	-	-	-	-	-
Stage 2	406	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	87	321	697	-	-	-
Mov Cap-2 Maneuver	87	-	-	-	-	-
Stage 1	396	-	-	-	-	-
Stage 2	380	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	29.8	0.6	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	697	-	87	321	-	-
HCM Lane V/C Ratio	0.063	-	0.297	0.368	-	-
HCM Control Delay (s)	10.5	-	63	22.6	-	-
HCM Lane LOS	B	-	F	C	-	-
HCM 95th %tile Q(veh)	0.2	-	1.1	1.6	-	-

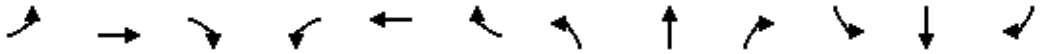
Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	51	19	746	924	4
Future Vol, veh/h	9	51	19	746	924	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	310	-	-	250
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	22	43	42	3	4	25
Mvmt Flow	10	55	20	802	994	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1837	994	994	0	-	0
Stage 1	994	-	-	-	-	-
Stage 2	843	-	-	-	-	-
Critical Hdwy	6.62	6.63	4.52	-	-	-
Critical Hdwy Stg 1	5.62	-	-	-	-	-
Critical Hdwy Stg 2	5.62	-	-	-	-	-
Follow-up Hdwy	3.698	3.687	2.578	-	-	-
Pot Cap-1 Maneuver	74	249	560	-	-	-
Stage 1	329	-	-	-	-	-
Stage 2	390	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	71	249	560	-	-	-
Mov Cap-2 Maneuver	71	-	-	-	-	-
Stage 1	329	-	-	-	-	-
Stage 2	376	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	29.5	0.3	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	560	-	71	249	-	-
HCM Lane V/C Ratio	0.036	-	0.136	0.22	-	-
HCM Control Delay (s)	11.7	-	63.5	23.5	-	-
HCM Lane LOS	B	-	F	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	0.8	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	0	47	4	0	7	60	582	1	12	603	143
Future Volume (veh/h)	114	0	47	4	0	7	60	582	1	12	603	143
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	950	1900	1863	1827	1863	1900	1812	1863
Adj Flow Rate, veh/h	125	0	3	4	0	8	66	640	1	13	663	123
Adj No. of Lanes	0	1	1	0	1	0	1	1	1	0	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	2	0	0	0	2	4	2	3	3	2
Cap, veh/h	201	0	321	41	9	26	444	1330	1153	39	1294	1153
Arrive On Green	0.20	0.00	0.20	0.20	0.00	0.20	0.73	0.73	0.73	0.73	0.73	0.73
Sat Flow, veh/h	719	0	1583	22	43	131	686	1827	1583	14	1778	1583
Grp Volume(v), veh/h	125	0	3	12	0	0	66	640	1	676	0	123
Grp Sat Flow(s),veh/h/ln	719	0	1583	196	0	0	686	1827	1583	1792	0	1583
Q Serve(g_s), s	0.0	0.0	0.2	0.3	0.0	0.0	6.0	19.1	0.0	0.0	0.0	3.0
Cycle Q Clear(g_c), s	24.1	0.0	0.2	24.4	0.0	0.0	27.0	19.1	0.0	21.0	0.0	3.0
Prop In Lane	1.00		1.00	0.33		0.67	1.00		1.00	0.02		1.00
Lane Grp Cap(c), veh/h	201	0	321	77	0	0	444	1330	1153	1333	0	1153
V/C Ratio(X)	0.62	0.00	0.01	0.16	0.00	0.00	0.15	0.48	0.00	0.51	0.00	0.11
Avail Cap(c_a), veh/h	235	0	359	95	0	0	444	1330	1153	1333	0	1153
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.9	0.0	41.4	43.5	0.0	0.0	13.5	7.4	4.8	7.7	0.0	5.2
Incr Delay (d2), s/veh	3.8	0.0	0.0	0.9	0.0	0.0	0.7	1.2	0.0	1.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.0	0.1	0.4	0.0	0.0	1.2	9.9	0.0	10.8	0.0	1.4
LnGrp Delay(d),s/veh	54.7	0.0	41.4	44.4	0.0	0.0	14.2	8.6	4.8	9.0	0.0	5.4
LnGrp LOS	D		D	D			B	A	A	A		A
Approach Vol, veh/h		128			12			707			799	
Approach Delay, s/veh		54.4			44.4			9.2			8.5	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		99.1		30.9		99.1		30.9
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		91.5		29.5		91.5		29.5
Max Q Clear Time (g_c+I1), s		29.0		26.1		23.0		26.4
Green Ext Time (p_c), s		12.0		0.2		12.0		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	12.6
HCM 2010 LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	157	5	31	601	313	394
Future Volume (veh/h)	157	5	31	601	313	394
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1743	1863	1863	1727	1792	1810
Adj Flow Rate, veh/h	171	1	34	653	340	331
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	9	2	2	10	6	5
Cap, veh/h	198	189	641	1402	1454	1248
Arrive On Green	0.12	0.12	0.81	0.81	0.81	0.81
Sat Flow, veh/h	1660	1583	763	1727	1792	1538
Grp Volume(v), veh/h	171	1	34	653	340	331
Grp Sat Flow(s),veh/h/ln	1660	1583	763	1727	1792	1538
Q Serve(g_s), s	13.1	0.1	1.4	14.9	5.7	6.7
Cycle Q Clear(g_c), s	13.1	0.1	7.1	14.9	5.7	6.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	198	189	641	1402	1454	1248
V/C Ratio(X)	0.86	0.01	0.05	0.47	0.23	0.27
Avail Cap(c_a), veh/h	402	384	641	1402	1454	1248
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.84	0.84	1.00	1.00
Uniform Delay (d), s/veh	56.2	50.4	3.7	3.7	2.9	2.9
Incr Delay (d2), s/veh	10.6	0.0	0.1	0.9	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	0.0	0.3	7.3	3.0	3.0
LnGrp Delay(d),s/veh	66.8	50.5	3.8	4.7	3.2	3.5
LnGrp LOS	E	D	A	A	A	A
Approach Vol, veh/h	172			687	671	
Approach Delay, s/veh	66.7			4.6	3.3	
Approach LOS	E			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		110.0		20.0		110.0		
Change Period (Y+Rc), s		4.5		4.5		4.5		
Max Green Setting (Gmax), s		89.5		31.5		89.5		
Max Q Clear Time (g_c+I1), s		16.9		15.1		8.7		
Green Ext Time (p_c), s		9.2		0.4		9.2		

Intersection Summary	
HCM 2010 Ctrl Delay	11.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	0	73	5	1	5	43	647	1	4	734	106
Future Volume (veh/h)	114	0	73	5	1	5	43	647	1	4	734	106
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1289	1900	1863	1845	950	1900	1863	1863
Adj Flow Rate, veh/h	118	0	7	5	1	5	44	667	1	4	757	89
Adj No. of Lanes	0	1	1	0	1	0	1	1	1	0	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	2	2	2	2	2	3	100	2	2	2
Cap, veh/h	186	0	235	43	12	16	468	1460	639	26	1470	1253
Arrive On Green	0.15	0.00	0.15	0.15	0.15	0.15	0.79	0.79	0.79	0.79	0.79	0.79
Sat Flow, veh/h	930	0	1583	52	80	110	648	1845	807	2	1857	1583
Grp Volume(v), veh/h	118	0	7	11	0	0	44	667	1	761	0	89
Grp Sat Flow(s),veh/h/ln	930	0	1583	243	0	0	648	1845	807	1859	0	1583
Q Serve(g_s), s	0.0	0.0	0.6	0.2	0.0	0.0	3.9	17.7	0.0	0.0	0.0	1.9
Cycle Q Clear(g_c), s	19.9	0.0	0.6	20.0	0.0	0.0	25.5	17.7	0.0	21.6	0.0	1.9
Prop In Lane	1.00		1.00	0.45		0.45	1.00		1.00	0.01		1.00
Lane Grp Cap(c), veh/h	186	0	235	71	0	0	468	1460	639	1496	0	1253
V/C Ratio(X)	0.63	0.00	0.03	0.15	0.00	0.00	0.09	0.46	0.00	0.51	0.00	0.07
Avail Cap(c_a), veh/h	263	0	322	128	0	0	468	1460	639	1496	0	1253
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.8	0.0	54.6	55.9	0.0	0.0	10.0	5.1	3.3	5.5	0.0	3.5
Incr Delay (d2), s/veh	3.5	0.0	0.1	1.0	0.0	0.0	0.4	1.0	0.0	1.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	0.0	0.3	0.4	0.0	0.0	0.7	9.3	0.0	11.5	0.0	0.9
LnGrp Delay(d),s/veh	66.3	0.0	54.7	56.9	0.0	0.0	10.4	6.1	3.3	6.8	0.0	3.6
LnGrp LOS	E		D	E			B	A	A	A		A
Approach Vol, veh/h		125			11			712			850	
Approach Delay, s/veh		65.7			56.9			6.4			6.4	
Approach LOS		E			E			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		123.2		26.8		123.2		26.8
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		110.5		30.5		110.5		30.5
Max Q Clear Time (g_c+I1), s		27.5		21.9		23.6		22.0
Green Ext Time (p_c), s		13.4		0.3		13.4		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	11.1
HCM 2010 LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	193	96	102	607	567	410
Future Volume (veh/h)	193	96	102	607	567	410
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1863	1863	1827	1810	1759
Adj Flow Rate, veh/h	208	9	110	653	610	346
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	2	2	4	5	8
Cap, veh/h	234	213	461	1471	1457	1204
Arrive On Green	0.13	0.13	0.81	0.81	0.81	0.81
Sat Flow, veh/h	1740	1583	585	1827	1810	1495
Grp Volume(v), veh/h	208	9	110	653	610	346
Grp Sat Flow(s),veh/h/ln	1740	1583	585	1827	1810	1495
Q Serve(g_s), s	17.6	0.7	10.2	16.2	14.8	8.8
Cycle Q Clear(g_c), s	17.6	0.7	25.1	16.2	14.8	8.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	234	213	461	1471	1457	1204
V/C Ratio(X)	0.89	0.04	0.24	0.44	0.42	0.29
Avail Cap(c_a), veh/h	481	438	461	1471	1457	1204
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.82	0.82	1.00	1.00
Uniform Delay (d), s/veh	63.8	56.5	8.0	4.4	4.3	3.7
Incr Delay (d2), s/veh	10.8	0.1	1.0	0.8	0.9	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	0.3	1.8	8.5	7.6	3.8
LnGrp Delay(d),s/veh	74.6	56.6	9.0	5.2	5.2	4.3
LnGrp LOS	E	E	A	A	A	A
Approach Vol, veh/h	217			763	956	
Approach Delay, s/veh	73.8			5.8	4.9	
Approach LOS	E			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		125.3		24.7		125.3		
Change Period (Y+Rc), s		4.5		4.5		4.5		
Max Green Setting (Gmax), s		99.5		41.5		99.5		
Max Q Clear Time (g_c+I1), s		27.1		19.6		16.8		
Green Ext Time (p_c), s		14.9		0.6		15.0		

Intersection Summary	
HCM 2010 Ctrl Delay	12.9
HCM 2010 LOS	B