Traffic Impact Study

Lumen Briarcliff

DeKalb County, Georgia

Report Prepared:

July 2020

Prepared for:

Stein Investment Group

Prepared by:

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7/29/2020

Kimley»Horn

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1.0 INTRODUCTION

This report presents the analysis of the anticipated traffic impacts associated with the *Lumen Briarcliff* development, which is expected to be completed in 2022 (referred to herein as "build-out year"). This study evaluates the impact of constructing 264 multi-family apartments, approximately 5,000 SF of retail, and approximately 5,000 SF of restaurant space. The approximate ±3.4-acre site is located in the northwest quadrant of the intersection of Clairmont Road (SR 155/US 23) at Briarcliff Road in DeKalb County, Georgia.

The site is currently comprised of approximately 5 buildings that are proposed to be demolished with the redevelopment of the site. Some of the buildings are currently in operation and generating traffic while other buildings are abandoned or generating minimal traffic.

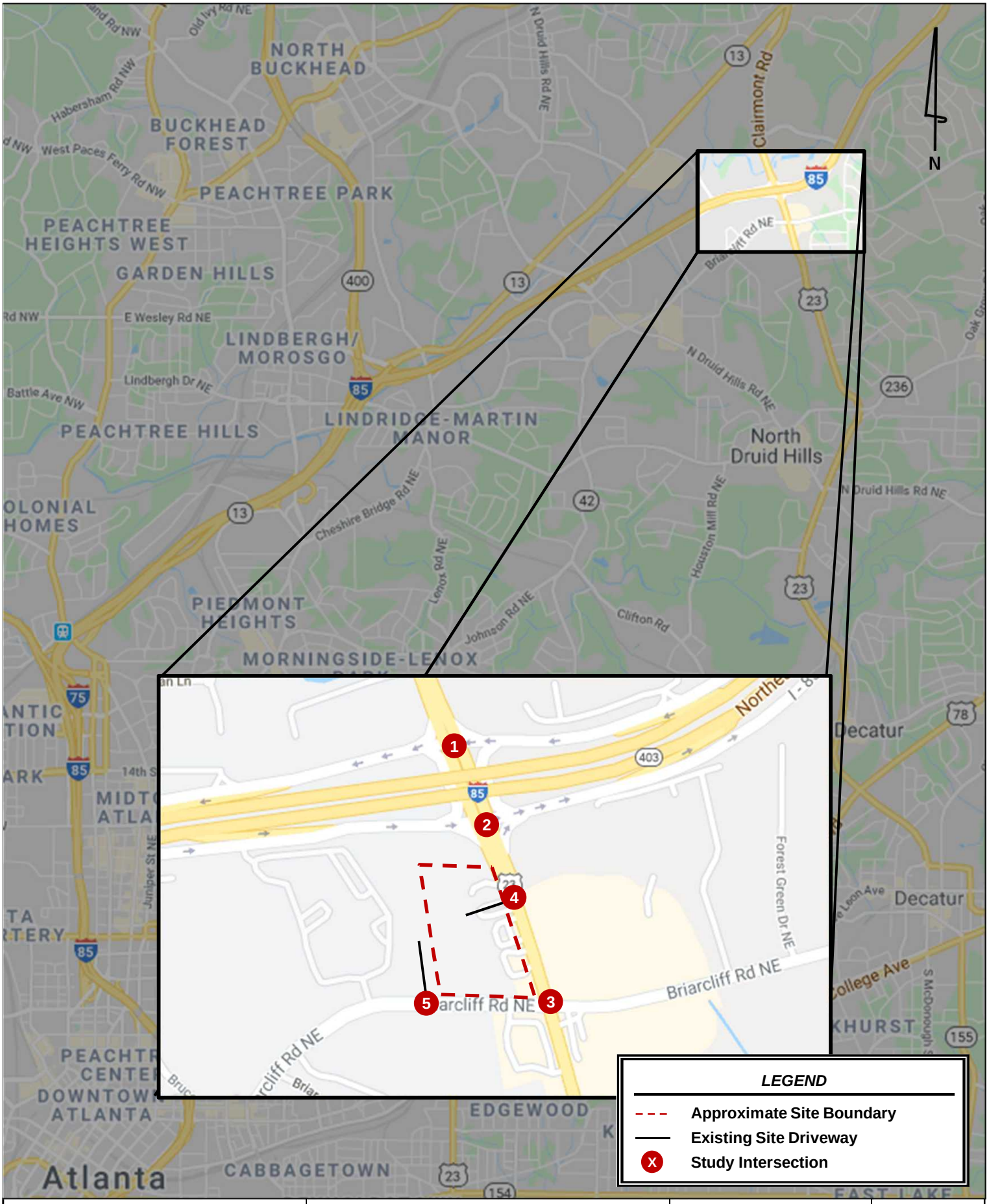
Figure 1 provides a location map of the project site. **Figure 2** provides an aerial image that captures the project site and the study roadway network. A site plan is also included in **Appendix A**.

2.0 STUDY AREA DETERMINATION

The study area consists of the following five (5) intersections:

1. Clairmont Road (SR 155/US 23) at I-85 SB Ramps (Signalized)
2. Clairmont Road (SR 155/US 23) at I-85 NB Ramps (Signalized)
3. Clairmont Road (SR 155/US 23) at Briarcliff Road (Signalized)
4. Clairmont Road (SR 155/US 23) at Site Driveway East (Unsignalized)
5. Briarcliff Road at Riviera Terrace Condominiums Driveway (Unsignalized)

For purposes of the traffic impact study, I-85, Briarcliff Road, and Site Driveway East are considered to have an east-west orientation. Clairmont Road (SR 155/US 23) and Riviera Terrace Condominiums Driveway are considered to have a north-south orientation.



Kimley»Horn	*Lumen Briarcliff Traffic Impact Study*	Site Location Map	Figure 1
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Kimley»Horn	*Lumen Briarcliff Traffic Impact Study*	Site Aerial	Figure 2
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3.0 EXISTING TRAFFIC CONDITIONS

The roadways within the study network have the following characteristics:

Clairmont Road (SR 155/US 23) is a four-lane, principal arterial with turn lanes and a posted speed limit of 40 MPH. GDOT counts taken north of Briarcliff Road indicate an AADT of 43,000 vehicles per day in 2018.

Briarcliff Road is a four-lane minor arterial with turn lanes and a posted speed limit of 35 MPH in the vicinity of the study network. GDOT counts taken west of Clairmont Road (SR 155/US 23) indicate an AADT of 11,900 vehicles per day in 2018.

I-85 is a twelve-lane, interstate with a posted speed limit of 65 MPH in the vicinity of the study network. GDOT counts taken west of the I-85/Clairmont Road interchange indicate an AADT of 216,000 vehicles per day in 2018.

Vehicle peak hour turning movement counts were performed at the following study intersections:

1. Clairmont Road (SR 155/US 23) at I-85 SB Ramps (Signalized)
2. Clairmont Road (SR 155/US 23) at I-85 NB Ramps (Signalized)
3. Clairmont Road (SR 155/US 23) at Briarcliff Road (Signalized)

The turning movement counts for intersections 1 and 2 were collected on Wednesday, November 8, 2017. The turning movement counts for intersection 3 were collected on Thursday, March 7, 2019. **Table 1** shows the AM and PM peak hours for each intersection.

Table 1: Peak Hour Summary

Intersection	AM Peak Hour	PM Peak Hour
1. Clairmont Road (SR 155/US 23) at I-85 SB Ramps	7:45 AM – 8:45 AM	4:00 PM – 5:00 PM
2. Clairmont Road (SR 155/US 23) at I-85 NB Ramps	7:30 AM – 8:30 AM	4:15 PM – 5:15 PM
3. Clairmont Road (SR 155/US 23) at Briarcliff Road	7:30 AM – 8:30 AM	5:00 PM – 6:00 PM

The peak hour traffic counts were increased at a 0.5% growth rate to the year 2020 (2 years for intersections 1 and 2; 1 year for intersection 3) which were considered to be estimated 2020 volumes to perform the analysis presented in this report. Growth rate calculations are provided in **Appendix C**.

Turning movement counts were not collected at intersections 4 or 5. The existing driveway associated with Intersection 4 appears to currently operate with minimal traffic. Additionally, the land uses served by this driveway are proposed to be demolished and will not generate traffic in the 2022 Build conditions. Therefore, the existing volumes entering and exiting the driveway were assumed to be zero. Other driveways along Clairmont Road (SR 155/US 23) and Briarcliff Road are proposed to be demolished.

Due to COVID-19, turning movement counts were not collected at the intersection of Briarcliff Road at Riviera Terrace Condominiums Driveway (Intersection 5). Instead, gross trips were estimated using the *Institute of Transportation Engineers' (ITE) Trip Generation Manual, Tenth Edition, 2017,* using equations where available, for the 45 existing condominiums (ITE Code: 220 Multi-Family Housing (Low-Rise)).

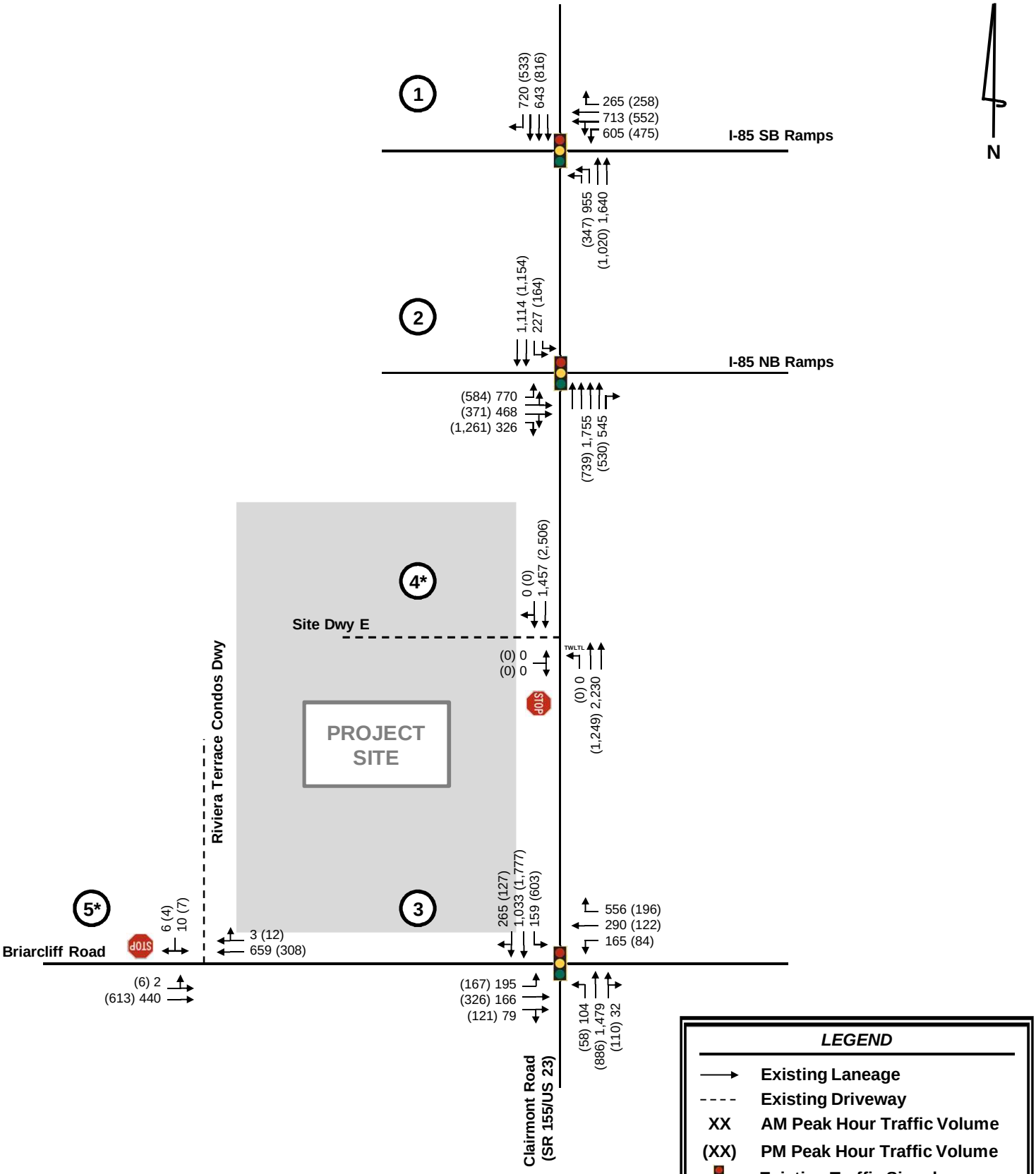
Table 2 summarizes the trip generation for the existing Riviera Terrace Condominiums.

Table 2: Riviera Terrace Condominiums Trip Generation Summary

ITE Code	Land Use	Density	Daily Traffic		AM Peak Hour		PM Peak Hour	
			Enter	Exit	Enter	Exit	Enter	Exit
220	Multi-Family Housing (Low-Rise)	45 Units	150	150	5	17	18	11

Trips associated with the existing Riviera Terrace Condominiums development were applied to the intersection of Briarcliff Road at Riviera Terrace Condominiums Driveway (Intersection 5) using the same trip distribution and assignment as the *Lumen Briarcliff* development residential trip distribution and assignment for Intersection 5 as shown in **Figure 5**. The trips associated with the existing Riviera Terrace Condominiums were only applied to Intersection 5. It was assumed that the project trips were already accounted for in the turning movement counts collected at the other study intersections. Trip distribution and assignment methodology is discussed in further detail in *Section 5.3*.

Figure 3 illustrates the estimated 2020 peak hour traffic volumes at the study intersections as well as the existing roadway geometry (intersection layout). The complete traffic count data is provided in **Appendix B**.



*Traffic counts were not collected at intersections 4 and 5. Volumes for these intersections were calculated using upstream/downstream intersection volumes and trip generation for the Riviera Terrace Condos. Volumes entering/exiting intersection 4 were assumed to be 0 to be more conservative.
Note: Turning movement counts collected at intersections 1-3 were increased assuming 0.5% per year to year 2020.

Kimley»Horn	*Lumen Briarcliff Traffic Impact Study*	**Estimated 2020 Conditions**	**Figure 3**
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4.0 PROJECTED BACKGROUND (NON-PROJECT) TRAFFIC

Projected background (non-project) traffic is defined as the expected traffic on the roadway network in the future year(s) absent the *Lumen Briarcliff* development. The existing 2020 peak hour traffic volumes were increased by 0.5% per year for two (2) years to account for the expected background growth in traffic through year 2022, build-out of the project. **Figure 4** illustrates the Projected 2022 No-Build traffic volumes.

4.1 FUTURE ROADWAY / INTERSECTION PROJECTS

The Atlanta Regional Commission's "Atlanta Region's Plan", the DeKalb County SPLOST project list, and GDOT's GeoPI system were researched to identify any currently programmed transportation projects that may impact the study network during the analysis period. Two (2) projects were identified in the vicinity of the site and are shown below in **Table 3**.

Table 3: Future Roadway Projects

PI#	Build Year	Description
0015956 (GDOT)*	2023	This project proposes to provide a raised median, additional through lane, and sidewalks (where none available) along Clairmont Road (SR 155/US 23) from I-85 NB Exit Ramp to Audubon Drive.
M006145 (GDOT)	N/A	This project proposes to resurface Clairmont Road (SR 155/US 23).

** Note: Please refer to the site plan in Appendix A that accounts for the additional widening to accommodate this future GDOT project.*

No improvements were considered in this analysis due to the build-out year of the improvements being beyond the build-out year of the proposed *Lumen Briarcliff* development.

Additional details about the projects listed above are provided in **Appendix E**.

5.0 PROJECT TRAFFIC

Project traffic used in this analysis is defined as the vehicle trips expected to be generated by the proposed development, and the distribution and assignment of that traffic through the study roadway network. This traffic impact study evaluated the impacts of adding the new trips generated by the proposed *Lumen Briarcliff* development.

5.1 PROJECT SITE ACCESS

Currently, there are approximately 15 full-movement driveways serving the site. However, access to the site will be provided via two (2) existing site driveways, which is shown on the proposed site plan in **Appendix A**, and all other driveways will be demolished. A brief description of the site driveways are as follows:

- Site Driveway East (Intersection 4) – an existing full-movement driveway along Clairmont Road (SR 155/US 23) located approximately 450 feet north of the intersection of Clairmont Road (SR 155/US 23) at Briarcliff Road (Intersection 3). The driveway is proposed to be converted to right-in/right-out only and maintain the existing one (1) ingress and one (1) egress lane on the site.

- Riviera Terrace Condominiums Driveway (Intersection 5) – an existing full-movement driveway along Briarcliff Road located approximately 400 feet west or the intersection of Clairmont Road (SR 155/US 23) at Briarcliff Road (Intersection 3). The intersection currently operates under side-street stop-control and is proposed to consist of two (2) egress lanes and one (1) ingress lane.

An additional fire access drive is proposed to be provided along Clairmont Road (SR 155/US 23) approximately 200 feet north of Site Driveway East (Intersection 4).

The proposed site driveways provide vehicular access to the entire development. Internal, private drives throughout the site provide access to all buildings and parking facilities. Refer to the site plan in **Appendix A** for a visual representation of vehicular access and circulation throughout the proposed development.

5.2 TRIP GENERATION

Gross trips associated with the proposed development were estimated using the *Institute of Transportation Engineers' (ITE) Trip Generation Manual, Tenth Edition, 2017,* using equations where available. Trip generation for the proposed development was calculated based upon the following land uses:

- Land Use 221: Multi-Family Housing (Low-Rise)
- Land Use 820: Shopping Center
- Land Use 931: Quality Restaurant

Reductions to gross trips were considered in the analysis, including internal capture (mixed-use) reductions and pass-by reductions.

Mixed-Use reductions occur when a site has a combination of different land uses that interact with one another. For example, people living in a residential development may walk to the restaurants and retail instead of driving off-site or to the site. This reduces the number of vehicle trips that will be made on the roadway.

Pass-by reductions are taken for a site when traffic normally traveling along a roadway may choose to visit a retail or restaurant establishment that is along the vehicle's path. These trips were already on the road and would therefore only be new trips on the driveways. The retail and restaurant establishments proposed for the project are expected to generate pass-by trips.

Table 4 summarizes the gross and net trip generation for the proposed development upon full build-out (2022). **Appendix C** provides the detailed trip generation worksheet for the proposed development.

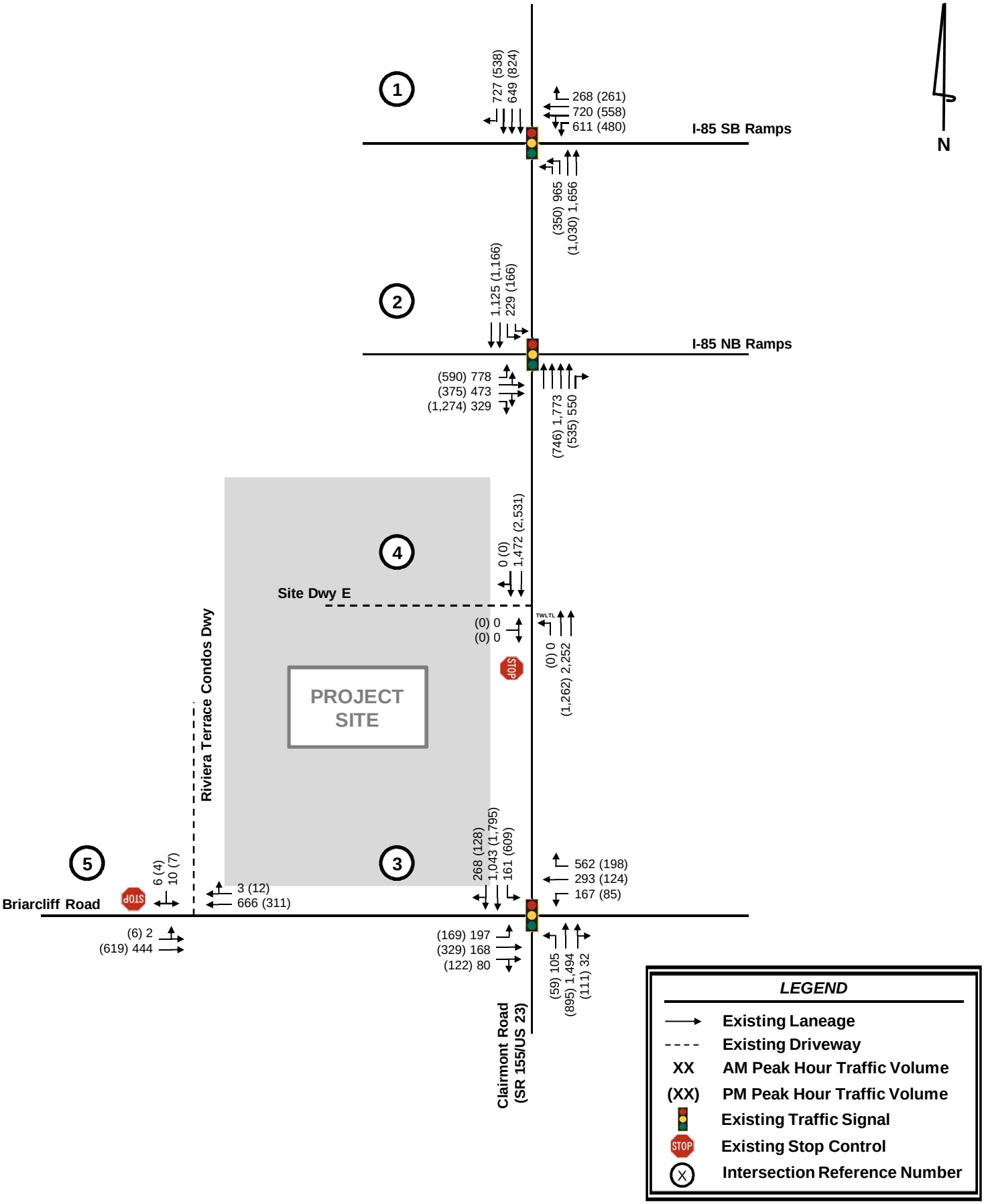
Table 4: Project Trip Generation Summary

ITE Code	Land Use	Density	Daily Traffic		AM Peak Hour		PM Peak Hour	
			Enter	Exit	Enter	Exit	Enter	Exit
221	Multi-Family Housing (Low-Rise)	264 units	719	719	23	66	68	44
820	Shopping Center	5,000 SF	89	89	3	2	9	10
931	Quality Restaurant	5,000 SF	210	210	2	2	26	13
Total Gross Trips			**1,023**	**1,023**	**28**	**70**	**103**	**67**
Mixed-Use Reductions			*-61*	*-61*	*-1*	*-1*	*-18*	*-18*
Pass-By Reductions			*-110*	*-110*	*-0*	*-0*	*-6*	*-6*
Total Net Trips			**852**	**852**	**27**	**69**	**79**	**43**

It should be noted that the existing land uses on the site currently generate traffic. All of the uses on the site are proposed to be demolished and will no longer generate traffic. However, existing traffic currently generated by the site was not reduced for a more conservative analysis.

5.3 TRIP DISTRIBUTION AND ASSIGNMENT

The directional distribution and assignment of adding new trips (project trips) related to the proposed development was based on a review of land uses and population densities in the area, and a review of the existing travel patterns in the area. Detailed trip distribution and assignment for both residential and non-residential land uses are shown in **Figure 5** and **Figure 6**, respectively. Based on trip generation from **Table 4** and the anticipated trip distribution, new project trips were assigned to the study roadway network. **Figure 7** illustrates the new project trips distributed throughout the study network for the Projected 2022 Build conditions. **Figure 8** illustrates the Projected 2022 Build traffic volumes for the AM and PM peak hours. **Appendix C** provides intersection volume worksheets for all study intersections.



Kimley»Horn	*Lumen Briarcliff Traffic Impact Study*	**Projected 2022 No-Build Conditions**	**Figure 4**
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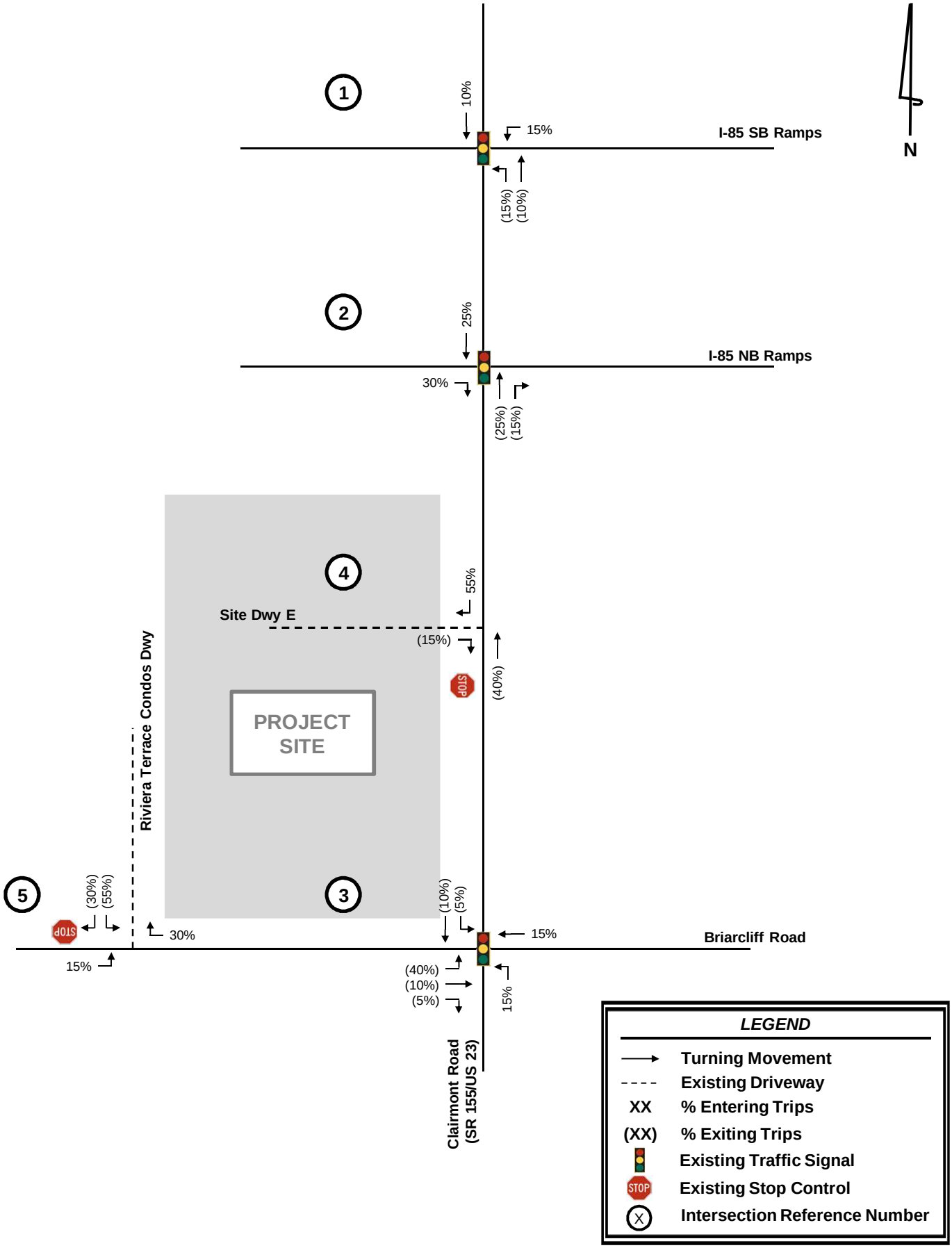

Kimley»Horn	*Lumen Briarcliff Traffic Impact Study*	**Residential Trip Distribution & Assignment**	**Figure 5**
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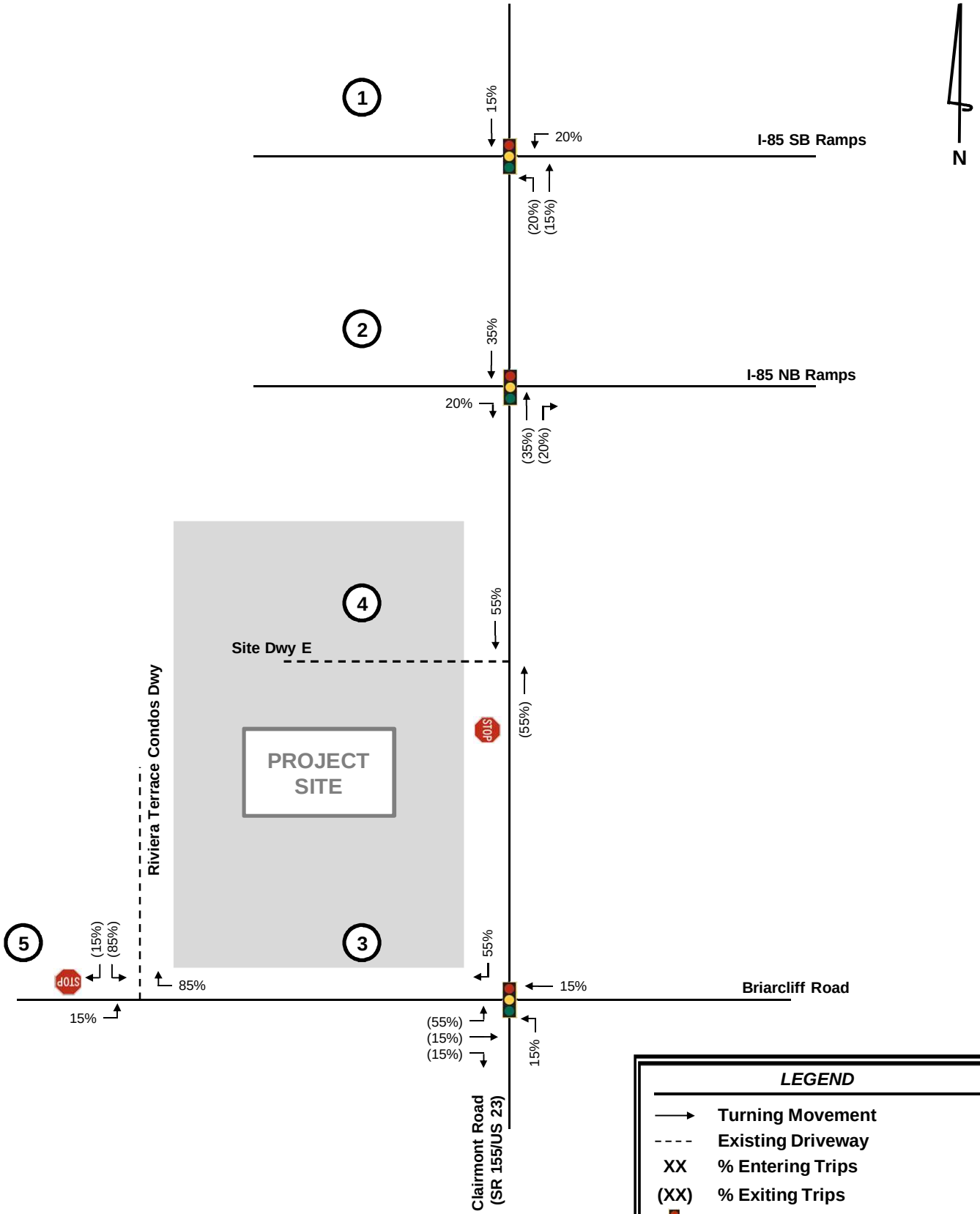

Kimley»Horn	*Lumen Briarcliff Traffic Impact Study*	**Non-Residential Trip Distribution & Assignment**	**Figure 6**
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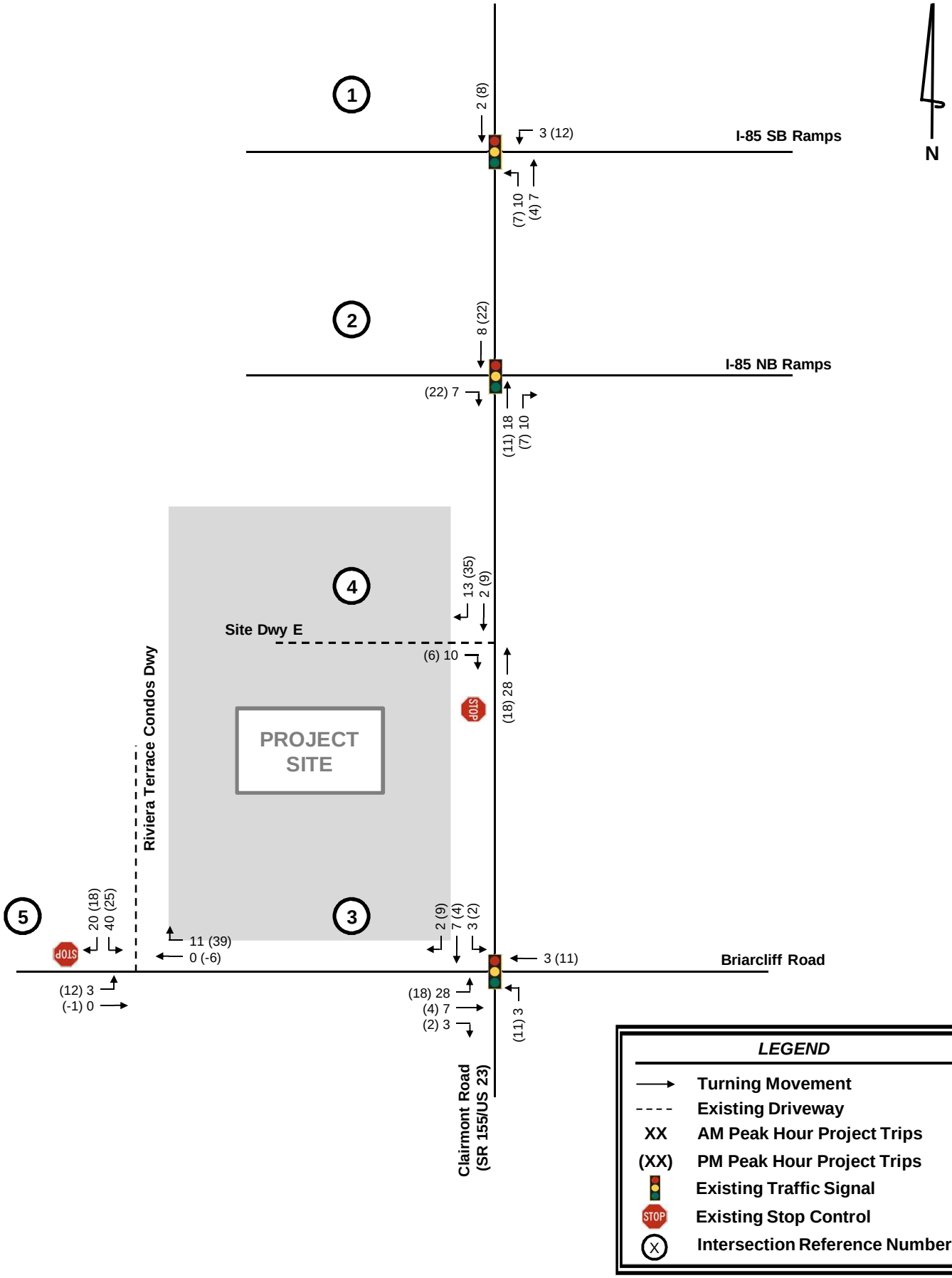

Kimley»Horn	*Lumen Briarcliff Traffic Impact Study*	**Project Trips**	**Figure 7**
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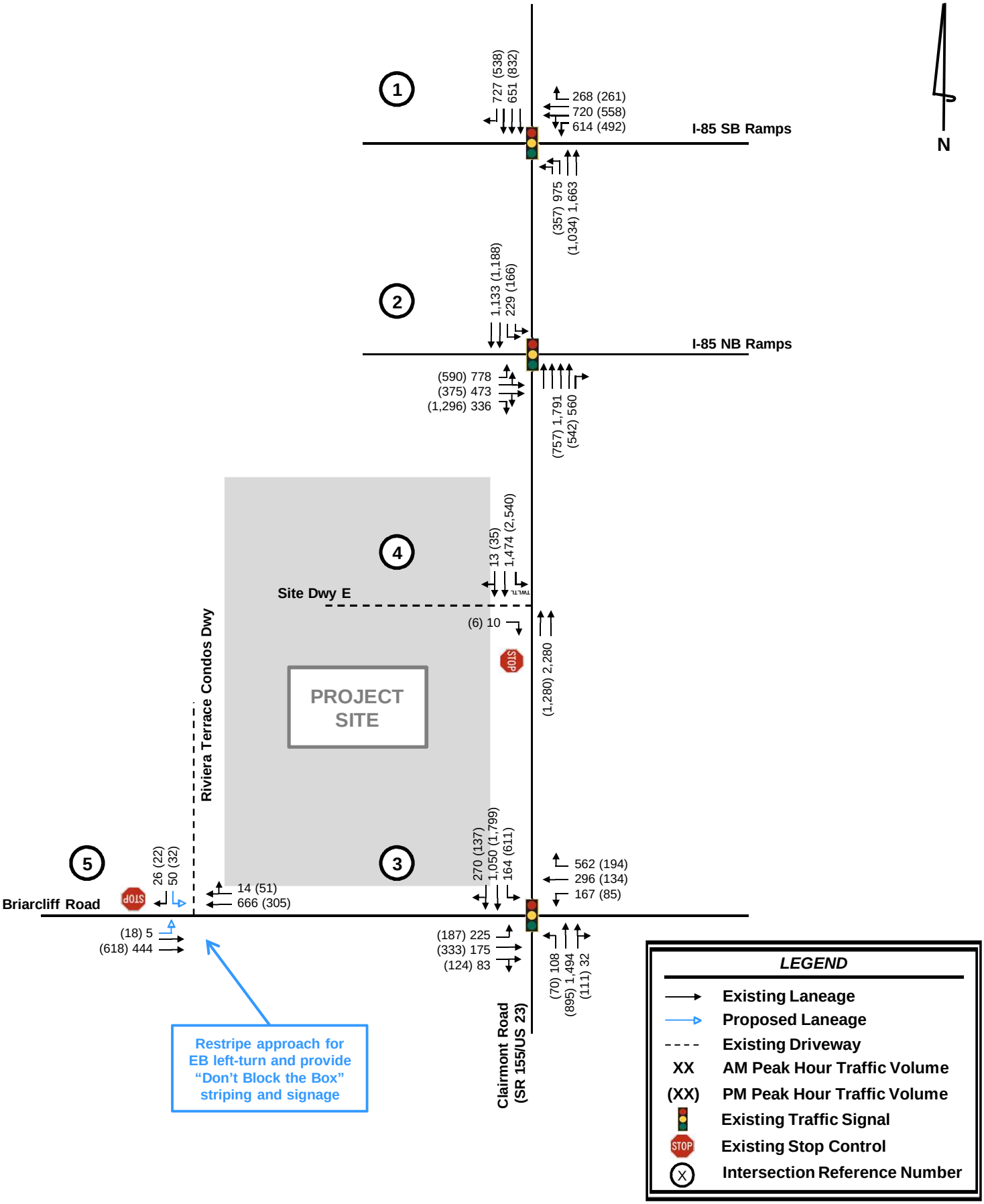

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Lumen Briarcliff Traffic Impact Study

Projected 2022 Build Conditions

Figure 8

6.0 LEVEL-OF-SERVICE ANALYSIS

Level-of-service determinations were made for the weekday AM and PM peak hours for the study network intersections using *Synchro, Version 10. Synchro* software uses methodologies contained in the *Highway Capacity Manual, 6th Edition* to determine the operating characteristics of an intersection. Capacity is defined as the maximum number of vehicles that can pass over a particular road segment or through a particular intersection within a specified period under prevailing roadway, traffic, and control conditions.

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 of a traffic stream. The *Highway Capacity Manual* defines six levels of service, LOS A through LOS F, with A being the best and F the worst.

LOS for signalized intersections are reported for the intersection as a whole. One or more movements at an intersection may experience a low LOS, 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 major street left-turns. Low levels-of-service for side street approaches are not uncommon, as vehicles may experience significant delay turning onto a major roadway.

In addition to the Existing 2020 conditions, an analysis was performed for the AM and PM peak hours under Projected 2022 No-Build and Build traffic conditions. The results of the LOS analysis are summarized for the AM and PM peak hours in **Table 5**. The *Synchro* analysis reports are included in **Appendix D**.

Table 5: Level-of-Service Summary
LOS (Delay in Seconds)

Intersection	Control	Approach	Existing 2020		Projected 2022 No-Build		Projected 2022 Build	
			AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
1. Clairmont Road (SR 155/US 23) at I-85 SB Ramps	Signal	Overall	E (61.8)	C (23.8)	E (63.9)	C (24.0)	E (64.6)	C (24.2)
2. Clairmont Road (SR 155/US 23) at I-85 NB Ramps	Signal	Overall	C (30.6)	C (33.7)	D (38.6)	C (34.9)	D (38.7)	D (36.6)
3. Clairmont Road (SR 155/US 23) at Briarcliff Road	Signal	Overall	E (55.6)	D (51.7)	E (57.1)	D (53.5)	E (58.5)	D (55.0)
4. Clairmont Road (SR 155/US 23) at Site Driveway East	RIRO	EB	A (0.0)	A (0.0)	A (0.0)	A (0.0)	B (12.9)	F (124.7)
5. Briarcliff Road at Riviera Terrace Condominiums Driveway	TWSC	SB	B (10.7)	B (10.6)	B (10.8)	B (10.6)	B (11.3)	B (11.0)
		EBL	A (8.0)	A (7.5)	A (8.0)	A (7.5)	A (8.0)	A (7.6)

**As stated above, low levels-of-service for side-street approaches are not uncommon as vehicles may experience greater delay turning onto a major roadway*

As shown in **Table 5**, the analysis indicates that under Existing 2020 conditions, the intersection of Clairmont Road (SR 155/US 23) at I-85 SB Ramps (Intersection 1) and the intersection of Clairmont Road (SR 155/US 23) at Briarcliff Road (Intersection 3) both currently operate at LOS E during the AM peak hour. These intersections are expected to continue to operate at LOS E during the AM peak hour under Projected 2022 No-Build conditions and Projected 2022 Build conditions.

The eastbound approach for the intersection of Clairmont Road (SR 155/US 23) at Site Driveway East (Intersection 4) is expected to operate at LOS F during the PM peak hour under Projected 2022 Build conditions. It should be noted that low levels-of-service for side-street approaches are not uncommon as vehicles may experience greater delay turning onto a major roadway.

All other study intersections and movements are projected to operate at LOS D or better during all scenarios.

7.0 INTERSECTION CONTROL EVALUATION (ICE)

Per GDOT's Policy, Intersection Control Evaluation (ICE) was performed for the site driveway along Clairmont Road (SR 155/US 23). The intent of ICE is to determine the most effective intersection design/traffic control at a given intersection.

The intersection of Clairmont Road (SR 155/US 23) at Site Driveway East is proposed to be converted from a full-movement driveway to a right-in/right-out (RIRO) controlled driveway. The proposed intersection control is expected to reduce the number of turning movements at the intersection and is in agreement with the proposed median along Clairmont Road (SR 155/US 23); therefore, a waiver form has been prepared in place of ICE Stages 1 and 2 forms.

The ICE waiver form for the intersection of Clairmont Road (SR 155/US 23) at Site Driveway East is provided in **Appendix F**.

8.0 CONCLUSION

This traffic study evaluated the traffic impacts associated with the *Lumen Briarcliff* development located in the northwest quadrant of the intersection of Clairmont Road (SR 155/US 23) at Briarcliff Road in DeKalb County, Georgia. The development, which is approximately ±3.4 acres in size, will include 264 multi-family apartments, approximately 5,000 SF of retail, and approximately 5,000 SF of restaurant space.

The study network, which consists of five (5) intersections, was analyzed for the weekday AM and PM peak hours under Existing 2020 conditions, Projected 2022 No-Build conditions (three years of background traffic growth), Projected 2022 Build conditions (Projected 2022 No-Build conditions plus traffic generated by the proposed *Lumen Briarcliff* development).

The intersections of Clairmont Road (SR 155/US 23) at I-85 SB Ramps (Intersection 1) and Clairmont Road (SR 155/US 23) at Briarcliff Road (Intersection 3) currently operate at LOS E during the AM peak hour under Existing 2020 conditions. These intersections are expected to continue to operate at LOS E during the AM peak hour under Projected 2022 No-Build conditions and Projected 2022 Build conditions.

The eastbound approach for the intersection of Clairmont Road (SR 155/US 23) at Site Driveway East (Intersection 4) is expected to operate at LOS F during the PM peak hour under Projected 2022 Build conditions. It should be noted that low levels-of-service for side-street approaches are not uncommon as vehicles may experience greater delay turning onto a major roadway.

All other study intersections and movements are projected to operate at LOS D or better during all scenarios.

Kimley-Horn and Associates, Inc. recommends site access improvements based on the results of this study. Site access improvements, or “Build” recommendations, are needed to serve the background road network traffic plus the *Lumen Briarcliff* development traffic.

8.1 SITE-ACCESS IMPROVEMENT RECOMMENDATIONS

Based on the results of this study, Kimley-Horn and Associates, Inc. recommends the following site-access improvements to serve the Projected 2022 Build traffic conditions (note: this would be the improvements needed to serve the traffic associated with the *Lumen Briarcliff* development).

- Intersection 4 – Clairmont Road (SR 155/US 23) at Site Driveway East
    - Convert the existing, full-movement driveway to RIRO control
    - On the site, maintain one (1) ingress lane entering the site and one (1) egress lane exiting the site.
- Intersection 5 – Briarcliff Road at Riviera Terrace Condominiums Driveway
    - Provide one (1) southbound right-turn lane and one (1) southbound left-turn lane exiting the site, and one (1) lane entering the site.
    - Provide an eastbound left-turn lane along Briarcliff Road via restriping.
    - Provide “Don’t Block the Box” striping and signage.

Additionally, reserve right-of-way on site to accommodate GDOT project PI 0015956, which will construct an additional southbound lane and install a raised median along Clairmont Road (SR 155/US 23).

APPENDIX A

Site Plan

STREETSCAPE SUMMARY:

BRIARCLIFF ROAD NORTHEAST
(MINOR ARTERIAL - DEKALB CLASSIFICATION)
- EDGE OF EXISTING TRAVEL LANE
- 4' BIKE LANE
- 30" CURB AND GUTTER
- 4' LANDSCAPE STRIP
- 6' SIDEWALK (MINIMUM WIDTH)
- 6' LANDSCAPE STRIP (INTERMITTENT)

CLAIRMONT ROAD
STATE ROUTE 155 (MAJOR ARTERIAL - DEKALB CLASSIFICATION)
- EDGE OF PROPOSED TRAVEL LANE (ROAD WIDENING)
- 4' BIKE LANE
- 30" CURB AND GUTTER
- 6' LANDSCAPE STRIP
- 8' SIDEWALK
- 2' LANDSCAPE STRIP

DEVELOPMENT SUMMARY:

LAND USE

APARTMENTS	
ALLOWED (BASE+20% BONUS)	276 (72 UNITS/ACRE)
PROPOSED	264 (68.7 UNITS/ACRE)
COMMERCIAL	
PROPOSED	10,000 SF
BUILDING SUMMARY	
BUILDING A	204,865 SF
BUILDING B	77,854 SF
BUILDING C	5,020 SF

PARKING SUMMARY

APARTMENTS	
REQ'D	396 SPACES (1.5 PER UNIT)
PROVIDED	370 (1.4 PER UNIT)
COMMERCIAL	
REQ'D (RESTAURANT)	67 SPACES (1/150 SF)
PROVIDED	57 SPACES (1/167 SF)

LOADING SUMMARY

REQUIRED	4 SPACES (INCL. 1 x XL SPACE)
PROVIDED	2 SPACES (12' x 35' x 14' CLEAR)

BUILDING HEIGHT

BUILDING	MAX (BASE / BONUS)	PROPOSED
A	8 STORIES / NO LIMIT	6 STORIES
B	10 STORIES / NO LIMIT	6 STORIES
C	--	2 STORIES

FLOOD PLAIN
THIS PROJECT DOES NOT LIE WITHIN A 100 YEAR FLOOD HAZARD ZONE AS DEFINED BY THE F.E.M.A. "FLOOD HAZARD BOUNDARY MAP" COMMUNITY PANEL NUMBER 13089C0054K, DATED 8/15/2019.

ZONING SUMMARY:

SITE AREA

EXISTING	3.845 ACRES

ZONING

ZONING CLASSIFICATION	
EXISTING	C1 & C2
PROPOSED	HR-3
OVERLAY DISTRICT	
N/A	
FUTURE LAND USE (COMPREHENSIVE PLAN)	
EXISTING	NC (NEIGHBORHOOD CENTER)
PROPOSED	RC (REGIONAL CENTER)

OPEN SPACE

REQ'D	15%
PROVIDED	21%

OUTDOOR RECREATION AREA (5.7.7(G))

REQ'D	5%
PROVIDED	5%

LOT COVERAGE (PERCENT IMPERVIOUS)

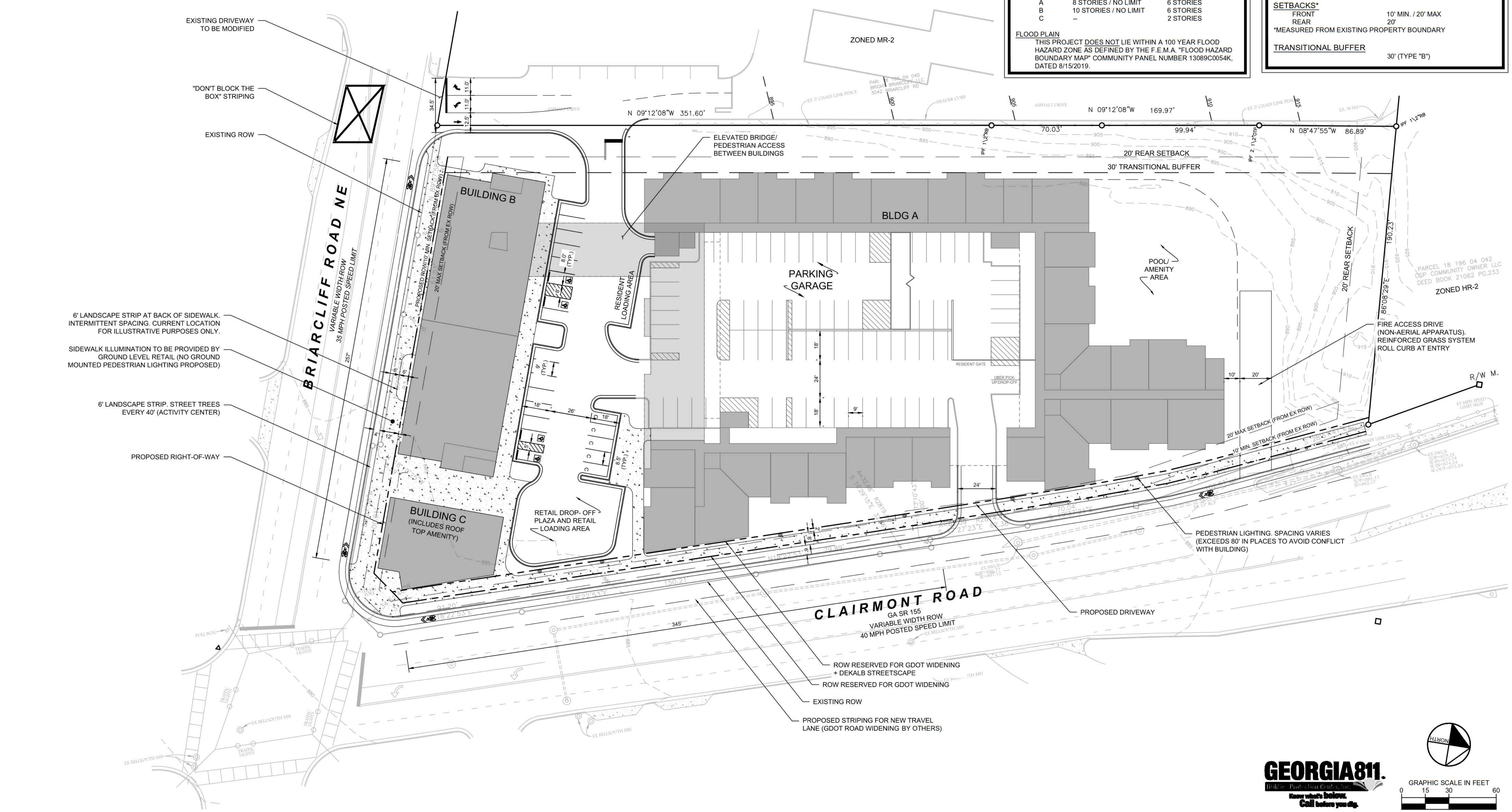
MAX	85%
PROPOSED	84%

SETBACKS*

FRONT	10' MIN. / 20' MAX
REAR	20'

*MEASURED FROM EXISTING PROPERTY BOUNDARY

TRANSITIONAL BUFFER
30' (TYPE "B")



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ATLANTA, GA 30342
PHONE: 770.580.2480

No.	ISSUANCE AND REVISION DESCRIPTIONS	DATE	BY

PROJECT
BRIARCLIFF WEST
3080 BRIARCLIFF ROAD
ATLANTA, GA 30329
DEKALB COUNTY

GEORGIA REGISTERED PROFESSIONAL ENGINEER NO. 033065 BRADLEY L. HORBAL 7/1/20

GSWCC NO. (LEVEL II)	22363
DRAWN BY	RWB
DESIGNED BY	RWB
REVIEWED BY	BLH
DATE	7/1/20
PROJECT NO.	017481003

TITLE
REZONING SITE PLAN

SHEET NUMBER
C0.10

Drawing name: C:\Users\robert.barclift\KH\PTC Development Services - Documents\017481003_3086 Briarcliff Road\CAD\PlanSheets\C2-00 - SITE PLAN.dwg C2-00 SITE PLAN Jul 01, 2020 5:35pm by: Robert.Barclift

APPENDIX B

Traffic Count Data

Prepared by National Data & Surveying Services

Clairmont Rd NE & I-85 SB Ramp

Peak Hour Turning Movement Count

ID: 17-09578-015
City: Atlanta

Day: Wednesday
Date: 11/08/2017

PEAK HOURS

AM: 07:45 AM - 08:45 AM
NOON: NONE
PM: 04:00 PM - 05:00 PM

COUNT PERIODS

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

Clairmont Rd NE — SOUTHBOUND

AM	709	633	39	0	2147	AM
NOON	0	0	0	0	0	NOON
PM	525	804	396	0	1518	PM

1	3	0	0

I-85 SB Ramp — EASTBOUND

AM	NOON	PM	
2352	0	1396	⇦
0	0	0	↶ 0
270	0	259	↱ 0
0	0	0	→ 0
0	0	0	↴ 0
AM	NOON	PM	

CONTROL

Signalized

TEV	5767	0	4597
	AM	NOON	PM
PHF	0.98		0.95

WESTBOUND — I-85 SB Ramp

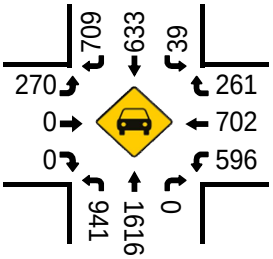
PM	NOON	AM	
254	0	261	1 ↰
544	0	702	1.5 ←
468	0	596	1.5 ↙
0	0	0	0 ↙
396	0	39	⇨
PM	NOON	AM	

0	2	2	0

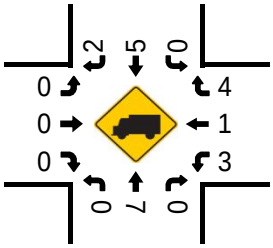
Clairmont Rd NE — NORTHBOUND

PM	1287	15	327	1005	0	PM
NOON	0	0	0	0	0	NOON
AM	1229	0	941	1616	0	AM

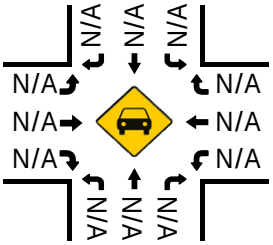
Total Vehicles (AM)



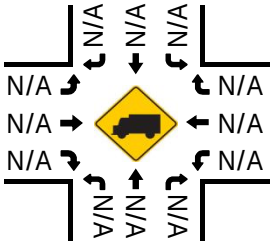
HT (AM)



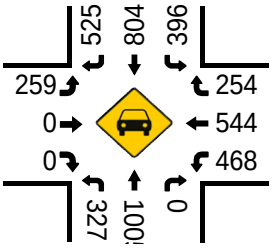
Total Vehicles (Noon)



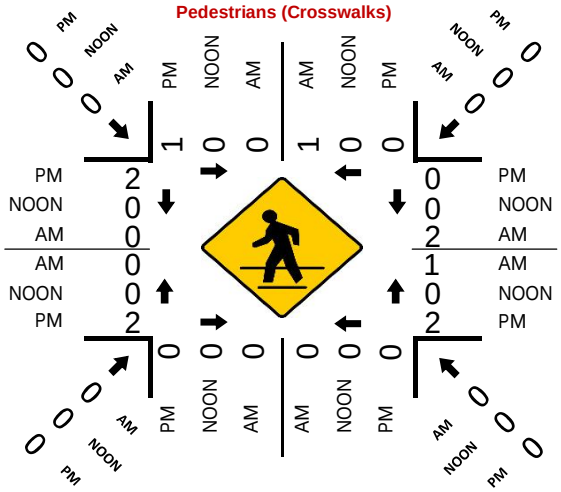
HT (NOON)



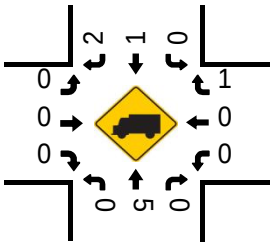
Total Vehicles (PM)



Pedestrians (Crosswalks)



HT (PM)



Project ID: 17-09578-015
Location: Clairmont Rd NE & I-85 SB Ramp
City: Atlanta

Day: Wednesday
Date: 11/08/2017

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Clairmont Rd NE Northbound						Clairmont Rd NE Southbound						I-85 SB Ramp Eastbound						I-85 SB Ramp Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	234	310	0	0	0	544	8	131	169	0	0	308	45	0	0	0	0	45	169	132	62	0	4	363	1260
7:15 AM	244	317	0	0	0	561	6	148	170	0	0	324	59	0	0	0	0	59	189	103	75	0	1	367	1311
7:30 AM	243	344	0	0	0	587	6	185	215	0	0	406	73	0	0	0	1	73	173	132	50	0	0	355	1421
7:45 AM	241	392	0	0	0	633	6	175	177	0	1	358	70	0	0	0	0	70	165	152	69	0	0	386	1447
Total	962	1363	0	0	0	2325	26	639	731	0	1	1396	247	0	0	0	1	247	696	519	256	0	5	1471	5439
8:00 AM	225	412	0	0	0	637	14	167	199	0	0	380	62	0	0	0	0	62	154	178	53	0	0	385	1464
8:15 AM	221	413	0	0	0	634	12	149	170	0	0	331	79	0	0	0	0	79	150	169	71	0	0	390	1434
8:30 AM	254	399	0	0	0	653	7	142	163	0	0	312	59	0	0	0	0	59	127	203	68	0	3	398	1422
8:45 AM	246	404	0	0	0	650	14	151	136	0	0	301	55	0	0	0	0	55	128	191	56	0	2	375	1381
Total	946	1628	0	0	0	2574	47	609	668	0	0	1324	255	0	0	0	0	255	559	741	248	0	5	1548	5701
BREAK																									
4:00 PM	92	255	0	1	0	348	113	224	157	0	0	494	66	0	0	0	0	66	92	111	62	0	2	265	1173
4:15 PM	79	265	0	2	0	346	95	193	125	0	1	413	67	0	0	0	3	67	108	137	70	0	0	315	1141
4:30 PM	85	256	0	6	0	347	93	199	143	0	0	435	68	0	0	0	0	68	130	163	66	0	0	359	1209
4:45 PM	71	229	0	6	0	306	95	188	100	0	0	383	58	0	0	0	1	58	138	133	56	0	0	327	1074
Total	327	1005	0	15	0	1347	396	804	525	0	1	1725	259	0	0	0	4	259	468	544	254	0	2	1266	4597
5:00 PM	68	241	0	6	0	315	111	180	132	0	0	423	70	0	0	0	0	70	130	136	52	0	1	318	1126
5:15 PM	69	257	0	13	0	339	94	171	92	0	0	357	56	0	0	0	0	56	138	137	69	0	2	344	1096
5:30 PM	78	267	0	2	0	347	63	158	80	0	0	301	75	0	0	0	2	75	135	122	58	0	1	315	1038
5:45 PM	86	271	0	5	0	362	55	161	81	0	0	297	60	0	0	0	2	60	140	104	51	0	1	295	1014
Total	301	1036	0	26	0	1363	323	670	385	0	0	1378	261	0	0	0	4	261	543	499	230	0	5	1272	4274
Grand Total	2536	5032	0	41	0	7609	792	2722	2309	0	2	5823	1022	0	0	0	9	1022	2266	2303	988	0	17	5557	20011
Apprch %	33.3	66.1	0.0	0.5	0.0		13.6	46.7	39.7	0.0	0.0		100.0	0.0	0.0	0.0	0.9		40.8	41.4	17.8	0.0	0.3		
Total %	12.7	25.1	0.0	0.2	0.0	38.0	4.0	13.6	11.5	0.0	0.0	29.1	5.1	0.0	0.0	0.0	0.0	5.1	11.3	11.5	4.9	0.0	0.1	27.8	
Cars, PU, Vans	2534	5010	0	41	0	7585	792	2714	2302		2	5808	1022	0	0	0		1022	2258	2300	981		17	5539	19954
% Cars, PU, Vans	99.9	99.6	0.0	100.0	0.0	99.7	100.0	99.7	99.7	0.0	100.0	99.7	100.0	0.0	0.0	0.0	0.0	100.0	99.6	99.9	99.3	0.0	100.0	99.7	99.7
Heavy Trucks	2	22	0	0		24	0	8	7	0		15	0	0	0	0		0	8	3	7	0		18	57
%Heavy Trucks	0.1	0.4	0.0	0.0	0.0	0.3	0.0	0.3	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.7	0.0	0.0	0.3	0.3

Project ID: 17-09578-015
Location: Clairmont Rd NE & I-85 SB Ramp
City: Atlanta

PEAK HOURS

Day: Wednesday
Date: 11/08/2017

AM

	Clairmont Rd NE Northbound					Clairmont Rd NE Southbound					I-85 SB Ramp Eastbound					I-85 SB Ramp Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	nt. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
7:45 AM	241	392	0	0	633	6	175	177	0	358	70	0	0	0	70	165	152	69	0	386	1447
8:00 AM	225	412	0	0	637	14	167	199	0	380	62	0	0	0	62	154	178	53	0	385	1464
8:15 AM	221	413	0	0	634	12	149	170	0	331	79	0	0	0	79	150	169	71	0	390	1434
8:30 AM	254	399	0	0	653	7	142	163	0	312	59	0	0	0	59	127	203	68	0	398	1422
Total Volume	941	1616	0	0	2557	39	633	709	0	1381	270	0	0	0	270	596	702	261	0	1559	5767
% App. Total	36.8	63.2	0.0	0.0	100	2.8	45.8	51.3	0.0	100	100.0	0.0	0.0	0.0	100	38.2	45.0	16.7	0.0	100	
PHF					0.979					0.909					0.854					0.979	0.985
Cars, PU, Vans	941	1609	0	0	2550	39	628	707	0	1374	270	0	0	0	270	593	701	257	0	1551	5745
% Cars, PU, Vans	100.0	99.6	0.0	0.0	99.7	100.0	99.2	99.7	0.0	99.5	100.0	0.0	0.0	0.0	100.0	99.5	99.9	98.5	0.0	99.5	99.6
Heavy Trucks	0	7	0	0	7	0	5	2	0	7	0	0	0	0	0	3	1	4	0	8	22
%Heavy Trucks	0.0	0.4	0.0	0.0	0.3	0.0	0.8	0.3	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.1	1.5	0.0	0.5	0.4

PM

	Clairmont Rd NE Northbound					Clairmont Rd NE Southbound					I-85 SB Ramp Eastbound					I-85 SB Ramp Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	nt. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
4:00 PM	92	255	0	1	348	113	224	157	0	494	66	0	0	0	66	92	111	62	0	265	1173
4:15 PM	79	265	0	2	346	95	193	125	0	413	67	0	0	0	67	108	137	70	0	315	1141
4:30 PM	85	256	0	6	347	93	199	143	0	435	68	0	0	0	68	130	163	66	0	359	1209
4:45 PM	71	229	0	6	306	95	188	100	0	383	58	0	0	0	58	138	133	56	0	327	1074
Total Volume	327	1005	0	15	1347	396	804	525	0	1725	259	0	0	0	259	468	544	254	0	1266	4597
% App. Total	24.3	74.6	0.0	1.1	100	23.0	46.6	30.4	0.0	100	100.0	0.0	0.0	0.0	100	37.0	43.0	20.1	0.0	100	
PHF					0.968					0.873					0.952					0.882	0.951
Cars, PU, Vans	327	1000	0	15	1342	396	803	523	0	1722	259	0	0	0	259	468	544	253	0	1265	4588
% Cars, PU, Vans	100.0	99.5	0.0	100.0	99.6	100.0	99.9	99.6	0.0	99.8	100.0	0.0	0.0	0.0	100.0	100.0	100.0	99.6	0.0	99.9	99.8
Heavy Trucks	0	5	0	0	5	0	1	2	0	3	0	0	0	0	0	0	0	1	0	1	9
%Heavy Trucks	0.0	0.5	0.0	0.0	0.4	0.0	0.1	0.4	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.1	0.2

Prepared by National Data & Surveying Services

Clairmont Rd NE & I-85 NB Ramp

Peak Hour Turning Movement Count

ID: 17-09578-014
City: Atlanta

Day: Wednesday
Date: 11/08/2017

PEAK HOURS

AM: 07:30 AM - 08:30 AM
NOON: NONE
PM: 04:15 PM - 05:15 PM

COUNT PERIODS

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

Clairmont Rd NE — SOUTHBOUND

AM	0	1097	224	0	2488	AM
NOON	0	0	0	0	0	NOON
PM	0	1137	160	2	1305	PM

I-85 NB Ramp — EASTBOUND

AM	NOON	PM		
280	0	259	⇦	
0	0	0	↶	0
759	0	575	↱	1.5
461	0	365	→	1
321	0	1242	↱	1.5
AM	NOON	PM		

WESTBOUND — I-85 NB Ramp

PM	NOON	AM		
0	0	0	↰	0
0	0	0	←	0
369	0	50	↰	0
0	0	0	↶	0
1047	0	1222	⇨	
PM	NOON	AM		

Clairmont Rd NE — NORTHBOUND

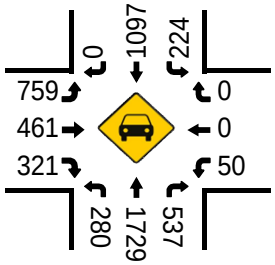
PM	2748	0	259	728	522	PM
NOON	0	0	0	0	0	NOON
AM	1468	0	280	1729	537	AM

CONTROL

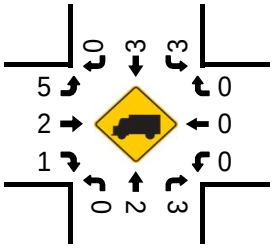
Signalized

TEV	5458	0	5359
	AM	NOON	PM
PHF	0.97		0.97

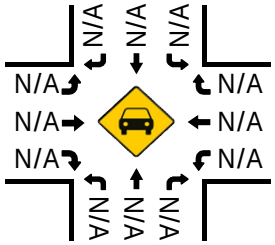
Total Vehicles (AM)



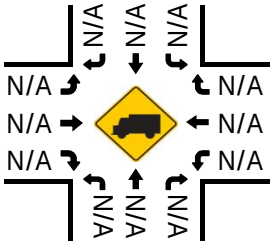
HT (AM)



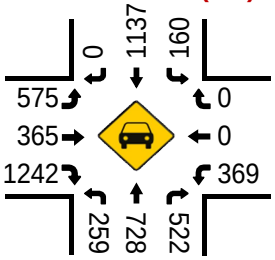
Total Vehicles (Noon)



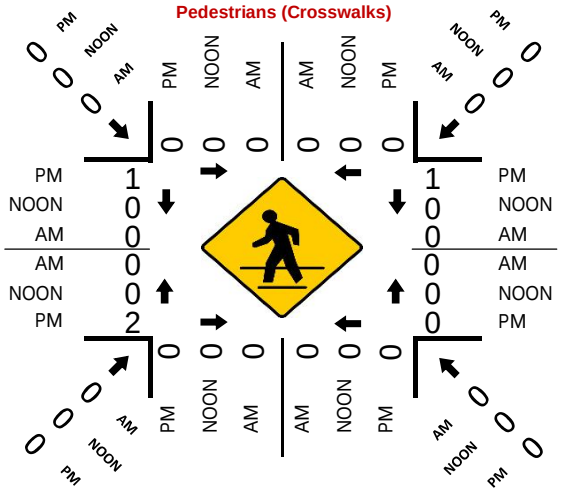
HT (NOON)



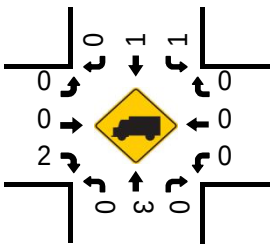
Total Vehicles (PM)



Pedestrians (Crosswalks)



HT (PM)



Project ID: 17-09578-014
Location: Clairmont Rd NE & I-85 NB Ramp
City: Atlanta

Day: Wednesday
Date: 11/08/2017

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Clairmont Rd NE Northbound						Clairmont Rd NE Southbound						I-85 NB Ramp Eastbound						I-85 NB Ramp Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	41	419	113	0	0	573	48	250	0	0	0	298	127	56	57	0	0	240	4	0	0	0	4	4	1115
7:15 AM	59	389	87	0	0	535	55	277	0	0	0	332	160	81	83	0	0	324	10	0	0	0	1	10	1201
7:30 AM	72	425	120	0	0	617	62	295	0	0	0	357	168	103	87	0	0	358	19	0	0	0	0	19	1351
7:45 AM	70	435	148	0	0	653	69	271	0	0	0	340	201	109	86	0	0	396	12	0	0	0	0	12	1401
Total	242	1668	468	0	0	2378	234	1093	0	0	0	1327	656	349	313	0	0	1318	45	0	0	0	5	45	5068
8:00 AM	66	446	137	0	0	649	51	271	0	0	0	322	195	121	73	0	0	389	9	0	0	0	0	9	1369
8:15 AM	72	423	132	0	0	627	42	260	0	0	0	302	195	128	75	0	0	398	10	0	0	0	0	10	1337
8:30 AM	58	460	103	0	0	621	38	234	0	0	0	272	197	84	64	0	0	345	12	0	0	0	2	12	1250
8:45 AM	50	468	78	0	1	596	32	243	0	0	0	275	172	95	68	0	0	335	14	0	0	0	1	14	1220
Total	246	1797	450	0	1	2493	163	1008	0	0	0	1171	759	428	280	0	0	1467	45	0	0	0	3	45	5176
BREAK																									
4:00 PM	59	217	146	0	0	422	53	252	0	0	0	305	135	88	238	0	1	461	120	0	0	0	1	120	1308
4:15 PM	68	181	151	0	0	400	54	256	0	1	0	311	152	106	330	0	3	588	82	0	0	0	0	82	1381
4:30 PM	64	189	129	0	0	382	42	280	0	0	0	322	164	76	310	0	0	550	110	0	0	0	0	110	1364
4:45 PM	51	173	115	0	0	339	30	316	0	0	0	346	120	88	287	0	0	495	87	0	0	0	0	87	1267
Total	242	760	541	0	0	1543	179	1104	0	1	0	1284	571	358	1165	0	4	2094	399	0	0	0	1	399	5320
5:00 PM	76	185	127	0	0	388	34	285	0	1	0	320	139	95	315	0	0	549	90	0	0	0	1	90	1347
5:15 PM	56	184	122	0	0	362	34	280	0	0	0	314	145	96	314	0	0	555	109	0	0	0	2	109	1340
5:30 PM	71	204	137	0	0	412	36	255	0	0	0	291	151	102	307	0	0	560	73	0	0	0	1	73	1336
5:45 PM	62	203	134	0	0	399	33	270	0	0	0	303	151	87	290	0	0	528	62	0	0	0	1	62	1292
Total	265	776	520	0	0	1561	137	1090	0	1	0	1228	586	380	1226	0	0	2192	334	0	0	0	5	334	5315
Grand Total	995	5001	1979	0	1	7975	713	4295	0	2	0	5010	2572	1515	2984	0	4	7071	823	0	0	0	14	823	20879
Apprch %	12.5	62.7	24.8	0.0	0.0		14.2	85.7	0.0	0.0	0.0		36.4	21.4	42.2	0.0	0.1		100.0	0.0	0.0	0.0	1.7		
Total %	4.8	24.0	9.5	0.0	0.0	38.2	3.4	20.6	0.0	0.0	0.0	24.0	12.3	7.3	14.3	0.0	0.0	33.9	3.9	0.0	0.0	0.0	0.1	3.9	
Cars, PU, Vans	995	4991	1972	0	1	7958	705	4287	0		0	4994	2558	1510	2979	0		7047	823	0	0		14	823	20822
% Cars, PU, Vans	100.0	99.8	99.6	0.0	100.0	99.8	98.9	99.8	0.0	0.0	0.0	99.7	99.5	99.7	99.8	0.0	0.0	99.7	100.0	0.0	0.0	0.0	100.0	100.0	99.7
Heavy Trucks	0	10	7	0		17	8	8	0	0		16	14	5	5	0		24	0	0	0	0		0	57
%Heavy Trucks	0.0	0.2	0.4	0.0	0.0	0.2	1.1	0.2	0.0	0.0	0.0	0.3	0.5	0.3	0.2	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3

Project ID: 17-09578-014
Location: Clairmont Rd NE & I-85 NB Ramp
City: Atlanta

PEAK HOURS

Day: Wednesday
Date: 11/08/2017

AM

	Clairmont Rd NE Northbound					Clairmont Rd NE Southbound					I-85 NB Ramp Eastbound					I-85 NB Ramp Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	nt. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
7:30 AM	72	425	120	0	617	62	295	0	0	357	168	103	87	0	358	19	0	0	0	19	1351
7:45 AM	70	435	148	0	653	69	271	0	0	340	201	109	86	0	396	12	0	0	0	12	1401
8:00 AM	66	446	137	0	649	51	271	0	0	322	195	121	73	0	389	9	0	0	0	9	1369
8:15 AM	72	423	132	0	627	42	260	0	0	302	195	128	75	0	398	10	0	0	0	10	1337
Total Volume	280	1729	537	0	2546	224	1097	0	0	1321	759	461	321	0	1541	50	0	0	0	50	5458
% App. Total	11.0	67.9	21.1	0.0	100	17.0	83.0	0.0	0.0	100	49.3	29.9	20.8	0.0	100	100.0	0.0	0.0	0.0	100	
PHF					0.975					0.925					0.968					0.658	0.974
Cars, PU, Vans	280	1727	534	0	2541	221	1094	0	0	1315	754	459	320	0	1533	50	0	0	0	50	5439
% Cars, PU, Vans	100.0	99.9	99.4	0.0	99.8	98.7	99.7	0.0	0.0	99.5	99.3	99.6	99.7	0.0	99.5	100.0	0.0	0.0	0.0	100.0	99.7
Heavy Trucks	0	2	3	0	5	3	3	0	0	6	5	2	1	0	8	0	0	0	0	0	19
%Heavy Trucks	0.0	0.1	0.6	0.0	0.2	1.3	0.3	0.0	0.0	0.5	0.7	0.4	0.3	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.3

PM

	Clairmont Rd NE Northbound					Clairmont Rd NE Southbound					I-85 NB Ramp Eastbound					I-85 NB Ramp Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	nt. Total
Peak Hour Analysis from 04:00 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
4:15 PM	68	181	151	0	400	54	256	0	1	311	152	106	330	0	588	82	0	0	0	82	1381
4:30 PM	64	189	129	0	382	42	280	0	0	322	164	76	310	0	550	110	0	0	0	110	1364
4:45 PM	51	173	115	0	339	30	316	0	0	346	120	88	287	0	495	87	0	0	0	87	1267
5:00 PM	76	185	127	0	388	34	285	0	1	320	139	95	315	0	549	90	0	0	0	90	1347
Total Volume	259	728	522	0	1509	160	1137	0	2	1299	575	365	1242	0	2182	369	0	0	0	369	5359
% App. Total	17.2	48.2	34.6	0.0	100	12.3	87.5	0.0	0.2	100	26.4	16.7	56.9	0.0	100	100.0	0.0	0.0	0.0	100	
PHF					0.943					0.939					0.928					0.839	0.970
Cars, PU, Vans	259	725	522	0	1506	159	1136	0	2	1297	575	365	1240	0	2180	369	0	0	0	369	5352
% Cars, PU, Vans	100.0	99.6	100.0	0.0	99.8	99.4	99.9	0.0	100.0	99.8	100.0	100.0	99.8	0.0	99.9	100.0	0.0	0.0	0.0	100.0	99.9
Heavy Trucks	0	3	0	0	3	1	1	0	0	2	0	0	2	0	2	0	0	0	0	0	7
%Heavy Trucks	0.0	0.4	0.0	0.0	0.2	0.6	0.1	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1

Clairmont Rd / US-23 & Briarcliff Rd

Peak Hour Turning Movement Count

ID: 19-09148-004
City: Atlanta

Day: Thursday
Date: 03/07/2019

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	03:30 PM - 06:00 PM

SOUTHBOUND — Clairmont Rd/US-23

AM	264	1028	158	0	2219	AM
NOON	0	0	0	0	0	NOON
PM	126	1768	600	0	1243	PM

EASTBOUND — Briarcliff Rd

AM	NOON	PM	
656	0	306	
0	0	0	0
194	0	166	1
165	0	324	2
79	0	120	0

WESTBOUND — Briarcliff Rd

PM	NOON	AM	
195	0	553	1
122	0	289	1
84	0	164	1
0	0	0	0
1033	0	355	

NORTHBOUND — Clairmont Rd/US-23

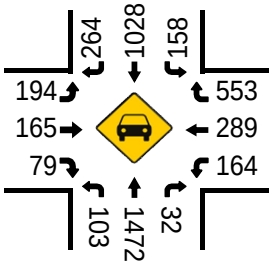
PM	1972	0	58	882	109	PM
NOON	0	0	0	0	0	NOON
AM	1271	0	103	1472	32	AM

CONTROL

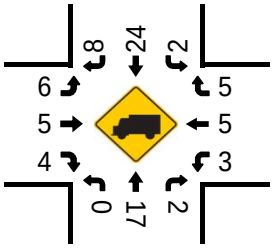
Signalized

TEV	4501 AM	0 NOON	4554 PM
PHF	0.97		0.98

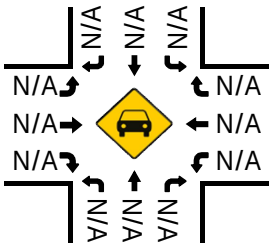
Total Vehicles (AM)



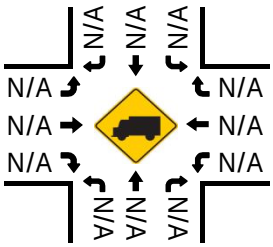
HT (AM)



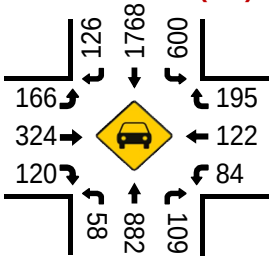
Total Vehicles (Noon)



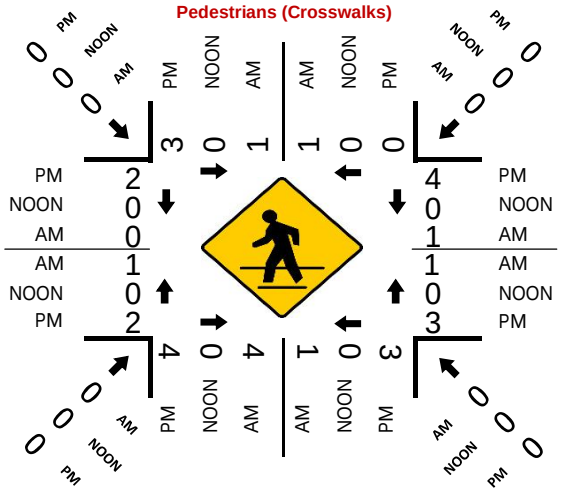
HT (NOON)



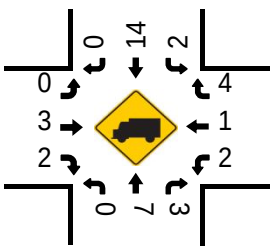
Total Vehicles (PM)



Pedestrians (Crosswalks)



HT (PM)



Project ID: 19-09148-004
Location: Clairmont Rd/US-23 & Briarcliff Rd
City: Atlanta

Day: Thursday
Date: 03/07/2019

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Clairmont Rd/US-23 Northbound						Clairmont Rd/US-23 Southbound						Briarcliff Rd Eastbound						Briarcliff Rd Westbound						
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total
7:00 AM	10	343	4	0	0	357	30	238	45	0	0	313	37	23	12	0	1	72	20	35	102	0	1	157	899
7:15 AM	14	359	3	0	0	376	32	252	60	0	1	344	48	34	11	0	1	93	25	53	136	0	0	214	1027
7:30 AM	24	356	7	0	1	387	48	257	81	0	0	386	49	55	27	0	1	131	39	78	134	0	1	251	1155
7:45 AM	31	362	11	0	0	404	40	266	76	0	0	382	48	61	21	0	0	130	41	63	143	0	1	247	1163
Total	79	1420	25	0	1	1524	150	1013	262	0	1	1425	182	173	71	0	3	426	125	229	515	0	3	869	4244
8:00 AM	25	388	7	0	2	420	38	280	54	0	1	372	51	20	19	0	0	90	51	61	142	0	0	254	1136
8:15 AM	23	366	7	0	2	396	32	225	53	0	1	310	46	29	12	0	0	87	33	87	134	0	0	254	1047
8:30 AM	17	361	10	0	1	388	23	225	61	0	1	309	44	31	14	0	0	89	23	65	129	0	0	217	1003
8:45 AM	18	291	3	0	0	312	36	210	48	0	1	294	53	27	16	0	1	96	29	48	126	0	0	203	905
Total	83	1406	27	0	5	1516	129	940	216	0	4	1285	194	107	61	0	1	362	136	261	531	0	0	928	4091
BREAK																									
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	13	231	15	0	5	259	109	357	47	0	1	513	58	84	46	0	2	188	27	27	84	0	2	138	1098
3:45 PM	13	263	22	0	1	298	91	400	37	0	1	528	53	93	22	0	0	168	31	29	49	0	2	109	1103
Total	26	494	37	0	6	557	200	757	84	0	2	1041	111	177	68	0	2	356	58	56	133	0	4	247	2201
4:00 PM	8	240	14	0	1	262	92	389	39	0	0	520	54	95	30	0	0	179	32	27	59	0	0	118	1079
4:15 PM	19	231	20	0	0	270	136	415	36	0	1	587	46	84	30	0	0	160	13	33	42	0	2	88	1105
4:30 PM	17	193	19	0	1	229	163	410	37	0	0	610	31	79	30	0	0	140	21	34	46	0	2	101	1080
4:45 PM	8	234	25	0	2	267	152	412	49	0	8	613	44	77	26	0	5	147	26	26	37	0	0	89	1116
Total	52	898	78	0	4	1028	543	1626	161	0	9	2330	175	335	116	0	5	626	92	120	184	0	4	396	4380
5:00 PM	13	213	30	0	3	256	134	459	36	0	1	629	39	95	32	0	3	166	13	38	47	0	4	98	1149
5:15 PM	18	220	29	0	0	267	151	475	25	0	1	651	49	69	29	0	0	147	25	24	47	0	2	96	1161
5:30 PM	11	232	29	0	4	272	150	415	38	0	0	603	34	85	35	0	1	154	20	29	48	0	1	97	1126
5:45 PM	16	217	21	0	0	254	165	419	27	0	1	611	44	75	24	0	0	143	26	31	53	0	0	110	1118
Total	58	882	109	0	7	1049	600	1768	126	0	3	2494	166	324	120	0	4	610	84	122	195	0	7	401	4554
Grand Total	298	5100	276	0	23	5674	1622	6104	849	0	19	8575	828	1116	436	0	15	2380	495	788	1558	0	18	2841	19470
Apprch %	5.3	89.9	4.9	0.0	0.4		18.9	71.2	9.9	0.0	0.2		34.8	46.9	18.3	0.0	0.6		17.4	27.7	54.8	0.0	0.6		
Total %	1.5	26.2	1.4	0.0	0.1	29.1	8.3	31.4	4.4	0.0	0.1	44.0	4.3	5.7	2.2	0.0	0.1	12.2	2.5	4.0	8.0	0.0	0.1	14.6	
Cars, PU, Vans	296	5040	271	0	23	5607	1605	6010	831		19	8446	814	1092	428	0		2334	484	774	1533		18	2791	19178
% Cars, PU, Vans	99.3	98.8	98.2	0.0	100.0	98.8	99.0	98.5	97.9	0.0	100.0	98.5	98.3	97.8	98.2	0.0	0.0	98.1	97.8	98.2	98.4	0.0	100.0	98.2	98.5
Heavy Trucks	2	60	5	0		67	17	94	18	0		129	14	24	8	0		46	11	14	25	0		50	292
%Heavy Trucks	0.7	1.2	1.8	0.0	0.0	1.2	1.0	1.5	2.1	0.0	0.0	1.5	1.7	2.2	1.8	0.0	0.0	1.9	2.2	1.8	1.6	0.0	0.0	1.8	1.5

Project ID: 19-09148-004
Location: Clairmont Rd/US-23 & Briarcliff Rd
City: Atlanta

PEAK HOURS

Day: Thursday
Date: 03/07/2019

AM

	Clairmont Rd/US-23 Northbound					Clairmont Rd/US-23 Southbound					Briarcliff Rd Eastbound					Briarcliff Rd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM to 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
7:30 AM	24	356	7	0	387	48	257	81	0	386	49	55	27	0	131	39	78	134	0	251	1155
7:45 AM	31	362	11	0	404	40	266	76	0	382	48	61	21	0	130	41	63	143	0	247	1163
8:00 AM	25	388	7	0	420	38	280	54	0	372	51	20	19	0	90	51	61	142	0	254	1136
8:15 AM	23	366	7	0	396	32	225	53	0	310	46	29	12	0	87	33	87	134	0	254	1047
Total Volume	103	1472	32	0	1607	158	1028	264	0	1450	194	165	79	0	438	164	289	553	0	1006	4501
% App. Total	6.4	91.6	2.0	0.0	100	10.9	70.9	18.2	0.0	100	44.3	37.7	18.0	0.0	100	16.3	28.7	55.0	0.0	100	
PHF					0.957					0.939					0.836					0.990	0.968
Cars, PU, Vans	103	1457	31	0	1591	155	1003	259	0	1417	188	158	75	0	421	159	283	548	0	990	4419
% Cars, PU, Vans	100.0	99.0	96.9	0.0	99.0	98.1	97.6	98.1	0.0	97.7	96.9	95.8	94.9	0.0	96.1	97.0	97.9	99.1	0.0	98.4	98.2
Heavy Trucks	0	15	1	0	16	3	25	5	0	33	6	7	4	0	17	5	6	5	0	16	82
%Heavy Trucks	0.0	1.0	3.1	0.0	1.0	1.9	2.4	1.9	0.0	2.3	3.1	4.2	5.1	0.0	3.9	3.0	2.1	0.9	0.0	1.6	1.8

PM

	Clairmont Rd/US-23 Northbound					Clairmont Rd/US-23 Southbound					Briarcliff Rd Eastbound					Briarcliff Rd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 03:30 PM to 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	13	213	30	0	256	134	459	36	0	629	39	95	32	0	166	13	38	47	0	98	1149
5:15 PM	18	220	29	0	267	151	475	25	0	651	49	69	29	0	147	25	24	47	0	96	1161
5:30 PM	11	232	29	0	272	150	415	38	0	603	34	85	35	0	154	20	29	48	0	97	1126
5:45 PM	16	217	21	0	254	165	419	27	0	611	44	75	24	0	143	26	31	53	0	110	1118
Total Volume	58	882	109	0	1049	600	1768	126	0	2494	166	324	120	0	610	84	122	195	0	401	4554
% App. Total	5.5	84.1	10.4	0.0	100	24.1	70.9	5.1	0.0	100	27.2	53.1	19.7	0.0	100	20.9	30.4	48.6	0.0	100	
PHF					0.964					0.958					0.919					0.911	0.981
Cars, PU, Vans	58	875	106	0	1039	598	1754	126	0	2478	166	321	118	0	605	82	121	191	0	394	4516
% Cars, PU, Vans	100.0	99.2	97.2	0.0	99.0	99.7	99.2	100.0	0.0	99.4	100.0	99.1	98.3	0.0	99.2	97.6	99.2	97.9	0.0	98.3	99.2
Heavy Trucks	0	7	3	0	10	2	14	0	0	16	0	3	2	0	5	2	1	4	0	7	38
%Heavy Trucks	0.0	0.8	2.8	0.0	1.0	0.3	0.8	0.0	0.0	0.6	0.0	0.9	1.7	0.0	0.8	2.4	0.8	2.1	0.0	1.7	0.8

APPENDIX C

Volume Development

(Trip Generation, Growth Rate, & Intersection Volumes)

Proposed Trip Generation Analysis (10th Ed. with *2nd Edition Handbook* Daily IC & *3rd Edition* AM/PM IC)
Lumen Briarcliff
DeKalb County, GA

Land Use	Intensity	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Proposed Site Traffic								
221 Multi-Family Housing (Mid-Rise)	264 d.u.	1,438	89	23	66	112	68	44
820 Shopping Center	5,000 s.f. gross leasable area	188	5	3	2	19	9	10
931 Quality Restaurant	5,000 s.f.	420	4	2	2	39	26	13
Gross Trips		**2,046**	**98**	**28**	**70**	**170**	**103**	**67**
Residential Trips		1,438	89	23	66	112	68	44
Mixed-Use Reductions		*-62*	*-1*	*0*	*-1*	*-10*	*-5*	*-5*
Alternative Mode Reductions		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Adjusted Residential Trips		1,376	88	23	65	102	63	39
Retail Trips		188	5	3	2	19	9	10
Mixed-Use Reductions		*-18*	*-1*	*-1*	*0*	*-12*	*-6*	*-6*
Alternative Mode Reductions		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Pass By Reductions (Based on ITE Rates)		*-58*	*0*	*0*	*0*	*-2*	*-1*	*-1*
Adjusted Retail Trips		112	4	2	2	5	2	3
Restaurant Trips		420	4	2	2	39	26	13
Mixed-Use Reductions		*-42*	*0*	*0*	*0*	*-14*	*-7*	*-7*
Alternative Mode Reductions		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Pass By Reductions (Based on ITE Rates)		*-162*	*0*	*0*	*0*	*-10*	*-5*	*-5*
Adjusted Restaurant Trips		216	4	2	2	15	14	1
Mixed-Use Reductions - TOTAL		*-122*	*-2*	*-1*	*-1*	*-36*	*-18*	*-18*
Alternative Mode Reductions - TOTAL		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Pass-By Reductions - TOTAL		*-220*	*0*	*0*	*0*	*-12*	*-6*	*-6*
New Trips		**1,704**	**96**	**27**	**69**	**122**	**79**	**43**
Driveway Volumes		**1,924**	**96**	**27**	**69**	**134**	**85**	**49**

Existing Trip Generation Analysis (10th Ed. with *2nd Edition Handbook* Daily IC & *3rd Edition* AM/PM IC)
Lumen Briarcliff
DeKalb County, GA

Land Use	Intensity	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Proposed Site Traffic								
220 Multi-Family Housing (Low-Rise)	45 d.u.	300	22	5	17	29	18	11
Gross Trips		**300**	**22**	**5**	**17**	**29**	**18**	**11**
Residential Trips		300	22	5	17	29	18	11
Mixed-Use Reductions		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Alternative Mode Reductions		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Adjusted Residential Trips		300	22	5	17	29	18	11
Mixed-Use Reductions - TOTAL		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Alternative Mode Reductions - TOTAL		*0*	*0*	*0*	*0*	*0*	*0*	*0*
Pass-By Reductions - TOTAL		*0*	*0*	*0*	*0*	*0*	*0*	*0*
New Trips		**300**	**22**	**5**	**17**	**29**	**18**	**11**
Driveway Volumes		**300**	**22**	**5**	**17**	**29**	**18**	**11**

Lumen Briarcliff
Growth Rate Table

Source:	GDOT
Location:	Clairmont Road
	n/o Briarcliff Road
Route #:	00015500
Route Type:	Principal Arterial
Station:	089-3241
Capacity:	

Count Year	Volume	Growth Rate
2013	39,400	
2014	44,400	12.69%
2015	45,900	3.38%
2016	47,400	3.27%
2017	50,200	5.91%
2018	**43,000**	-14.34%

Avg. 1 Year Rates 2013-2018	**1.76%**

Source:	GDOT
Location:	Briarcliff Road
	w/o Clairmont Road
Route #:	00515700
Route Type:	Minor Arterial
Station:	089-3667
Capacity:	

Count Year	Volume	Growth Rate
2013	11,700	
2014	11,700	0.00%
2015	12,600	7.69%
2016	13,000	3.17%
2017	**11,900**	-8.46%
2018	11,900	0.00%

Avg. 1 Year Rates 2013-2018	**0.34%**

	Annual Growth
DeKalb County Population Annual Growth (2000-2019):	1.04%
CHOA Master Plan DRI #2789	0.5%
Emory at Executive Park DRI #2962	0.5%

***Bolded data is from actual count years.**

CHOSEN GROWTH RATE: 0.5%

INTERSECTION VOLUME DEVELOPMENT

Intersection #1

Clairmont Rd NE at I-85 SB Ramp

AM PEAK HOUR

Description	Clairmont Rd NE Northbound			Clairmont Rd NE Southbound			I-85 SB Ramp Eastbound			I-85 SB Ramp Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2017 Traffic Volumes	941	1,616	0	0	633	709	0	0	0	596	702	261
Pedestrians		3			0			0			1	
Conflicting Pedestrians	0		0	1		0	0		0	3		0
Heavy Vehicles	0	7	0	0	5	2	0	0	0	3	1	4
Heavy Vehicle %	2%	2%	0%	0%	2%	2%	0%	0%	0%	2%	2%	2%
Peak Hour Factor		0.98			0.98			0.98			0.98	
Adjustment (Growth from 2017 to 2020)	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508
Adjusted 2020 Volumes	955	1640	0	0	643	720	0	0	0	605	713	265
Annual Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Growth Factor	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010
Other Development Trips												
2022 Background Traffic	965	1,656	0	0	649	727	0	0	0	611	720	268
Project Trips												
Trip Distribution IN					10%					15%		
Trip Distribution OUT	15%	10%										
Residential Trips	10	7	0	0	2	0	0	0	0	3	0	0
Trip Distribution IN					15%					20%		
Trip Distribution OUT	20%	15%										
Retail Trips	0	0	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN					15%					20%		
Trip Distribution OUT	20%	15%										
Restaurant Trips	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	10	7	0	0	2	0	0	0	0	3	0	0
2022 Buildout Total	975	1,663	0	0	651	727	0	0	0	614	720	268
2022 Buildout Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%

PM PEAK HOUR

Description	Clairmont Rd NE Northbound			Clairmont Rd NE Southbound			I-85 SB Ramp Eastbound			I-85 SB Ramp Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2017 Traffic Volumes	342	1,005	0	0	804	525	0	0	0	468	544	254
Pedestrians		2			4			0			1	
Conflicting Pedestrians	0		0	1		0	4		0	2		0
Heavy Vehicles	0	5	0	0	1	2	0	0	0	0	0	1
Heavy Vehicle %	2%	2%	0%	0%	2%	2%	0%	0%	0%	2%	2%	2%
Peak Hour Factor		0.95			0.95			0.95			0.95	
Adjustment (Growth from 2017 to 2020)	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508
Adjusted 2020 Volumes	347	1020	0	0	816	533	0	0	0	475	552	258
Annual Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Growth Factor	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010
Other Development Trips												
2022 Background Traffic	350	1,030	0	0	824	538	0	0	0	480	558	261
Project Trips												
Trip Distribution IN					10%					15%		
Trip Distribution OUT	15%	10%										
Residential Trips	6	4	0	0	6	0	0	0	0	9	0	0
Trip Distribution IN					15%					20%		
Trip Distribution OUT	20%	15%										
Retail Trips	1	0	0	0	0	0	0	0	0	0	0	0
Trip Distribution IN					15%					20%		
Trip Distribution OUT	20%	15%										
Restaurant Trips	0	0	0	0	2	0	0	0	0	3	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	7	4	0	0	8	0	0	0	0	12	0	0
2022 Buildout Total	357	1,034	0	0	832	538	0	0	0	492	558	261
2022 Buildout Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%

INTERSECTION VOLUME DEVELOPMENT

Intersection #2

Clairmont Rd NE at I-85 NB Ramp

AM PEAK HOUR

Description	Clairmont Rd NE Northbound Left	Through	Right	Clairmont Rd NE Southbound Left	Through	Right	I-85 NB Ramp Eastbound Left	Through	Right	I-85 NB Ramp Westbound Left	Through	Right
Observed 2017 Traffic Volumes	0	1,729	537	224	1,097	0	759	461	321	0	0	0
Pedestrians		0			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles	0	2	3	3	3	0	5	2	1	0	0	0
Heavy Vehicle %	0%	2%	2%	2%	2%	0%	2%	2%	2%	0%	0%	0%
Peak Hour Factor		0.97			0.97			0.97			0.97	
Adjustment (Growth from 2017 to 2020)	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508
Adjusted 2020 Volumes	0	1755	545	227	1114	0	770	468	326	0	0	0
Annual Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Growth Factor	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010
Other Development Trips												
2022 Background Traffic	0	1,773	550	229	1,125	0	778	473	329	0	0	0
Project Trips												
Trip Distribution IN					25%				30%			
Trip Distribution OUT		25%	15%									
Residential Trips	0	16	10	0	6	0	0	0	7	0	0	0
Trip Distribution IN					35%				20%			
Trip Distribution OUT		35%	20%									
Retail Trips	0	1	0	0	1	0	0	0	0	0	0	0
Trip Distribution IN					35%				20%			
Trip Distribution OUT		35%	20%									
Restaurant Trips	0	1	0	0	1	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	18	10	0	8	0	0	0	7	0	0	0
2022 Buildout Total	0	1,791	560	229	1,133	0	778	473	336	0	0	0
2022 Buildout Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%

PM PEAK HOUR

Description	Clairmont Rd NE Northbound Left	Through	Right	Clairmont Rd NE Southbound Left	Through	Right	I-85 NB Ramp Eastbound Left	Through	Right	I-85 NB Ramp Westbound Left	Through	Right
Observed 2017 Traffic Volumes	0	728	522	162	1,137	0	575	365	1,242	0	0	0
Pedestrians		1			3			0			0	
Conflicting Pedestrians	0		0	0		0	3		0	1		0
Heavy Vehicles	0	3	0	1	1	0	0	0	2	0	0	0
Heavy Vehicle %	0%	2%	2%	2%	2%	0%	2%	2%	2%	0%	0%	0%
Peak Hour Factor		0.97			0.97			0.97			0.97	
Adjustment (Growth from 2017 to 2020)	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508	1.01508
Adjusted 2020 Volumes	0	739	530	164	1154	0	584	371	1261	0	0	0
Annual Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Growth Factor	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010
Other Development Trips												
2022 Background Traffic	0	746	535	166	1,166	0	590	375	1,274	0	0	0
Project Trips												
Trip Distribution IN					25%				30%			
Trip Distribution OUT		25%	15%									
Residential Trips	0	10	6	0	16	0	0	0	19	0	0	0
Trip Distribution IN					35%				20%			
Trip Distribution OUT		35%	20%									
Retail Trips	0	1	1	0	1	0	0	0	0	0	0	0
Trip Distribution IN					35%				20%			
Trip Distribution OUT		35%	20%									
Restaurant Trips	0	0	0	0	5	0	0	0	3	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	11	7	0	22	0	0	0	22	0	0	0
2022 Buildout Total	0	757	542	166	1,188	0	590	375	1,296	0	0	0
2022 Buildout Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%

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INTERSECTION VOLUME DEVELOPMENT

Intersection #3

Clairmont Rd/US-23 at Briarcliff Rd

AM PEAK HOUR

Description	Clairmont Rd/US-23 Northbound			Clairmont Rd/US-23 Southbound			Briarcliff Rd Eastbound			Briarcliff Rd Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2019 Traffic Volumes	103	1,472	32	158	1,028	264	194	165	79	164	289	553
Pedestrians		2			1			5			2	
Conflicting Pedestrians	5		0	2		0	1		0	2		0
Heavy Vehicles	0	15	1	3	25	5	6	7	4	5	6	5
Heavy Vehicle %	2%	2%	3%	2%	2%	2%	3%	4%	5%	3%	2%	2%
Peak Hour Factor		0.97			0.97			0.97			0.97	
Adjustment (Growth from 2019 to 2020)	1.005	1.005	1.005	1.005	1.005	1.005	1.005	1.005	1.005	1.005	1.005	1.005
Adjusted 2020 Volumes	104	1479	32	159	1033	265	195	166	79	165	290	556
Annual Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Growth Factor	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010
Other Development Trips												
2022 Background Traffic	105	1,494	32	161	1,043	268	197	168	80	167	293	562
Project Trips												
Trip Distribution IN	15%										15%	
Trip Distribution OUT				5%	10%		40%	10%	5%			
Residential Trips	3	0	0	3	7	0	26	7	3	0	3	0
Trip Distribution IN	15%					55%					15%	
Trip Distribution OUT							55%	15%	15%			
Retail Trips	0	0	0	0	0	1	1	0	0	0	0	0
Trip Distribution IN	15%					55%					15%	
Trip Distribution OUT							55%	15%	15%			
Restaurant Trips	0	0	0	0	0	1	1	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	3	0	0	3	7	2	28	7	3	0	3	0
2022 Buildout Total	108	1,494	32	164	1,050	270	225	175	83	167	296	562
2022 Buildout Heavy Vehicle %	2%	2%	3%	2%	2%	2%	3%	4%	5%	3%	2%	2%

PM PEAK HOUR

Description	Clairmont Rd/US-23 Northbound			Clairmont Rd/US-23 Southbound			Briarcliff Rd Eastbound			Briarcliff Rd Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2019 Traffic Volumes	58	882	109	600	1,768	126	166	324	120	84	122	195
Pedestrians		7			4			7			3	
Conflicting Pedestrians	7		0	3		0	4		0	7		0
Heavy Vehicles	0	7	3	2	14	0	0	3	2	2	1	4
Heavy Vehicle %	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Peak Hour Factor		0.98			0.98			0.98			0.98	
Adjustment (Growth from 2019 to 2020)	1.005	1.005	1.005	1.005	1.005	1.005	1.005	1.005	1.005	1.005	1.005	1.005
Adjusted 2020 Volumes	58	886	110	603	1777	127	167	326	121	84	123	196
Annual Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Growth Factor	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010
Other Development Trips												
2022 Background Traffic	59	895	111	609	1,795	128	169	329	122	85	124	198
Project Trips												
Trip Distribution IN	15%										15%	
Trip Distribution OUT				5%	10%		40%	10%	5%			
Residential Trips	9	0	0	2	4	0	16	4	2	0	9	0
Trip Distribution IN	15%					55%					15%	
Trip Distribution OUT							55%	15%	15%			
Retail Trips	0	0	0	0	0	1	2	0	0	0	0	0
Trip Distribution IN	15%					55%					15%	
Trip Distribution OUT							55%	15%	15%			
Restaurant Trips	2	0	0	0	0	8	0	0	0	0	2	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	11	0	0	2	4	9	18	4	2	0	11	0
2022 Buildout Total	70	895	111	611	1,799	137	187	333	124	85	135	198
2022 Buildout Heavy Vehicle %	2%	2%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%

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INTERSECTION VOLUME DEVELOPMENT

Intersection #4

Clairmont Rd NE at /Site Dwy E

AM PEAK HOUR

Description	Clairmont Rd NE Northbound Left	Through	Right	Clairmont Rd NE Southbound Left	Through	Right	Eastbound Left	Through	Right	Site Dwy E Westbound Left	Through	Right
Observed 2019 Traffic Volumes	0	2,219	0	0	1,450	0	0	0	0	0	0	0
Pedestrians		0			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles	0	26	0	0	33	0	0	0	0	0	0	0
Heavy Vehicle %	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor		0.97			0.97			0.97			0.97	
Adjustment (Growth from 2019 to 2020)	1.005	1.005	1.005	1.005	1.005	1.005	1.005	1.005	1.005	1.005	1.005	1.005
Adjusted 2020 Volumes	0	2230	0	0	1457	0	0	0	0	0	0	0
Annual Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Growth Factor	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010
Other Development Trips												
2022 Background Traffic	0	2,252	0	0	1,472	0	0	0	0	0	0	0
Project Trips												
Trip Distribution IN						55%						
Trip Distribution OUT		40%							15%			
Residential Trips	0	26	0	0	0	13	0	0	10	0	0	0
Trip Distribution IN					55%							
Trip Distribution OUT		55%										
Retail Trips	0	1	0	0	1	0	0	0	0	0	0	0
Trip Distribution IN					55%							
Trip Distribution OUT		55%										
Restaurant Trips	0	1	0	0	1	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	28	0	0	2	13	0	0	10	0	0	0
2022 Buildout Total	0	2,280	0	0	1,474	13	0	0	10	0	0	0
2022 Buildout Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%

PM PEAK HOUR

Description	Clairmont Rd NE Northbound Left	Through	Right	Clairmont Rd NE Southbound Left	Through	Right	Eastbound Left	Through	Right	Site Dwy E Westbound Left	Through	Right
Observed 2019 Traffic Volumes	0	1,243	0	0	2,494	0	0	0	0	0	0	0
Pedestrians		0			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles	0	11	0	0	16	0	0	0	0	0	0	0
Heavy Vehicle %	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Peak Hour Factor		0.97			0.97			0.97			0.97	
Adjustment (Growth from 2019 to 2020)	1.005	1.005	1.005	1.005	1.005	1.005	1.005	1.005	1.005	1.005	1.005	1.005
Adjusted 2020 Volumes	0	1249	0	0	2506	0	0	0	0	0	0	0
Annual Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Growth Factor	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010
Other Development Trips												
2022 Background Traffic	0	1,262	0	0	2,531	0	0	0	0	0	0	0
Project Trips												
Trip Distribution IN						55%						
Trip Distribution OUT		40%							15%			
Residential Trips	0	16	0	0	0	35	0	0	6	0	0	0
Trip Distribution IN					55%							
Trip Distribution OUT		55%										
Retail Trips	0	2	0	0	1	0	0	0	0	0	0	0
Trip Distribution IN					55%							
Trip Distribution OUT		55%										
Restaurant Trips	0	0	0	0	8	0	0	0	0	0	0	0
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	18	0	0	9	35	0	0	6	0	0	0
2022 Buildout Total	0	1,280	0	0	2,540	35	0	0	6	0	0	0
2022 Buildout Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%

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INTERSECTION VOLUME DEVELOPMENT

Intersection #5

Briarcliff Rd NE at Riviera Terrace Condos Dwy

AM PEAK HOUR

Description	Northbound			Riviera Terrace Condos Dwy Southbound			Briarcliff Rd Eastbound			Briarcliff Rd Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2019 Traffic Volumes/Generated Condo Trips	0	0	0	10	0	6	2	438	0	0	656	3
Pedestrians		0			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles	0	0	0	0	0	0	0	17	0	0	11	0
Heavy Vehicle %	0%	0%	0%	2%	0%	2%	2%	4%	0%	0%	2%	2%
Peak Hour Factor		0.97			0.97			0.97			0.97	
Adjustment (Growth from 2019 to 2020)	1.005	1.005	1.005		1.005			1.005	1.005	1.005	1.005	
Adjusted 2020 Volumes	0	0	0	10	0	6	2	440	0	0	659	3
Annual Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Growth Factor	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010
Other Development Trips												
2022 Background Traffic	0	0	0	10	0	6	2	444	0	0	666	3
Project Trips												
Trip Distribution IN							15%					30%
Trip Distribution OUT				55%		30%						
Residential Trips	0	0	0	36	0	20	3	0	0	0	0	7
Trip Distribution IN							15%					85%
Trip Distribution OUT				85%		15%						
Retail Trips	0	0	0	2	0	0	0	0	0	0	0	2
Trip Distribution IN							15%					85%
Trip Distribution OUT				85%		15%						
Restaurant Trips	0	0	0	2	0	0	0	0	0	0	0	2
Pass-By Trips	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	0	0	40	0	20	3	0	0	0	0	11
2022 Buildout Total	0	0	0	50	0	26	5	444	0	0	666	14
2022 Buildout Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	4%	2%	2%	2%	2%

PM PEAK HOUR

Description	Northbound			Riviera Terrace Condos Dwy Southbound			Briarcliff Rd Eastbound			Briarcliff Rd Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Observed 2019 Traffic Volumes/Generated Condo Trips	0	0	0	7	0	4	6	610	0	0	306	12
Pedestrians		0			0			0			0	
Conflicting Pedestrians	0		0	0		0	0		0	0		0
Heavy Vehicles	0	0	0	0	0	0	0	5	0	0	1	0
Heavy Vehicle %	0%	0%	0%	2%	0%	2%	2%	2%	0%	0%	2%	2%
Peak Hour Factor		0.97			0.97			0.97			0.97	
Adjustment (Growth from 2019 to 2020)	1.005	1.005	1.005		1.005			1.005	1.005	1.005	1.005	
Adjusted 2020 Volumes	0	0	0	7	0	4	6	613	0	0	308	12
Annual Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Growth Factor	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010	1.010
Other Development Trips												
2022 Background Traffic	0	0	0	7	0	4	6	619	0	0	311	12
Project Trips												
Trip Distribution IN							15%					30%
Trip Distribution OUT				55%		30%						
Residential Trips	0	0	0	21	0	12	9	0	0	0	0	19
Trip Distribution IN							15%					85%
Trip Distribution OUT				85%		15%						
Retail Trips	0	0	0	3	0	0	0	0	0	0	0	2
Trip Distribution IN							15%					85%
Trip Distribution OUT				85%		15%						
Restaurant Trips	0	0	0	0	0	0	2	0	0	0	0	12
Pass-By Trips	0	0	0	1	0	6	1	-1	0	0	-6	6
Total Project Trips	0	0	0	25	0	18	12	-1	0	0	-6	39
2022 Buildout Total	0	0	0	32	0	22	18	618	0	0	305	51
2022 Buildout Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%

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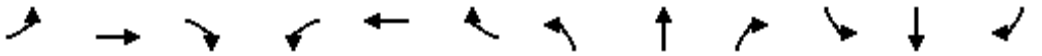
APPENDIX D

Synchro Analysis Reports



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	605	713	265	955	1640	0	0	643	720
Future Volume (veh/h)	0	0	0	605	713	265	955	1640	0	0	643	720
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
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				448	964	221	974	1673	0	0	656	688
Peak Hour Factor				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	2	0	0	2	2
Cap, veh/h				463	973	411	1028	2345	0	0	1647	511
Arrive On Green				0.26	0.26	0.26	0.59	1.00	0.00	0.00	0.32	0.32
Sat Flow, veh/h				1781	3741	1580	3456	3647	0	0	5274	1585
Grp Volume(v), veh/h				448	964	221	974	1673	0	0	656	688
Grp Sat Flow(s),veh/h/ln				1781	1870	1580	1728	1777	0	0	1702	1585
Q Serve(g_s), s				37.3	38.5	18.1	39.2	0.0	0.0	0.0	15.0	48.4
Cycle Q Clear(g_c), s				37.3	38.5	18.1	39.2	0.0	0.0	0.0	15.0	48.4
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				463	973	411	1028	2345	0	0	1647	511
V/C Ratio(X)				0.97	0.99	0.54	0.95	0.71	0.00	0.00	0.40	1.35
Avail Cap(c_a), veh/h				463	973	411	1244	2345	0	0	1647	511
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.72	0.72	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				54.9	55.3	47.8	29.3	0.0	0.0	0.0	39.5	50.8
Incr Delay (d2), s/veh				33.4	26.6	1.4	10.4	1.4	0.0	0.0	0.7	168.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				28.5	29.4	11.8	19.1	0.8	0.0	0.0	10.6	63.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				88.2	81.9	49.2	39.7	1.4	0.0	0.0	40.2	219.1
LnGrp LOS				F	F	D	D	A	A	A	D	F
Approach Vol, veh/h					1633			2647			1344	
Approach Delay, s/veh					79.2			15.5			131.8	
Approach LOS					E			B			F	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	50.6	54.4		45.0		105.0						
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0						
Max Green Setting (Gmax), s	54.0	39.0		39.0		99.0						
Max Q Clear Time (g_c+I1), s	41.2	50.4		40.5		2.0						
Green Ext Time (p_c), s	3.4	0.0		0.0		25.9						

Intersection Summary		
HCM 6th Ctrl Delay		61.8
HCM 6th LOS		E

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)	770	468	326	0	0	0	0	1755	545	227	1114	0
Future Volume (veh/h)	770	468	326	0	0	0	0	1755	545	227	1114	0
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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	872	373	239				0	1809	498	234	1148	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	808	424	359				0	3668	904	288	2464	0
Arrive On Green	0.23	0.23	0.23				0.00	1.00	1.00	0.17	1.00	0.00
Sat Flow, veh/h	3563	1870	1585				0	6696	1585	3456	3647	0
Grp Volume(v), veh/h	872	373	239				0	1809	498	234	1148	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585				0	1609	1585	1728	1777	0
Q Serve(g_s), s	34.0	28.9	20.6				0.0	0.0	0.0	9.8	0.0	0.0
Cycle Q Clear(g_c), s	34.0	28.9	20.6				0.0	0.0	0.0	9.8	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	808	424	359				0	3668	904	288	2464	0
V/C Ratio(X)	1.08	0.88	0.67				0.00	0.49	0.55	0.81	0.47	0.00
Avail Cap(c_a), veh/h	808	424	359				0	3668	904	668	2464	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	0.67	0.67	0.00
Uniform Delay (d), s/veh	58.0	56.0	52.8				0.0	0.0	0.0	61.4	0.0	0.0
Incr Delay (d2), s/veh	55.5	18.7	4.6				0.0	0.5	2.4	3.8	0.4	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(95%),veh/ln	30.5	22.4	13.6				0.0	0.2	1.1	6.9	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	113.5	74.8	57.4				0.0	0.5	2.4	65.1	0.4	0.0
LnGrp LOS	F	E	E				A	A	A	E	A	A
Approach Vol, veh/h		1484						2307			1382	
Approach Delay, s/veh		94.7						0.9			11.4	
Approach LOS		F						A			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		110.0			18.5	91.5		40.0				
Change Period (Y+Rc), s		6.0			6.0	6.0		6.0				
Max Green Setting (Gmax), s		104.0			29.0	69.0		34.0				
Max Q Clear Time (g_c+I1), s		2.0			11.8	2.0		36.0				
Green Ext Time (p_c), s		12.1			0.7	31.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay			30.6
HCM 6th 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)	195	166	79	165	290	556	104	1479	32	159	1033	265
Future Volume (veh/h)	195	166	79	165	290	556	104	1479	32	159	1033	265
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1841	1841	1856	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	201	171	43	170	299	524	107	1525	32	164	1065	259
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, %	3	4	4	3	2	2	2	2	2	2	2	2
Cap, veh/h	239	548	134	372	362	401	329	1756	37	192	1447	350
Arrive On Green	0.09	0.20	0.20	0.09	0.19	0.19	0.04	0.49	0.49	0.12	1.00	1.00
Sat Flow, veh/h	1767	2784	682	1767	1870	1580	1781	3559	75	1781	2837	686
Grp Volume(v), veh/h	201	106	108	170	299	524	107	760	797	164	665	659
Grp Sat Flow(s),veh/h/ln	1767	1749	1717	1767	1870	1580	1781	1777	1857	1781	1777	1746
Q Serve(g_s), s	13.7	7.8	8.1	11.4	23.0	29.0	4.4	56.9	57.1	7.1	0.0	0.0
Cycle Q Clear(g_c), s	13.7	7.8	8.1	11.4	23.0	29.0	4.4	56.9	57.1	7.1	0.0	0.0
Prop In Lane	1.00		0.40	1.00		1.00	1.00		0.04	1.00		0.39
Lane Grp Cap(c), veh/h	239	344	338	372	362	401	329	877	916	192	906	891
V/C Ratio(X)	0.84	0.31	0.32	0.46	0.83	1.31	0.32	0.87	0.87	0.85	0.73	0.74
Avail Cap(c_a), veh/h	239	344	338	378	362	401	419	877	916	192	906	891
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.5	51.5	51.6	42.9	58.1	56.0	17.1	33.7	33.7	30.7	0.0	0.0
Incr Delay (d2), s/veh	22.6	0.5	0.5	0.9	14.6	155.6	0.6	11.3	11.0	29.1	5.2	5.5
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(95%),veh/ln	12.0	6.2	6.4	8.8	18.1	47.5	3.4	34.8	36.2	7.6	2.4	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.0	52.0	52.2	43.8	72.7	211.6	17.7	45.0	44.8	59.8	5.2	5.5
LnGrp LOS	E	D	D	D	E	F	B	D	D	E	A	A
Approach Vol, veh/h		415			993			1664			1488	
Approach Delay, s/veh		59.8			141.1			43.1			11.4	
Approach LOS		E			F			D			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	82.5	19.5	35.5	15.0	80.0	20.0	35.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	14.0	69.0	14.0	29.0	9.0	74.0	14.0	29.0
Max Q Clear Time (g_c+I1), s	15.4	2.0	13.4	10.1	9.1	59.1	15.7	31.0
Green Ext Time (p_c), s	0.1	12.4	0.0	1.0	0.0	8.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	55.6
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	2230	1457	0
Future Vol, veh/h	0	0	0	2230	1457	0
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	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	0	0	0	2299	1502	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	751	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	*490	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		1		-	-	-
Mov Cap-1 Maneuver	-	*490	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	0	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-

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

Intersection	
Int Delay, s/veh	0.2

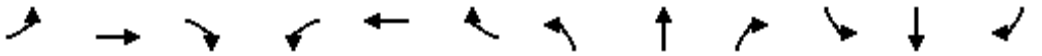
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	440	659	3	10	6
Future Vol, veh/h	2	440	659	3	10	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	4	2	2	2	2
Mvmt Flow	2	454	679	3	10	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	682	0	-	0	912	341
Stage 1	-	-	-	-	681	-
Stage 2	-	-	-	-	231	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	*1206	-	-	-	*578	*806
Stage 1	-	-	-	-	*761	-
Stage 2	-	-	-	-	*785	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	*1206	-	-	-	*576	*806
Mov Cap-2 Maneuver	-	-	-	-	*576	-
Stage 1	-	-	-	-	*759	-
Stage 2	-	-	-	-	*785	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	* 1206	-	-	-	645
HCM Lane V/C Ratio	0.002	-	-	-	0.026
HCM Control Delay (s)	8	0	-	-	10.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	475	552	258	347	1020	0	0	816	533
Future Volume (veh/h)	0	0	0	475	552	258	347	1020	0	0	816	533
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
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				360	777	197	365	1074	0	0	859	490
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	2	2	2	0	0	2	2
Cap, veh/h				457	960	406	448	2215	0	0	2215	688
Arrive On Green				0.26	0.26	0.26	0.26	1.00	0.00	0.00	0.43	0.43
Sat Flow, veh/h				1781	3741	1581	3456	3647	0	0	5274	1585
Grp Volume(v), veh/h				360	777	197	365	1074	0	0	859	490
Grp Sat Flow(s),veh/h/ln				1781	1870	1581	1728	1777	0	0	1702	1585
Q Serve(g_s), s				18.8	19.5	10.6	9.9	0.0	0.0	0.0	11.5	25.3
Cycle Q Clear(g_c), s				18.8	19.5	10.6	9.9	0.0	0.0	0.0	11.5	25.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				457	960	406	448	2215	0	0	2215	688
V/C Ratio(X)				0.79	0.81	0.49	0.81	0.48	0.00	0.00	0.39	0.71
Avail Cap(c_a), veh/h				517	1085	459	829	2215	0	0	2215	688
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.80	0.80	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.6	34.9	31.6	35.9	0.0	0.0	0.0	19.3	23.2
Incr Delay (d2), s/veh				7.1	4.2	0.9	3.0	0.6	0.0	0.0	0.5	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(95%),veh/ln				13.8	14.3	7.4	6.7	0.3	0.0	0.0	8.0	15.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				41.8	39.1	32.5	38.9	0.6	0.0	0.0	19.8	29.4
LnGrp LOS				D	D	C	D	A	A	A	B	C
Approach Vol, veh/h					1334			1439			1349	
Approach Delay, s/veh					38.8			10.3			23.3	
Approach LOS					D			B			C	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	19.0	49.4		31.7		68.3						
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0						
Max Green Setting (Gmax), s	24.0	29.0		29.0		59.0						
Max Q Clear Time (g_c+I1), s	11.9	27.3		21.5		2.0						
Green Ext Time (p_c), s	1.0	1.2		4.2		10.6						

Intersection Summary		
HCM 6th Ctrl Delay		23.8
HCM 6th 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)	584	371	1261	0	0	0	0	739	530	164	1154	0
Future Volume (veh/h)	584	371	1261	0	0	0	0	739	530	164	1154	0
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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	401	578	1295				0	762	349	169	1190	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	695	729	1232				0	2323	572	238	1741	0
Arrive On Green	0.39	0.39	0.39				0.00	0.36	0.36	0.14	0.98	0.00
Sat Flow, veh/h	1781	1870	3158				0	6696	1585	3456	3647	0
Grp Volume(v), veh/h	401	578	1295				0	762	349	169	1190	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1579				0	1609	1585	1728	1777	0
Q Serve(g_s), s	17.7	27.3	39.0				0.0	8.6	18.0	4.7	2.0	0.0
Cycle Q Clear(g_c), s	17.7	27.3	39.0				0.0	8.6	18.0	4.7	2.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	695	729	1232				0	2323	572	238	1741	0
V/C Ratio(X)	0.58	0.79	1.05				0.00	0.33	0.61	0.71	0.68	0.00
Avail Cap(c_a), veh/h	695	729	1232				0	2323	572	484	1741	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	0.82	0.82	0.00
Uniform Delay (d), s/veh	24.0	26.9	30.5				0.0	23.2	26.2	42.1	0.5	0.0
Incr Delay (d2), s/veh	1.2	6.0	40.3				0.0	0.4	4.8	3.2	1.8	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(95%),veh/ln	12.0	18.9	29.6				0.0	5.9	11.9	3.6	1.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.2	32.9	70.8				0.0	23.5	31.0	45.3	2.3	0.0
LnGrp LOS	C	C	F				A	C	C	D	A	A
Approach Vol, veh/h		2274						1111			1359	
Approach Delay, s/veh		53.1						25.9			7.7	
Approach LOS		D						C			A	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		55.0			12.9	42.1		45.0				
Change Period (Y+Rc), s		6.0			6.0	6.0		6.0				
Max Green Setting (Gmax), s		49.0			14.0	29.0		39.0				
Max Q Clear Time (g_c+I1), s		4.0			6.7	20.0		41.0				
Green Ext Time (p_c), s		12.0			0.3	4.3		0.0				

Intersection Summary			
HCM 6th Ctrl Delay			33.7
HCM 6th 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)	167	326	121	84	123	196	58	886	110	603	1777	127
Future Volume (veh/h)	167	326	121	84	123	196	58	886	110	603	1777	127
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	170	333	102	86	126	136	59	904	107	615	1813	128
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	2	2	2	2	2	2	2	2
Cap, veh/h	232	389	117	149	237	388	207	1801	213	468	2221	155
Arrive On Green	0.07	0.14	0.14	0.05	0.13	0.13	0.02	0.56	0.56	0.24	1.00	1.00
Sat Flow, veh/h	1781	2685	809	1781	1870	1559	1781	3199	379	1781	3369	235
Grp Volume(v), veh/h	170	218	217	86	126	136	59	502	509	615	946	995
Grp Sat Flow(s),veh/h/ln	1781	1777	1717	1781	1870	1559	1781	1777	1801	1781	1777	1828
Q Serve(g_s), s	14.0	24.0	24.7	8.3	12.6	14.4	2.8	34.4	34.4	24.0	0.0	0.0
Cycle Q Clear(g_c), s	14.0	24.0	24.7	8.3	12.6	14.4	2.8	34.4	34.4	24.0	0.0	0.0
Prop In Lane	1.00		0.47	1.00		1.00	1.00		0.21	1.00		0.13
Lane Grp Cap(c), veh/h	232	258	249	149	237	388	207	1001	1014	468	1171	1205
V/C Ratio(X)	0.73	0.85	0.87	0.58	0.53	0.35	0.28	0.50	0.50	1.31	0.81	0.83
Avail Cap(c_a), veh/h	232	391	378	270	505	611	512	1001	1014	468	1171	1205
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	74.0	83.4	83.7	72.1	81.7	62.1	17.6	26.6	26.6	27.5	0.0	0.0
Incr Delay (d2), s/veh	11.4	10.4	13.1	3.5	1.8	0.5	0.7	1.8	1.8	156.2	6.0	6.6
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(95%),veh/ln	4.3	17.4	17.6	7.2	10.4	9.8	2.2	21.5	21.8	47.7	3.5	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.4	93.8	96.8	75.6	83.6	62.7	18.4	28.4	28.4	183.8	6.0	6.6
LnGrp LOS	F	F	F	E	F	E	B	C	C	F	A	A
Approach Vol, veh/h		605			348			1070			2556	
Approach Delay, s/veh		92.5			73.4			27.8			49.0	
Approach LOS		F			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	137.8	16.4	35.0	30.0	118.6	20.0	31.4
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	39.0	69.0	24.0	44.0	24.0	84.0	14.0	54.0
Max Q Clear Time (g_c+I1), s	4.8	2.0	10.3	26.7	26.0	36.4	16.0	16.4
Green Ext Time (p_c), s	0.1	28.1	0.1	2.3	0.0	7.6	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	51.7
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	1249	2506	0
Future Vol, veh/h	0	0	0	1249	2506	0
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	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	0	0	0	1288	2584	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1292	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	*36	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		1		-	-	-
Mov Cap-1 Maneuver	-	*36	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	0	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-

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

Intersection	
Int Delay, s/veh	0.2

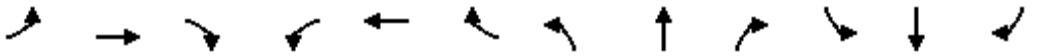
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	613	308	12	7	4
Future Vol, veh/h	6	613	308	12	7	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	632	318	12	7	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	330	0	-	0	652	165
Stage 1	-	-	-	-	324	-
Stage 2	-	-	-	-	328	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	*1426	-	-	-	*561	*953
Stage 1	-	-	-	-	*900	-
Stage 2	-	-	-	-	*702	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	*1426	-	-	-	*557	*953
Mov Cap-2 Maneuver	-	-	-	-	*557	-
Stage 1	-	-	-	-	*894	-
Stage 2	-	-	-	-	*702	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	* 1426	-	-	-	656
HCM Lane V/C Ratio	0.004	-	-	-	0.017
HCM Control Delay (s)	7.5	0	-	-	10.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	611	720	268	965	1656	0	0	649	727
Future Volume (veh/h)	0	0	0	611	720	268	965	1656	0	0	649	727
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
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				453	973	224	985	1690	0	0	662	695
Peak Hour Factor				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	2	0	0	2	2
Cap, veh/h				463	973	411	1038	2345	0	0	1632	507
Arrive On Green				0.26	0.26	0.26	0.60	1.00	0.00	0.00	0.32	0.32
Sat Flow, veh/h				1781	3741	1580	3456	3647	0	0	5274	1585
Grp Volume(v), veh/h				453	973	224	985	1690	0	0	662	695
Grp Sat Flow(s),veh/h/ln				1781	1870	1580	1728	1777	0	0	1702	1585
Q Serve(g_s), s				37.9	39.0	18.3	39.7	0.0	0.0	0.0	15.2	47.9
Cycle Q Clear(g_c), s				37.9	39.0	18.3	39.7	0.0	0.0	0.0	15.2	47.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				463	973	411	1038	2345	0	0	1632	507
V/C Ratio(X)				0.98	1.00	0.55	0.95	0.72	0.00	0.00	0.41	1.37
Avail Cap(c_a), veh/h				463	973	411	1244	2345	0	0	1632	507
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.72	0.72	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				55.1	55.5	47.9	28.9	0.0	0.0	0.0	39.9	51.0
Incr Delay (d2), s/veh				36.0	29.0	1.5	10.7	1.4	0.0	0.0	0.8	179.6
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(95%),veh/ln				29.2	30.0	11.9	19.2	0.8	0.0	0.0	10.8	65.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				91.1	84.5	49.4	39.5	1.4	0.0	0.0	40.6	230.7
LnGrp LOS				F	F	D	D	A	A	A	D	F
Approach Vol, veh/h					1650			2675			1357	
Approach Delay, s/veh					81.5			15.4			138.0	
Approach LOS					F			B			F	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	51.1	53.9		45.0		105.0						
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0						
Max Green Setting (Gmax), s	54.0	39.0		39.0		99.0						
Max Q Clear Time (g_c+I1), s	41.7	49.9		41.0		2.0						
Green Ext Time (p_c), s	3.4	0.0		0.0		26.5						

Intersection Summary		
HCM 6th Ctrl Delay		63.9
HCM 6th LOS		E

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)	778	473	329	0	0	0	0	1773	550	229	1125	0
Future Volume (veh/h)	778	473	329	0	0	0	0	1773	550	229	1125	0
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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	910	459	163				0	1828	504	236	1160	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	808	424	359				0	3664	903	290	2464	0
Arrive On Green	0.23	0.23	0.23				0.00	1.00	1.00	0.17	1.00	0.00
Sat Flow, veh/h	3563	1870	1585				0	6696	1585	3456	3647	0
Grp Volume(v), veh/h	910	459	163				0	1828	504	236	1160	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585				0	1609	1585	1728	1777	0
Q Serve(g_s), s	34.0	34.0	13.3				0.0	0.0	0.0	9.9	0.0	0.0
Cycle Q Clear(g_c), s	34.0	34.0	13.3				0.0	0.0	0.0	9.9	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	808	424	359				0	3664	903	290	2464	0
V/C Ratio(X)	1.13	1.08	0.45				0.00	0.50	0.56	0.81	0.47	0.00
Avail Cap(c_a), veh/h	808	424	359				0	3664	903	668	2464	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	0.66	0.66	0.00
Uniform Delay (d), s/veh	58.0	58.0	50.0				0.0	0.0	0.0	61.3	0.0	0.0
Incr Delay (d2), s/veh	72.7	67.7	0.9				0.0	0.5	2.5	3.7	0.4	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(95%),veh/ln	33.6	33.6	9.2				0.0	0.2	1.1	6.9	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	130.7	125.7	50.9				0.0	0.5	2.5	65.0	0.4	0.0
LnGrp LOS	F	F	D				A	A	A	E	A	A
Approach Vol, veh/h		1532						2332			1396	
Approach Delay, s/veh		120.7						0.9			11.3	
Approach LOS		F						A			B	

Timer - Assigned Phs	2		5	6		8				
Phs Duration (G+Y+Rc), s	110.0		18.6	91.4		40.0				
Change Period (Y+Rc), s	6.0		6.0	6.0		6.0				
Max Green Setting (Gmax), s	104.0		29.0	69.0		34.0				
Max Q Clear Time (g_c+I1), s	2.0		11.9	2.0		36.0				
Green Ext Time (p_c), s	12.3		0.7	32.5		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	38.6
HCM 6th 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)	197	168	80	167	293	562	105	1494	32	161	1043	268
Future Volume (veh/h)	197	168	80	167	293	562	105	1494	32	161	1043	268
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1841	1841	1856	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	203	173	43	172	302	530	108	1540	32	166	1075	262
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, %	3	4	4	3	2	2	2	2	2	2	2	2
Cap, veh/h	238	547	133	372	362	401	327	1756	36	190	1445	350
Arrive On Green	0.09	0.20	0.20	0.09	0.19	0.19	0.04	0.49	0.49	0.12	1.00	1.00
Sat Flow, veh/h	1767	2790	676	1767	1870	1580	1781	3560	74	1781	2836	687
Grp Volume(v), veh/h	203	107	109	172	302	530	108	768	804	166	671	666
Grp Sat Flow(s),veh/h/ln	1767	1749	1718	1767	1870	1580	1781	1777	1857	1781	1777	1746
Q Serve(g_s), s	13.9	7.8	8.2	11.6	23.3	29.0	4.5	57.8	58.1	7.2	0.0	0.0
Cycle Q Clear(g_c), s	13.9	7.8	8.2	11.6	23.3	29.0	4.5	57.8	58.1	7.2	0.0	0.0
Prop In Lane	1.00		0.39	1.00		1.00	1.00		0.04	1.00		0.39
Lane Grp Cap(c), veh/h	238	343	337	372	362	401	327	877	916	190	906	890
V/C Ratio(X)	0.85	0.31	0.32	0.46	0.84	1.32	0.33	0.88	0.88	0.88	0.74	0.75
Avail Cap(c_a), veh/h	238	343	337	376	362	401	416	877	916	190	906	890
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.6	51.6	51.8	42.8	58.2	56.0	17.1	33.9	34.0	30.9	0.0	0.0
Incr Delay (d2), s/veh	24.7	0.5	0.6	0.9	15.5	161.9	0.6	11.9	11.7	33.7	5.4	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.3	6.3	6.5	8.9	18.3	48.6	3.4	35.4	36.9	7.9	2.5	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.3	52.1	52.3	43.7	73.7	217.9	17.7	45.8	45.6	64.6	5.4	5.7
LnGrp LOS	E	D	D	D	E	F	B	D	D	E	A	A
Approach Vol, veh/h		419			1004			1680			1503	
Approach Delay, s/veh		61.0			144.7			43.9			12.1	
Approach LOS		E			F			D			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	82.5	19.6	35.4	15.0	80.0	20.0	35.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	14.0	69.0	14.0	29.0	9.0	74.0	14.0	29.0
Max Q Clear Time (g_c+I1), s	15.9	2.0	13.6	10.2	9.2	60.1	15.9	31.0
Green Ext Time (p_c), s	0.1	12.6	0.0	1.0	0.0	8.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	57.1
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	2252	1472	0
Future Vol, veh/h	0	0	0	2252	1472	0
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	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	0	0	0	2322	1518	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	759	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	*469	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		1		-	-	-
Mov Cap-1 Maneuver	-	*469	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	0	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-

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

Intersection	
Int Delay, s/veh	0.2

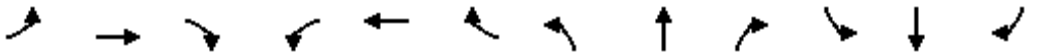
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	444	666	3	10	6
Future Vol, veh/h	2	444	666	3	10	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	4	2	2	2	2
Mvmt Flow	2	458	687	3	10	6

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	690	0	-	0	922	345
Stage 1	-	-	-	-	689	-
Stage 2	-	-	-	-	233	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	*1206	-	-	-	*566	*806
Stage 1	-	-	-	-	*761	-
Stage 2	-	-	-	-	*784	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	*1206	-	-	-	*565	*806
Mov Cap-2 Maneuver	-	-	-	-	*565	-
Stage 1	-	-	-	-	*759	-
Stage 2	-	-	-	-	*784	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	* 1206	-	-	-	636
HCM Lane V/C Ratio	0.002	-	-	-	0.026
HCM Control Delay (s)	8	0	-	-	10.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	480	558	261	350	1030	0	0	824	538
Future Volume (veh/h)	0	0	0	480	558	261	350	1030	0	0	824	538
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
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				364	784	200	368	1084	0	0	867	497
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	2	2	2	0	0	2	2
Cap, veh/h				460	965	408	451	2210	0	0	2203	684
Arrive On Green				0.26	0.26	0.26	0.26	1.00	0.00	0.00	0.43	0.43
Sat Flow, veh/h				1781	3741	1581	3456	3647	0	0	5274	1585
Grp Volume(v), veh/h				364	784	200	368	1084	0	0	867	497
Grp Sat Flow(s),veh/h/ln				1781	1870	1581	1728	1777	0	0	1702	1585
Q Serve(g_s), s				19.1	19.7	10.7	10.0	0.0	0.0	0.0	11.6	26.0
Cycle Q Clear(g_c), s				19.1	19.7	10.7	10.0	0.0	0.0	0.0	11.6	26.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				460	965	408	451	2210	0	0	2203	684
V/C Ratio(X)				0.79	0.81	0.49	0.82	0.49	0.00	0.00	0.39	0.73
Avail Cap(c_a), veh/h				517	1085	459	829	2210	0	0	2203	684
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.79	0.79	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.6	34.8	31.5	35.8	0.0	0.0	0.0	19.5	23.5
Incr Delay (d2), s/veh				7.4	4.3	0.9	2.9	0.6	0.0	0.0	0.5	6.6
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(95%),veh/ln				14.0	14.4	7.5	6.7	0.3	0.0	0.0	8.1	15.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				42.0	39.2	32.4	38.7	0.6	0.0	0.0	20.0	30.2
LnGrp LOS				D	D	C	D	A	A	A	B	C
Approach Vol, veh/h					1348			1452			1364	
Approach Delay, s/veh					38.9			10.3			23.7	
Approach LOS					D			B			C	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	19.0	49.2		31.8		68.2						
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0						
Max Green Setting (Gmax), s	24.0	29.0		29.0		59.0						
Max Q Clear Time (g_c+I1), s	12.0	28.0		21.7		2.0						
Green Ext Time (p_c), s	1.0	0.8		4.1		10.8						

Intersection Summary		
HCM 6th Ctrl Delay		24.0
HCM 6th 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)	590	375	1274	0	0	0	0	746	535	166	1166	0
Future Volume (veh/h)	590	375	1274	0	0	0	0	746	535	166	1166	0
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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	405	584	1309				0	769	358	171	1202	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	695	729	1232				0	2319	571	240	1741	0
Arrive On Green	0.39	0.39	0.39				0.00	0.36	0.36	0.14	0.98	0.00
Sat Flow, veh/h	1781	1870	3158				0	6696	1585	3456	3647	0
Grp Volume(v), veh/h	405	584	1309				0	769	358	171	1202	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1579				0	1609	1585	1728	1777	0
Q Serve(g_s), s	18.0	27.7	39.0				0.0	8.7	18.7	4.7	2.1	0.0
Cycle Q Clear(g_c), s	18.0	27.7	39.0				0.0	8.7	18.7	4.7	2.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	695	729	1232				0	2319	571	240	1741	0
V/C Ratio(X)	0.58	0.80	1.06				0.00	0.33	0.63	0.71	0.69	0.00
Avail Cap(c_a), veh/h	695	729	1232				0	2319	571	484	1741	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	0.82	0.82	0.00
Uniform Delay (d), s/veh	24.1	27.1	30.5				0.0	23.2	26.4	42.1	0.5	0.0
Incr Delay (d2), s/veh	1.2	6.4	44.1				0.0	0.4	5.1	3.2	1.9	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(95%),veh/ln	12.1	19.2	30.6				0.0	6.0	12.2	3.6	1.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.3	33.4	74.6				0.0	23.6	31.6	45.3	2.4	0.0
LnGrp LOS	C	C	F				A	C	C	D	A	A
Approach Vol, veh/h		2298						1127			1373	
Approach Delay, s/veh		55.5						26.1			7.7	
Approach LOS		E						C			A	

Timer - Assigned Phs	2		5	6		8				
Phs Duration (G+Y+Rc), s	55.0		13.0	42.0		45.0				
Change Period (Y+Rc), s	6.0		6.0	6.0		6.0				
Max Green Setting (Gmax), s	49.0		14.0	29.0		39.0				
Max Q Clear Time (g_c+I1), s	4.1		6.7	20.7		41.0				
Green Ext Time (p_c), s	12.2		0.3	4.1		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	34.9
HCM 6th 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)	169	329	122	85	124	198	59	895	111	609	1795	128
Future Volume (veh/h)	169	329	122	85	124	198	59	895	111	609	1795	128
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	172	336	104	87	127	139	60	913	108	621	1832	129
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	2	2	2	2	2	2	2	2
Cap, veh/h	233	392	119	150	241	391	205	1795	212	463	2214	154
Arrive On Green	0.07	0.15	0.15	0.05	0.13	0.13	0.02	0.56	0.56	0.24	1.00	1.00
Sat Flow, veh/h	1781	2677	815	1781	1870	1559	1781	3199	378	1781	3370	234
Grp Volume(v), veh/h	172	221	219	87	127	139	60	507	514	621	955	1006
Grp Sat Flow(s),veh/h/ln	1781	1777	1716	1781	1870	1559	1781	1777	1801	1781	1777	1828
Q Serve(g_s), s	14.0	24.3	25.0	8.4	12.7	14.7	2.9	35.0	35.1	24.0	0.0	0.0
Cycle Q Clear(g_c), s	14.0	24.3	25.0	8.4	12.7	14.7	2.9	35.0	35.1	24.0	0.0	0.0
Prop In Lane	1.00		0.48	1.00		1.00	1.00		0.21	1.00		0.13
Lane Grp Cap(c), veh/h	233	260	251	150	241	391	205	997	1010	463	1167	1201
V/C Ratio(X)	0.74	0.85	0.87	0.58	0.53	0.36	0.29	0.51	0.51	1.34	0.82	0.84
Avail Cap(c_a), veh/h	233	391	377	270	505	611	509	997	1010	463	1167	1201
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.9	83.2	83.5	71.8	81.4	62.0	17.8	26.9	26.9	27.5	0.0	0.0
Incr Delay (d2), s/veh	11.6	10.7	13.4	3.5	1.8	0.5	0.8	1.9	1.8	167.7	6.4	7.0
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(95%),veh/ln	4.5	17.6	17.8	7.2	10.4	10.0	2.3	21.9	22.1	49.3	3.8	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.5	94.0	96.9	75.3	83.2	62.5	18.6	28.8	28.8	195.2	6.4	7.0
LnGrp LOS	F	F	F	E	F	E	B	C	C	F	A	A
Approach Vol, veh/h		612			353			1081			2582	
Approach Delay, s/veh		92.7			73.1			28.2			52.1	
Approach LOS		F			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	137.4	16.5	35.3	30.0	118.2	20.0	31.8
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	39.0	69.0	24.0	44.0	24.0	84.0	14.0	54.0
Max Q Clear Time (g_c+I1), s	4.9	2.0	10.4	27.0	26.0	37.1	16.0	16.7
Green Ext Time (p_c), s	0.1	28.8	0.1	2.3	0.0	7.7	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	53.5
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	1262	2531	0
Future Vol, veh/h	0	0	0	1262	2531	0
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	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	2	2	0
Mvmt Flow	0	0	0	1301	2609	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1305	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	*36	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		1		-	-	-
Mov Cap-1 Maneuver	-	*36	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	0	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	-	-	-

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

Intersection	
Int Delay, s/veh	0.2

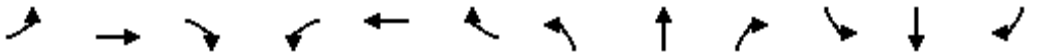
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	619	311	12	7	4
Future Vol, veh/h	6	619	311	12	7	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	638	321	12	7	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	333	0	-	0	658	167
Stage 1	-	-	-	-	327	-
Stage 2	-	-	-	-	331	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	*1426	-	-	-	*555	*953
Stage 1	-	-	-	-	*900	-
Stage 2	-	-	-	-	*700	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	*1426	-	-	-	*551	*953
Mov Cap-2 Maneuver	-	-	-	-	*551	-
Stage 1	-	-	-	-	*893	-
Stage 2	-	-	-	-	*700	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	* 1426	-	-	-	651
HCM Lane V/C Ratio	0.004	-	-	-	0.017
HCM Control Delay (s)	7.5	0	-	-	10.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	614	720	268	975	1663	0	0	651	727
Future Volume (veh/h)	0	0	0	614	720	268	975	1663	0	0	651	727
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
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				454	977	224	995	1697	0	0	664	695
Peak Hour Factor				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	2	0	0	2	2
Cap, veh/h				463	973	411	1047	2345	0	0	1618	502
Arrive On Green				0.26	0.26	0.26	0.61	1.00	0.00	0.00	0.32	0.32
Sat Flow, veh/h				1781	3741	1580	3456	3647	0	0	5274	1585
Grp Volume(v), veh/h				454	977	224	995	1697	0	0	664	695
Grp Sat Flow(s),veh/h/ln				1781	1870	1580	1728	1777	0	0	1702	1585
Q Serve(g_s), s				38.0	39.0	18.3	40.1	0.0	0.0	0.0	15.3	47.5
Cycle Q Clear(g_c), s				38.0	39.0	18.3	40.1	0.0	0.0	0.0	15.3	47.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				463	973	411	1047	2345	0	0	1618	502
V/C Ratio(X)				0.98	1.00	0.55	0.95	0.72	0.00	0.00	0.41	1.38
Avail Cap(c_a), veh/h				463	973	411	1244	2345	0	0	1618	502
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.71	0.71	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				55.1	55.5	47.9	28.5	0.0	0.0	0.0	40.2	51.2
Incr Delay (d2), s/veh				36.6	30.0	1.5	10.8	1.4	0.0	0.0	0.8	184.7
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(95%),veh/ln				29.4	30.3	11.9	19.2	0.8	0.0	0.0	10.8	66.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				91.7	85.5	49.4	39.2	1.4	0.0	0.0	41.0	235.9
LnGrp LOS				F	F	D	D	A	A	A	D	F
Approach Vol, veh/h					1655			2692			1359	
Approach Delay, s/veh					82.3			15.4			140.7	
Approach LOS					F			B			F	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	51.5	53.5		45.0		105.0						
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0						
Max Green Setting (Gmax), s	54.0	39.0		39.0		99.0						
Max Q Clear Time (g_c+I1), s	42.1	49.5		41.0		2.0						
Green Ext Time (p_c), s	3.4	0.0		0.0		26.8						

Intersection Summary		
HCM 6th Ctrl Delay		64.6
HCM 6th LOS		E

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)	778	473	336	0	0	0	0	1791	560	229	1133	0
Future Volume (veh/h)	778	473	336	0	0	0	0	1791	560	229	1133	0
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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	911	462	168				0	1846	514	236	1168	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	808	424	359				0	3664	903	290	2464	0
Arrive On Green	0.23	0.23	0.23				0.00	1.00	1.00	0.17	1.00	0.00
Sat Flow, veh/h	3563	1870	1585				0	6696	1585	3456	3647	0
Grp Volume(v), veh/h	911	462	168				0	1846	514	236	1168	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585				0	1609	1585	1728	1777	0
Q Serve(g_s), s	34.0	34.0	13.8				0.0	0.0	0.0	9.9	0.0	0.0
Cycle Q Clear(g_c), s	34.0	34.0	13.8				0.0	0.0	0.0	9.9	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	808	424	359				0	3664	903	290	2464	0
V/C Ratio(X)	1.13	1.09	0.47				0.00	0.50	0.57	0.81	0.47	0.00
Avail Cap(c_a), veh/h	808	424	359				0	3664	903	668	2464	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	0.65	0.65	0.00
Uniform Delay (d), s/veh	58.0	58.0	50.2				0.0	0.0	0.0	61.3	0.0	0.0
Incr Delay (d2), s/veh	73.1	70.1	0.9				0.0	0.5	2.6	3.7	0.4	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(95%),veh/ln	33.7	34.1	9.5				0.0	0.2	1.2	6.9	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	131.1	128.1	51.1				0.0	0.5	2.6	64.9	0.4	0.0
LnGrp LOS	F	F	D				A	A	A	E	A	A
Approach Vol, veh/h		1541						2360			1404	
Approach Delay, s/veh		121.5						1.0			11.3	
Approach LOS		F						A			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		110.0			18.6	91.4		40.0				
Change Period (Y+Rc), s		6.0			6.0	6.0		6.0				
Max Green Setting (Gmax), s		104.0			29.0	69.0		34.0				
Max Q Clear Time (g_c+I1), s		2.0			11.9	2.0		36.0				
Green Ext Time (p_c), s		12.5			0.7	33.2		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	38.7
HCM 6th 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)	225	175	83	167	296	562	108	1494	32	164	1050	270
Future Volume (veh/h)	225	175	83	167	296	562	108	1494	32	164	1050	270
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1841	1841	1856	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	232	180	47	172	305	528	111	1540	32	169	1082	264
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, %	3	4	4	3	2	2	2	2	2	2	2	2
Cap, veh/h	237	541	138	366	362	401	327	1756	36	190	1443	350
Arrive On Green	0.09	0.20	0.20	0.09	0.19	0.19	0.04	0.49	0.49	0.12	1.00	1.00
Sat Flow, veh/h	1767	2760	702	1767	1870	1580	1781	3560	74	1781	2835	687
Grp Volume(v), veh/h	232	112	115	172	305	528	111	768	804	169	676	670
Grp Sat Flow(s),veh/h/ln	1767	1749	1713	1767	1870	1580	1781	1777	1857	1781	1777	1746
Q Serve(g_s), s	14.0	8.3	8.7	11.6	23.6	29.0	4.6	57.8	58.1	7.3	0.0	0.0
Cycle Q Clear(g_c), s	14.0	8.3	8.7	11.6	23.6	29.0	4.6	57.8	58.1	7.3	0.0	0.0
Prop In Lane	1.00		0.41	1.00		1.00	1.00		0.04	1.00		0.39
Lane Grp Cap(c), veh/h	237	343	336	366	362	401	327	877	916	190	904	888
V/C Ratio(X)	0.98	0.33	0.34	0.47	0.84	1.32	0.34	0.88	0.88	0.89	0.75	0.75
Avail Cap(c_a), veh/h	237	343	336	371	362	401	414	877	916	190	904	888
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.1	51.8	52.0	42.9	58.3	56.0	17.1	33.9	34.0	31.0	0.0	0.0
Incr Delay (d2), s/veh	52.9	0.6	0.6	0.9	16.4	159.8	0.6	11.9	11.7	36.9	5.6	5.9
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(95%),veh/ln	9.4	6.7	6.8	8.9	18.6	48.3	3.5	35.4	36.9	8.2	2.5	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	102.0	52.4	52.6	43.8	74.7	215.8	17.7	45.8	45.6	68.0	5.6	5.9
LnGrp LOS	F	D	D	D	E	F	B	D	D	E	A	A
Approach Vol, veh/h		459			1005			1683			1515	
Approach Delay, s/veh		77.5			143.6			43.9			12.7	
Approach LOS		E			F			D			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	82.3	19.6	35.4	15.0	80.0	20.0	35.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	14.0	69.0	14.0	29.0	9.0	74.0	14.0	29.0
Max Q Clear Time (g_c+I1), s	10.6	2.0	13.6	10.7	9.3	60.1	16.0	31.0
Green Ext Time (p_c), s	0.1	12.8	0.0	1.1	0.0	8.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	58.5
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	10	0	2280	1474	13
Future Vol, veh/h	0	10	0	2280	1474	13
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	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	0	2351	1520	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	767	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	*467	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		1		-	-	-
Mov Cap-1 Maneuver	-	*467	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	467	-	-
HCM Lane V/C Ratio	-	0.022	-	-
HCM Control Delay (s)	-	12.9	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

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

Intersection	
Int Delay, s/veh	0.7

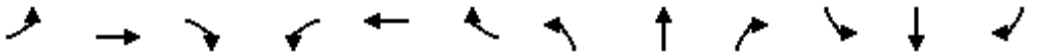
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	444	666	14	50	26
Future Vol, veh/h	5	444	666	14	50	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	4	2	2	2	2
Mvmt Flow	5	458	687	14	52	27

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	701	0	-	0	933	351
Stage 1	-	-	-	-	694	-
Stage 2	-	-	-	-	239	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	*1206	-	-	-	*554	*806
Stage 1	-	-	-	-	*761	-
Stage 2	-	-	-	-	*778	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	*1206	-	-	-	*552	*806
Mov Cap-2 Maneuver	-	-	-	-	*552	-
Stage 1	-	-	-	-	*758	-
Stage 2	-	-	-	-	*778	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	11.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	* 1206	-	-	-	552	806
HCM Lane V/C Ratio	0.004	-	-	-	0.093	0.033
HCM Control Delay (s)	8	-	-	-	12.2	9.6
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0.3	0.1

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	492	558	261	357	1034	0	0	832	538
Future Volume (veh/h)	0	0	0	492	558	261	357	1034	0	0	832	538
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
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				368	797	201	376	1088	0	0	876	499
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	2	2	2	0	0	2	2
Cap, veh/h				464	974	412	459	2202	0	0	2179	676
Arrive On Green				0.26	0.26	0.26	0.27	1.00	0.00	0.00	0.43	0.43
Sat Flow, veh/h				1781	3741	1581	3456	3647	0	0	5274	1585
Grp Volume(v), veh/h				368	797	201	376	1088	0	0	876	499
Grp Sat Flow(s),veh/h/ln				1781	1870	1581	1728	1777	0	0	1702	1585
Q Serve(g_s), s				19.3	20.0	10.8	10.2	0.0	0.0	0.0	11.9	26.3
Cycle Q Clear(g_c), s				19.3	20.0	10.8	10.2	0.0	0.0	0.0	11.9	26.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				464	974	412	459	2202	0	0	2179	676
V/C Ratio(X)				0.79	0.82	0.49	0.82	0.49	0.00	0.00	0.40	0.74
Avail Cap(c_a), veh/h				517	1085	459	829	2202	0	0	2179	676
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.79	0.79	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.5	34.7	31.3	35.6	0.0	0.0	0.0	19.8	24.0
Incr Delay (d2), s/veh				7.5	4.6	0.9	2.9	0.6	0.0	0.0	0.6	7.1
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(95%),veh/ln				14.1	14.6	7.5	6.8	0.3	0.0	0.0	8.3	16.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				42.0	39.3	32.2	38.5	0.6	0.0	0.0	20.4	31.0
LnGrp LOS				D	D	C	D	A	A	A	C	C
Approach Vol, veh/h					1366			1464			1375	
Approach Delay, s/veh					39.0			10.4			24.3	
Approach LOS					D			B			C	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	19.3	48.7		32.1		67.9						
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0						
Max Green Setting (Gmax), s	24.0	29.0		29.0		59.0						
Max Q Clear Time (g_c+I1), s	12.2	28.3		22.0		2.0						
Green Ext Time (p_c), s	1.1	0.5		4.0		10.8						

Intersection Summary		
HCM 6th Ctrl Delay		24.2
HCM 6th 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)	590	375	1296	0	0	0	0	757	542	166	1188	0
Future Volume (veh/h)	590	375	1296	0	0	0	0	757	542	166	1188	0
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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	405	588	1329				0	780	365	171	1225	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	695	729	1232				0	2319	571	240	1741	0
Arrive On Green	0.39	0.39	0.39				0.00	0.36	0.36	0.14	0.98	0.00
Sat Flow, veh/h	1781	1870	3158				0	6696	1585	3456	3647	0
Grp Volume(v), veh/h	405	588	1329				0	780	365	171	1225	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1579				0	1609	1585	1728	1777	0
Q Serve(g_s), s	18.0	28.0	39.0				0.0	8.8	19.1	4.7	2.2	0.0
Cycle Q Clear(g_c), s	18.0	28.0	39.0				0.0	8.8	19.1	4.7	2.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	695	729	1232				0	2319	571	240	1741	0
V/C Ratio(X)	0.58	0.81	1.08				0.00	0.34	0.64	0.71	0.70	0.00
Avail Cap(c_a), veh/h	695	729	1232				0	2319	571	484	1741	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	1.00	1.00	0.81	0.81	0.00
Uniform Delay (d), s/veh	24.1	27.1	30.5				0.0	23.3	26.6	42.1	0.5	0.0
Incr Delay (d2), s/veh	1.2	6.6	49.8				0.0	0.4	5.4	3.1	2.0	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(95%),veh/ln	12.1	19.4	32.2				0.0	6.1	12.5	3.6	1.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.3	33.8	80.3				0.0	23.7	32.0	45.2	2.5	0.0
LnGrp LOS	C	C	F				A	C	C	D	A	A
Approach Vol, veh/h		2322						1145			1396	
Approach Delay, s/veh		58.9						26.3			7.7	
Approach LOS		E						C			A	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		55.0			13.0	42.0		45.0				
Change Period (Y+Rc), s		6.0			6.0	6.0		6.0				
Max Green Setting (Gmax), s		49.0			14.0	29.0		39.0				
Max Q Clear Time (g_c+I1), s		4.2			6.7	21.1		41.0				
Green Ext Time (p_c), s		12.6			0.3	4.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			36.6									
HCM 6th 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)	187	333	124	85	135	198	70	895	111	611	1799	137
Future Volume (veh/h)	187	333	124	85	135	198	70	895	111	611	1799	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	191	340	106	87	138	144	71	913	108	623	1836	138
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	2	2	2	2	2	2	2	2
Cap, veh/h	228	396	122	150	244	394	208	1790	212	462	2186	162
Arrive On Green	0.07	0.15	0.15	0.05	0.13	0.13	0.03	0.56	0.56	0.24	1.00	1.00
Sat Flow, veh/h	1781	2672	820	1781	1870	1560	1781	3199	378	1781	3353	249
Grp Volume(v), veh/h	191	224	222	87	138	144	71	507	514	623	962	1012
Grp Sat Flow(s),veh/h/ln	1781	1777	1715	1781	1870	1560	1781	1777	1801	1781	1777	1825
Q Serve(g_s), s	14.0	24.6	25.3	8.4	13.9	15.2	3.4	35.2	35.2	24.0	0.0	0.0
Cycle Q Clear(g_c), s	14.0	24.6	25.3	8.4	13.9	15.2	3.4	35.2	35.2	24.0	0.0	0.0
Prop In Lane	1.00		0.48	1.00		1.00	1.00		0.21	1.00		0.14
Lane Grp Cap(c), veh/h	228	263	254	150	244	394	208	994	1007	462	1159	1190
V/C Ratio(X)	0.84	0.85	0.87	0.58	0.57	0.37	0.34	0.51	0.51	1.35	0.83	0.85
Avail Cap(c_a), veh/h	228	391	377	270	505	611	507	994	1007	462	1159	1190
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	76.2	83.0	83.3	71.5	81.6	61.9	17.8	27.2	27.2	27.6	0.0	0.0
Incr Delay (d2), s/veh	23.3	11.1	13.8	3.5	2.1	0.6	1.0	1.9	1.8	171.2	7.0	7.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.9	17.9	18.0	7.2	11.2	10.2	2.7	22.0	22.2	49.8	4.0	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	99.5	94.1	97.1	75.1	83.7	62.5	18.7	29.0	29.0	198.8	7.0	7.7
LnGrp LOS	F	F	F	E	F	E	B	C	C	F	A	A
Approach Vol, veh/h		637			369			1092			2597	
Approach Delay, s/veh		96.8			73.4			28.3			53.3	
Approach LOS		F			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	136.4	16.5	35.6	30.0	117.9	20.0	32.1
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	39.0	69.0	24.0	44.0	24.0	84.0	14.0	54.0
Max Q Clear Time (g_c+I1), s	5.4	2.0	10.4	27.3	26.0	37.2	16.0	17.2
Green Ext Time (p_c), s	0.2	29.3	0.1	2.3	0.0	7.7	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	55.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	6	0	1280	2540	35
Future Vol, veh/h	0	6	0	1280	2540	35
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	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	6	0	1320	2619	36

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1328	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	*36	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %		1		-	-	-
Mov Cap-1 Maneuver	-	*36	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	124.7	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	36	-	-
HCM Lane V/C Ratio	-	0.172	-	-
HCM Control Delay (s)	-	124.7	-	-
HCM Lane LOS	-	F	-	-
HCM 95th %tile Q(veh)	-	0.5	-	-

Notes

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

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	618	305	51	32	22
Future Vol, veh/h	18	618	305	51	32	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	19	637	314	53	33	23

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	367	0	-	0	698	184
Stage 1	-	-	-	-	341	-
Stage 2	-	-	-	-	357	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1417	-	-	-	*519	*953
Stage 1	-	-	-	-	*900	-
Stage 2	-	-	-	-	*679	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	1417	-	-	-	*513	*953
Mov Cap-2 Maneuver	-	-	-	-	*513	-
Stage 1	-	-	-	-	*888	-
Stage 2	-	-	-	-	*679	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	11
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1417	-	-	-	513	953
HCM Lane V/C Ratio	0.013	-	-	-	0.064	0.024
HCM Control Delay (s)	7.6	-	-	-	12.5	8.9
HCM Lane LOS	A	-	-	-	B	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2	0.1

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

APPENDIX E

Programmed Projects

PROJECT ID	DESCRIPTION	PRELIMINARY ENGINEERING YEAR	PRELIMINARY ENGINEERING AMOUNT	RIGHT OF WAY YEAR	RIGHT OF WAY AMOUNT	CONSTRUCTION YEAR	CONSTRUCTION AMOUNT	FUNDING SOURCE	COUNTIES
0015956	The proposed project is 1.5 miles of the SR 155 / US 23 / Clairmont Road corridor between I-85 Northbound Exit Ramp and SR 236 / LaVista Road in DeKalb County. The proposed project modifications can be summarized as follows: PI No. 0015956 - Addition of a raised median between I-85 Northbound Exit Ramp and Audubon Drive - Addition of a through lane between I-85 NB Exit Ramp and Audubon Drive The project also proposes to install sidewalk at locations that are missing sidewalks along this section of the study corridor. Rumble strips are proposed along this corridor between Council Bluff Drive and SR 236 / LaVista Road in order to reduce ¿run off the road¿ crash types. The bridge at Interstate 85 will not be affected by the project. The I-85 northbound exit ramp terminal would have channelization, signing, marking, and traffic signal modifications.	2018	$350,000.00	2022	$1,100,000.00	2023	$1,700,000.00	Federal	DeKalb
M006145	This project, selected by the District Maintenance Office, is the resurfacing of SR 155 to improve the roadways current low PACES rating.	N/A	N/A	N/A	N/A	N/A	N/A	Federal	DeKalb

APPENDIX F

Intersection Control Evaluation (ICE) Worksheets

GDOT INTERSECTION CONTROL EVALUATION (ICE) WAIVER FORM

ICE Version 2.15 | Revised 07/01/2019

Waiver Request - Level 2 / 3

In certain circumstances where an ICE would otherwise be required, an ICE may be waived based on appropriate evidence presented with a written request. Scenarios in which an ICE waiver request may be considered include:

1. Proposed improvements do not substantially alter the character of the intersection, and are considered minor in nature, such as extending existing turn lane(s) or modifying signal phasing at an existing traffic signal
2. The intersection consists of a public roadway intersecting a divided, multilane roadway where the access will be limited to a closed median with only right-in/right-out access that will operate acceptably; or
3. The intersection is along an undivided, two-lane roadway that will not be widened and meets the following criteria:
   - Low risk in terms of exposure (total intersection entering volume less than 1,000 vehicles /day)
   - Latest 5 years of crash history is not indicative of a crash problem (no discernible crash patterns coupled with low crash frequency and severity)
   - Layout has no unusual or undesirable geometric features (such as restricted sight distance)
   - The proposed changes are not expected to adversely affect safety

If only one alternative is determined to be feasible from the ICE Stage 1, then a waiver may be submitted in lieu of completing ICE Stage 2. The waiver must clearly explain why there is no other feasible alternative. A Waiver Form should also be submitted to document an agreed upon decision to select a preferred alternative other than the highest scoring alternative in Stage 2.

ICE waiver forms with supporting documentation should be submitted for approval to the Office of Traffic Operations or District Engineer (depending on Waiver level). Questions regarding the waiver process should be routed to the State Traffic Engineer.

Project Information:

Location:	SR155 @ Site Dwy E
County:	DeKalb
GDOT District:	7 - Metro Atlanta
Area Type:	Suburb/Transition
Existing Intersection Control:	Conventional (Minor Stop)
GDOT PI # (or N/A):	N/A
Requested By:	GDOT
Prepared By:	Kimley-Horn
Analyst:	KBA
Date:	6/22/2020
Waiver Request Type:	Driveway Permit

Traffic and Operations Data:[1]

Intersection meets signal/AWS warrants?	None	
Traffic Analysis Type:	Intersection Delay	
Existing Avg Daily Traffic (Major Street):	0	
Existing Avg Daily Traffic (Minor Street):	0	
Analysis Period:	AM Peak	PM Peak
2022 Opening Yr Peak Hour Intersection Delay:	12.9 sec	124.7 sec
2022 Opening Yr Peak Hour Intersection V/C:	0.02	0.17
2022 Design Yr Peak Hour Intersection Delay:	12.9 sec	124.7 sec
2022 Design Yr Peak Hour Intersection V/C:	0.02	0.17

[1]Crash data required for all existing intersections. ADT's required if available (from data collected or nearest GDOT count station site). Capacity data is optional unless needed to justify basis of the waiver request.

Crash Data (Required):[1]

Crash Type	Crash Data: Enter most recent 5 years of crash data	*Crash Severity* PDO	Injury Crash*	Fatal Crash*	
	Angle	0	0	0	<-
	Head-On	0	0	0	
	Rear End	3	0	0	
	Sideswipe - same	2	0	0	
	Sideswipe - opposite	0	0	0	
	Not Collision w/Motor Veh	0	0	0	
	TOTALS:	5	0	0	

* Number of crashes resulting in injuries / fatalities, not number of persons

Description of Work / Justification for Waiver (Required):	The existing, full-movement driveway is proposed to be operate under RIRO control which will reduce the number of turning movements at the driveway. SR 155 is programmed to have a center median constructed in 2023. This driveway design is in accordance with the future plans for this corridor.
Proposed Intersection Control:	RIRO w/down stream U-Turn

REQUESTED BY: Jin Seo Date: 6/22/2020

Title: Traffic Engineer

APPROVED BY: _____ Date: _____

Name: _____

District Engineer or (Approved Delegate)