Traffic Report

SC Highway 41 Corridor Improvements Project

Charleston and Berkeley Counties, South Carolina

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Prepared for
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1.1 Project Description

The purpose of this report is to present the results of the traffic analysis for the proposed SC Highway 41 (SC 41) Corridor Improvements Project. The project traffic study area, illustrated in **Figure 1**, has been defined as:

- A corridor of SC 41 from US Highway 17 (US 17) in Mount Pleasant across the new Wando River Bridge to Clements Ferry Road in Berkeley County.
- A route formed by Bessemer Road, along with portions of Park West Boulevard and Dunes West Boulevard, forming a route around the east side of the historic Phillips Community.
- US 17 from Six Mile Road to Park West Boulevard.
- Segments of Six Mile Road, Hamlin Road and Porchers Bluff Road between US 17 and Billy Swails Boulevard.

The project has two components: **Section I: Improvements to SC 41 from US 17 to the Wando River Bridge**, and **Section II: Improvements along US 17 from south of Hamlin Road to north of Porchers Bluff Road, including the intersection of SC 41 and US 17**. Section I includes a wide range of alternatives, as it focuses on meeting the purpose and need of the project. Section II accommodates the preferred alternative through its connection of SC 41 to US 17. More specifically:

- A full range of alternatives includes widening of the existing roadway as well as various combinations of new alignments and cross sections for SC 41. As a result, the connecting point to US 17 may not be the same for all alternatives.
- The singular build alternative for Section II along US 17 is dependent on the reasonable alternatives for the Section I and accommodates all reasonable alternatives for Section I.
- Land use, access conditions and stakeholders differ significantly between the US 17 and SC 41 corridors.

The Preferred Alternative for Section I was determined through an alternatives analysis that included not only traffic analysis to confirm satisfaction of the purpose and need, but also a comparison of relative impacts to the community and natural environment.

This first chapter covers the traffic conditions that are related to the overall project. Chapter 2 focuses on the range of alternatives for Section I of the project, the SC 41 Corridor. The traffic screening process for the full range of alignments is described, and the remaining reasonable alternatives are analyzed in more detail. Chapter 3 provides the analysis necessary to demonstrate the adequacy of the connection between SC 41 and US 17, including the improvements necessary at adjacent intersections along US 17 to distribute traffic and provide a reasonable level of service in the design year, 2045. Chapter 4 provides more detail on the process of developing the microsimulation model and its use for this study. Chapter 5 summarizes some of the comparable measures of effectiveness (MOE) of the no-build and two build alternatives.

1.2 Purpose and Need

The primary purpose of the proposed SC 41 Corridor Improvements Project is to reduce traffic congestion

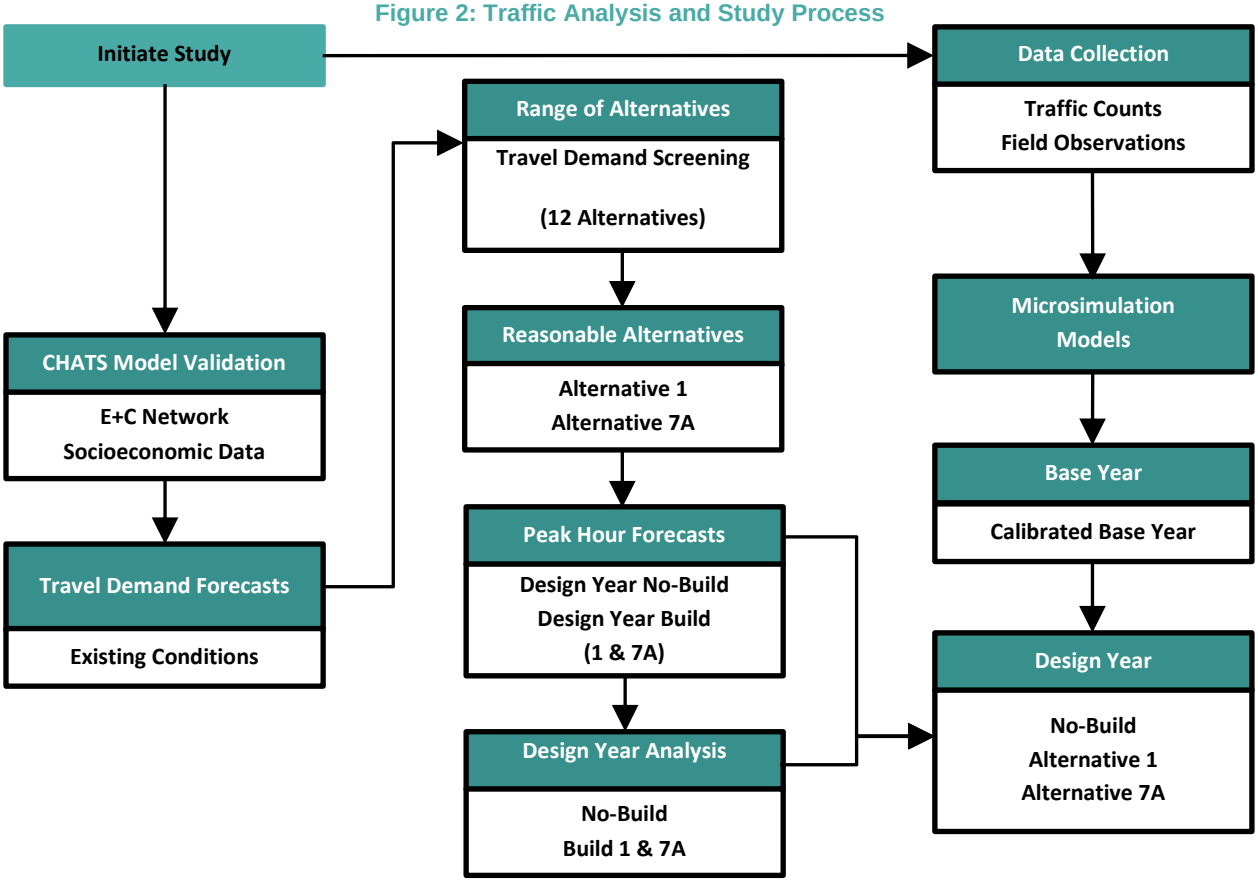
within the SC 41 corridor to accommodate future traffic projections. The secondary purposes of the proposed SC 41 Corridor Improvements Project are to enhance safety throughout the corridor, improve transportation system and community connections, and provide bicycle and pedestrian accommodations, while minimizing community and environmental impacts. The proposed project is needed to address anticipated local and regional growth, increased traffic congestion, safety and emergency response concerns, and inadequate interconnections of transportation modes, including pedestrian and bicycle facilities.

Figure 1: Traffic Analysis Study Area

1.3 Traffic Analysis and Study Process

The process for completing the traffic study for the project is illustrated in **Figure 2**. The Charleston Area Transportation Study (CHATS) Travel Demand Model (CHATS Model), developed and maintained by the Berkeley Charleston Dorchester Council of Governments (BCDCOG), was validated for use in forecasting future traffic volumes in the project area.

Figure 2: Traffic Analysis and Study Process



Basic alignments were established by the project design team, each of these alignments were tested individually within the CHATS Model to determine whether they would provide either the capacity needed in the SC 41 corridor to provide a reasonable level of service (LOS), or in the case of new alignments, would attract a sufficient number of trips from the existing facility to adequately reduce congestion. This screening process reduced the full range of alternatives to two, referred to as Alternative 1, and Alternative 7A.

The process continued with development of alternative-specific future peak hour forecasts. Future forecasts were developed using the CHATS Model peak period turning movement output for these two alternatives, with adjustments made for certain movements based on engineering judgement. A capacity analysis was completed for the future no-build, and the two future build alternatives for both the AM and PM peak hours. This was an iterative process between traffic and roadway engineers to balance operating efficiency with impacts, with multiple intersection types being evaluated at several locations

along the corridor. The resulting geometry and peak hour volumes became the basis for the Part I portion of the future build versions of the microsimulation model.

The development of concepts for the intersection of SC 41 and US 17 (project Section II) involved additional travel demand modeling using the CHATS Model. This step was driven by the recognition that the capacity improvements to Part I, combined with an expectation of continued growth in the region, would overload an already congested US 17 corridor south of SC 41. The Town of Mount Pleasant has been planning and building a route parallel to US 17 between I-526 and Porchers Bluff Road. Southern portions of that corridor are referred to as Hungryneck Boulevard, while the portion closest to SC 41 is called Billy Swails Boulevard. The travel demand model was used to test connections between US 17 and Billy Swails Boulevard with the intent of determining whether the traffic between US 17 and SC 41 could be distributed and reduce future congestion on US 17.

A concept was developed by the design team to address critical high-volume movements within and near the SC 41 and US 17 intersection. The concept focused on the separation of conflicting movements to reduce delay while minimizing impacts to the surrounding land uses. This resulted in one alternative that included a modified diverging diamond intersection on the SC 41 leg of the existing SC 41 and US 17 intersection. North along SC 41, the southbound SC 41 to southbound US 17 traffic will be channeled along the diagonal section of old SC 41 and will merge directly onto US 17. Further north along SC41, an intersection with Winnowing Way allows with an alternate path to either northbound US 17, or to utilize the parallel Billy Swails Boulevard via Porchers Bluff Road. The concept provides a grade separated crossing of the northbound lanes of US 17 at Porchers Bluff Road. The initial concept for Section II was added incorporated into the design year build models of Alternative 1 and 7A of Section I, and further design refinements were made to finalize this alternative.

1.4 Traffic Forecasting Considerations

Traffic forecasting for SC 41 from US 17 to the Wando River involved a process that took several important factors into considerations, including:

- The SC 41 corridor connects to areas of current and potential future high growth.
- The connecting roadways of US 17 and Clements Ferry Road are also areas of potential future high growth.
- Other planned and committed roadway projects in the area will have an effect on the distribution of traffic and consequently, on the future forecast under both build and no-build conditions.
- The traffic forecast for SC 41 may vary among the alternatives being considered.

The need for an improvement to SC 41 is based on congestion due to a lack of capacity. The initial range of alternatives considered to address this need included widening the existing roadway as well as new, parallel alignments to either replace or supplement the capacity of the existing roadway. The CHATS Model was utilized to screen an initial list of twelve (12) alternatives for SC 41, representing varying locations and cross-sectional properties.

1.4.1 Travel Demand Modeling Preparation

The version of the CHATS Model utilized for travel demand modeling was obtained from BCDCOG in June 2017. This version had recently been updated, and included the updated road network reflecting committed projects, and updated socioeconomic (SE) data reflecting certain mega projects in the BCDCOG region.

Stantec evaluated the roadway network within the immediate vicinity of the SC 41 corridor including the committed project for future forecasts. In addition, a review was completed of the socioeconomic data within traffic analysis zones (TAZ) that border or were assumed to contribute traffic to SC 41, US 17 and Clements Ferry Road. The CHATS model did not yet include all of the growth projections made by the Town of Mount Pleasant or Berkeley County Planning Departments. Stantec obtained the SE data forecasts by TAZ through 2040 from the Town of Mount Pleasant and updated the CHATS model SE data accordingly. A meeting was held with Berkeley County and City of Charleston planners to obtain input on growth along Clements Ferry Road and on that portion of SC 41 north of the Wando River.

Of particular importance to the future traffic forecast is a development known as Cainhoy Plantation, located on either side of Clements Ferry Road and comprised of 9,325 acres of mixed-use development including residences, public schools, retail shops, restaurants and office space. The development plan approved by the City of Charleston originally included up to 18,000 residential units in this development. During the process of travel demand modeling, the developer provided notice that the intensity of the development would be substantially reduced, by approximately fifty percent (50%). This was also updated in the corresponding TAZs in the CHATS model.

Stantec also reviewed the location of TAZ centroid connectors, which determine where the trips generated within that TAZ are loaded onto the network. With developments the size of Cainhoy Plantation, this was found to have a substantial effect on how the generated trips are split between SC 41 (toward US 17) and Clements Ferry Road (toward I-526). The connector for the TAZ's on each side of Clements Ferry Road was adjusted to approximate a combination of the entrances in the Cainhoy Plantation master development plan, resulting in approximately 24% of the trips contributing to growth on SC 41, and 76% contributing to trips west of the connectors on Clements Ferry Road.

Another major development related generator for the SC 41 project is Mount Pleasant's largest subdivision, Carolina Park. Through June 2015, the TAZ containing Carolina Park indicated that 791 residential units were completed. Full buildout is forecast by 2040, with 2,832 residential units. School enrollment and commercial space is expected to grow accordingly. This will have a greater impact on the volume along US 17 through the intersection with SC 41. The daily traffic volume on US 17 north of SC 41 was approximately 30,000 vehicles per day in 2015, and is forecast to double by the year 2040, according to the CHATS model.

1.4.2 Committed Projects for Travel Demand Forecasting

The following projects were considered completed in the 2045 design year:

- **Billy Swails Boulevard from Six Mile Road to Hamlin Road** – This is the final section of the Hungryneck Boulevard corridor from the eastern terminus of I-526 to Porchers Bluff Road, north of SC 41. This long-planned facility was designed to provide a parallel alternative to US 17.

- **US 17 to Rifle Range Connector –** This new alignment is roughly aligned with Long Point Road at US 17 and extends to Rifle Range Road on a path that is generally parallel to Six Mile Road, crossing the proposed Billy Swails Boulevard.
- **Park West Boulevard Widening -** The existing two-lane roadway will be widened to four lanes from Bessemer Road to Queensgate Way.
- **Clements Ferry Road from Jack Primus Road to Clements Ferry Road –** This will complete the widening between SC 41 and I-526.
- **526 Lowcountry Corridor –** The western portion of the 526 Lowcountry Corridor is committed, and the eastern portion, from Virginia Avenue to US 17 in Mount Pleasant is under a corridor study at this time. The prioritization of segments within the combined corridor is yet to be fully decided. The portion of the route from I-26 to Clements Ferry Road was assumed to be widened for forecasting traffic on SC 41.

1.5 Data Collection

1.5.1 Traffic Data

Continuous 48-hour directional (through) volumes and peak hour turning movement counts were collected in September of 2017. Through counts and turning movement counts were performed in 15-minute increments and were classified by vehicle type. The count locations are illustrated in **Figure 3**. Both sets of counts were collected when school was in session, so as to capture a typical peak weekday.

(1) 48-Hour Continuous Counts

Directional counts were collected for 48-hours on Tuesday, September 19, 2017 and Wednesday, September 20, 2017 at eight (8) locations. The eight (8) tube count locations include:

- US 17: South of 6 Mile Rd
- US 17: South of Hamlin Rd/Brickyard Pkwy
- US 17: North of Winnowing Way/Porchers Bluff
- SC 41: South of Colonnade Dr
- SC 41: South of Canyon Ln/Parkers Island Rd
- SC 41: North of Planters Pointe Blvd/Wood Park Dr
- SC 41: South of Clements Ferry Rd
- Clements Ferry Rd: West of Cainhoy Rd

(2) Peak Hour Intersection Counts

Turning movement counts were collected from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM on Tuesday, September 19, 2017 at thirty (30) intersections. Later, it was determined that the study area would expand to the east and include an additional five (5) intersections along Bessemer Road/Park West Boulevard. Turning movement counts for these intersections were collected from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM on Tuesday, March 12, 2019. The twenty-eight (28) existing intersections counted include:

1) US 17 & Six Mile Road;
2) US 17 & Long Point Road;
3) US 17 & Brickyard Parkway/Hamlin Road;
4) US 17 & SC 41 Access Road;
5) US 17 & SC 41;
6) US 17 & Winnowing Way/Porchers Bluff;
7) US 17 & Lexington Drive/Oakland Market Drive;
8) US 17 & Park West Boulevard/South Morgan's Point Road;
9) Six Mile Road & Sweetgrass Basket Parkway;
10) Hamlin Road & Billy Swails Boulevard;
11) SC 41 & Old SC 41/Gregorie Ferry Road;
12) SC 41 & Colonnade Drive;
13) SC 41 & Tradewind Drive;
14) SC 41 & Joe Rouse Road;
15) SC 41 & Bennett Charles Road;
16) SC 41 & Sunchaser Lane;
17) SC 41 & Parkers Island Road;
18) SC 41 & Canyon Lane;
19) SC 41 & Rivertowne Parkway/Dunes West Boulevard;
20) SC 41 & Planters Point Boulevard/Wood Park Drive;
21) SC 41 & Harpers Ferry Way;
22) SC 41 & Clements Ferry Road;
23) Clements Ferry Road & Cainhoy Road;
24) SC 41 & Reflectance Road/Halfway Creek Road;
25) Clements Ferry Road & Reflectance Road;
26) Bessemer Road & Dumont Drive;
27) Bessemer Road & Park West Boulevard;
28) Park West Boulevard & Wando Plantation Way;
29) Park West Boulevard & Palmetto Hall Boulevard; and
30) Park West Boulevard & Kings Gate Lane.

(3) Field Observations

Team members made field visits to observe traffic operations and collect field data in August 2018 and in March of 2019. The following sections document the details of each team member's visit.

August 2018

The traffic volumes collected in September 2017, along with these field observations, and peak period volumes from the CHATS Travel Demand Model (TDM) were used to develop an origin-destination (O-D) matrix for this model. Field observations were made during the AM and PM peak periods. Observations included general driver behavior, intersection queues and signal phasing and timing.

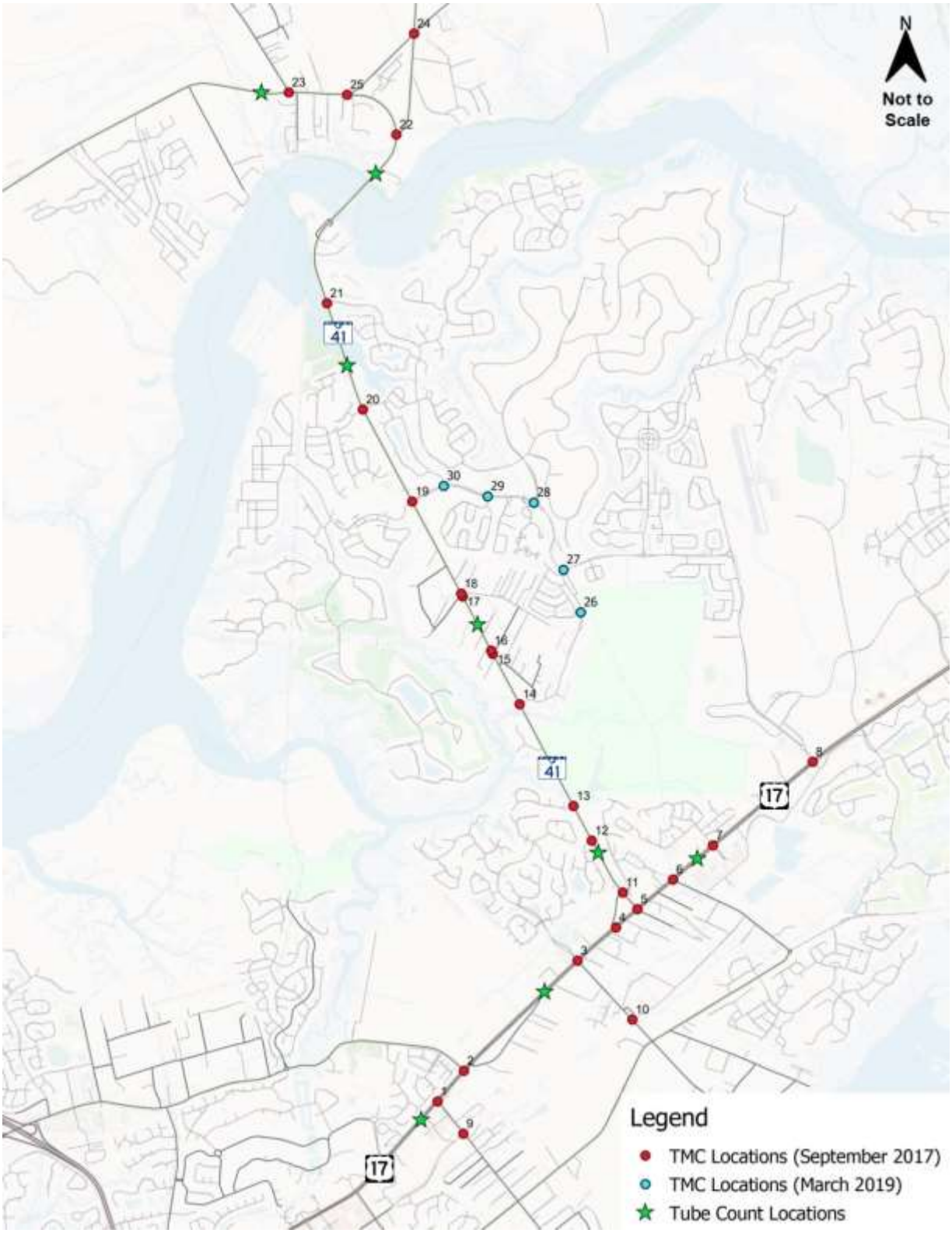
Observations noted consistent occurrences of queues extending from US 17, north along US 17 beyond the SC 41 intersection with Joe Rouse Road. It was also observed that while the southbound lane drop south of Joe Rouse Road contributed to this queueing as vehicles attempted to merge back into the single continuing southbound lane of the intersection, the problem was enhanced by the effects of the US 17/SC 41 intersection causing intermittent stopping and starting from the lane drop to US 17.

March 14 & 18, 2019

Additional field visits were made to collect additional travel times for the study area. These observations would be used to calibrate a microsimulation model for the study area road network. This model was used to evaluate potential traffic impacts of capacity improvements along SC 41 (Section I) and at US 17 (Section II).

Travel times were collected using the floating car method, defined as traveling with traffic such that the data collection vehicle maintains the average speed of those vehicles around it. Travel time runs were performed from 6:30 AM to 9:30 AM and from 3:30 PM to 6:30 PM. A summary of the notes from those field visits are included in the Appendix A.

Figure 3: Count Locations



1.6 Crash Analysis

Crash records were provided by the South Carolina Department of Public Safety for the seven years from 2011 through 2017 for the SC 41 corridor from US 17 to the Wando River Bridge. The records received include details such as the location (latitude, longitude), type of collision, time of day, road conditions, crash severity, and conditions contributing to the incident. Crash severity is classified as property damage only (PDO), injury or fatality. Collision types are described in **Table 1**.

Table 1: Categories of Crash Types Evaluated in SC 41 Corridor

Type	Description	Common Contributor
Angle	Vehicle strikes vehicle at angle. More common at intersections.	Failure to yield right of way, or failure to obey traffic control device.
Head On	Vehicle strikes vehicle heading in the opposite direction.	Vehicle inadvertently crosses into opposing lane or passes at an unsafe time or location.
Rear End	Vehicle strikes vehicle traveling in the same direction.	Following vehicle following too close for travel speed or road conditions.
Single Vehicle	Vehicle leaves road and may strike a roadside object.	Driver traveling too fast for conditions, asleep or impaired.
Sideswipe	Vehicle strikes vehicle side to side, traveling in same or opposite direction.	Driver distracted, asleep or under the influence; aggressive driving.

(1) Crash Frequency, Type, Severity and Contributing Factors by Location

There are two SCDOT count stations within the corridor. One is located south of Joe Rouse Road, and the other is located north of Dunes West Boulevard. There are three segments of SC 41 within the study area, based on their access characteristics. These are:

- South Segment - US 17 to Joe Rouse Road
- Middle Segment - Joe Rouse Road to Dunes West Boulevard
- North Segment - Dunes West Boulevard to Clements Ferry Road

Unlike the north and south segments, the middle segment includes direct driveway access to individual residential parcels. There is no SCDOT count station located in the middle segment, so Stantec used 48-hour continuous counts collected within each of these segments in 2017 to extrapolate the AADT for the middle section. These are shown in **Table 2**.

Table 2: AADT for Three Segments of SC 41

Year	South Segment	Middle Segment[1]	North Segment
2011	18,300	13,553	11,800
2012	19,300	14,042	12,100
2013	19,700	14,296	12,300
2014	19,400	13,557	11,400
2015	22,400	15,608	13,100
2016	23,400	16,827	14,400
2017	24,800	16,839	13,900

1. ***Prorated from South and North Segments using 2017 counts in all three segments.***

There were 575 crashes in the corridor within the seven years studied. These included 119 angle, 14 head on, 335 rear end, 81 single vehicle and 26 sideswipe crashes. The breakdown of crashes by type, year, and segment, are shown in **Table 3**.

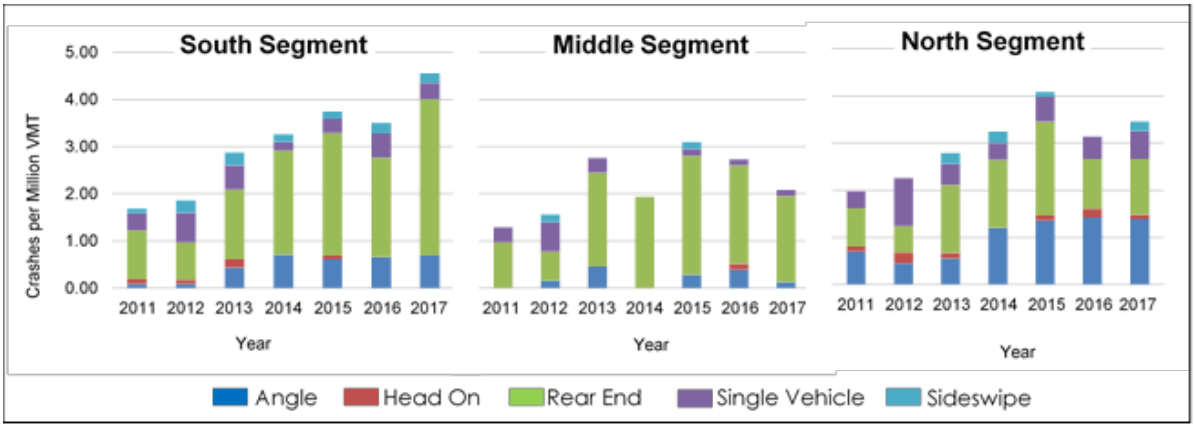
Table 3: Crashes by Year and Type in Each Segment of SC 41

Year	Angle			Head On			Rear End			Single Vehicle			Sideswipe		
	South	Middle	North	South	Middle	North	South	Middle	North	South	Middle	North	South	Middle	North
2011	1	0	6	1	0	1	11	6	7	4	2	3	1	0	0
2012	1	1	4	1	0	2	9	4	5	7	4	9	3	1	0
2013	5	3	5	2	0	1	17	13	13	6	2	4	3	0	2
2014	8	0	10	0	0	0	25	12	12	2	0	3	2	0	2
2015	8	2	13	1	0	1	34	18	19	4	1	5	2	1	1
2016	9	3	15	0	1	2	29	16	11	7	1	5	3	0	0
2017	10	1	14	0	0	1	48	14	12	5	1	6	3	0	2
Total	**42**	**10**	**67**	**5**	**1**	**8**	**173**	**83**	**79**	**35**	**11**	**35**	**17**	**2**	**7**

Angle and head on crashes are higher in the north segment. The greater number of angle crashes are potentially due to higher volumes of turning movements at unsignalized intersections. Rear end crashes are the exhibit the highest increase from year to year in all segments, but particularly in the south. This is indicative of congestion. Of the 335 rear end crashes for the combined three segments during the study years, forty-nine percent (49%) occurred between the peak hours of 7:00 and 9:00 am, and 4:00 and 6:00 pm.

To provide an equitable basis of comparison between segments, Stantec compared crash rates for these three segments on a per million vehicle miles traveled basis using the AADT provided in Table 2 and a length of 1.6 miles for the south segment, 1.3 miles for the middle segment and 2.0 miles for the north segment. The comparison between the segments on this basis is illustrated in **Figure 4**. It is important to note that the major intersections that bookend the middle segment were included in their entirety in the north and south segments. This was done because the middle section was defined, with driveways for individual residential parcels that connect directly to SC 41.

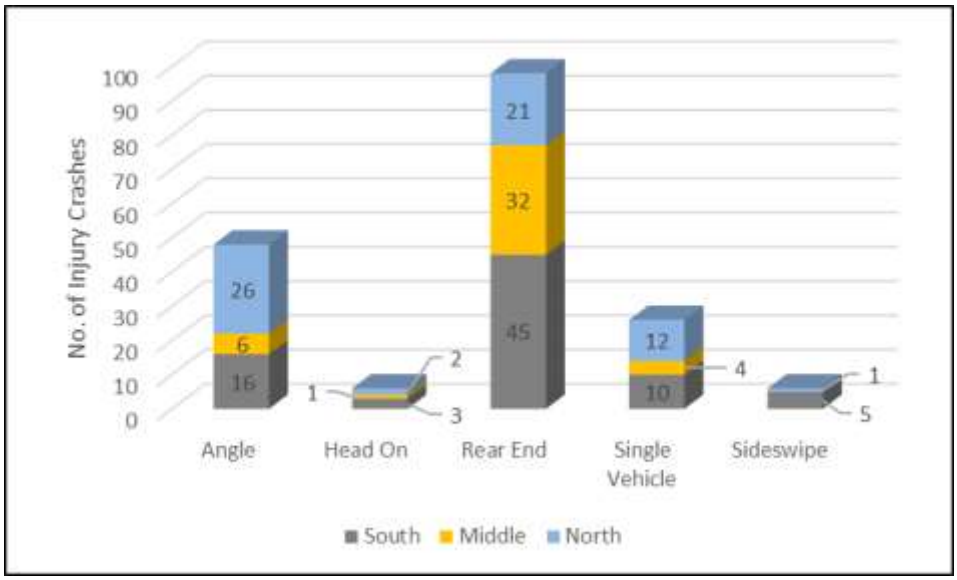
Figure 4: Crash Rates by Type and Year for Each SC 41 Segment



The severity of crashes was also considered. The 575 crashes that occurred during the study period

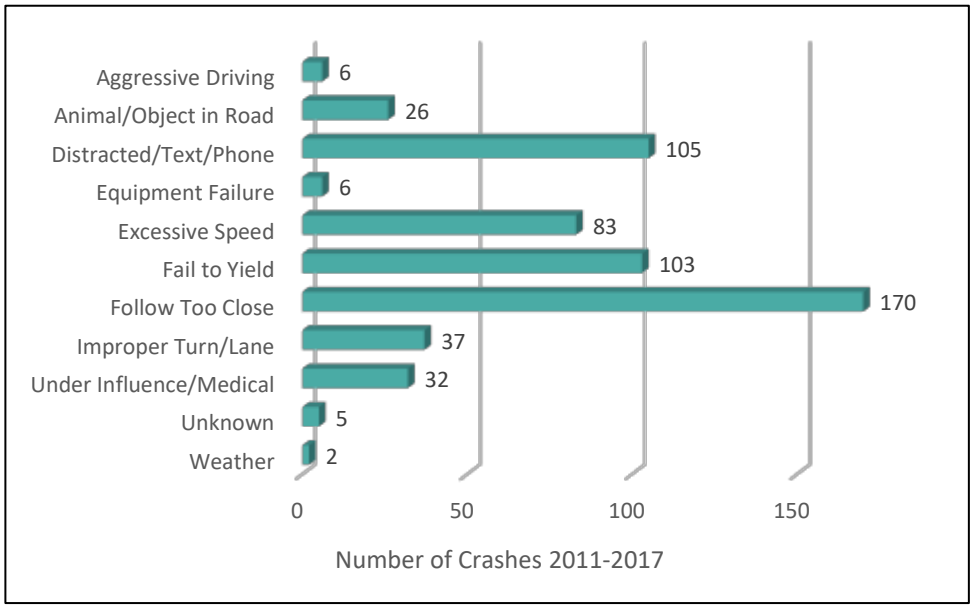
included 184 that resulted in 272 injuries and three fatalities. Rear end collisions produced the most injuries for all three segments of SC 41. The south segment experienced the greatest number of injury crashes. **Figure 5** illustrates the types of injury crashes by segment.

Figure 5: Total Injury Crashes by Collision Type and Segment (2011 – 2017)



The factors contributing to the type, frequency and severity of crashes are important in the evaluation of project needs and the development of concepts. **Figure 6** summarizes the primary contributing factors for the 575 crashes that occurred along SC 41 during the 2011 through 2017 study period. The dominant rear end crash type coincides with the most common contributing factors, including following too close and distracted driving. Following too close typically increases with congestion.

Figure 6: Primary Factors Contributing to Crashes on SC 41



2.1 Background

2.1.1 Existing Conditions Along SC 41

South Carolina Highway 41 (SC 41) is a two-lane suburban roadway between US Highway 17 (US 17) and Clements Ferry Road (S-8-33), with some exceptions. Near the US 17 intersection at the south end of the corridor, has up to five lanes to accommodate dedicated turning movements. Other widened areas include:

- A northbound left turn at Colonnade Drive
- A northbound left turn lane at Tradewind Drive
- A northbound left turn lane at Cardinal Hill Drive
- Northbound and southbound turn lanes at Joe Rouse Road
- A second southbound lane extending approximately 1,000 feet south from Joe Rouse Road
- A northbound right turn lane at Nehemiah Road
- Northbound and southbound turn lanes at Rivertowne Parkway/Dunes West Boulevard
- Northbound and southbound turn lanes at Planters Pointe Boulevard/Wood Park Drive
- Northbound and southbound turn lanes at Harpers Ferry Way
- Northbound and southbound left and southbound right turn lanes at Shipyard Park at the Wando River

The bridge over the Wando River, south of the intersection with Clements Ferry Road, has been widened to four lanes. Any improvements to the SC 41 corridor would be expected to terminate south of this bridge. The corridor has a posted speed limits of 45 mph between US 17 and Dunes West Boulevard, 55 mph between Dunes West Boulevard and Harpers Ferry Way, and 35 mph between Harpers Ferry Way and the Wando River bridge.

2.2 Base Year Traffic Conditions

Traffic counts were collected in September of 2017. The Base Year AM and PM peak hour volumes were developed from these counts and are illustrated in **Figure 7**. The calculated peak hour factors for the intersections along the SC 41 corridor are listed in **Table 4**.

Heavy vehicle percentages at intersections throughout the SC 41 corridor were based on the turning movement counts collected. Base Year heavy vehicle percentages were utilized in the analysis, with a minimum percentage of 2%.

Figure 7: Base Year Peak Hour Volumes for SC 41

SC 41 - 2017 BASE PEAK HOUR TRAFFIC VOLUMES LEGEND

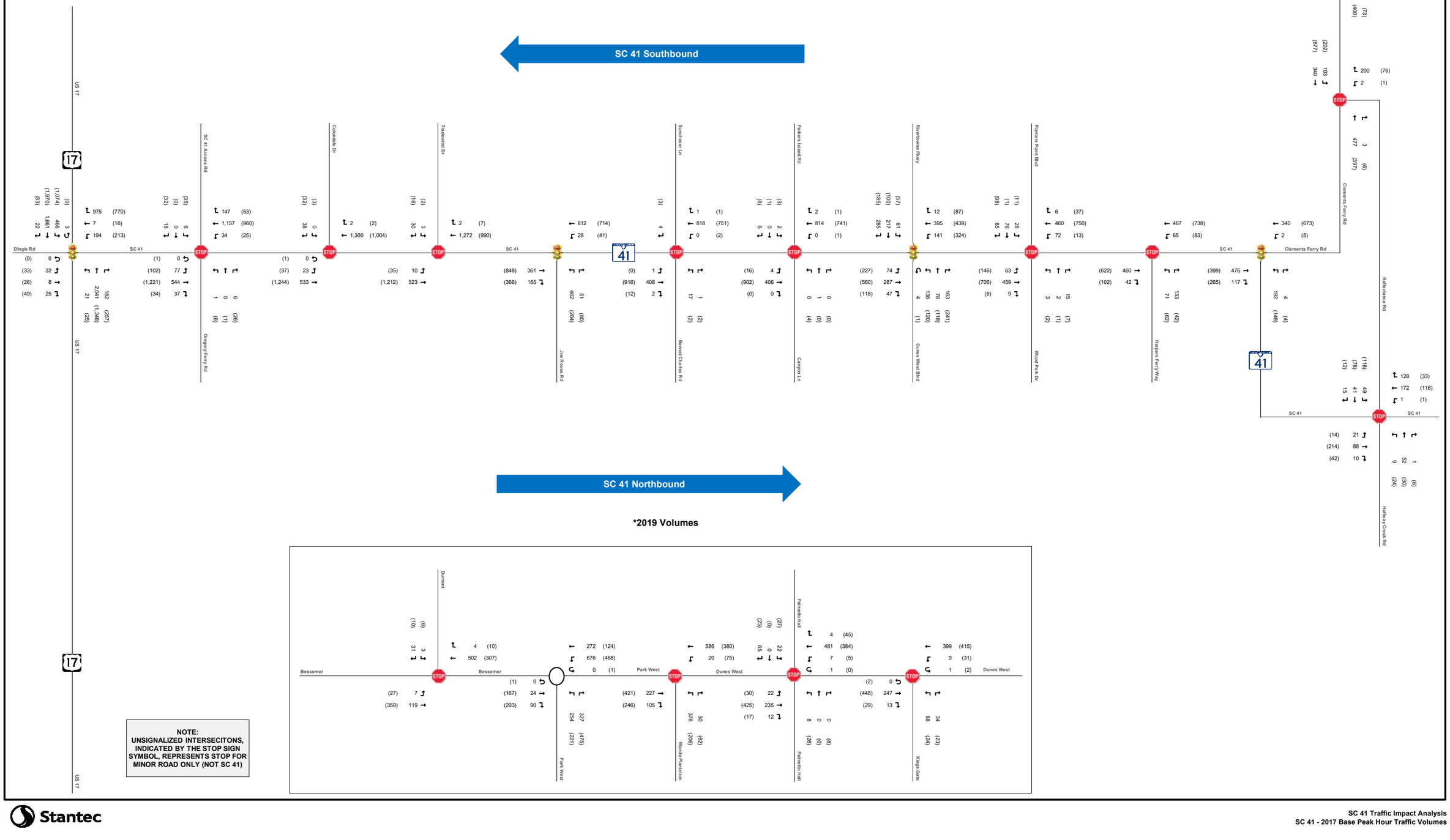
000 - AM PEAK TRAFFIC VOLUMES
(000) - PM PEAK TRAFFIC VOLUMES

- SIGNALIZED INTERSECITON
- ROUNDABOUT INTERSECTION
- UNSIGNALIZED INTERSECITON

SC 41 Southbound

SC 41 Northbound

***2019 Volumes**



NOTE:
UNSIGNALIZED INTERSECITONS, INDICATED BY THE STOP SIGN SYMBOL, REPRESENTS STOP FOR MINOR ROAD ONLY (NOT SC 41)

Table 4: SC 41 Base Year – AM and PM Intersection Peak Hour Factors

Intersection	AM	PM
SC 41 & US 17	0.97	0.96
SC 41 & Hwy 41 Access Road	0.98	0.98
SC 41 & Colonnade Drive	0.98	0.98
SC 41 & Tradewind Street	0.94	0.98
SC 41 & Bessemer Road	0.95	0.96
SC 41 & Bennett Charles Road/Sunchaser Lane	0.97	0.95
SC 41 & Canyon Lane/Parkers Island Road	0.92	0.97
SC 41 & Dunes West Blvd	0.91	0.98
SC 41 & Wood Park Drive	0.94	0.95
SC 41 & Harpers Ferry Way	0.91	0.91
SC 41 & Clements Ferry Road	0.93	0.97
SC 41 & Reflectance Road	0.95	0.88
Northbound Street & Clements Ferry Road	0.94	0.94
Northbound Street & Clements Ferry Road	0.91	0.95
SC 41 & Westbound Street	0.96	0.98
Kings Gate Lane & Dunes West Blvd	0.91	0.95
Palmetto Hall Blvd & Dunes West Blvd	0.92	0.96
Wando Plantation Way & Dunes West Blvd	0.93	0.97
Bessemer Road & Park West Blvd	0.93	0.97
Bessemer Road & Dumont Drive	0.96	0.92

2.2.1 Base Year Peak Hour Traffic Operations

(1) Intersection Level of Service

Base Year traffic volumes were collected for the intersections along SC 41 for both AM and PM peak hours. Using the Base Year traffic volumes, intersection analyses were conducted for the intersections along SC 41 using the Transportation Research Board's *Highway Capacity Manual 2010 (HCM 2010)* methodologies of the Synchro, Version 10 software was used for the intersection analysis. The SC 41 corridor was also analyzed with a calibrated Base Year microsimulation model produced using VISSIM 8.0 software, for the AM and PM peak hour periods.

The level of service (LOS) for intersections is based on the average control delay per vehicle. For unsignalized intersections, major street traffic generally will experience virtually no delay. Most of the delay will be encountered by traffic on approaches controlled by stop or yield signs. For signalized intersections, delay per vehicle is controlled by signal operations, and the LOS can be identified for the entire intersection, individual intersection approaches, and each movement/lane-group. **Table 5** shows the HCM 2010 LOS criteria for unsignalized and signalized intersections. For urban intersections, LOS D or better is considered acceptable.

Table 5: Intersection HCM 2010 Level of Service Criteria

LOS	Control Delay (sec/veh)	
	Unsignalized Intersections (worst leg of intersection)	Signalized Intersections (entire intersection)
A	≤ 10	≤ 10
B	>10-15	>10-20
C	>15-25	>20-35
D	>25-35	>35-55
E	>35-50	>55-80
F	> 50	> 80

The differences between the LOS and delay results produced by these two methods can be attributed to the static (Synchro) vs dynamic (VISSIM) nature of the models. Synchro per HCM methodologies utilizes demand volumes for all approaches and movements at the intersection. This is true even if upstream bottlenecks do not allow that volume to reach the intersection. VISSIM measures vehicles that are able to travel through the intersection during the simulation period. Traffic is therefore affected by conditions upstream and downstream of the intersection.

The results of the level of service (LOS) analysis of the SC 41 intersections are tabulated from the microsimulation model are listed in **Table 6**.

The microsimulation setup and modeling process is described in more detail in Chapter 4.

Intersection level of service (LOS) grades range from LOS A to LOS F, which are directly related to the level of control delay at the intersection and characterize the operational conditions of the intersection traffic flow. LOS A operations typically represent ideal, free-flow conditions where vehicles experience little to no delays, and LOS F operations typically represent poor, forced-flow (bumper-to-bumper) conditions with high vehicular delays, and are generally considered undesirable.

For the signalized intersections, the overall intersection LOS and delay results were evaluated, while for the Unsignalized intersections with one-way or two-way stop control, the LOS and delay results are evaluated for the worst-case minor-street approaches only, as based upon *HCM 2010* methodologies for two-way Unsignalized intersections. Synchro reports can be found in **Appendix E.**

According to the Calibrated Base Year VISSIM analysis, all intersections within the SC 41 corridor currently operate at LOS D or better, except for the intersections of SC 41 & SC 41 Access Road, SC 41 & Colonnade Drive, SC 41 & Joe Rouse Road, and SC 41 & Bennett Charles Road.

Table 6: SC 41 Base Year Intersection Level of Service

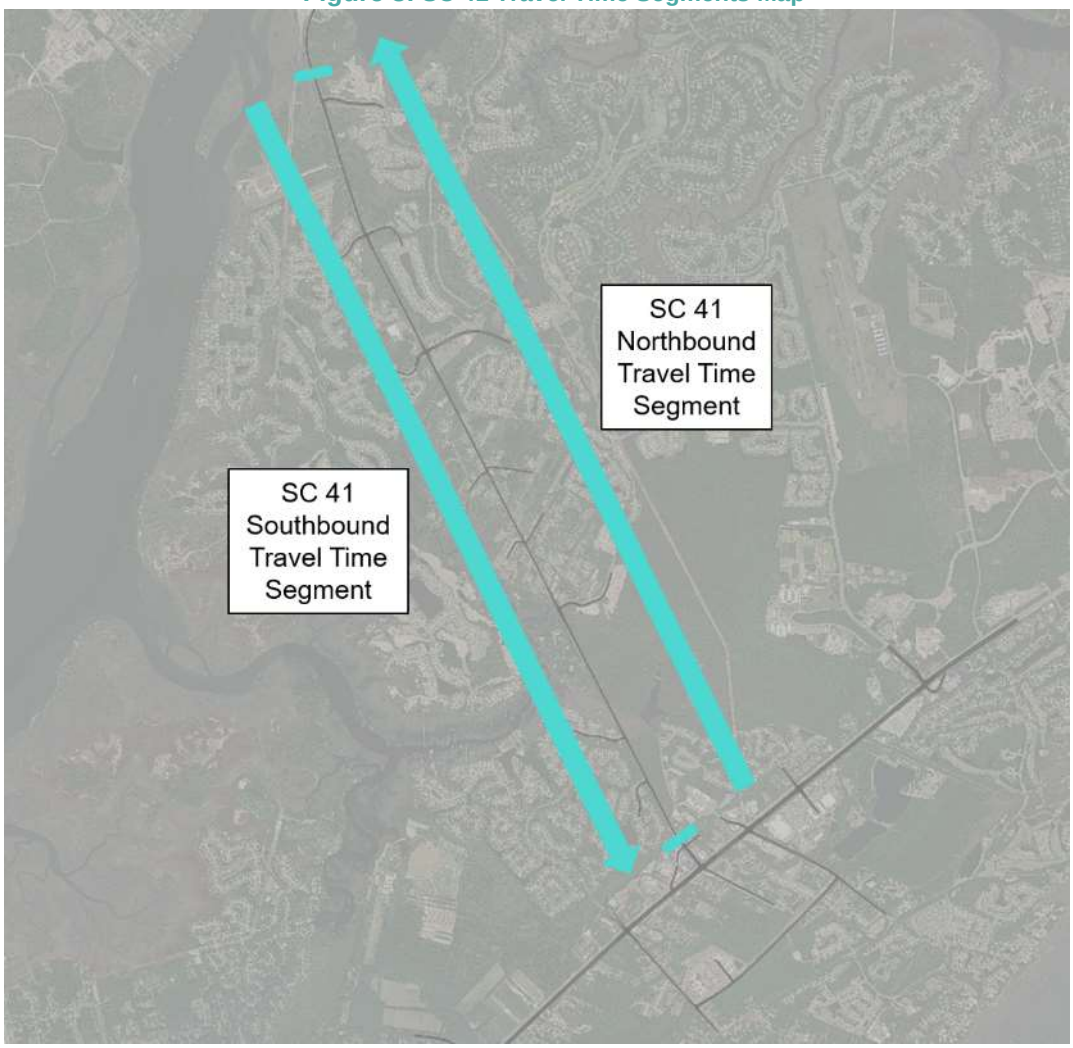
Intersection	Intersection Control	AM	PM
SC 41 & US 17	Signalized	C/30.1	D/50.9
SC 41 & SC Access Road/Gregory Farm Road	Unsignalized	F/63.8	D/34.2
SC 41 & Colonnade Drive	Unsignalized	F/147.3	D/30.5
SC 41 & Tradewind Drive	Unsignalized	D/29.0	B/12.9
SC 41 & Joe Rouse Road	Signalized**	F/-	F/-
SC 41 & Bennett Charles Road	Unsignalized	E/55.2	B/18.0
SC 41 & Sunchaser Lane	Unsignalized	F/157.3	B/11.8
SC 41 & Parkers Island Road	Unsignalized	C/18.1	A/6.8
SC 41 & Canyon Lane	Unsignalized	B/11.6	A/8.2
SC 41 & Rivertowne Parkway/Dunes West Blvd	Signalized	A/8.2	C/16.5
SC 41 & Planters Pointe Blvd/Wood Park Drive	Signalized	C/12.1	C/27.0
SC 41 & Harpers Ferry Road***	Unsignalized	B/11.2	B/10.4
SC 41 & Clements Ferry Road	Signalized	A/9.8	B/11.1
SC 41 & Reflectance Road/Halfway Creek Road	Unsignalized	C/30.1	D/50.9
Clements Ferry Road & Reflectance Road	Unsignalized	F/63.8	D/34.2
Clements Ferry Road & Cainhoy Road	Signalized	F/147.3	D/30.5

**Delay exceeds 300 seconds.*
***Unsignalized intersection LOS/Delay are representative of the stop-controlled approach only.*
****Harpers Ferry Way was unsignalized when this study was initiated.*

(2) Travel Time

The dynamic characteristics of the VISSIM microsimulation model produce measures of effectiveness (MOE) not available from traditional HCM methods. One of these that it particularly useful in demonstrating both the effects of congestion and the project need is travel time. Travel time was measured in the AM and PM peak hours as described in the data collection section of this report. The SC 41 southbound travel time segment begins just north of Harpers Ferry Way and ends just north of Gregorie Ferry Road. The SC 41 northbound travel time segment begins just north of Gregorie Ferry Road and ends just north of Harpers Ferry Way. These travel time segments, used for all US 17 microsimulation analysis, are illustrated in **Figure 8**.

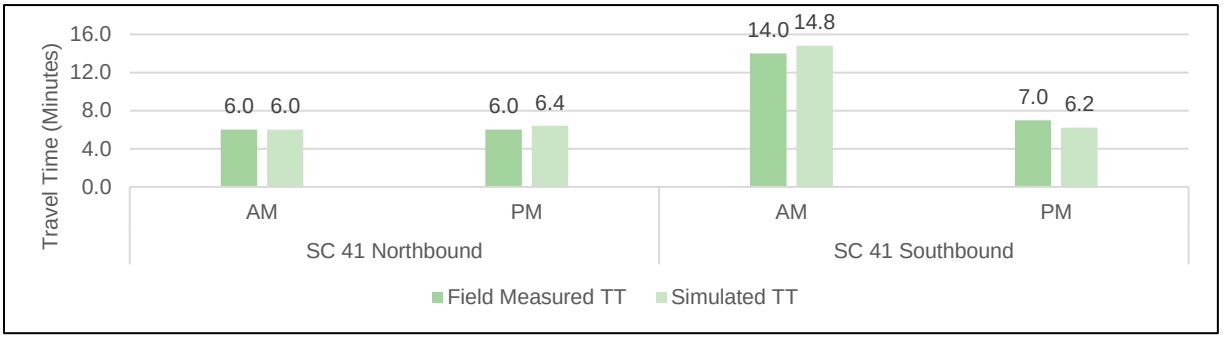
Figure 8: SC 41 Travel Time Segments Map



The VISSIM model calibration process involves adjustments to volumes, driver behavior and other model inputs to reflect these travel times. **Figure 9** illustrates the comparison between the field measured travel times and those in the calibrated model in the Base Year.

In the AM peak hour, travel times in the southbound direction of SC 41 are much higher with significant congestion building throughout the peak period. Field observations confirmed this condition. Congestion on SC 41 southbound extends from the US 17 intersection to Rivertowne Parkway/Dunes West Boulevard.

Figure 9: Calibrated Base Year AM and PM Peak Hour Travel Time Comparison



2.3 Travel Demand Alternatives Screening

2.3.1 Traffic Growth Analysis

Various segments along SC 41 and the major cross-streets (Bessemer Road, Dunes West Boulevard, and Park West Boulevard) were analyzed to compare the volumes among the three different sources (SCDOT, Stantec, CHATS). The segments are identified by a CHATS link identification. The CHATS links were compared to the nearest SCDOT count station and Stantec count location. **Table 7** shows the corridor analysis segments.

Table 7: Corridor Analysis Segments

Facility	CHATS Link ID	SCDOT Station	Stantec Location	Segment Description
SC 41	4232	193	1	US 17 to Joe Rouse Road
	4620	198	2	Joe Rouse Road to Dunes West Boulevard
	4260	198	3	Dunes West Boulevard to Wando River
Bessemer Rd	2620	-	-	SC 41 to Park West Boulevard (E-W)
Park West Blvd	3477	-	-	Bessemer Road to Park West Boulevard (N-S)
Dunes West Boulevard	3503	-	-	Park West Boulevard to SC 41

The Base Year of the CHATS model is 2015 with a horizon year of 2040. A comparison of the 2015 Average Annual Daily Traffic (AADT) from the model to 2015 SCDOT and 2015 Stantec count stations reveals some significant differences. The magnitude of these differences varies, as shown in **Table 8**.

Table 8: Comparison of 2015 AADT Data

Facility	Segment	CHATS 2015	SCDOT 2015	Difference from CHATS	Counts 2015	Difference from CHATS
SC 41	US 17 to Joe Rouse Rd	21,400	22,400	4.53%	26,800	24.83%
	Joe Rouse Rd to Dunes West Blvd	15,400	13,100	-17.80%	17,800	15.74%
	Dunes West Blvd to Wando River	13,100	13,100	0.26%	14,500	11.17%
Bessemer Rd	SC 41 to Park West Blvd (E-W)	4,300	-	-	-	-
Park West Blvd	Bessemer Rd to Park West Blvd (N-S)	4,200	-	-	-	-
Dunes West Blvd	Park West Blvd to SC 41	7,900	-	-	-	-

The magnitude of differences in Base Year AADTs indicates the need for certain assumptions to be made about the CHATS forecast for the horizon year. Stantec has made the following basic assumptions:

- SCDOT traffic counts are collected and processed in accordance with the "Traffic Monitoring Guide" published by the Federal Highway Administration (FHWA). The resulting AADT is accurate (to the relevant standard) in the vicinity of the count station.
- The CHATS model is very complex, and its calibration based on Base Year traffic volumes may result in inaccuracies for limited segments of certain roadways.
- Horizon year AADTs in the CHATS model are produced by adding new trips generated as a result of anticipated land use, capacity limitations and changes in the road network that influence travel demand in the project area.

Stantec obtained 2017 counts for comparison. **Table 9** compares the 2015 and 2017 Stantec counts.

Table 9: Comparison of 2015 and 2017 Count Data

Facility	Segment	2015 Counts	2017 Counts	Growth Rate
SC 41	US 17 to Joe Rouse Rd	26,800	26,700	-0.10%
	Joe Rouse Rd to Dunes West Blvd	17,800	18,800	2.72%
	Dunes West Blvd to Wando River	14,500	15,700	4.09%

** growth is average annual linear rate.*

To capture the traffic growth generated by future development, the new trips (difference between 2015 and 2040 AADT in the CHATS model) were added to the counts taken in 2015. This is referred to as the adjusted 2040 CHATS AADT (2040 AADT***adj***), determined as follows:

2040 AADT***adj*** = 2015 COUNT AADT + (2040 CHATS AADT – 2015 CHATS AADT)

The CHATS 2040 AADT***adj*** for each roadway segment is shown in **Table 10**.

Table 10: Adjusted CHATS 2040 AADT

Facility	Segment	CHATS		COUNTS	CHATS (adjusted)	
		2015	2040	2015	2040	Growth*
SC 41	US 17 to Joe Rouse Rd	21,400	35,000	26,752	40,300	2.02%
	Joe Rouse Rd to Dunes West Blvd	15,400	26,900	17,795	29,400	2.60%
	Dunes West Blvd to Wando River	13,100	29,400	14,525	30,900	4.51%
Bessemer Rd	SC 41 to Park West Blvd (E-W)	4,200	6,500	-	-	-
Park West Blvd	Bessemer Rd to Park West Blvd (N-S)	4,200	12,000	-	-	-
Dunes West Blvd	Park West Blvd to SC 41	7,900	17,800	-	-	-

** growth is average annual linear rate.*

2.3.2 Range of Alternative Alignments

Alternative development and screening were completed through further modifications to the CHATS model. The model distributes trips in part according to the capacity of the links (roads) within the network. By adding lanes (capacity) to a link, more traffic may be drawn to that link. Similarly, if a new link (roadway on new alignment) is placed in the model, connecting two existing links, some of the existing or forecasted traffic on those adjoining links may be drawn to the new connecting link (road). A wide variety of alternatives were modeled in this manner, by either adding capacity directly to SC 41, or by adding connecting or parallel roadways in an attempt to distribute the traffic demand, relieve congestion and reduce travel times.

2.0 – Project Section I: SC 41 Widening

Twelve different build alternatives and a no-build alternative were analyzed in the CHATS Travel Demand Model. Each of the alternatives is described below:

No Build (See Figure 10): Assumes no change to SC 41 from the existing 2017 conditions.

Build Alternative 1 (See Figure 11):

- Widen SC 41 to four lanes, from US 17 to Wando River.

Build Alternative 2 (See Figure 12):

- Widen SC 41 from US 17 to Joe Rouse Road to four lanes.
- Widen SC 41 to three lanes (2 general purpose lanes + 1 two-way left turn lane) from Joe Rouse Road to Dunes West Boulevard.
- Widen SC 41 to four lanes north of Dunes West Boulevard to the Wando River bridge.

Build Alternative 2A:

- Widen SC 41 from US 17 to Joe Rouse Road to four lanes.
- Widen SC 41 to three lanes (2 general purpose lanes + 1 two-way left turn lane) from Joe Rouse Road to Dunes West Boulevard.
- Widen Joe Rouse Road, Bessemer Road, and Dunes West Boulevard to three lanes (2 general purpose lanes + 1 two-way left turn lane).
- Widen SC 41 to four lanes north of Dunes West Boulevard to the Wando River bridge.

Build Alternative 3 (See Figure 13):

- Widen SC 41 from US 17 to Joe Rouse Road to four lanes.
- Convert Joe Rouse Road, Bessemer Road, and Dunes West Boulevard to two lanes one-way northbound from the intersection of SC 41 and Joe Rouse Road to the intersection of SC 41 and Dunes West Boulevard.
- Convert SC 41 to two lanes one-way southbound from Joe Rouse Road to Dunes West Boulevard.
- Widen SC 41 to four lanes north of Dunes West Boulevard to the Wando River bridge.

Build Alternative 4 (See Figure 14):

- Maintain two lanes on SC 41.
- New two-lane (two-way) roadway on new parallel alignment extending diagonally from the intersection of US 17 and Winnowing Way, where it begins to parallel to SC 41, tying back into Dunes West Boulevard.
- Widen SC 41 from Dunes West Boulevard to the Wando River bridge.

Build Alternative 5 (See Figure 15):

- Maintain two lanes on SC 41.
- New two-lane (two-way) roadway on new parallel alignment extending diagonally from the intersection of US 17 and Winnowing Way, where it begins to parallel to SC 41, tying back into Dunes West Boulevard.
- New two-lane (two-way) extending from Dunes West Boulevard until connecting to Harpers Ferry Way (SC 41 Parallel).
- Widen SC 41 from Harpers Ferry Way to the Wando River bridge.

Build Alternative 5A:

- Maintain two lanes on SC 41.
- New four-lane (two-way) roadway on new parallel alignment extending diagonally from the intersection of US 17 and Winnowing Way, where it begins to parallel to SC 41, tying back into Dunes West Boulevard.

- New two-lane (two-way) extending from Dunes West Boulevard until connecting to Harpers Ferry Way (SC 41 Parallel).
- Widen SC 41 from Harpers Ferry Way to the Wando River bridge.

Build Alternative 6 (See Figure 16):

- Maintain two lanes on SC 41.
- New four-lane roadway on new parallel alignment extending diagonally from the intersection of US 17 and Winnowing Way, then it begins to parallel to SC 41 tying back into Dunes West Boulevard (SC 41 Parallel).
- Widen SC 41 from Dunes West Boulevard to the Wando River bridge.

Build Alternative 7 (See Figure 17):

- Widen SC 41 to four lanes from US 17 to Joe Rouse Road.
- Widen Joe Rouse Road, Bessemer Road, Park West Boulevard and Dunes West Boulevard to four lanes from SC 41 to SC 41.
- Widen SC 41 to four lanes from Dunes West Boulevard to the Wando River bridge.
- Widen SC 41 to three lanes (2 general purpose lanes/1 two-way left turn lane) from Joe Rouse Road to Dunes West Boulevard.

Build Alternative 8 (See Figure 18):

- Widen SC 41 to six lanes from US 17 to Joe Rouse Road.
- Widen Joe Rouse Road, Bessemer Road, Park West Boulevard and Dunes West Boulevard to six lanes from SC 41 to SC 41.
- Widen SC 41 to six lanes from Dunes West Boulevard to the Wando River bridge.
- Widen SC 41 to three lanes (2 general purpose/1 two-way left turn lane) from Joe Rouse Road to Dunes West Boulevard.

Build Alternative 9 (See Figure 19):

- Widen SC 41 to six lanes from US 17 to Joe Rouse Road.
- Widen Joe Rouse Road, Bessemer, Park West Boulevard and Dunes West Boulevard to four lanes from SC 41 to SC 41.
- Widen SC 41 to four lanes from Dunes West Boulevard to the Wando River bridge.
- Widen SC 41 to three lanes (2 general purpose/1 two-way left turn lane) from Joe Rouse Road to Dunes West Boulevard.

Build Alternative 10 (See Figure 20):

- Widen SC 41 to six lanes from US 17 to Wando River.

Build Alternative 11 (See Figure 21):

- Widen SC 41 from US 17 to Joe Rouse to six lanes.
- Widen SC 41 to four lanes from Joe Rouse Road to the Wando River bridge.

Build Alternative 12 (See Figure 22):

- Widen SC 41 from US 17 to Dunes West Boulevard to six lanes.
- Widen SC 41 to four lanes from Dunes West Boulevard to the Wando River bridge.

2.3.3 Planning Level Capacity Methodology

Florida Department of Transportation (FDOT)'s Generalized Annual Average Daily Volumes for Florida's Urbanized Areas table obtained from the Florida Department of Transportation's 2013 Quality/Level of Service Handbook was utilized to assign a planning Level of Service (LOS) to each of the projected

alternative volumes. Although SCDOT has published a planning LOS table for use in travel demand modeling, the FDOT publication is much more comprehensive, as it provides separate values for high speed and low speed facilities, and adjustment factors for certain roadway characteristics such as exclusive turn lanes at intersections.

Based on the functional road classification and number of lanes, along with other actual (existing) or assumed (build alternates) roadway characteristics, the planning LOS for each road segment was determined. LOS A operations typically represent ideal, free-flow conditions where vehicles experience little to no delays, and LOS F operations typically represent poor, forced-flow (bumper-to-bumper) conditions with high vehicular delays, and are generally considered undesirable. **Table 11** shows the FDOT's volume thresholds for each Level of Service (LOS) for Uninterrupted Flow Highways and for Interrupted Flow Arterials-State Signalized Arterials-Class 1 (40 mph or higher posted speed limit).

Table 11: Urbanized Area Uninterrupted Flow Highways & Signalized Arterials

Level of Service									
# of Lanes	Uninterrupted Flow Highways				State Signalized Arterials - Class I				
	B	C	D	E	# Lanes	B	C	D	E
2	8,600	17,000	24,200	33,300	**2**	*	16,800	17,700	**
3[a]	9,030	17,850	25,410	34,965	**3[c]**	*	17,640	18,585	**
4[b]	36,700	51,800	65,600	72,600	**4[d]**	*	37,900	39,800	**
6[b]	55,000	77,700	98,300	108,800	**6[d]**	*	58,400	59,900	**
					One-Way Adjustments* **				
					2	*	10,080	10,620	**

[a] The 3 lane scenario was analyzed a 2 lane divided with exclusive left turn lanes. This adjustment was +5% of the undivided volumes.

[b] The 4 and 6 lane segments were assumed to have divided medians.

[c] The 3 lane scenario was analyzed a 2 lane divided with exclusive left turn lanes. This adjustment was +5% of the undivided volumes.

[d] The 4 and 6 lane scenarios were assumed to have divided medians.

*Cannot be achieved using table input value defaults.

**For the automobile mode, volumes greater than Level of Service D become F because intersection capacities have been reached.

***One-Way Facility Adjustment was calculated by multiplying the corresponding two-directional volumes by 0.6

Uninterrupted flow facilities are roadways that have no fixed causes of periodic delay or interruption to the traffic stream, such as signals or stop signs. Interrupted flow facilities are roadways that have fixed causes of periodic delay or interruption to the traffic stream, such as signals or stop signs, with average spacing less than or equal to 2.0 miles. LOS A is not considered a responsible target for planning purposes, so it is not shown in these tables. Anything exceeding LOS E volumes is considered LOS F (there is no upper limit for LOS F).

Table 12 lists the AADT for the respective network segments for the fourteen (14) alternatives as determined by the CHATS travel demand model. The screening level capacity expressed as Level of Service (LOS) for the study segments as uninterrupted or interrupted facilities is listed in **Table 13**.

Table 12: 2040 CHATS Model AADT for Range of Alternatives

Facility	Segment	2015 AADT	2040 AADT (# of Lanes)														
			No Build	Alt 1	Alt 2	Alt 2A	Alt 3	Alt 4	Alt 5	Alt 5A	Alt 6	Alt 7	Alt 8	Alt 9	Alt 10	Alt 11	Alt 12
SC 41																	
	US 17 to Joe Rouse Rd	21,400	32,300	49,400	42,600	42,800	39,900	27,100	26,200	22,400	24,100	43,800	45,600	44,900	51,300	50,400	51,000
			(2)	(4)	(4)	(4)	(4)	(2)	(2)	(2)	(2)	(4)	(6)	(6)	(6)	(6)	(6)
	Joe Rouse Rd to Dunes West Blvd	15,400	26,800	42,700	35,000	35,500	29,500*	27,000	26,300	22,400	23,800	30,000	29,900	30,300	45,400	43,600	45,200
			(2)	(4)	(3)	(3)	(2SB)	(2)	(2)	(2)	(2)	(3)	(3)	(3)	(6)	(4)	(6)
	Dunes West Blvd to Wando River[1]	13,100	26,200	33,600	29,700	29,500	25,900	29,700	14,600	9,700	32,500	32,300	33,300	32,500	34,700	33,900	34,100
			(2)	(4)	(4)	(4)	(4)	(4)	(2)	(2)	(4)	(4)	(6)	(4)	(6)	(4)	(4)
Bessemer Rd																	
	SC 41 to Park West Blvd (E-	4,200	6,400	7,600	8,000	8,100	22,300*	600	800	700	300	14,500	16,200	15,300	6,800	7,700	6,800
			(2)	(2)	(2)	(3)	(2NB)	(2)	(2)	(2)	(2)	(4)	(6)	(4)	(2)	(2)	(2)
Park West Blvd																	
	Bessemer Rd to Park West Blvd (N-S)	4,100	16,500	5,900	7,200	6,600	8,300	9,000	9,000	4,600	4,300	10,900	11,800	11,200	5,800	5,800	5,800
			(2)	(2)	(2)	(3)	2	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Dunes West Blvd																	
	Park West Blvd To SC 41	7,800	14,500	12,600	14,800	14,000	28,500*	21,300	22,000	31,700	29,000	23,800	25,000	24,000	11,600	12,500	11,600
			(2)	(2)	(2)	(3)	(2NB)	(2)	(2)	(4)	(4)	(4)	(6)	(4)	(2)	(2)	(2)
SC 41 Parallel																	
	North of US 17	-						30,500	31,000	31,000	41,300						
								(2)	(2)	(4)	(4)						
SC 41 Parallel																	
	North of Dunes West Blvd	-							14,900	24,200							
									(2)	(4)							
SC 41																	
	Harpers Ferry Way to Wando River	-							14,900	24,200							
									(2)	(4)							

** These are one-way volumes.*

[1] This segment represents Dunes West Blvd to Harpers Ferry Way in Alternative 5.

**The volumes in this table do not correlate to LOS. LOS can be found in Tables 8 and 9 on the following pages.*

2.0 – Project Section I: SC 41 Widening

Table 13: FDOT Planning LOS - Multi-lane Divided Highways

Facility	Segment	Parameter	2040 AADT														
			No Build	Alt 1	Alt 2	Alt 2A	Alt 3	Alt 4	Alt 5	Alt 5A	Alt 6	Alt 7	Alt 8	Alt 9	Alt 10	Alt 11	Alt 12
SC 41	US 17 to Joe Rouse Rd	LOS_U	E	C	C	C	C	E	E	D	D	C	C	C	C	C	C
		LOS_I	F	F	F	F	F	F	F	F	F	F	C	C	C	C	C
		% Over	183%	124%	107%	108%	100%	153%	148%	126%	136%	110%					
		Lanes	(2)	(4)	(4)	(4)	(4)	(2)	(2)	(2)	(2)	(4)	(6)	(6)	(6)	(6)	(6)
	Joe Rouse Rd to Dunes West Blvd	LOS_U	E	C	F	F	E	E	E	D	D	E	E	E	B	C	B
		LOS_I	F	F	F	F	F	F	F	F	F	F	F	F	C	F	C
		% Over	151%	107%	188%	191%	167%	152%	149%	126%	134%	161%	161%	163%		110%	
		Lanes	(2)	(4)	(3)	(3)	(2SB)	(2)	(2)	(2)	(2)	(3)	(3)	(3)	(6)	(4)	(6)
	Dunes West Blvd to Wando River1	LOS_U	E	B	B	B	B	B	C	C	B	B	B	B	B	B	B
		LOS_I	F	C	C	C	C	C	C	C	C	C	C	C	C	C	C
		% Over	148%														
		Lanes	(2)	(4)	(4)	(4)	(4)	(4)	(2)	(2)	(4)	(4)	(6)	(4)	(6)	(4)	(4)
Bessemer Rd	SC 41 to Park West Blvd (E-W)	LOS_U	B	B	B	B	D	B	B	B	B	B	B	B	B	B	B
		LOS_I	C	C	C	C	F	C	C	C	C	C	C	C	C	C	C
		% Over					126%										
		Lanes	(2)	(2)	(2)	(3)	(2NB)	(2)	(2)	(2)	(2)	(4)	(6)	(4)	(2)	(2)	(2)
Park West Blvd	Bessemer Rd to Park West Blvd (N-S)	LOS_U	C	B	B	B	B	C	C	B	B	C	C	C	B	B	B
		LOS_I	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
		% Over															
		Lanes	(2)	(2)	(2)	(3)	2	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Dunes West Blvd	Park West Blvd to SC 41	LOS_U	C	C	C	C	E	D	D	B	B	B	B	B	C	C	C
		LOS_I	C	C	C	C	F	F	F	C	C	C	C	C	C	C	C
		% Over					161%	120%	124%								
		Lanes	(2)	(2)	(2)	(3)	(2NB)	(2)	(2)	(4)	(4)	(4)	(6)	(4)	(2)	(2)	(2)
SC 41 Parallel	North of US 17	LOS_U						C	C	B	B						
		LOS_I						C	C	C	C						
		% Over															
		Lanes						(2)	(2)	(4)	(4)						
SC 41 Parallel	North of Dunes West Blvd	LOS_U							C	B							
		LOS_I							C	C							
		% Over															
		Lanes							(2)	(4)							
SC 41	Harpers Ferry Way to Wando River	LOS_U							B	B							
		LOS_I							C	C							
		% Over															
		Lanes							4	4							

Table Notes

LOS_U = Level of Services for Uninterrupted Conditions

LOS_I = Level of Services for Interrupted Flow Conditions

C = LOS indicated a C or better

Volumes greater than LOS D become F because intersection capacities have been reached.

LOS

C

D

E

F

Figure 10: 2040 No-Build LOS

Figure 11: 2040 Alternative 1 LOS

Figure 12: 2040 Alternative 2 LOS

Figure 13: 2040 Alternative 3 LOS

Figure 14: 2040 Alternative 4 LOS

Figure 15: 2040 Alternative 5 LOS

Figure 16: 2040 Alternative 6 LOS

Figure 17: 2040 Alternative 7 LOS

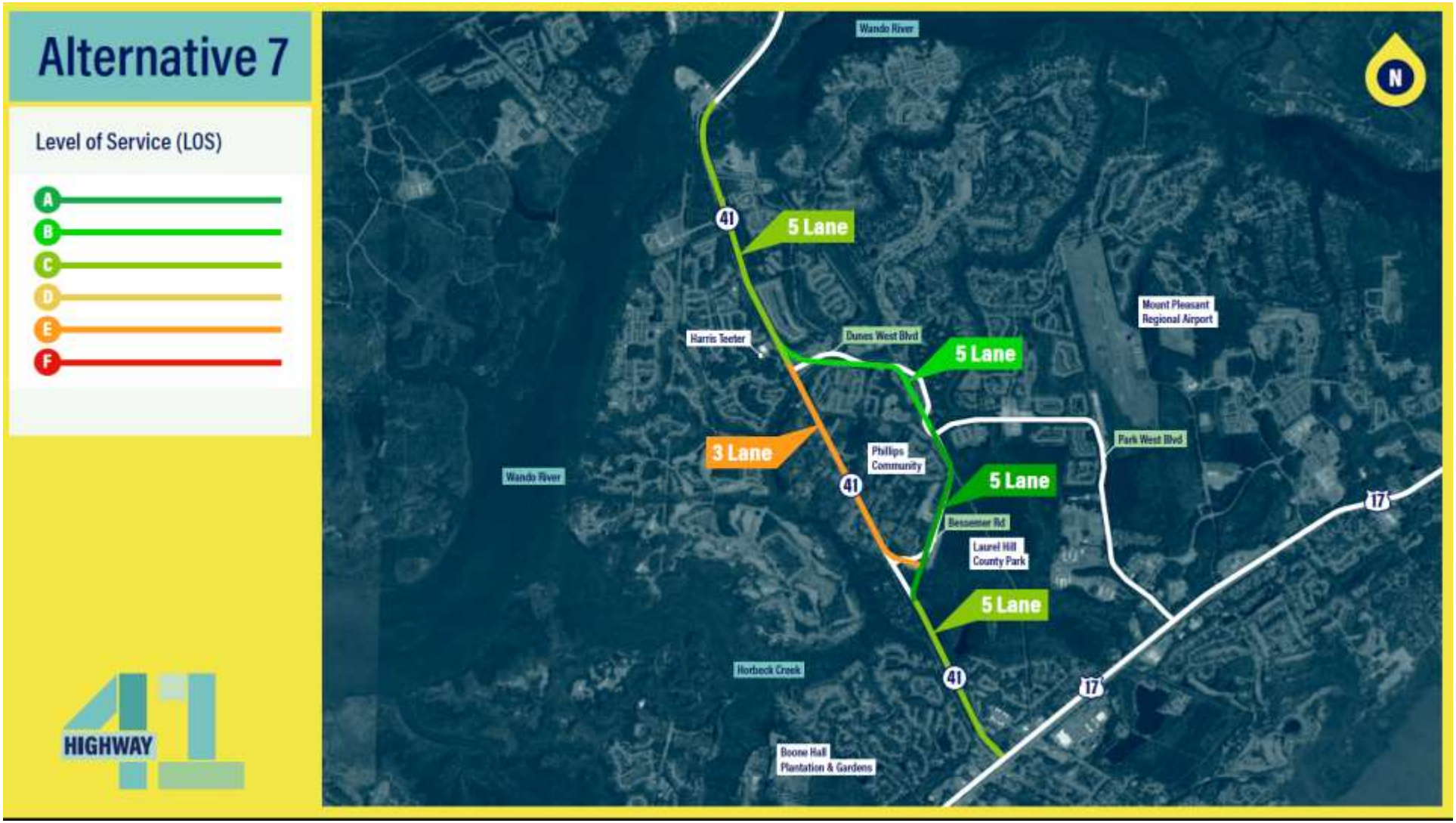


Figure 18: 2040 Alternative 8 LOS

Figure 19: 2040 Alternative 9 LOS

Figure 20: 2040 Alternative 10 LOS

Figure 21: 2040 Alternative 11 LOS

Figure 22: 2040 Alternative 12 LOS

Following the initial planning level screening analysis, the alternatives were refined and more detailed analysis was performed for Alternatives 1, 2, and 7. The refinement included an update of growth forecasts in the project area to correspond to changes in development plans for Cainhoy Plantation.

Corridor LOS analysis was conducted for these selected alternatives using the Transportation Research Board's Highway Capacity Manual 2010 (HCM 2010) methodologies of the HCS 7 and HCS 2010 software. LOS grades range from A to F, which correspond to the traffic density in passenger cars per mile per lane (pc/mi/ln) for multilane highways, and the percentage of free-flow speed (PFFS%) or the percent-time-spent following (PTSF%) for two-lane highways. depending on classification.

Traffic flow conditions corresponding to LOS A to F by HCM methods are the same as previously described for the planning level screening. **Table 14** and **Table 14** summarize the HCM 2010 thresholds associated with each LOS grade for two-lane and multilane highways.

Table 14: HCM 2010 Automobile LOS for Two-Lane Highways (Exhibit 15-3 HCM 2010)

	Class I Highways	Class III Highways
LOS	PTSF (%)	PFFS (%)
A	≤ 35	> 91.7
B	> 35-50	> 83.3-91.7
C	> 50-65	> 75.0-83.3
D	> 65-80	> 66.7-75.0
E	> 80	≤ 66.7

Table 15: HCM 2010 Automobile LOS for Multilane Highway Segments (Exhibit 14-4 HCM 2010)

Multilane Highways	
LOS	Density (pc/mi/ln)
A	> 0-11
B	> 11-18
C	> 18-26
D	> 26-35
E	> 35-45
F	> 45

The results of the HCM analysis for Alternatives 1, 2, and 7 are shown in **Table 16**. For each alternative, the results are presented with the same level of development (growth in travel demand) as the planning level screening analysis.

The results of this preliminary analysis indicate that Alternatives 1 and 7 merit further analysis.

Table 16: SC 41 HCS Peak Hour Corridor Analysis Results

Roadway	Segment		Levels of Service/Density (pc/mi/ln) or PTSF (%) or PFFS (%)*							
			No Build		Alt 1		Alt 2		Alt 7	
			NB	SB	NB	SB	NB	SB	NB	SB
SC 41	US 17 to Joe Rouse	LOS	F	F	D / 31.5	D / 31.5	C / 25.8	C / 25.8	C / 22.9	C / 22.9
		Lanes	2		4		4		4	
	Joe Rouse to Dunes West ***	LOS	E / 93.0%	E / 93.0%	D / 26.5	D / 27.6	F	F	E / 92.3%	E / 92.3%
		Lanes	2		4		3		3	
	Dunes West to Wando River	LOS	E / 94.3%	E / 94.3%	C / 22.5	C / 22.5	C / 18.1	C / 18.1	C / 19.6	C / 19.6
		Lanes	2		4		4		4	
			EB	WB	EB	WB	EB	WB	EB	WB
Bessemer ***	SC 41 to Park West (E-W)	LOS	B / 85.3%	B / 85.5%	C / 83.3%	B / 83.5%	C / 82.8%	C / 82.9%	A / 8.8	A / 8.8
		Lanes	2		2		2		4	
Dunes West ***	Park West to SC 41 (E-W)	LOS	E / 65.8%	E / 65.8%	D / 74.8%	D / 74.8%	D / 71.6%	D / 71.6%	B / 14.2	B / 14.1
		Lanes	2		2		2		4	

**Level of Service based on HCS 7 for Multi-Lane Highways and HCS 2010 for Two-Lane Highways. Volumes were determined by assuming 10% of the AADT and a 50/50 directional split.*

*** This segment of SC 41 was analyzed as a Class I Highway. The 2 and 3 lane roadway LOS is determined based off the percent time spent following (PTSF %). However, if the volume exceeds capacity for this segment then that metric ultimately determines the LOS.*

****The Class III 2 lane roadway LOS is determined based off the percent free-flow speed (PFFS %). These segments were analyzed as Class III Highways.*

A B C D E F

LOS

2.4 Design Year (2045) Traffic Projections

2.4.1 Traffic Volume Projections

The AM and PM peak hourly volumes for the SC 41 Widening were determined by the following process:

- The linear annual growth rate determined as described in Section 2.3.1 for each segment of SC 41 and connecting side street, was applied to the peak hour turning movement counts at the corresponding intersections.

- Balancing between intersections was performed using judgment based upon the following factors:

- Distance and number of access points that might generate or attract trips between the intersections.
- Alternate paths that may allow for high volume turning movements to be allocated between successive intersections given current and future land use. This was particularly important where a low volume of turns existed in the Base Year but were development forecasts would generate or attract more trips in the future.

This exercise was performed for the No-Build, Build Alternative 1 and Build Alternative 7A based upon travel demand modeling that was completed specifically for these alternatives, and are illustrated by the following figures.

Figure 23: Design Year (2045) AM and PM No-Build Peak Hour Volumes

Figure 24: Design Year (2045) AM and PM Build Alternative 1Peak Hour Volumes

Figure 25: Design Year (2045) AM and PM Build Alternative 7A Peak Hour Volumes

Figure 26: Opening Year (2025) AM and PM Build Alternative 1 Peak Hour Volumes

2.5 Alternatives Operations Analysis

2.5.1 Introduction of the Alternatives

Design Year (2045) No Build: assumes no change to SC 41 from the Base Year conditions.

Design Year (2045) Build Alternative 1: Widen SC 41 to four lanes, from US 17 to the Wando River.

Design Year (2045) Design Alternative 7A:

- Widen SC 41 to four lanes from US 17 to Joe Rouse Road.
- Widen Joe Rouse Road, Bessemer Road, Park West Boulevard and Dunes West Boulevard to four lanes from SC 41 to SC 41.
- Widen SC 41 to four lanes from Dunes West Boulevard to the Wando River bridge.
- Widen SC 41 to three lanes (2 general purpose lanes/1 two-way left turn lane) from Joe Rouse Road to Dunes West Boulevard.

Figure 23: Opening Year (2025) Build Alternative 1 - AM and PM Peak Hour for SC 41

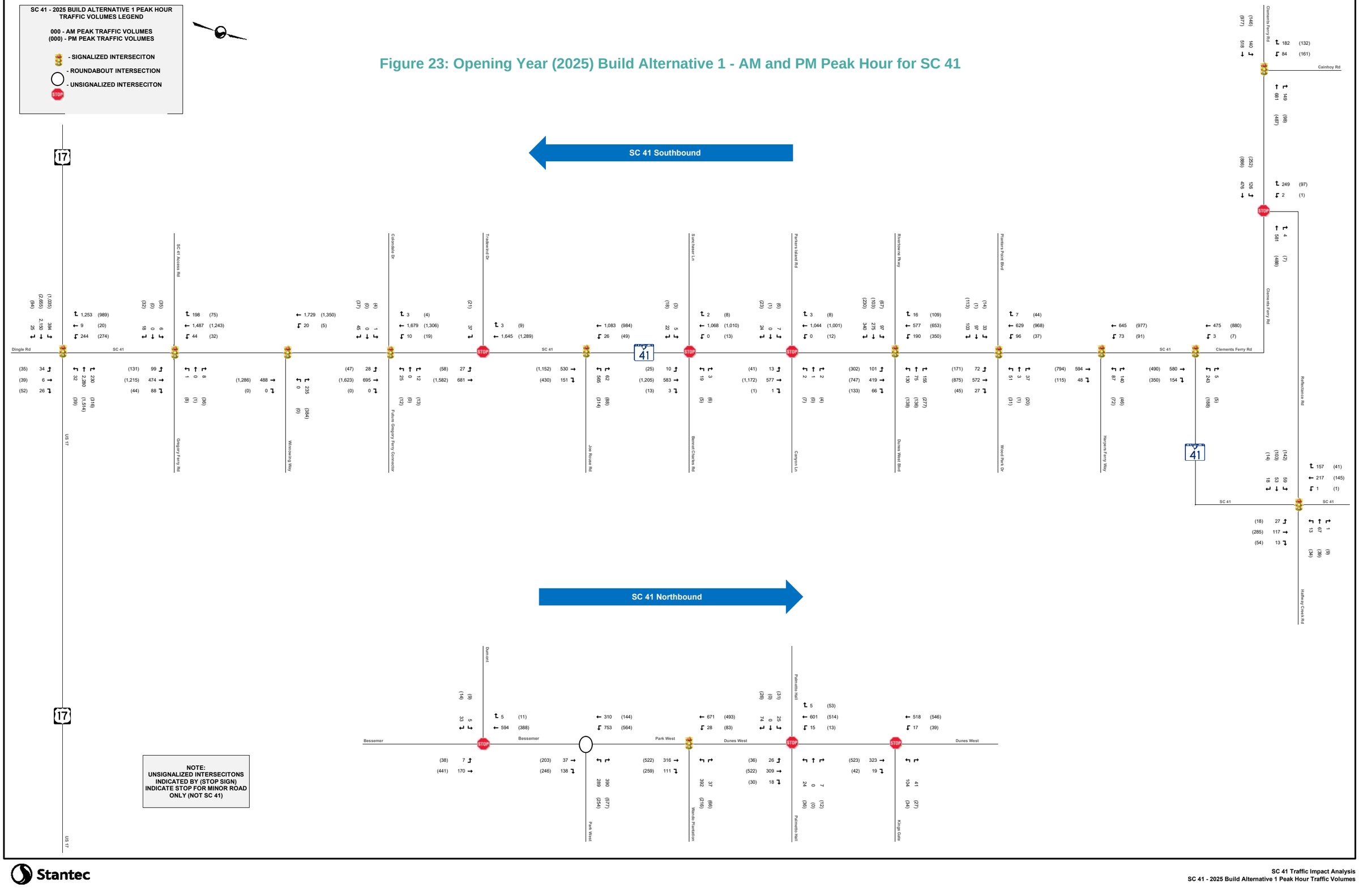
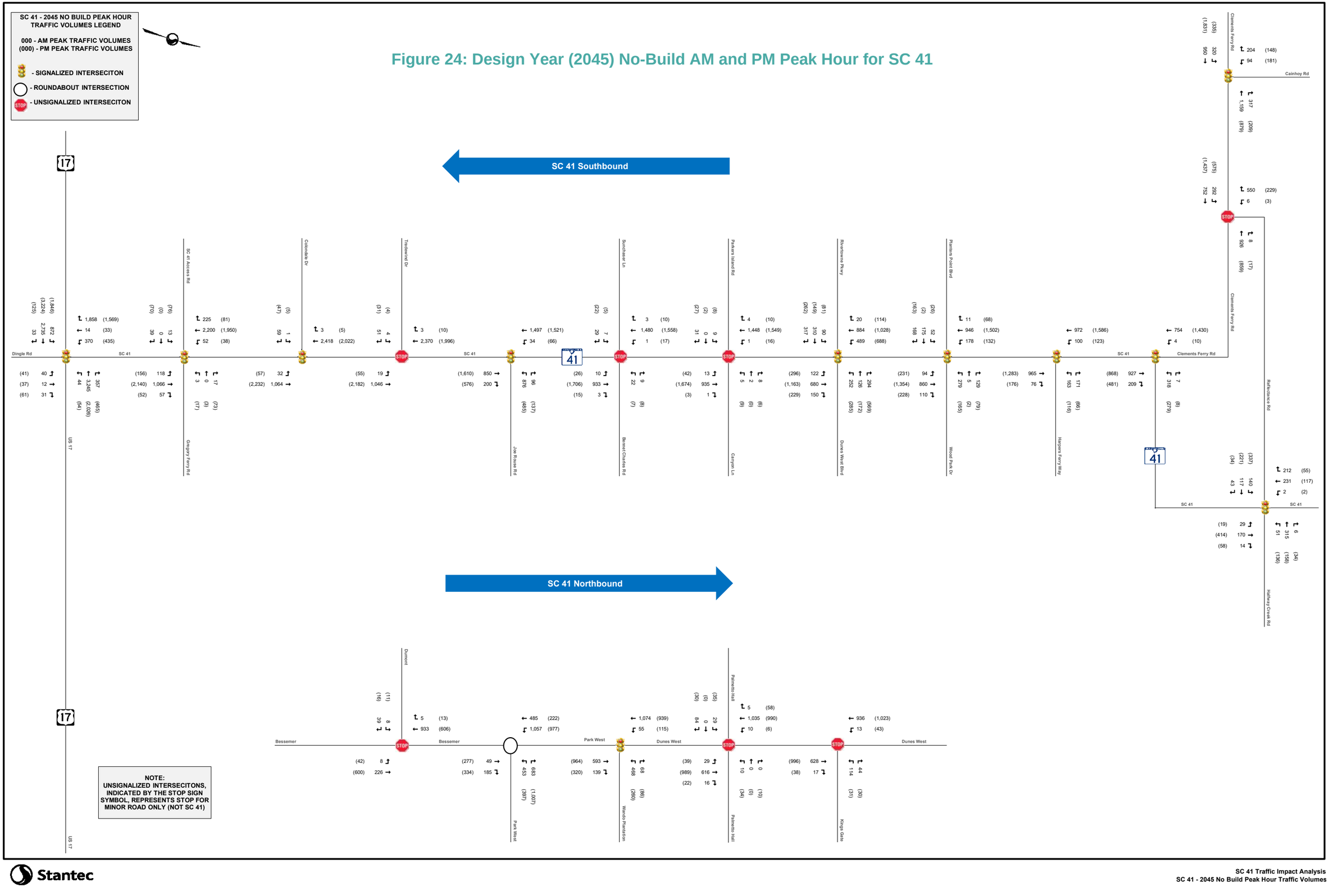


Figure 24: Design Year (2045) No-Build AM and PM Peak Hour for SC 41

SC 41 - 2045 NO BUILD PEAK HOUR TRAFFIC VOLUMES LEGEND

000 - AM PEAK TRAFFIC VOLUMES
(000) - PM PEAK TRAFFIC VOLUMES

- SIGNALIZED INTERSECITON
- ROUNDABOUT INTERSECTION
- UNSIGNALIZED INTERSECITON

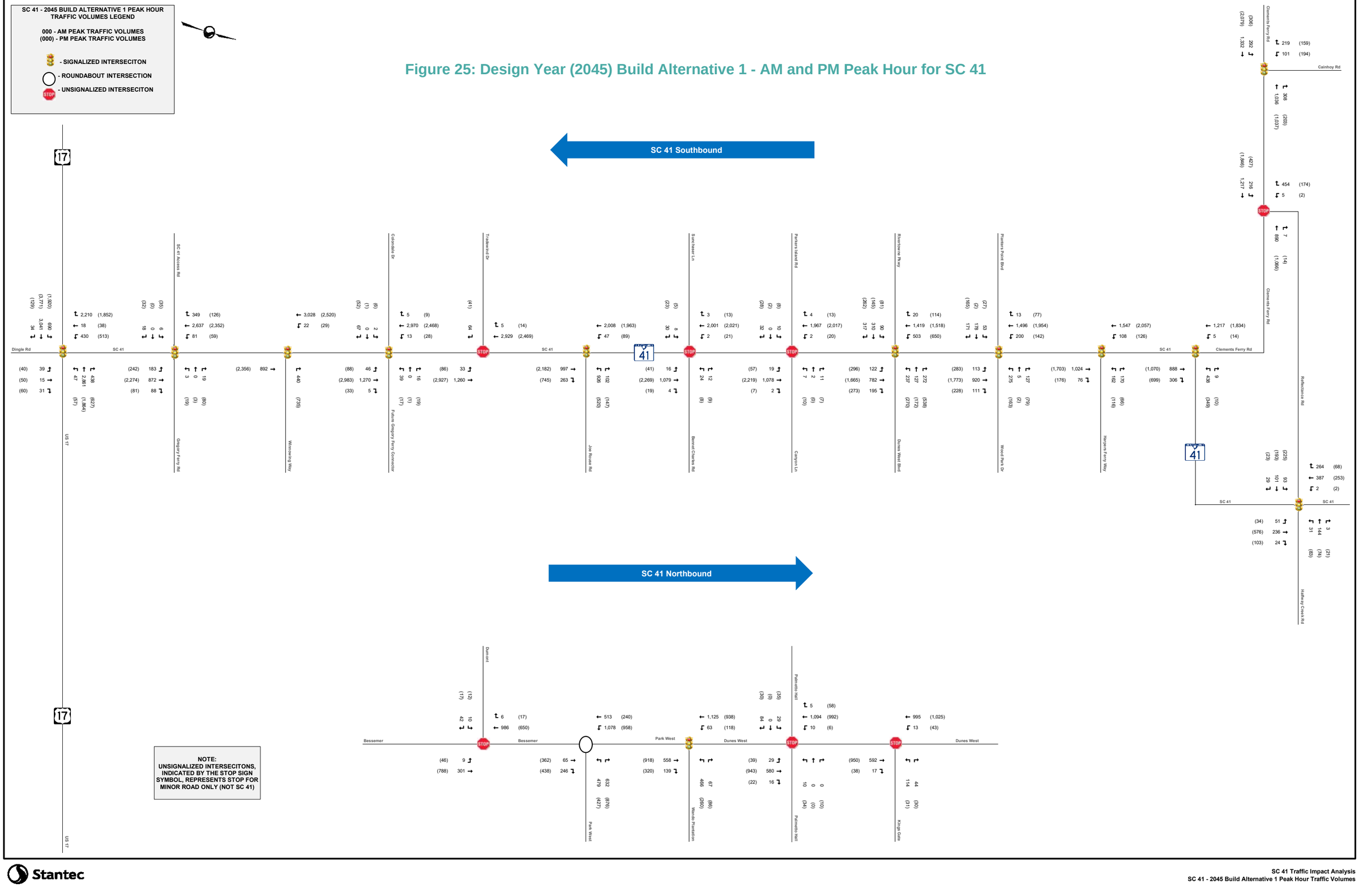


SC 41 - 2045 BUILD ALTERNATIVE 1 PEAK HOUR TRAFFIC VOLUMES LEGEND

000 - AM PEAK TRAFFIC VOLUMES
(000) - PM PEAK TRAFFIC VOLUMES

- SIGNALIZED INTERSECITON
- ROUNDABOUT INTERSECTION
- UNSIGNALIZED INTERSECITON

Figure 25: Design Year (2045) Build Alternative 1 - AM and PM Peak Hour for SC 41

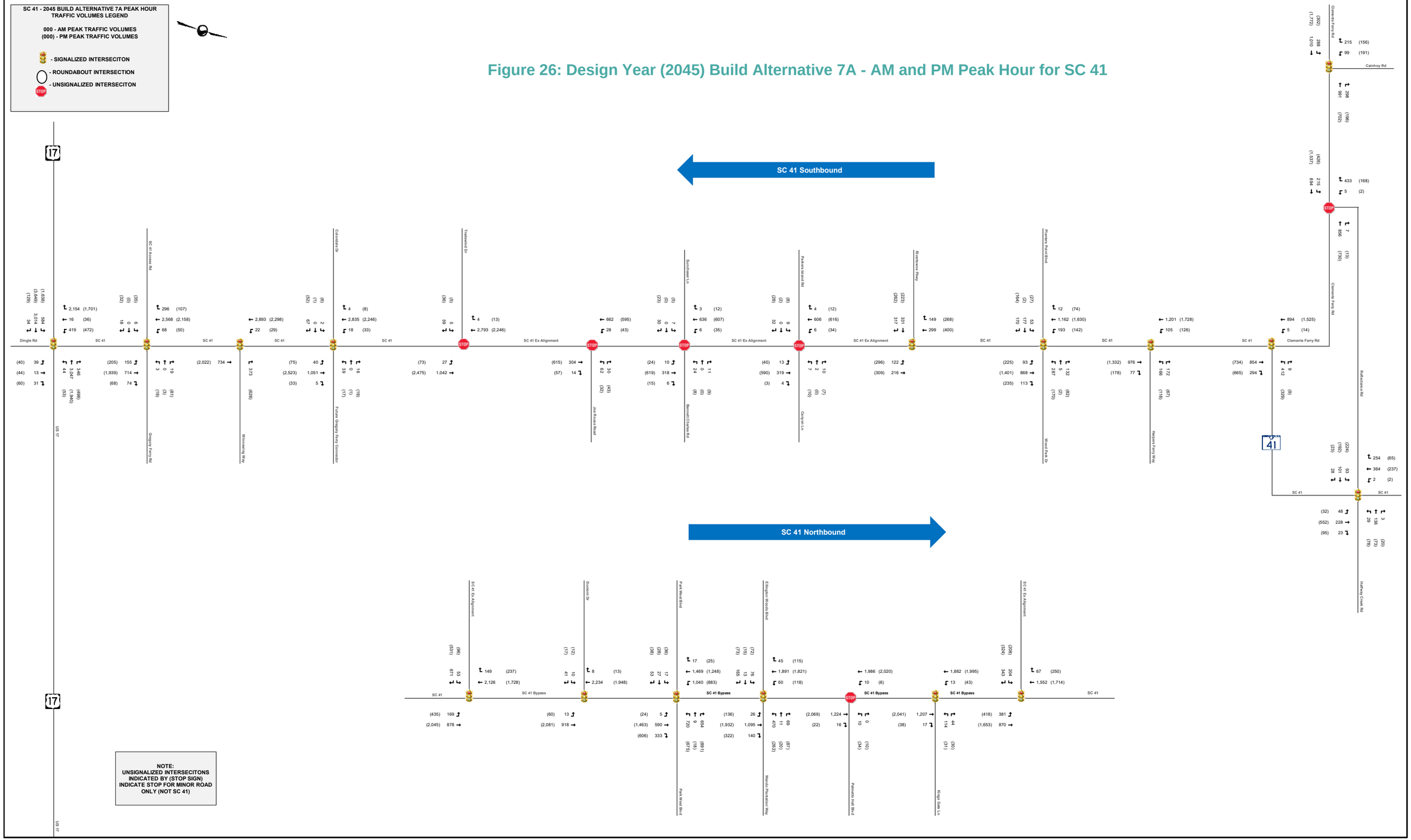


SC 41 - 2045 BUILD ALTERNATIVE 7A PEAK HOUR TRAFFIC VOLUMES LEGEND

000 - AM PEAK TRAFFIC VOLUMES
(000) - PM PEAK TRAFFIC VOLUMES

- SIGNALIZED INTERSECITON
- ROUNDABOUT INTERSECTION
- UNSIGNALIZED INTERSECITON

Figure 26: Design Year (2045) Build Alternative 7A - AM and PM Peak Hour for SC 41



NOTE:
UNSIGNALIZED INTERSECITONS INDICATED BY (STOP SIGN) INDICATE STOP FOR MINOR ROAD ONLY (NOT SC 41)

2.6 Summary of Alternatives Analysis

Table 17 provides a comparison of the 2045 No-Build, Build Alternative 1 and Build Alternative 2 level of service (LOS) and average delay per vehicle. **Figure 27** compares the travel times within the corridor among these three conditions. **Figure 28** and **Figure 29** compare the percentage of demand volume that is processed for each condition.

2.6.1 Comparison of Level of Service/Delay

(1) Design Year (2045) No Build

According to Design Year (2045) No Build Microsimulation analysis, the majority intersections within the SC 41 corridor are expected to operate at undesirable level of service in the AM and PM peak hours.

The intersections of SC 41 & US 17, SC 41 & Tradewind Drive, SC 41 & Sunchaser Lane, and SC 41 & Harpers Ferry Way are projected to experience acceptable levels of service and delay in the AM peak hour, but not in the PM peak hour. The intersection of SC 41 & Parkers Island Road is projected to experience acceptable level of service and delay in the PM peak hour, but not in the AM peak hour.

(2) Design Year (2045) Build Alternative 1

According to Design Year (2045) Build Alternative 1 microsimulation analysis, the majority intersections within the SC 41 corridor are expected to operate at acceptable levels of service in the AM and PM peak hours. The intersection of SC 41 & Tradewind Drive is projected to experience undesirable level of service and delay in the AM and PM peak hours. The intersections SC 41 & Bennett Charles Road, SC 41 & Parkers Island Road, and SC 41 & Canyon Lane are expected to operate with acceptable level of service and delay in the AM peak hour, but not in the PM peak hour.

(3) Design Year (2045) Build Alternative 7A

According to Design Year (2045) Build Alternative 7A microsimulation analysis, the majority of the intersections within the SC 41 corridor are expected to operate at acceptable levels of service in the AM and PM peak hours. The intersection of SC 41 & Tradewind Drive is projected to experience undesirable level of service and delay in the AM peak hour. The intersection SC 41 & SC 41 Access Road/Gregorie Ferry Road is projected to experience undesirable level of service and delay in the PM peak hour.

NOTE REGARDING STOP CONTROLLED INTERSECTIONS

It is important to note that the level of service for a stop-controlled intersection is based on the delay of the stopped approach only. SC 41 is free flowing at these intersections. Areas along SC 41 which are projected to increase in density through development or redevelopment have their future traffic growth assigned to these existing intersections for modeling purposes. These include the SC 41 intersections with Tradewind Drive, Bennett Charles Road, Parkers Island Road and Canyon Lane. As the land is developed or redeveloped, new intersections will be formed with SC 41 and would be controlled by a traffic signal.

Table 17: SC 41 Design Year (2045) Overall Intersection Level of Service Comparison – Microsimulation Analysis

Intersection	Intersection Control	AM			PM		
		No Build	Build Alt 1	Build Alt 7A	No Build	Build Alt 1	Build Alt 7A
SC 41 & US 17	Signalized	D/48.5	B/18.9	C/22.0	F/97.6	C/22.4	C/24.8
SC 41 & SC 41 Access Rd/Gregorie Ferry Rd	Signalized	F/60.3	A/3.5	D/25.1	F/575.0	A/6.7	E/36.0
SC 41 & Colonnade Dr	Unsignalized	F/291.6	A/4.3	A/3.7	F/376.9	A/7.5	A/8.3
SC 41 & Tradewind Dr	Unsignalized	D/29.3	F/90.0	E/35.5	F/523.1	F/85.7	D/30.4
SC 41 & 41 Bypass	Signalized	-	-	B/14.1	-	-	C/21.9
SC 41 & Joe Rouse Rd	Signalized	F/81.4	C/20.5	A/7.5	E/71.8	C/22.1	C/22.4
SC 41 & Bennett Charles Rd*	Unsignalized	F/1823.7	D/27.1	A/9.8	F/109.6	F/89.5	C/18.5
SC 41 & Parkers Island Rd*	Unsignalized	C/21.8	C/16.3	B/10.2	F/1080.6	F/52.9	C/18.1
SC 41 & Canyon Ln*	Unsignalized	F/51.2	C/20.3	A/8.9	C/23.3	F/98.4	C/16.9
SC 41 & Dunes West Blvd	Signalized	F/81.3	D/35.7	C/27.5	E/64.7	C/30.5	D/41.8
SC 41 & Planters Point Blvd/Wood Park Dr	Signalized	F/428.5	C/33.3	D/38.9	F/87.6	C/30.4	C/30.8
SC 41 & Harpers Ferry Way	Signalized	F/533.5	A/9.4	B/10.3	F/238.8	A/8.5	A/10.0
SC 41 CFI Intersection North of Dunes West Blvd	Signalized	-	B/13.6	-	-	B/15.6	-
SC 41 DDI Crossover Intersection (North of US 17)	Signalized	-	B/11.0	C/22.5	-	A/9.3	B/10.0
SC 41 & Winnowing Way	Signalized	A/6.8	-	-	C/21.6	-	-

* ***Before these unsignalized intersections experience enough volume on the stopped approach to cause a failing LOS, the property along SC 41 would have to continue to develop or redevelop. If this happens, those developed or redeveloped areas would require replacement of the stop control with signalized control.***

Figure 27: SC 41 Design Year (2045) Overall Travel Time Comparison

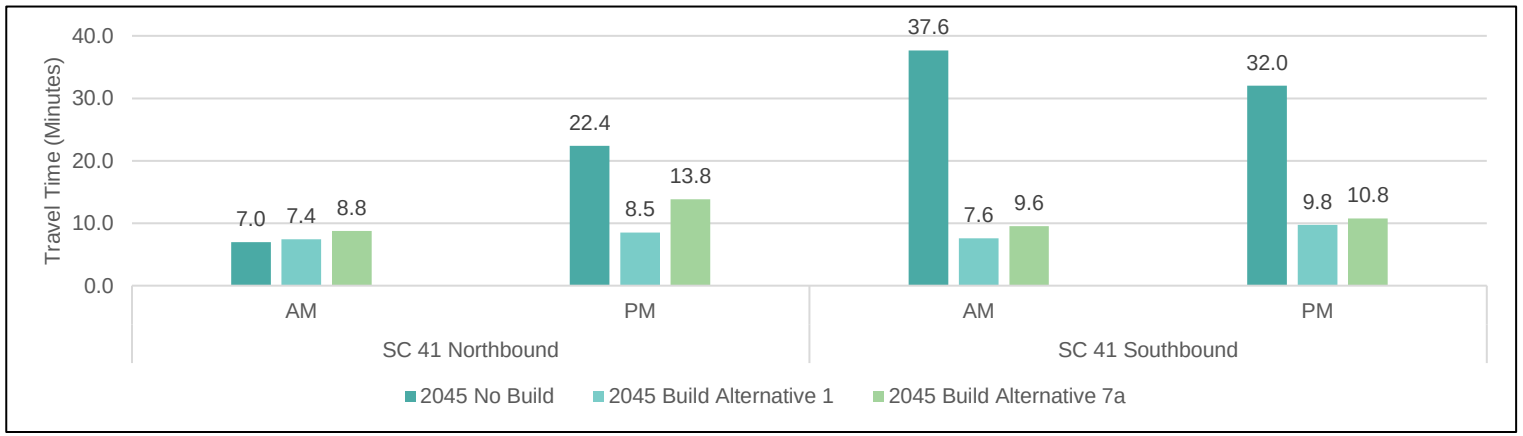


Figure 28: Percentage of 2045 AM Peak Hour Demand Volume Served by Alternative

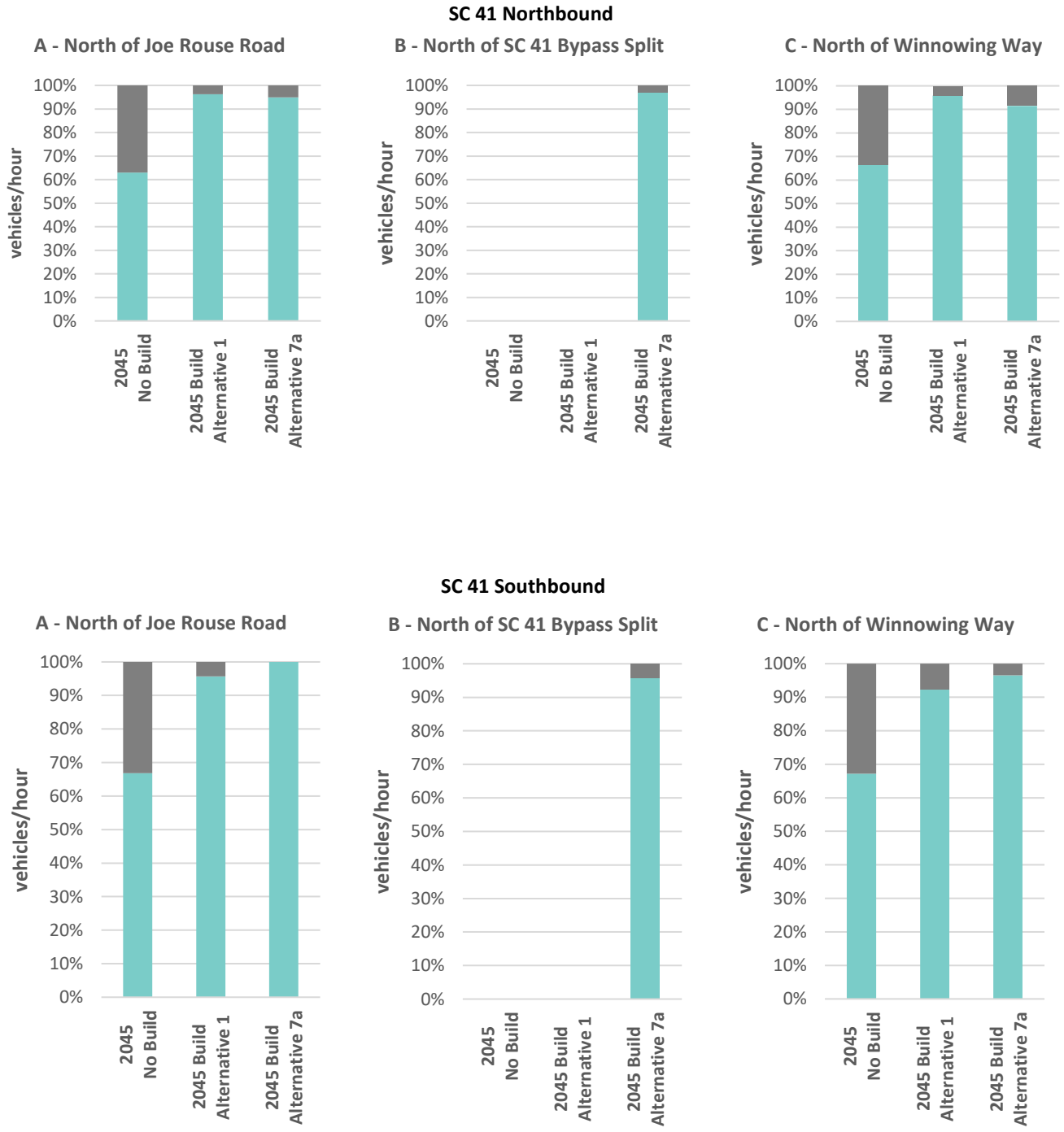
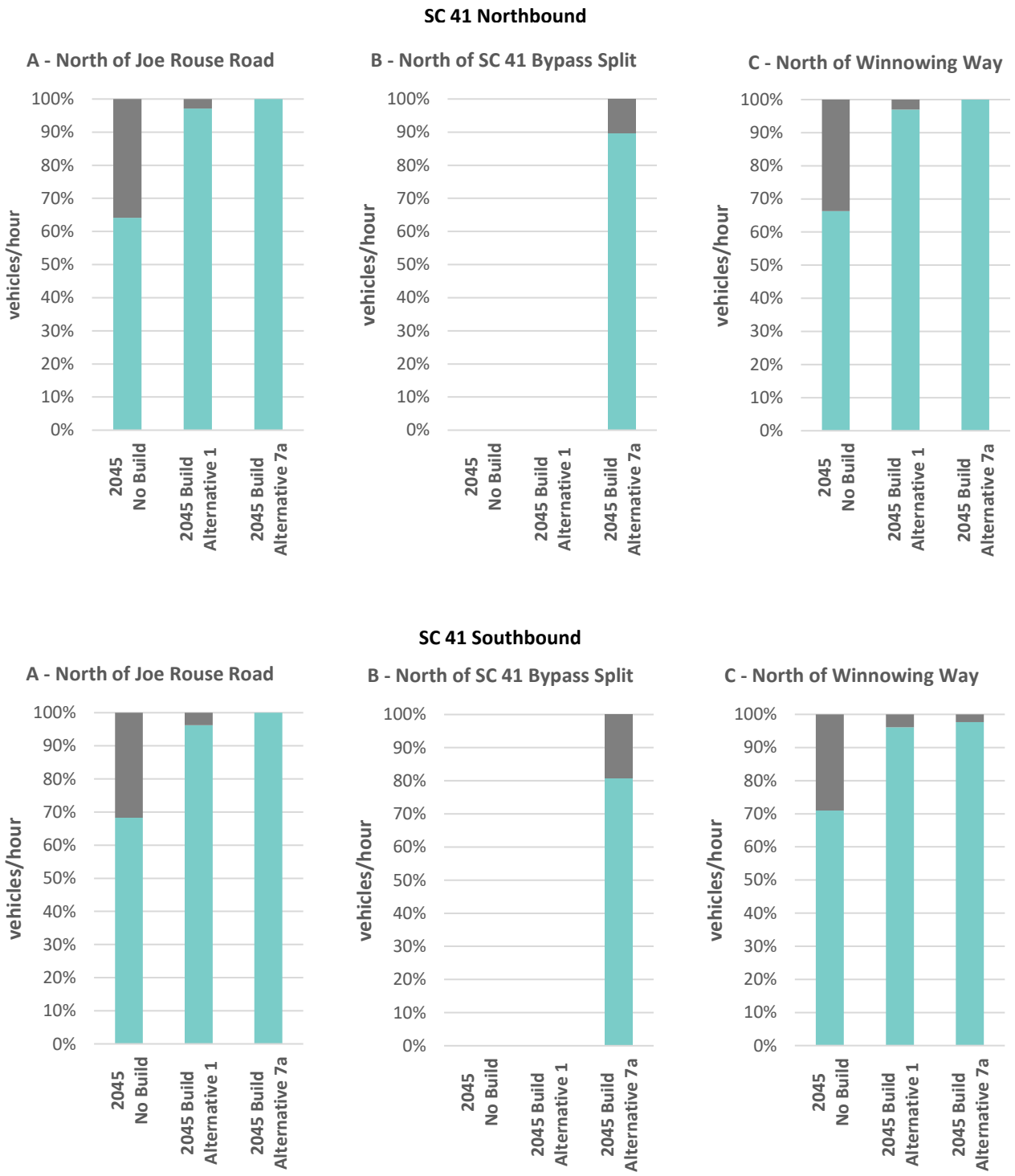


Figure 29: Percentage of 2045 PM Peak Hour Demand Volume Served by Alternative



2.6.2 Comparison of Travel Time and Volume Served

(1) Design Year (2045) No Build

As the sections above show, the SC 41 mainline operations during the AM peak hour are mostly congested with long travel times along SC 41, except for SC 41 in the northbound direction in the AM peak hour. The volume served for both directions of SC 41 is about half of the actual demand. The congestion highlighted by all of the model output is highly dependent on the capacity of the SC 41 corridor and the main intersection at SC 41 & US 17.

(2) Design Year (2045) Build Alternative 1

As the travel time comparison above illustrates, the SC 41 mainline operations during the AM peak hour are mostly free flow with shorter travel times in both directions of SC 41 with the Alternative 1 build condition.

This alternative processes over 90 percent of the volume that attempts to enter the network within the AM and PM peak hours.

(3) Design Year (2045) Build Alternative 7A

The SC 41 mainline operations during the AM peak hour are mostly free flow with improved travel times in both directions of SC 41compared to the no-build. When compared to Alternative 1, the SC 41 northbound travel time in the PM peak hour is 5 minutes longer and the southbound travel time in the AM peak hour is 2 minutes longer.

The volume processed by Alternative 7A in the peak hour periods exceed 90% of the demand volume except for southbound traffic in the PM peak hour. Southbound traffic is delayed at the split north of Dunes West Boulevard because traffic attempting to follow the existing alignment south of Dunes West Boulevard is attempting to take the shorter route along the existing SC 41 alignment.

Conclusion of Results

Intersections with a failing LOS in the build condition that are unsignalized are an indication of delay only on the stopped approach and not on SC 41 which is in a free flow condition. The increased delay on the stopped controlled minor street is due to reduced gaps, or opportunities to enter the flow of traffic on SC 41. This delay generally affects a low volume of traffic. Travel times and volume of traffic processed indicates that Alternative 1 is the better performing alternative.

3.1 Background

3.1.1 Existing Conditions Along US 17

US Highway 17 (US 17) is a Principal Urban Arterial that is part of the Strategic Highway Network (STRAHNET). The SHRAHNET is a "network of highways which are important to the United States' strategic defense policy and which provide defense access, continuity and emergency capabilities for defense purposes. US 17 has a posted speed limit of 45 miles per hour.

The corridor was widened within the past ten years from four-lane divided to a six-lane divided with raised medians. US 17 and SC 41 are both generally north-south routes, with the intersection of US 17 and SC 41 being the southern terminus of SC 41. This is the south end of the SC 41 corridor. The fourth leg of the intersection is a minor street, Dingle Road.

The US 17 northbound approach includes three through lanes and two dedicated left turn lanes. The southbound US 17 approach includes three through lanes, a right turn lane and a left turn lane. The southbound SC 41 approach includes a dedicated left turn lane, a through/left turn lane, and a free flow right turn lane. The free-flow rights lead to a fourth southbound lane on US 17 which drops approximately 700 feet south of the intersection.

3.2 Base Year Traffic Conditions

3.2.1 Base Year Traffic Profile

A detailed review of the Base Year peak hour profile for US 17 within the study area reveals a pattern between the intersections of US 17/Long Point Road and US 17/SC 41. **Figure 30** illustrates the variation in northbound traffic during the AM and PM peak periods through the project study area, from south of Six Mile Road to north of SC 41. **Figure 31** illustrates the variation in the southbound direction. This traffic pattern confirms the following points:

- The AM northbound US 17 volume increases by 24% at Long Point Road. This coincides with the turning movements at this intersection. Approximately 85% of the traffic approaching US 17 turns left, or north on US 17 toward SC 41.
- The AM northbound US 17 volume decreases by 28% at SC 41. This coincides with heavy AM peak northbound lefts to SC 41.
- The majority of AM peak traffic from Brickyard Parkway and Hamlin Road enters US 17 in the southbound direction.
- The AM southbound US 17 volume increases by 36% at SC 41. This is indicative of the heavy right turns from southbound SC 41 to southbound US 17. It also points to the potential growth in southbound US 17 traffic that will result from increasing the capacity of SC 41.
- The AM southbound volume drops by 27% at Long Point Road. This is an indication of traffic using Long Point Road to access I-526.
- AM peak hour volumes are higher than PM Peaks. This is a result of concurrent school and commute traffic in the AM, while peak PM school traffic occurs before the commuter PM peak.

Figure 30: US 17 Northbound Base Year Peak Hour Volumes – Six Mile Road through SC 41

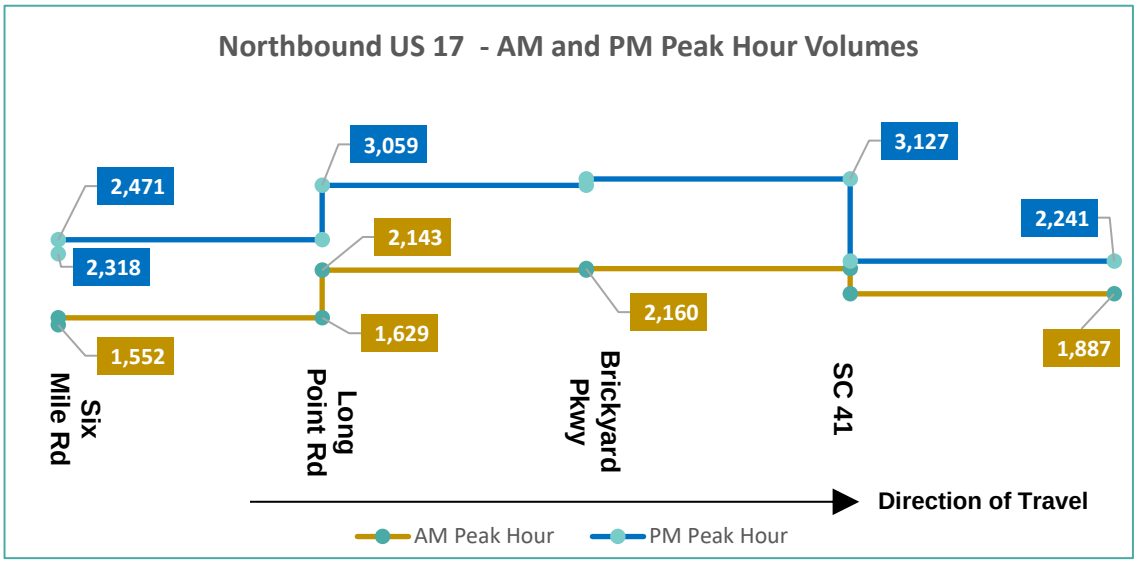
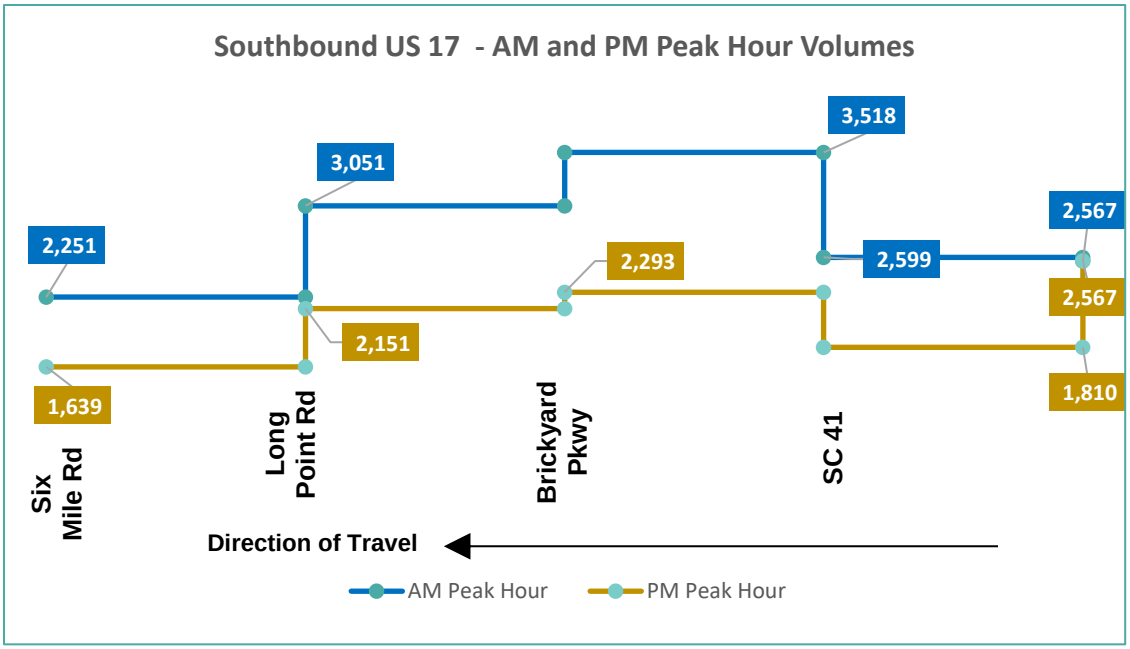


Figure 31: US 17 Southbound Base Year Peak Hour Volumes – Six Mile Road through SC 41



(1) Base Year Peak Hour Volumes

The US 17 Base Year AM and PM, adjusted, balanced, peak design hour volumes can be seen **Figure 32**. These peak hour volumes were developed from mainline counts and peak hour turning movement counts taken in September 2017.

(2) Intersection Peak Hour Factors

The collected 2017 turning movement count peak-hour factors (PHF) were utilized in the analysis of Base Year. For opening and design year conditions, a minimum PHF of 0.90 and maximum PHF of 0.95 being considered. US 17 intersection peak hours are summarized in **Table 18.**

Table 18: US 17 Base Year AM Intersection Peak Hour Factors

Intersection	AM	PM
Hamlin Road & US 17	0.96	0.95
SC 41 Access Rd & US 17	0.95	0.98
SC 41 & US 17	0.97	0.96
Porchers Bluff Road & US 17	0.93	0.98
Oakland Market Drive & US 17	0.95	0.97
Park West Blvd & US 17	0.98	0.96
Six Mile Road & US 17	0.94	0.95
Six Mile Road & Sweetgrass Basket Parkway	0.92	0.89
Long Point Road & US 17	0.97	0.95
Hamlin & Billy Swails Parkway	0.71	0.96

3.2.2 Base Year Peak Hour Traffic Operations

Using the Base Year traffic volumes, intersection analyses were conducted for the intersections along US 17 following the Transportation Research Board's Highway Capacity Manual 2010 (HCM 2010) methodologies and using Synchro, Version 10 software. US 17 intersection analyses were conducted for Base Year conditions for the weekday AM peak-hour and the weekday PM peak-hour time periods. Using VISSIM 8.0 software, the US 17 corridor was analyzed for the calibrated Base Year conditions for the weekday AM and PM peak-hour time periods. The results of the analyses for Base Year conditions for the weekday AM and PM peak-hour time periods are described below.

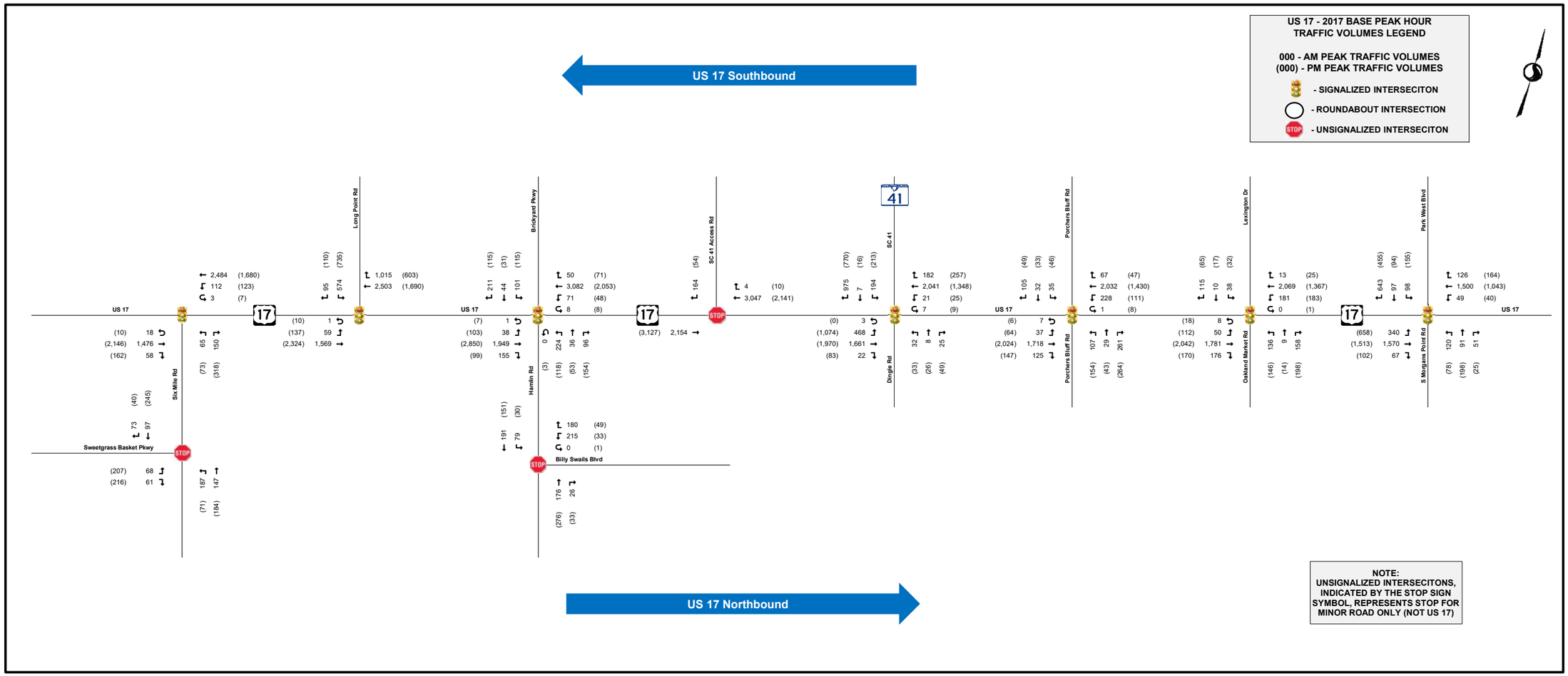
(1) Intersection Level of Service

Intersection level of service (LOS) grades range from LOS A to LOS F, which are directly related to the level of control delay at the intersection and characterize the operational conditions of the intersection traffic flow. LOS A operations typically represent ideal, free-flow conditions where vehicles experience little to no delays, and LOS F operations typically represent poor, forced-flow (bumper-to-bumper) conditions with high vehicular delays, and are generally considered undesirable. For the signalized intersections, the overall intersection LOS and delay results are evaluated for acceptable operation, while for the Unsignalized intersections with two-way stop control, the LOS and delay results are evaluated for the worst-case minor-street approaches only, as based upon *HCM 2010* methodologies for two-way Unsignalized intersections. **Table 19** summarizes the Base Year LOS and delay for intersections along US 17 obtained by microsimulation.

(a) Travel Time

Travel time data was collected using field-measured data. AM travel time runs were collected from 6:30 AM to 9:30 AM and PM travel time runs were collected from 3:30 PM to 6:30 PM. Peak hour travel times for US 17 northbound and southbound were measured on Tuesday, March 18, 2019. The southbound

Figure 32: US 17 Base Year Peak Hour Traffic Volumes



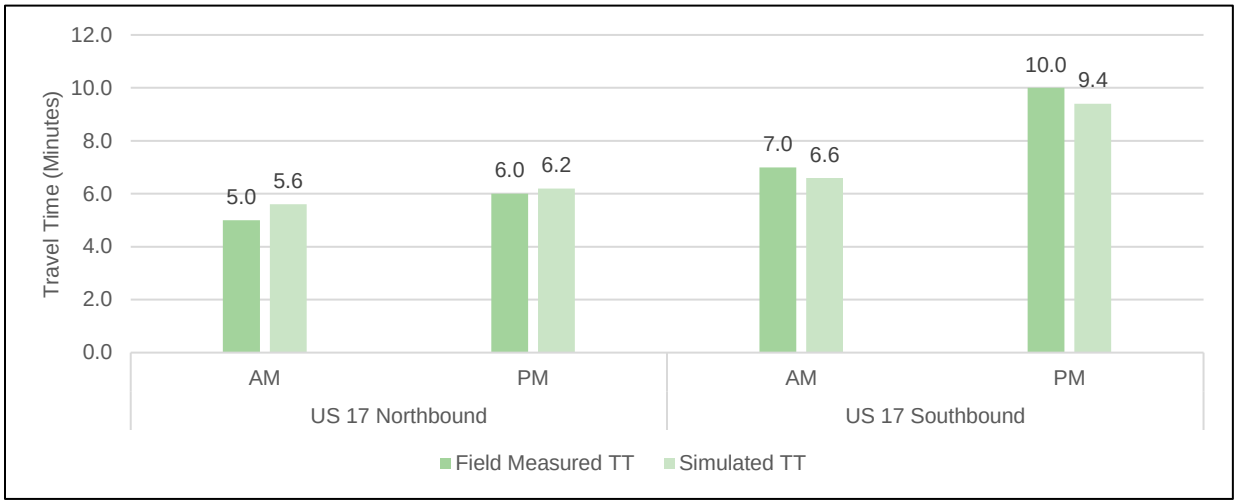
US 17 southbound travel time segment begins east of Park West Boulevard and ends just south of 6 Mile Road. The US 17 northbound travel time segment begins just south of 6 Mile Road and ends just north of Park West Boulevard. These travel time segments, used for all SC 41 microsimulation analysis, are illustrated in **Figure 33**. A comparison between field-measured and simulated travel times for the AM and PM peak hours are shown in **Figure 34**.

Table 19: US 17 Base Year Intersection Level of Service

Intersection	Intersection Control	AM	PM
US 17 & 6 Mile Rd	Signalized	A/4.8	A/6.4
6 Mile & Sweetgrass Basket Pkwy	Unsignalized	A/2.6	A/4.6
US 17 & Long Point Rd	Signalized	B/17.1	C/21.2
US 17 & Hamlin Rd/Brickyard Pkwy	Signalized	B/15.3	B/16.5
US 17 & SC 41	Signalized	C/30.1	D/50.9
US 17 & Porchers Bluff Rd	Signalized	B/11.5	B/17.2
Hamlin Rd & Billy Swails Blvd	Unsignalized	A/3.8	A/1.8
Porchers Bluff Rd & Billy Swails Blvd	Unsignalized	A/1.5	A/0.8
US 17 & Lexington Dr	Signalized	B/13.3	B/18.2
US 17 & Park West Blvd/South Morgan's Point Rd	Signalized	C/27.3	D/45.8

Figure 33: US 17 Travel Time Segments Map

Figure 34: US 17 Calibrated Base Year Peak Hour Travel Time Comparison



3.2.3 Base Year Traffic Operations Summary

(1) Intersection Level of Service

According to the Calibrated Base Year VISSIM analysis, all intersections within the US 17 corridor currently operate at LOS D or better. While this intersection experiences heavy traffic volumes, capacity restrictions at the intersections of US 17 and Long Point Road to the south, and US 17 and Park West Boulevard to the north, prevent the full demand volume from reaching this intersection. The capacity limitations of SC 41 also restrict the volume that reaches this intersection in each signal cycle.

The mainline operations during the AM and PM peak hour are mostly free flow along US 17. However, in the AM peak hour, travel times in the southbound direction of US 17 are much longer with significant congestion building throughout the peak period. Field observations confirm this condition. Congestion on US 17 southbound, occurs between Long Point Road and Hamlin Road and between Hamlin Road and SC 41/Dingle Road.

In the PM peak hour, travel times in the northbound and southbound directions on US 17 are much higher with significant congestion building throughout the peak period. Field observations reflect this condition. Congestion on US 17 northbound extends from the SC 41/Dingle Road intersection back to the intersection of Long Point Road. Congestion on US 17 southbound extends from SC 41/Dingle Road to Lexington Drive.

3.3 Design Year (2045) Traffic Projections

Section I (SC 41 Widening) and Section II (Intersection of SC 41 and US 17) are being reported as separate improvements within this study, but they are linked as committed (funded) projects for the traffic analysis. This is addressed in the respective Section I and Section II forecasts through the travel demand model.

3.3.1 Traffic Volume Projections

The 2045 AM and PM peak hour through and turning movement volumes are grown from the Base Year counts by a factor equal to the ratio of the 2040 to 2015 ADT from the CHATS model. This growth rate is then extrapolated from 2040 to the design year, 2045. This process ensures that the demand from the widening of SC 41 is represented at the intersection. The study segments affecting US 17 growth are listed in **Table 20.**

Table 20: Growth Comparison from (2040) CHATS Travel Demand Model

Segment	2015 AADT	2040 AADT			
		No-Build AADT		Build	
US 17 South of Six Mile Rd	43911	70177	2.4%	71470	2.5%
Long Point Rd	13436	26352	3.8%	26577	3.9%
US 17 South of Brickyard/Hamlin Rd	58189	77996	1.4%	79974	1.5%
US 17 North of SC 41	41803	63990	2.1%	66325	2.3%
SC 41 North of US 17	19611	26966	1.5%	42449	4.7%

The travel demand modeling for 2040 indicates that the build condition (widening of SC 41) increases the annual growth rate slightly for US 17 and Long Point Road.

3.3.2 US 17 Design Year and Opening Year Traffic Projections

Peak hour design volumes were developed for the design year and opening year for the no-build condition and build conditions. These future volumes were derived from rates developed through the travel demand model (CHATS model) and balanced using engineering judgment and are illustrated by the following figures.

Figure 35: Opening Year (2025) AM and PM Build Peak Hour Volumes

Figure 36: Design Year (2045) AM and PM No-Build Peak Hour Volumes

Figure 37: Opening Year (2045) AM and PM Build Peak Hour Volumes

Figure 35: US 17 Opening Year (2025) Peak Hour Traffic Volumes

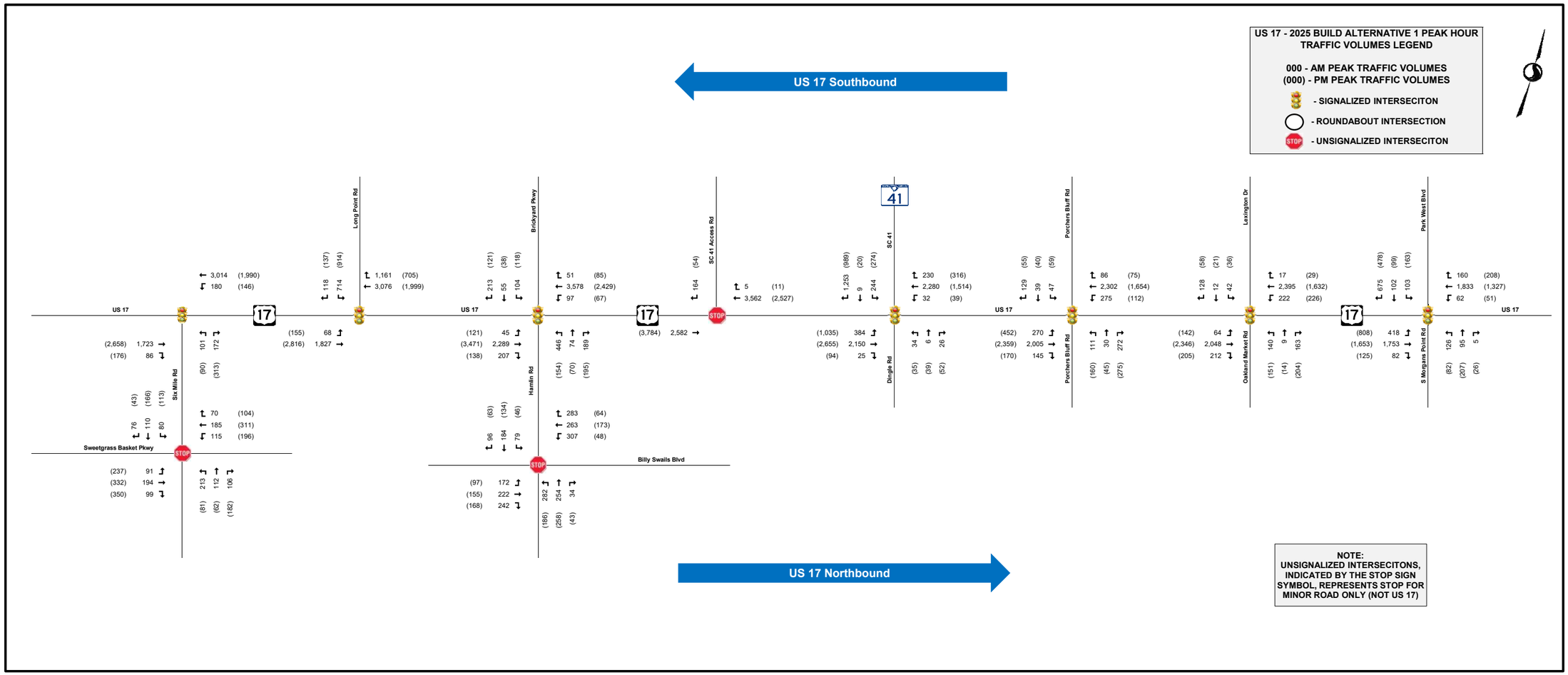


Figure 36: US 17 Design Year (2045) No-Build Peak Hour Traffic Volumes

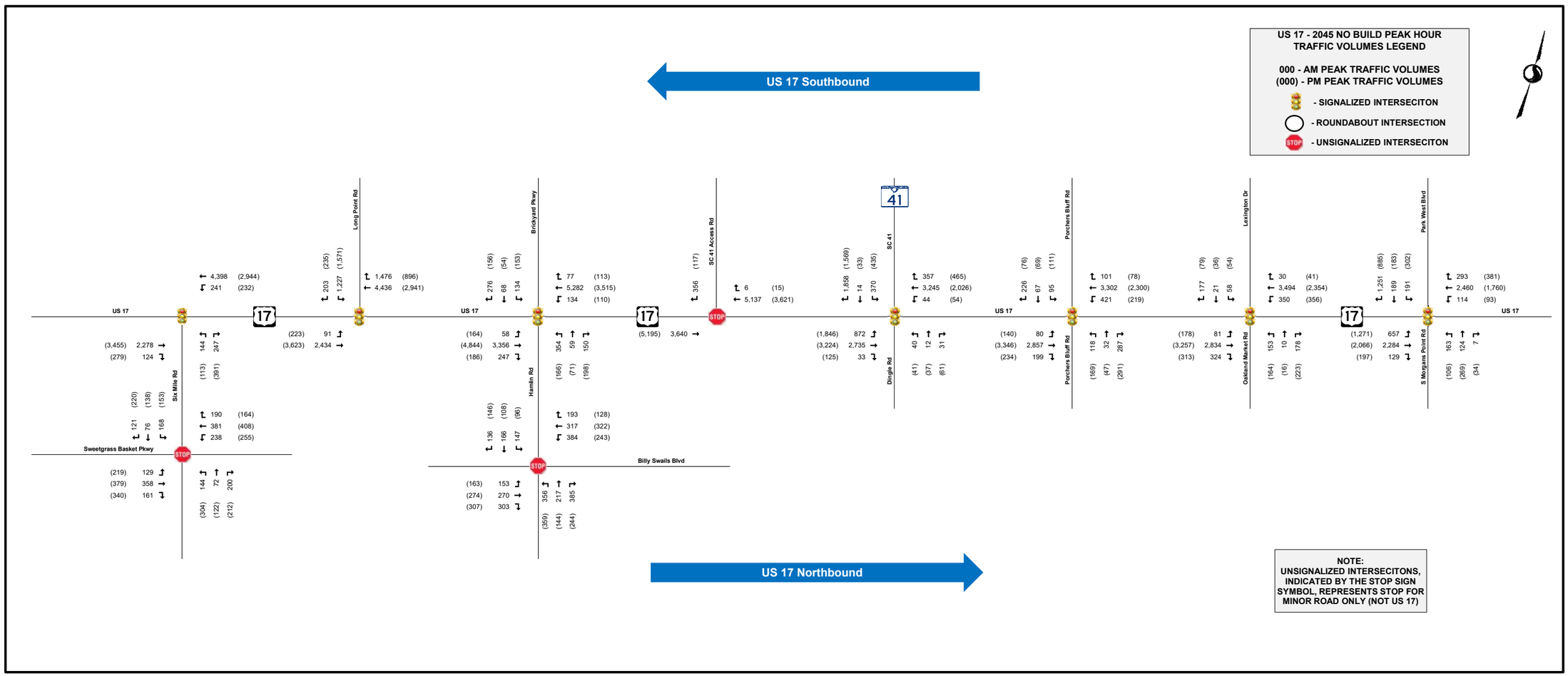
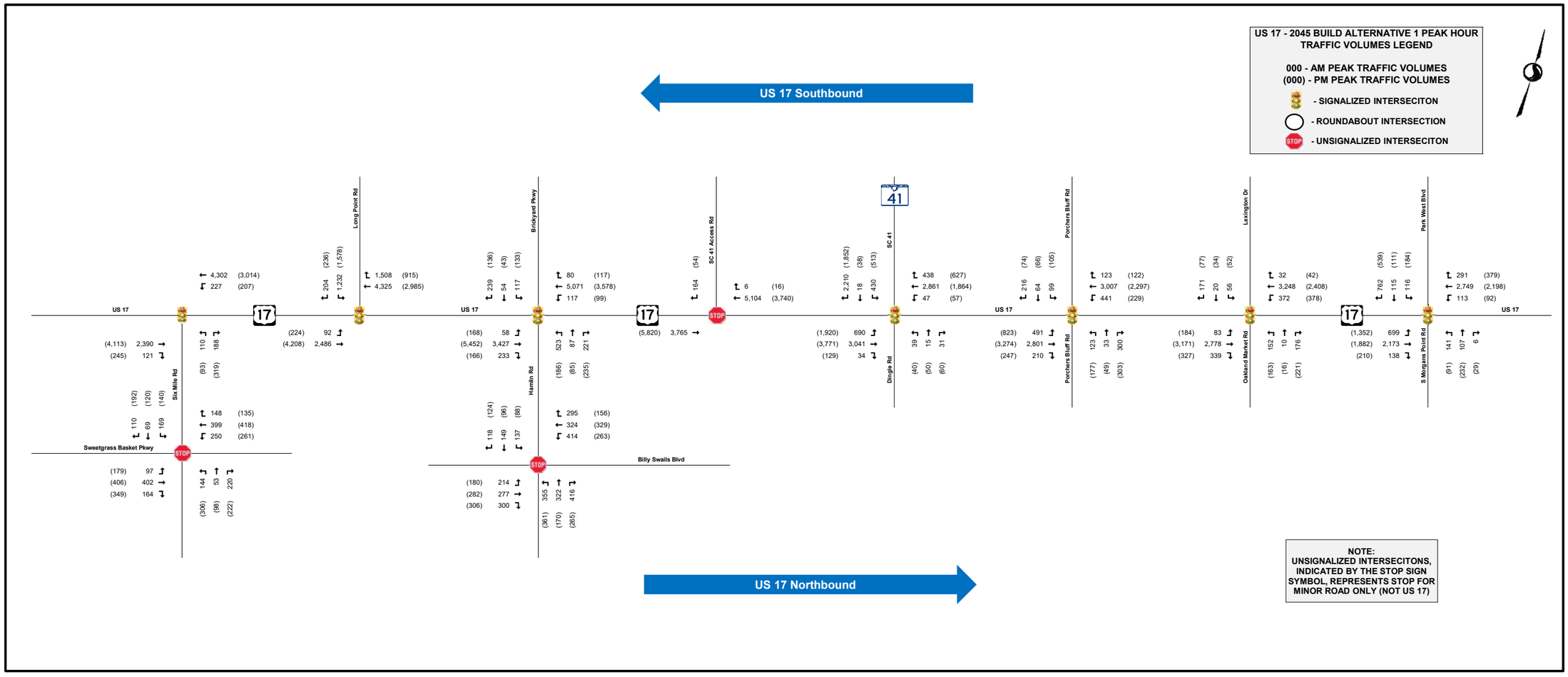


Figure 37: US 17 Design Year (2025) Build Alternative 1 Peak Hour Traffic Volumes



3.4 Alternative Concept Development

3.4.1 Alternative Development Considerations

The development of concepts for the intersection of US 17 and SC 41 was based on the following principals:

- US 17 south of SC 41 was near capacity in the Base Year and the, growth, added capacity and resulting volumes of traffic to/from SC 41 would exceed that capacity.
- Increased traffic at the intersection would need to be dispersed to the greatest extent possible among the roads in the network parallel to US 17. This focused on the US 17 parallel route, Billy Swails Boulevard.
- High volumes of northbound US 17 to northbound SC 41 traffic conflicted with high volumes of southbound US 17 through traffic, which necessitates some grade separated movements.
- A typical grade-separated solution for a T-intersection might include a partial diamond or directional ramps. These may adversely affect local access to both US 17 and SC 41 given the existing land use and access conditions.
- Separation of high-volume critical movements might be accomplished by innovative intersection designs such as displaced lefts or limited grade separations.

3.4.2 Range of Alternatives Considered

The conditions listed above led to the development of the following range of alternatives for improvements along US 17 which would accommodate either Alternative 1 or 7A in the SC 41 corridor:

- Grade separate all intersections (Hamlin/41/Porchers) –17 at second level and lefts from 17 to 41 at third level.
- Grade separated interchanges along US 17 at Brickyard-Hamlin, SC 41, and Porchers Bluff Road. US 17 at the second level, and all left turns from US 17 at third level.
- Diverging Diamond Interchange at SC 41/US 17 with wide ramps. Tight diamond interchange at US 17/Brickyard-Hamlin Road.
    - Variation: Diverging Diamond Interchange at SC 41/US 17 with wide ramps. US 17/Brickyard-Hamlin remains at-grade with roundabouts on Brickyard Parkway and on Hamlin Road to accommodate traffic diverted from left turn restrictions on US 17.
- Diverging Diamond Interchange at SC 41/US 17 with tight ramps. Tight diamond interchange at US 17/Brickyard-Hamlin Road.
- Echelon Interchange at SC 41/US 17. US 17/Brickyard-Hamlin remains at-grade with roundabouts.
- Three Level Interchange at US 17/Porchers Bluff Road. US 17/Brickyard-Hamlin remains at-grade with roundabouts.
- Diverging Diamond Interchange at US 17/Porchers Bluff-Winnowing Way. US 17/Brickyard-Hamlin remains at-grade with roundabouts.

- Echelon Interchange at US 17/Porchers Bluff-Winnowing Way. US 17/Brickyard-Hamlin remains at-grade with roundabouts.
- US 17 overpass from west of Brickyard-Hamlin to east of Porchers Bluff-Winnowing Way.
- Triple lefts at US 17/SC 41. Overpass at Porchers Bluff-Winnowing Way. US 17/Porchers Bluff-Winnowing Way. US 17/Brickyard-Hamlin remains at-grade with roundabouts.
    - Variation: Triple lefts at US 17/SC 41. Overpass at Porchers Bluff-Winnowing Way. US 17/Brickyard-Hamlin remains at-grade with no southbound left turns to Hamlin.
- Loop ramp at Porchers Bluff Road. Brickyard-Hamlin remain at-grade with roundabouts.

Some or all of these alternatives may have satisfied the future traffic needs for the project, but they were reduced to the following recommended alternative, based on appropriate distribution of traffic to the network and reduced impacts:

- **Diverging Diamond Intersection at SC 41 & US 17 Intersection.**
- **At-grade intersection at US 17 & Brickyard Parkway-Hamlin Road. Southbound left turns to Hamlin Road prohibited.**
- **U-turn via median break at US 17 & Old Georgetown Road for displaced southbound left turns to Hamlin Road.**
- **Northbound US 17 Overpass at US 17 & Porchers Bluff Road-Winnowing Way intersection.**
- **Conversion of existing diagonal access road in the southwest quadrant of the US 17/SC 41 intersection to a two-lane, one-way path for southbound SC 41 to southbound US 17 right turns.**

3.5 Summary of Alternatives Analysis

The improvement options for the US 17 corridor were highly dependent on the reasonable alternates for widening of SC 41. In order to provide a comparison between the SC 41 alternatives, 1 and 7A, the improvements described above were combined with Alternative 1 and with Alternative 7A in separate microsimulation models. The following results provide a comparison of the AM and PM peak hour periods from these models, in addition to the no-build model.

3.5.1 Comparison of Level of Service/Delay

(1) Design Year (2045) No Build

Design Year (2045) No-Build microsimulation analysis results indicate that all intersections within the US 17 corridor are projected to operate at acceptable levels of service in the AM peak hour. The intersections of Six Mile Road & Sweetgrass Basket Parkway, US 17 & SC 41, US 17 & Porchers Bluff Road, Porchers Bluff Road & Billy Swails Boulevard, US 17 & Lexington Drive, and US 17 & Park West Boulevard/South Morgan's Point Road are projected to operate at undesirable levels of service in the PM peak hour. **Table 21** provides the level of service comparison between the Design Year No-Build, Build Alternative 1 and Build Alternative 7A by microsimulation methods.

(2) Design Year (2045) Build Alternative 1

Design Year (2045) Build Alternative 1 microsimulation analysis results indicate that all intersections within the US 17 corridor are expected to operate at acceptable levels of service in the AM and PM peak hours, except for the intersection of Hamlin Road & Billy Swails Boulevard, which is projected to experience undesirable acceptable level of service and delay in the PM peak hour.

(3) Design Year (2045) Build Alternative 7A

Design Year (2045) Build Alternative 7A microsimulation analysis indicates that all intersections within the US 17 corridor are expected to operate at acceptable levels of service in the AM and PM peak hours, except for the intersection of Hamlin Road & Billy Swails Boulevard, which is projected to experience undesirable level of service and delay in the AM peak hour.

Table 21: US 17 Design Year (2045) Overall Intersection Level of Service Comparison

Intersection	Control	AM			PM		
		No Build	Alt 1	Alt 7A	No Build	Alt 1	Alt 7A
US 17 & 6 Mile Road	Signalized	B/19.8	A/1.0	A/1.7	C/25.7	A/1.4	A/1.0
6 Mile & Sweetgrass Basket Pkwy	Signalized	C/21.1	B/14.4	B/15.3	F/94.8	C/34.1	D/46.0
US 17 & Long Point Road	Signalized	C/30.4	A/1.8	A/1.1	B/12.3	A/2.2	A/1.4
US 17 & Hamlin Road/Brickyard Pkwy	Signalized	D/42.8	B/16.8	B/15.0	D/44.2	B/13.6	B/17.1
US 17 & SC 41	Signalized	D/48.5	B/18.9	C/22.0	F/97.6	C/22.4	C/24.8
US 17 & Porchers Bluff Road	Signalized	B/15.0	B/13.9	B/16.2	E/79.0	B/10.5	C/25.1
Hamlin Road & Billy Swails Blvd	Signalized	C/17.5	D/48.2	E/56.0	E/49.4	E/58.7	D/52.4
Porchers Bluff Road & Billy Swails Blvd	Unsignalized	A/9.4	B/10.5	A/2.3	F/324.8	A/8.4	A/3.4
US 17 & Lexington Drive	Signalized	C/25.4	C/29.1	C/23.3	E/75.7	C/29.8	D/45.6
US 17 & Park West Blvd/South Morgan's Point Road	Signalized	D/43.1	A/3.6	A/2.3	F/83.0	A/1.6	C/21.3

3.5.2 Comparison of Travel Time and Volume Served

(1) Design Year (2045) No Build

As the sections above show, the US 17 mainline operations during the AM and PM peak hours are congested with long travel times in both directions of US 17. The peak hour volume served results indicate that US 17 processes about half of the actual demand in the no-build condition. The congestion identified by microsimulation analysis results from the capacity limitations of the US 17 corridor and the main intersection at SC 41 & US 17.

(2) Design Year (2045) Build Alternative 1

The US 17 mainline operations during the AM and PM peak hours are mostly free flow with low travel times in both directions of US 17. Peak hour volume served analysis results indicate that both alternatives process more vehicles than the no-build, but slightly more than 20% of the northbound traffic north of the SC 41 intersection is able to be processed. Observations in the model indicate that this is due to the reassignment of the demand traffic to another route. In this case, southbound SC 41 traffic turning left to northbound US 17 has followed Winnowing Way from SC 41 to US 17 northbound instead of the assumed (demand) route.

(3) Design Year (2045) Build Alternative 7A

The performance of Alternative 7A in the US 17 corridor is very similar to Alternative 1 in terms of travel time and the percentage of demand volume served.

Figure 38 provides a comparison of travel times for these respective alternatives, and **Figures 39-40** compare the percentage of the demand volume served during AM and PM peak periods, by each of the alternatives.

Figure 38: US 17 Design Year (2045) Overall Travel Time Comparison

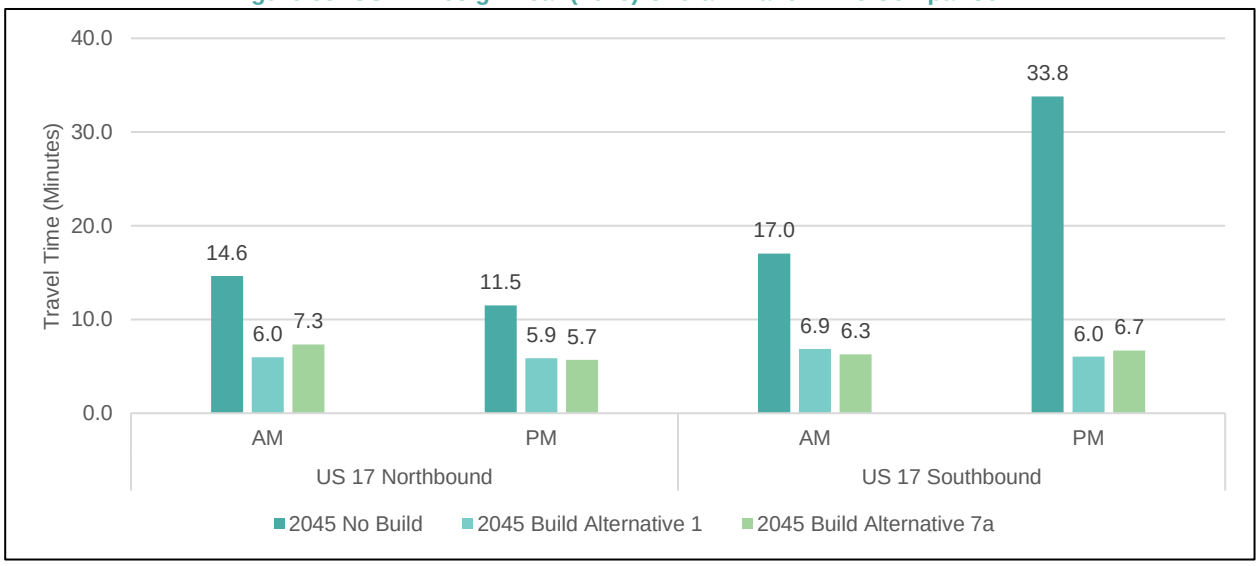


Figure 39: Percentage of 2045 AM Peak Hour Demand Volume Served by Alternative

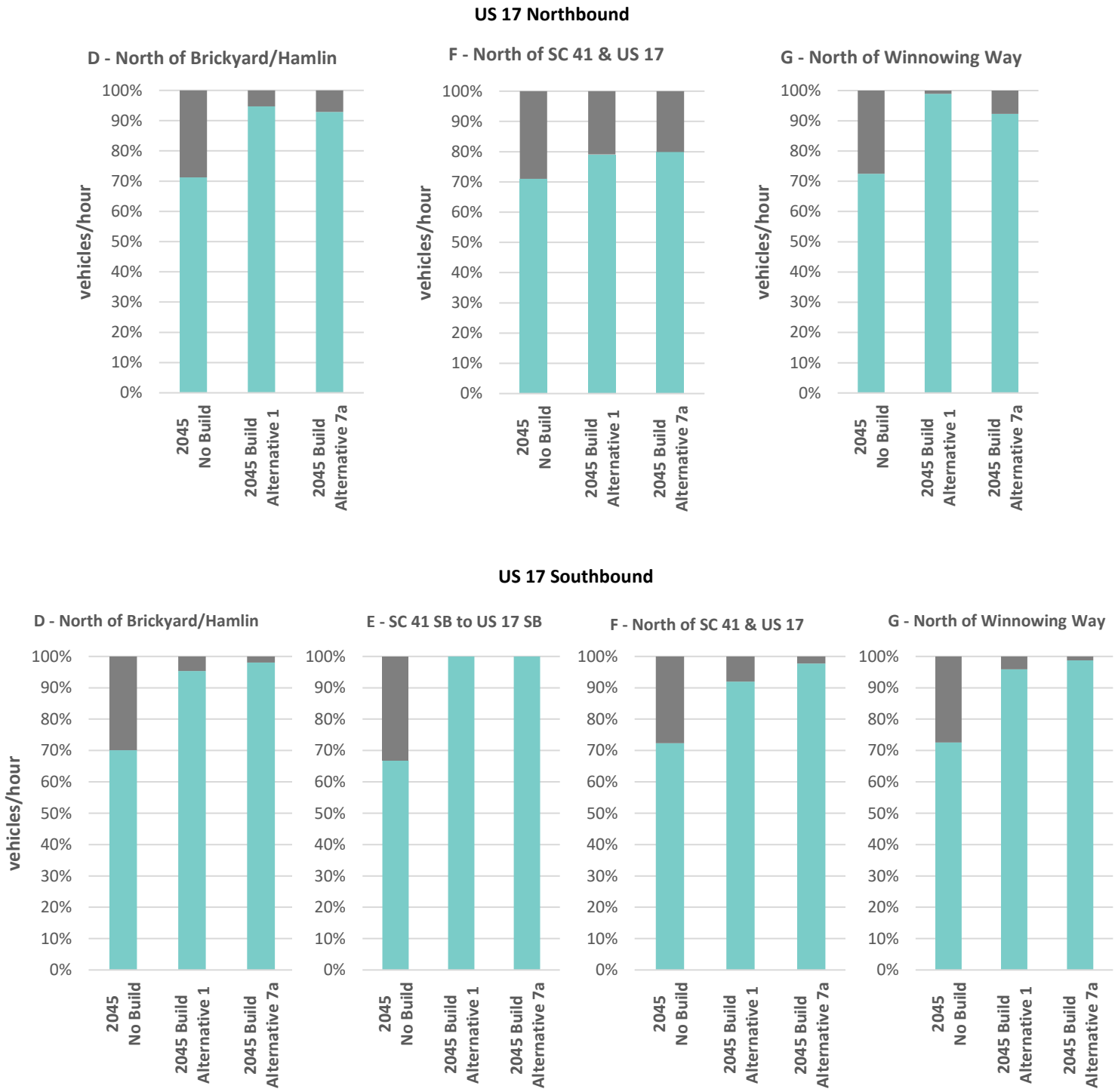
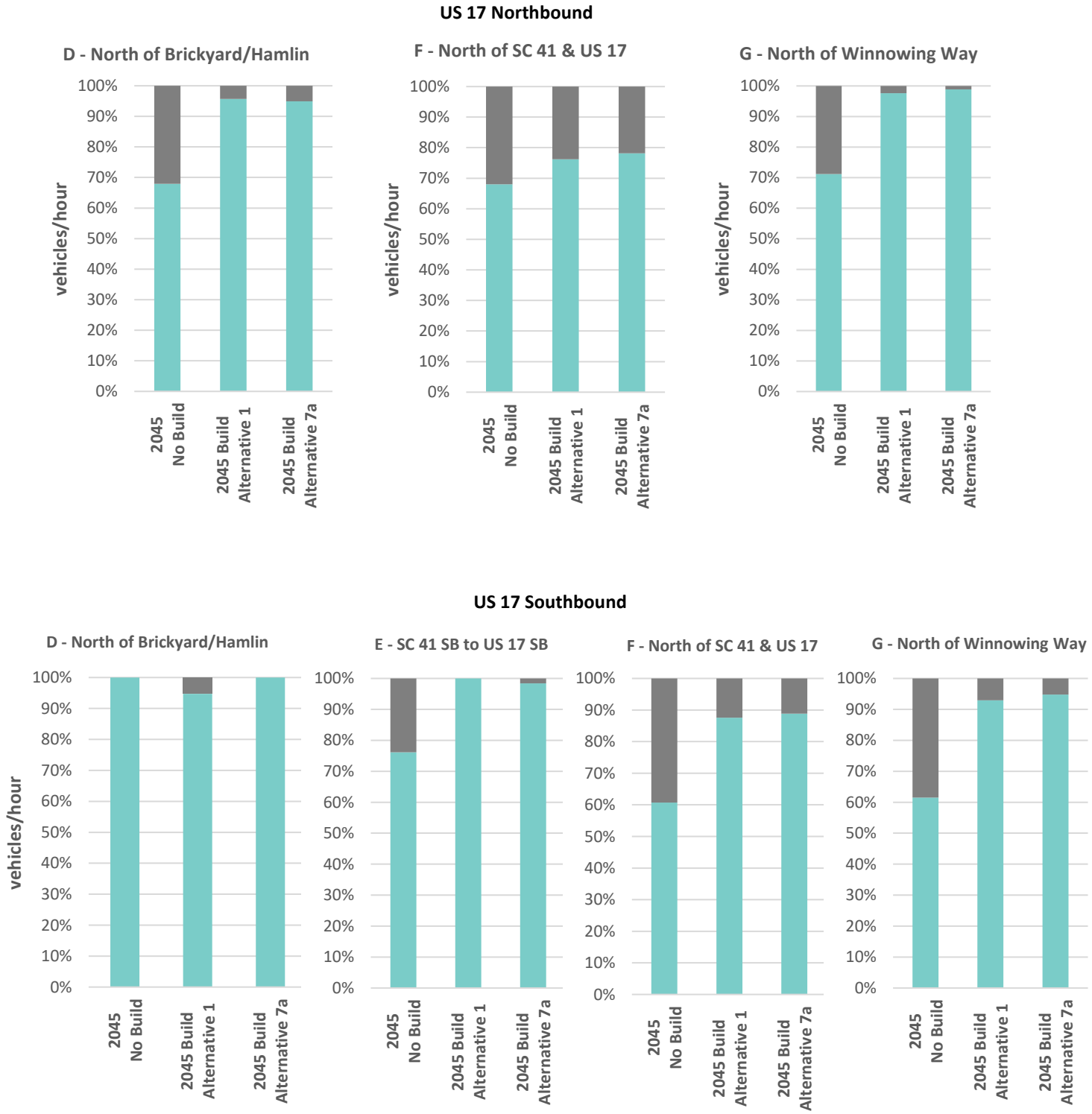


Figure 40: Percentage of 2045 PM Peak Hour Demand Volume Served by Alternative



4.1 Microsimulation Modeling Detail

Stantec conducted traffic analyses using VISSIM 8.0 microsimulation software to evaluate the calibrated Base Year, Design Year (2045) No Build, Design Year (2045) Alt 1 Build, and Design Year (2045) Alt 7A Build traffic conditions in the SC 41 study area. The model network, shown in **Figures 41-43**, extends along nearly 4-mile sections of SC 41 and US 17 in Mount Pleasant, South Carolina. The study area includes eleven (11) intersections along SC 41 from US 17 to Harpers Ferry Way and seven (7) intersections along US 17 from 6 Mile Road to Park West Boulevard.

The calibrated Base Year VISSIM microsimulation model uses Base Year traffic volumes and is calibrated to match the travel conditions through the study area network. This model provides a dynamic view of capacity constraints within the system. Another version of the VISSIM model is then run using the Design Year (2045) traffic volumes. The base and design year conditions models effectively illustrate the progressive breakdowns in traffic flow in the network and help initiate the prioritization of improvement alternatives.

This area has mostly urban residential land uses with some commercial land uses along US 17. SC 41 is a heavily traveled road in Mount Pleasant, South Carolina, connecting US 17 to residential communities and to I-526. These sections of US 17 and SC 41 have some truck traffic generated by industrial land uses north of the study area. Nucor Steel and BP Chemical are the two main industrial businesses north of this area. The analysis presented in this report includes eighteen (18) intersections along SC 41 and US 17 for the Base Year, Design Year (2045) No Build, and Design Year (2045) Alt 1 Build analyses:

SC 41	US 17
SC 41 & Old SC 41/Gregorie Ferry Rd	US 17 & Six Mile Rd
SC 41 & Colonnade Dr	US 17 & Long Point Rd
SC 41 & Tradewind Dr	US 17 & Brickyard Pkwy/Hamlin Rd
SC 41 & Joe Rouse Rd	US 17 & SC 41
SC 41 & Bennett Charles Rd	US 17 & Winnowing Way/Porchers Bluff Rd
SC 41 & Sunchaser Ln	US 17 & Lexington Dr/Oakland Market Dr
SC 41 & Parkers Island Rd	US 17 & Park West Blvd/South Morgan's Point Rd
SC 41 & Canyon Ln	
SC 41 & Rivertowne Pkwy/Dunes West Blvd	
SC 41 & Planters Point Blvd/Wood Park Dr	
SC 41 & Harpers Ferry Way	

In addition to the intersections listed above along SC 41, for the Design Year (2045) Alt 7A Build analysis, five (5) more intersections were added to the analysis:

- Bessemer Rd & Dumont Dr
- Bessemer Rd & Park West Blvd
- Park West Blvd & Wando Plantation Way
- Park West Blvd & Palmetto Hall Blvd
- Park West Blvd & Kings Gate Ln

Figure 41: Calibrated Base Year VISSIM Network Limits

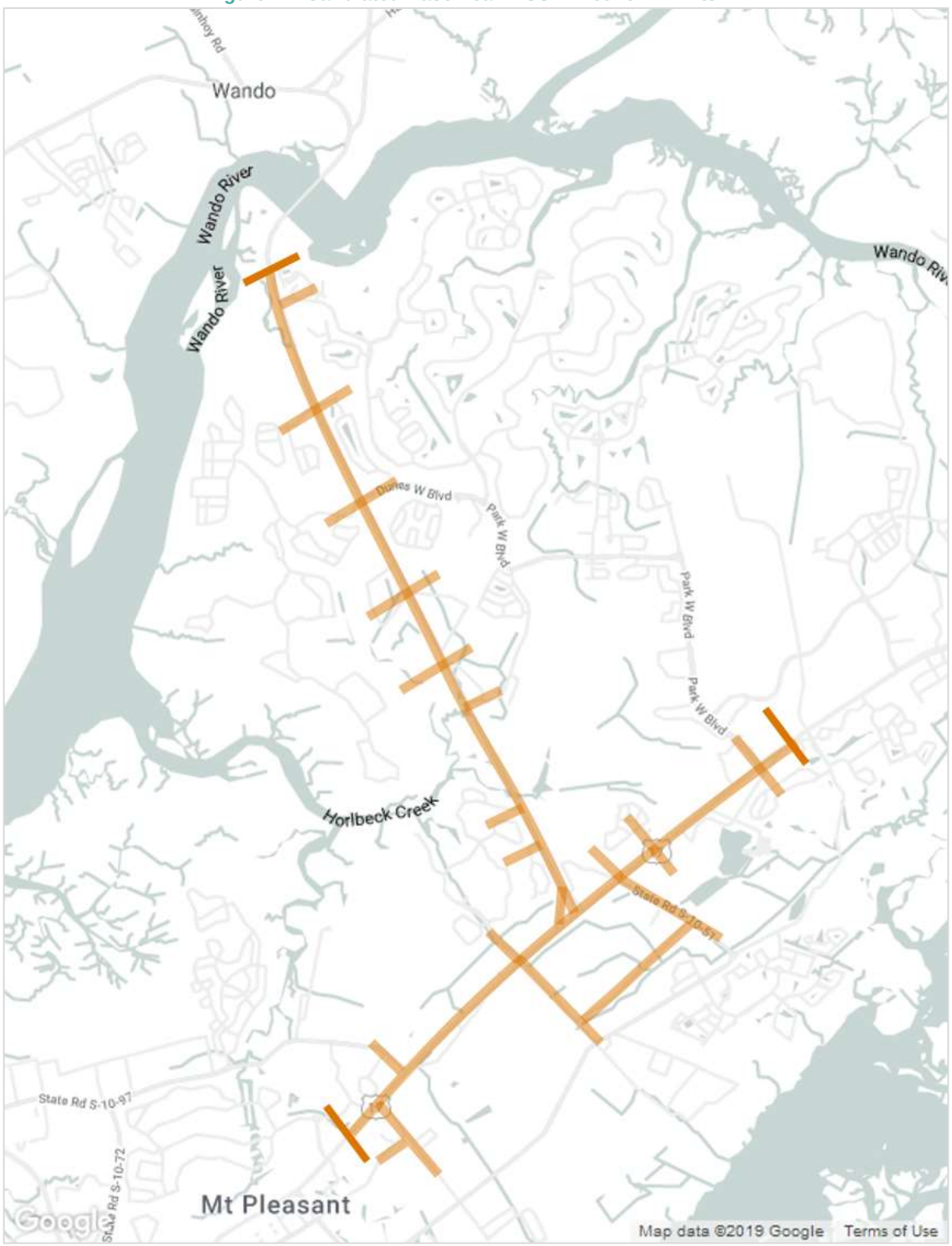


Figure 42: Design Year (2045) No Build and Section I - Alt 1 Build VISSIM Network Limits

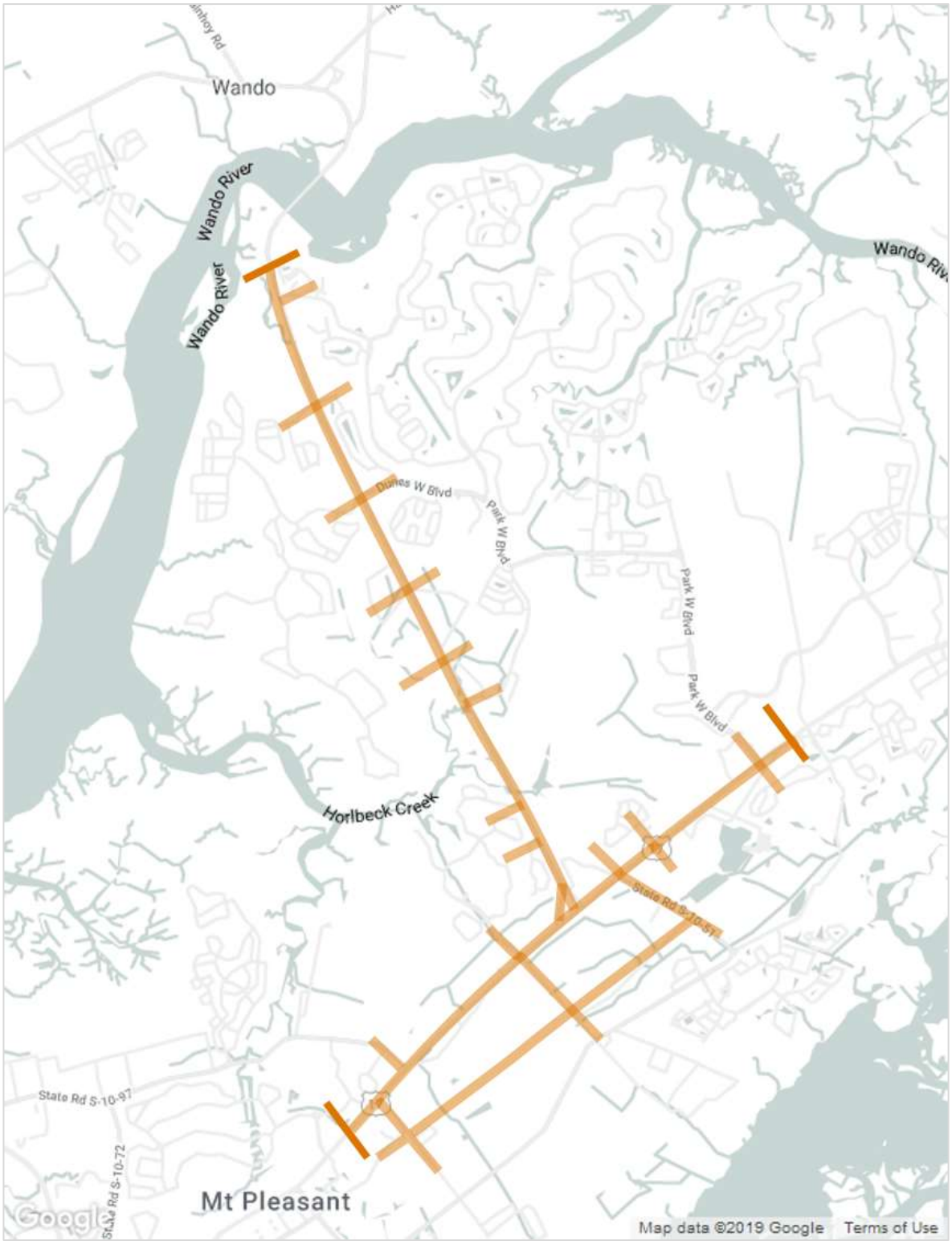
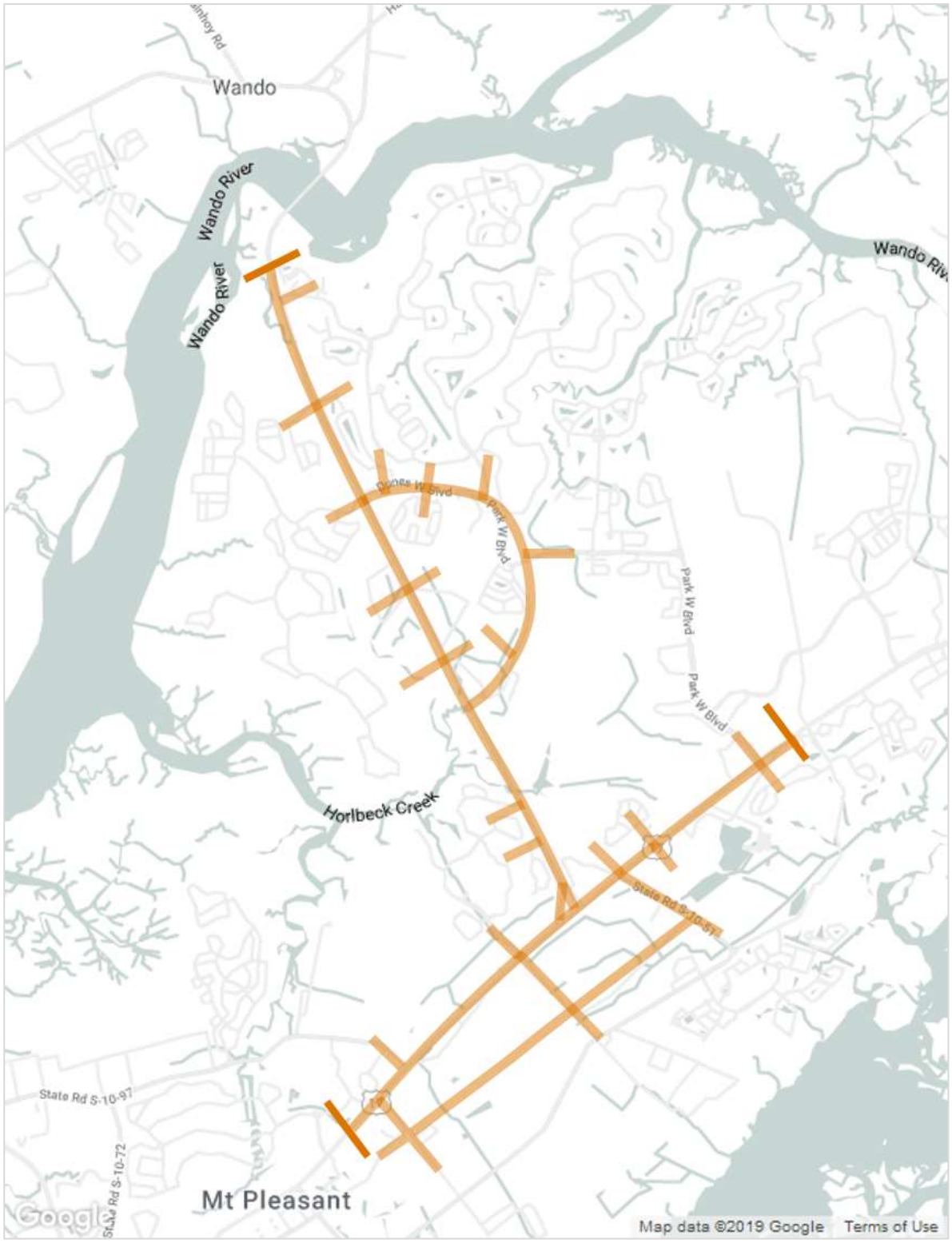


Figure 43: Design Year (2045) Section I - Alt 7A Build VISSIM Network Limit



4.2 Calibrated Base Year Model

The process of developing and calibrating a model to the Base Year is documented in **Appendix D**.

4.3 Design Year (2045) Model Setup and Methodology

4.3.1 Projected 2045 Volumes

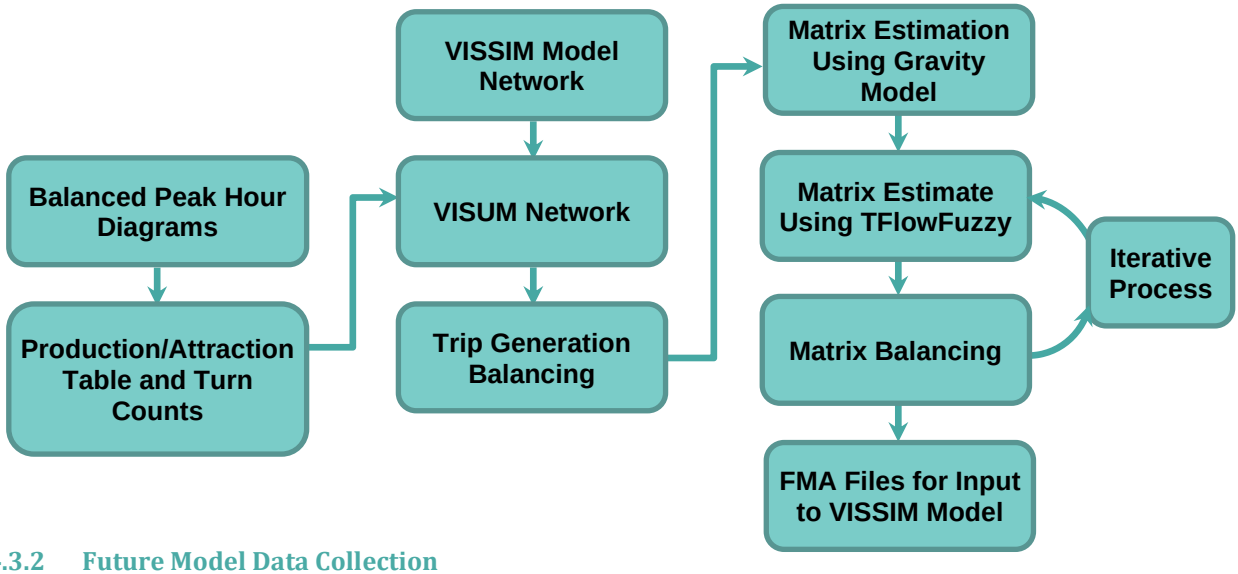
4.3.1.1 Growth Rate Assumptions

Development of Design and Opening Year peak hour volumes is described in Sections 2.4.1 and 3.3.1.

4.3.1.2 OD Matrix Development

The design year model development began by estimating the travel demand in an origin-destination (OD) matrix format. The OD estimation was performed using the TFlowFuzzy module in VISUM. The TFlowFuzzy process requires three input data – a network, a seed OD trip table with demand traffic count data. The coverage of the network and the zone structure are the same as in VISSIM. The OD estimation process involved a series of trip assignment and OD trip table adjustments performed by the TFlowFuzzy module. A graphical depiction of the general OD matrix estimation process and necessary data is shown in **Figure 44.**

Figure 44: OD Matrix Estimation Process



4.3.2 Future Model Data Collection

4.3.2.1 Geometric Data

Geometric data such as link distance, number of lanes, turn lane length, lane width, and curvature were obtained using a combination of aerial photography collected in 2015, Bing© maps, and preliminary roadway design files for the committed projects with designs available. Grade data was gathered and implemented into the Design Year (2045) Build models for the proposed bridge along US 17 Northbound over the US 17 and Winnowing Way/Porchers Bluff intersection.

4.3.2.2 Traffic Control Data

The No-Build and Build networks were modeled in Synchro using the projected turning movement volumes for 2045. Signals were optimized in Synchro to determine the optimal cycle length, splits, and offsets for each signal in the network. Existing signal phasing was used in locations where the geometry was not being modified and phasing changes were not necessary. Signal phasing was modified in locations where the geometry and/or projected traffic volumes required it. Additionally, the timings that Synchro provided are used as a starting point for the VISSIM model, but do not always best accommodate the simulated traffic. Therefore, some of the signal timing was modified in VISSIM and may not match the Synchro files. This was performed to maximize efficiency at the signals and accommodate all movements, particularly the coordinated phases and/or ramp approaches.

4.3.3 Model Adjustments and Quality Control

The Base Year calibrated model included adjustments to various model parameters, including, but not limited to, the following:

- Driver behavior types & link behaviors;
- Lane change distances;
- OD matrices;
- Desired speed distributions; and
- Vehicle route closures.

These parameter adjustments ensured that the Base Year model reasonably matched existing conditions. However, as demand increased with future year projected growth, some areas which operated properly in the Base Year became problematic in the future years. Some of the issues observed in the simulation included, but were not limited to, the following:

- Vehicles waiting too long to change lanes in advance of a turn or lane-drop, particularly on arterials;
- Vehicles getting to the end of a merge lane and stopping, rather than working their way into the mainline lanes within the assigned acceleration lane distance; and
- Vehicles using an unreasonable path that was not present in the Base Year model.

To ensure that the future year models did not show unrealistic conditions, some parameters were modified in the No Build and Build networks. The following is a list of some of the parameters changed during this process:

- Adjustments to OD matrices;
- Increasing of lane change distance on connectors;
- Addition of route closures for unreasonable or illogical paths;
- Adjustment of traffic control parameters at intersections that changed from the Base Year to the future year No-Build conditions;
- Adjustments to reduced speed areas; and
- Modification of link behavior types.

4.3.4 Unconstrained Analysis

It was observed during this analysis that the Design Year (2045) No Build, Build Alt 1, and Build Alt 7A microsimulation models were *constrained* by upstream or downstream bottlenecks; that is, a significant portion of the traffic attempting to enter or exit the network was unable to do so due to geometric constraints at the boundaries of the network. VISSIM reports this volume as Latent Demand. Since the largest contributing factors to these high latent demand values were geometric constraints that will not be addressed as part of the SC 41 widening project, or any currently committed projects, there was a need for an additional analysis step: *unconstrained analysis*.

The unconstrained analysis was determined necessary for two primary reasons:

1. If traffic trapped outside of the network (upstream of the project limits) in the microsimulation analysis, the full projected 2045 design year demand volume is not reaching the improved portions of the network, and the analysis is not able to fully test the capacity of the improvements to process the demand. Without an *unconstrained* analysis, this could lead to reporting of results which were more favorable than should be expected. Further, this provides flexibility for upstream improvements with less concern for overloading a recently completed project.

2. If traffic is unable to leave the network due to the capacity constraints downstream of the project limits, this contributes to congestion within the project limits. This congestion is not necessarily a result of an inadequate design, as it becomes difficult to determine whether this congestion would also occur within the project limits if these downstream constraints did not exist. Without an *unconstrained* analysis, this could lead to reporting of results which were less favorable than might be expected.

To perform an unconstrained analysis, each of the Design Year models were modified such that the capacity limitations were removed (or significantly reduced), thereby allowing a higher number of vehicles to enter and leave the network.

To reflect unconstrained conditions, geometric modifications were made to the build alternative models to US 17 at the north and south ends of the network, where high volumes of traffic were not able to enter the network. These were not necessarily indicative of a planned project; rather, the adjustments were those deemed necessary to allow all – or nearly all – inbound traffic into the network and outbound traffic to leave. The modifications listed below were included in the unconstrained model:

- US 17 & 6 Mile Road Intersection
  - Removed signaled intersection controls.
  - Widen northbound to four (4) lanes
- US 17 & Long Point Road
  - Removed signaled intersection controls.
  - Widen northbound to four (4) lanes
- US 17 & Park West Boulevard/South Morgans Point Road
  - Removed signaled intersection controls.
  - Added a third northbound left-turn lane into Park West Boulevard.
  - Widen northbound to four (4) lanes from the intersection to the south but kept the three (3) receiving lanes north of this intersection.

5.1 Combined Network Operations

Following is a summary of the operational analysis of the no-build and build scenarios associated with the combined network of SC 41 Widening and the SC 41 and US 17 Intersection improvements. These scenarios all reflect unconstrained conditions, assuming the intersections of US 17 with Long Point Road, Six Mile Road and Park West Boulevard, were left unrestricted in the model. These intersections were selected based on initial model observations which indicated that, in some cases traffic could not get away from the SC 41 intersection to allow it to be adequately evaluated. Similarly, these intersections reduced the demand that could reach the intersection.

5.1.1 Delay and Average Speed (AM and PM)

A comparison of the Design Year network-wide Average Delay, Total Delay and Average Speed is shown in **Table 22** for each of the Design Year conditions. These results indicate that Alternative 1 provides the best network wide operating conditions, with the lowest amount of delay, and the highest average speed.

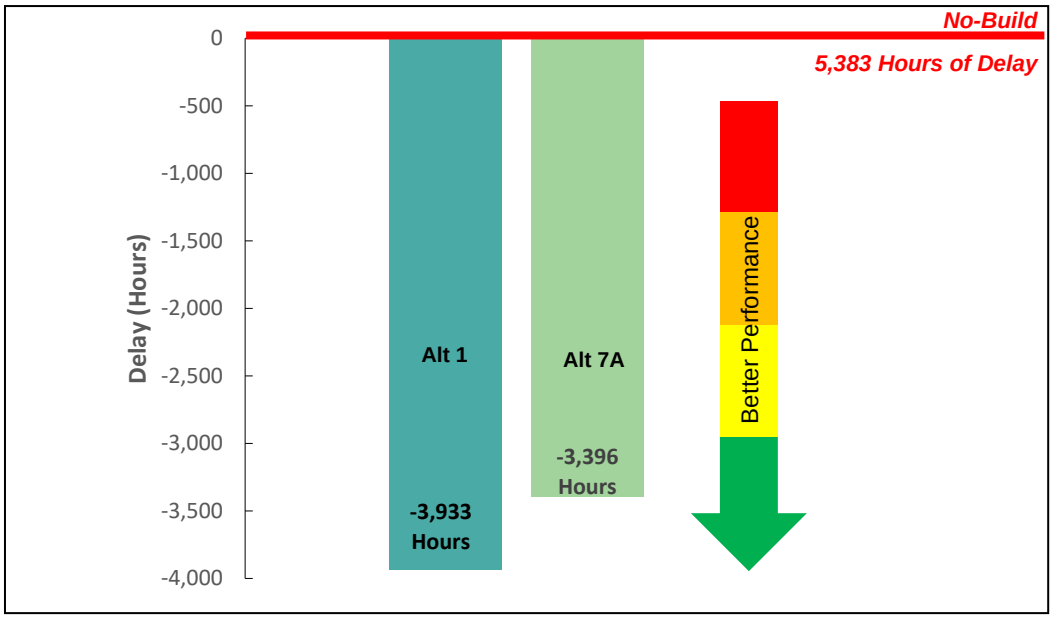
Table 22: Design Year (2045) Alternatives AM and PM Peak Hour Network-Wide MOE's

Network Wide-MOEs	UNITS	No Build		Build Alternative 1		Build Alternative 7A	
		AM	PM	AM	PM	AM	PM
Average Delay (All)	Seconds/ Vehicle	553.57	749.30	117.60	140.27	143.96	197.01
Total Delay	Hours	2,357	3,026	632	818	817	1,117
Average Speed (All)	Miles/ Hour	10.97	8.20	29.49	27.87	26.98	23.90

Average delay per vehicle: Total delay / (Vehicles in the network + vehicles that have arrived)
****Total delay of all vehicles that are in the network or have already left it.***

The delay experienced each day by drivers in the AM and PM peak hours is forecast to total 5,383 hours within the modeled network. Comparative microsimulation models indicate that Alternative 1 will reduce that total delay by 3,933 hours, or 73% in the design year. Alternative 7A will reduce the delay by 3,396 hours, or 63%. This comparison is illustrated by **Figure 45**.

Figure 45: Reduction in 2045 Total Peak Hour Delay



5.1.2 Volume Served vs. Demand (AM and PM)

Traditional LOS and delay results are more meaningful for evaluation in the future, particularly in high traffic growth conditions, when evaluated along with the Volume Served. The values in **Tables 23-24** illustrate the amount of the total demand volume is actually processed by each scenario. The results indicate that both build alternatives serve over 90% of the demand in the design year, compared to 55% for the no-build condition. There are segments that appear to process more than the demand. This is because, through dynamic assignment, the model routes traffic to other routes based on congestion.

Table 23: SC 41 & US 17 Design Year (2045) Alternatives AM Peak Hour Demand vs. Volume Served

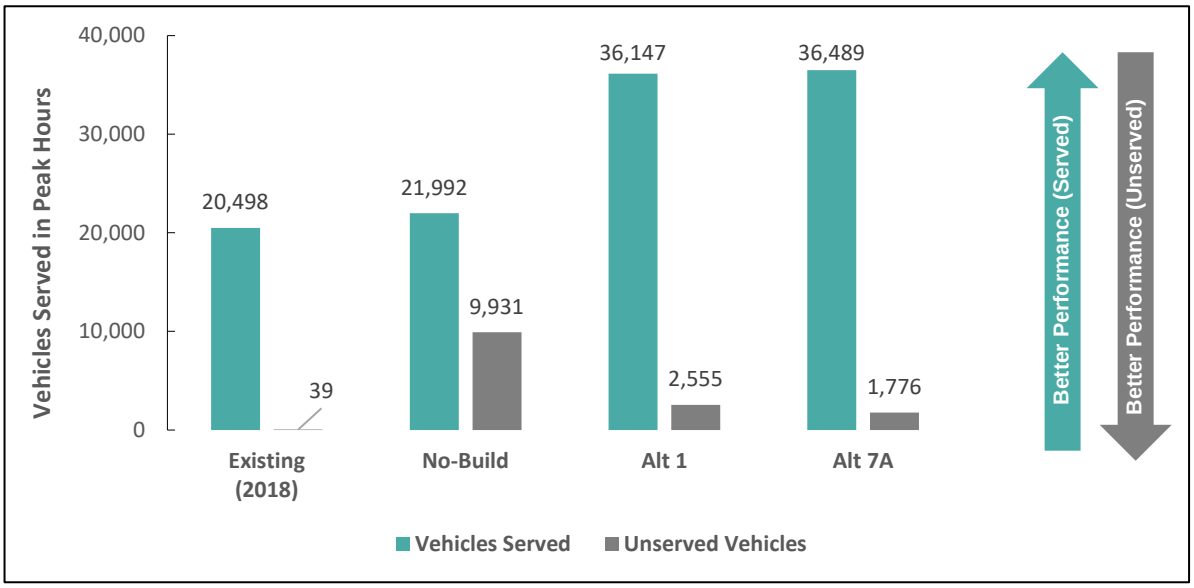
Location		2045 No Build		Build Alternative 1		Build Alternative 7A	
		Demand	Volume Served	Demand	Volume Served	Demand	Volume Served
SC 41 Northbound	North of Winnowing Way	1065	526	1332	1275	1107	1004
	North of Joe Rouse Road	946	389	1099	1056	334	316
	North of SC 41 Bypass Split	-	-	-	-	931	901
SC 41 Southbound	North of SC 41 Bypass Split	-	-	-	-	2275	2174
	North of Joe Rouse Road	1531	770	2055	1963	690	800
	North of Winnowing Way	2421	1240	3050	2794	2915	2809
US 17 Northbound	North of Hamlin/Brickyard	3640	2168	3765	3554	3632	3353
	North of SC 41	3136	1856	3502	2575	3464	2592
	North of Winnowing Way	3239	2010	3200	3165	3193	2926
US 17 Southbound	North of Winnowing Way	3824	2380	3571	3417	3726	3678
	North of SC 41	3646	2249	3346	3055	3437	3358
	SC 41 SB to US 17 SB	1858	934	2210	2350	2154	2321
	North of Hamlin/Brickyard	5493	3146	5268	5013	5398	5291

Table 24: SC 41 & US 17 Design Year (2045) Alternatives PM Peak Hour Demand vs. Volume Served

Location		No Build		Build Alternative 1		Build Alternative 7A	
		Demand	Volume Served	Demand	Volume Served	Demand	Volume Served
SC 41 Northbound	North of Winnowing Way	2237	1100	3091	2994	2548	2572
	North of Joe Rouse Road	1747	770	2329	2260	658	762
	North of SC 41 Bypass Split	-	-	-	-	2141	1896
SC 41 Southbound	North of SC 41 Bypass Split	-	-	-	-	1965	1497
	North of Joe Rouse Road	1587	851	2052	1971	638	1033
	North of Winnowing Way	2027	1199	2505	2403	2282	2227
US 17 Northbound	North of Hamlin/Brickyard	5195	2742	5820	5557	5416	5124
	North of SC 41	3590	1904	4344	2988	4181	3014
	North of Winnowing Way	3748	2228	3682	3592	3593	3551
US 17 Southbound	North of Winnowing Way	2597	970	2648	2447	2583	2440
	North of SC 41	2545	897	2548	2186	2491	2178
	SC 41 SB to US 17 SB	1569	1077	1852	1908	1702	1675
	North of Hamlin/Brickyard	3738	1701	3794	3583	3419	3518

The volume served comparison among the design year scenarios is further illustrated in **Figure 46**.

Figure 46: Comparison of 2045 AM and PM Peak Hour Volume Served

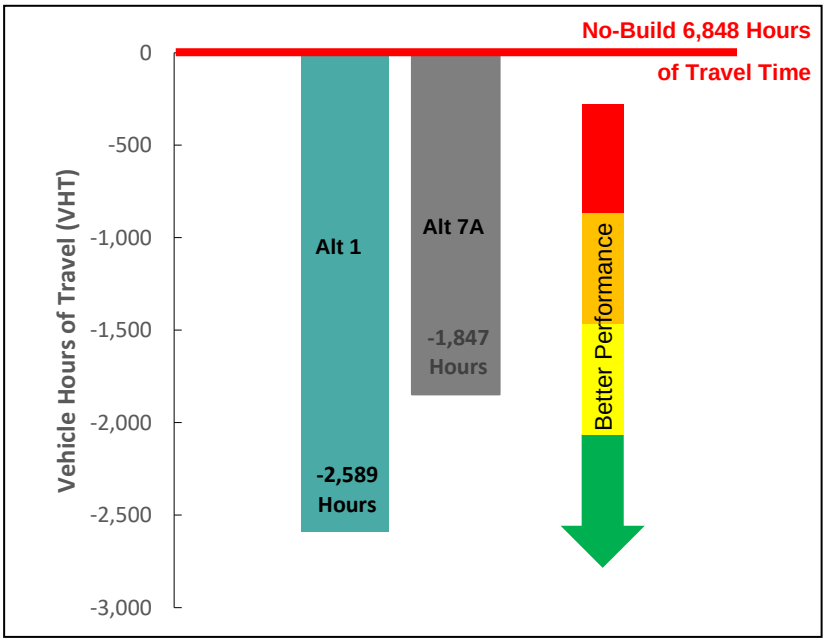


5.1.3 Vehicle Hours Traveled (VHT) (AM and PM)

Another measure of network-wide effectiveness is vehicle hours traveled. This was calculated by the microsimulation model for the two peak hours of the day, and for each of the alternatives: no-build, Alternative 1 and Alternative 7A. It is useful in relating two of the previously mentioned MOEs, volume served and total delay.

Figure 47 illustrates the comparative reduction in travel of Alternatives 1 and 7A when compared to the no-build condition for the design year, 2045, traffic.

Figure 47: Comparison of 2045 AM and PM Peak Vehicle Hours Traveled



5.1.4 Summary of Comparative Network Measures of Effectiveness

The network MOEs are summarized in **Table 25**. Shaded cells in the table indicate the best performing alternative for each MOE. Each value includes the percentage of improvement over the No-Build Alternative.

Build Alternatives 1 and 7A both make significant improvements over the no-build condition when evaluated under the 2045 design year traffic forecast. Considering a very comparable number of vehicles served between these two build alternatives, the corresponding difference in vehicles hours traveled or, alternatively, the total delay, indicates that Alternative 7A requires more time for approximately the same number of vehicles to complete the same trip.

Table 25: Summary of Network MOEs Comparing No-Build and Build Alternatives

Network MOEs	UNITS	No Build		Build Alternative 1		Build Alternative 7A	
		AM	PM	AM	PM	AM	PM
Average Delay/Vehicle	Seconds	554	749	117.60	140.27	143.96	197.01
				79%	81%	74%	74%
Total Delay Peak Hours	Hours/Day	2,357	3,026	632	818	817	1,117
				73%	73%	65%	63%
Average Speed	MPH	10.97	8.20	29.49	27.87	26.98	23.90
				169%	240%	146%	191%
Peak Hour Vehicle Hours Traveled	Hours/Day	3,111	3,737	1,965	2,294	2,294	2,707
				37%	39%	26%	28%
Volume Served	Vehicles	11,923	10,069	17,410	18,737	17,965	18,524
				46%	86%	51%	84%

Average delay per vehicle: Total delay / (Vehicles in the network + vehicles that have arrived)
****Total delay of all vehicles that are in the network or have already left it.***

According to the National Center for Educational Statistics, there are 181 days in a typical school year in South Carolina. Traffic data and observations indicate that traffic is heavier on the days when school is in session. If it was assumed that the study area only experienced peak traffic flows and the corresponding delays during the days schools is in session, Build Alternative 1 would save approximately 712,000 vehicle hours of delay in a year. Build Alternative 7A would save somewhat lesser amount, approximately 624,000 vehicle hours of delay in a year.

It is important to note that these annual reductions in delay are based on AM and PM peak hours. The PM peak hour used in these studies does not coincide with typical afternoon school dismissals, and therefore underestimates the potential for annual time savings or reduction in delays.

Appendix A

March 2019 Field Visit Notes

Thursday, March 14, 2019 – SC 41 Travel Time Measurements

AM Peak Hour Travel Times & Observations:

- 1 northbound: 6:38 AM start (5:24)
- 1 southbound: 6:45 AM start (6:47)
- 2 southbound: 7:28 AM start (15:46)
    - Observations:
        - Came to complete stop at Dunes West Blvd (stop and go from 0-20mph).
        - After Joe Rouse - speed was 25-35.
- 3 northbound: 7:47 AM start (6:24)
- 3 southbound: 7:58 AM start (13:30)
    - Observations:
        - 55 mph to Dunes West and then came complete stop at Nehemiah Road intersection.
        - 20 cars turned left from dual lefts at Joe Rouse (only these lefts using the outer right lane).

PM Peak Hour Travel Times & Observations:

- 1 northbound: 3:35:00 PM start (6:49)
- 1 southbound: 4:01:00 PM start (7:45)
- 2 northbound: 4:17:00 PM start (7:07)
- 2 southbound: 4:25:00 PM start (6:16)
- 3 northbound: 4:37:00 PM start (8:01)
- 3 southbound: 4:47:00 PM start (6:43)
- 4 northbound: 4:56:00 PM start (5:45)
- 4 southbound: 5:03:00 PM start (7:39)
- 5 northbound: 5:14:00 PM start (7:15)
- 6 northbound: 5:35:00 PM start (6:35)
- 6 southbound: 5:43:00 PM start (6:53)

Tuesday, March 18, 2019 – US 17 Travel Time Measurements

AM Peak Hour Travel Times & Observations:

- 1 eastbound: 6:58:00 AM start (5:56)
- 1 westbound: 7:05:00 AM start (5:47)
- 2 eastbound: 7:12:00 AM start (6:18)
- 2 westbound: 7:20:00 AM start (6:23)
- 3 eastbound: 7:27:00 AM start (5:07)
- 3 westbound: 7:34:00 AM start (8:19)
- 4 eastbound: 7:44:00 AM start (6:10)
- 4 westbound: 7:51:00 AM start (6:02)
- 5 eastbound: 7:59:00 AM start (5:41)
- 5 westbound: 8:07:00 AM start (5:12)

PM Peak Hour Travel Times & Observations:

- 1 eastbound: 4:17:00 PM start (5:33)
- 1 westbound: 4:25:00 PM start (11:42)
- 2 eastbound: 4:37:00 PM start (5:58)
- 2 westbound: 4:45:00 PM start (12:00)
    - Observations:
        - Westbound queue from SC 41 to Porchers Bluff Road intersection.
        - 70 second green time for the eastbound left phase at the US 17 & SC 41 intersection.
- 3 eastbound: 4:58:00 PM start (6:32)
- 3 westbound: 5:07:00 PM start (13:06)
- 4 eastbound: 5:22:00 PM start (12:13)
- 4 westbound: 5:43:00 PM start (7:38)

Appendix B

Traffic Control Data

FED. RD. DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.
	SC	CHARLESTON			US 17	SP1

— DETECTION INSTALLATION CHART —

PHASE / LOOP LTR	DETECTOR AMP NO.	DETECTOR CHAN NO.	WIRED TO PHASE(S)	LOCK X	NON-LOCK X	PULSE X	PRES X	OPERATION DELAY SEC	OPERATION EXT SEC	SPECIAL FEATURES TIME OF DAY-TOD SWITCHING, etc.	LOOP DESIGN SIZE X	LOOP DESIGN NO. OF TURNS	LOOP DESIGN DIST. FROM ⚓
1a			1		X		X			VIDEO	6 X 30	-	-5'
5a			5		X		X			VIDEO	6 X 30	-	-5'
8a			8		X		X			VIDEO	6 X 30	-	-5'
8b			8		X		X	10.0		VIDEO	6 X 30	-	-5'
2a			2	X			X				6 X 6	4	255'
2b			2	X			X				6 X 6	4	255'
2c			2	X			X				6 X 6	4	385'
2d			2	X			X				6 X 6	4	385'
6a			6	X			X				6 X 6	4	255'
6b			6	X			X				6 X 6	4	255'
6c			6	X			X				6 X 6	4	385'
6d			6	X			X				6 X 6	4	385'

NOTES

1. COORDINATE WITH EXISTING UTILITIES FOR POLE AND CONDUIT LOCATIONS.
2. CONSTRUCTION SHALL MEET CURRENT SCDOT SIGNAL DESIGN STANDARDS.
3. CONTRACTOR SHALL COORDINATE WITH SCDOT DISTRICT 6 AND TOWN OF MOUNT PLEASANT DURING CONSTRUCTION.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN OF MAST ARM POLES AND FOUNDATIONS. POLE STYLE SHALL BE COORDINATED WITH TOWN OF MOUNT PLEASANT AND POLES SHALL MEET CURRENT TOWN AND SCDOT STANDARDS.
5. EQUIPMENT HAS BEEN LOCATED TO ACCOUNT FOR THE WIDENING OF US 17 AS SHOWN.
6. TRAFFIC SIGNAL CONTROL WILL BE OPERATED BY ADAPTIVE CONTROL SYSTEM.
7. CONTROLLER TO BE TIED INTO FIBER OPTIC COMMUNICATION INTERCONNECT IN FUTURE.
8. ROADWAY NAME SIGNS "US HIGHWAY 17" AND "SIX MILE RD" TO BE INSTALLED ON MAST ARMS LATER
9. CONTACT SCDOT DISTRICT 6 SIGNAL SHOP TO ASSIST IN LOCATING MAST ARM POLE FOUNDATIONS

—SIGNAL EQUIPMENT—

ONE (1) 8 PHASE FULLY ACTUATED STANDARD 2070 CONTROLLER WITH FLASHER, SIGNAL MONITOR UNIT, AND ~~POLE~~ (BASE)-MOUNTED ~~336S~~ (332A) CABINET. EXT. ▭ PROP. ▬

8 MODEL 222, (2)-CHANNEL VEHICLE DETECTOR UNITS

PEDESTRIAN SIGNALS: EXT. △ P PROP. ▲ W/ACT. & SIGN

VEHICLE SIGNALS: EXT. ○▷ PROP. ●▶

SIGNAL NUMBER	1/6	2	5/2	6	6,8CONC	8	8,5CONC	P6	P8
LENS	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G		
PHASE	1,6	2	5,2	6	6,8	8	8,5	P6	P8
SIZE	12"	12"	12"	12"	12"	12"	12"	16"	16"
QUANTITY	1	2	1	2	1	1	1	2	2

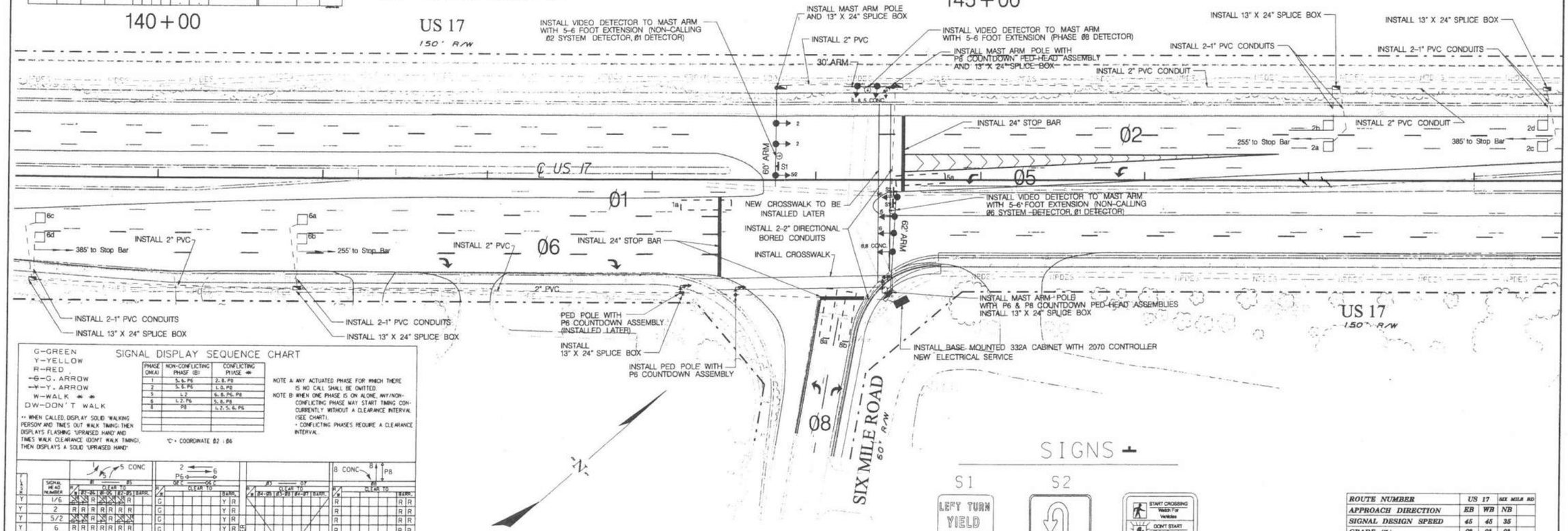
OLA= OLC= OLB= OLD=

MAST ARM POLES AS NECESSARY: ●

PEDESTRIAN POLES AS NECESSARY: ●

SIGNAL TIMINGS

INTERVAL	PHASE 1	2	3	4	5	6	7	8
WALK						7		7
DON'T WALK						30		28
MIN INITIAL	4	30			4	30		15
MAX INITIAL								
ADD/VEH								
VEH EXT	3.0	3.8			3.0	3.8		3.0
TIM BFR REDUC								
TIME TO REDUC								
MIN GAP								
MAX LIMIT	20	60			20	60		30
MAXIMUM 2								
YELLOW	4.0	4.7			4.0	4.7		4.0
RED CLEAR	2.0	2.0			2.0	2.0		2.0



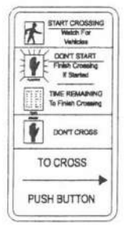
SIGNS

S1

R10-12

S2

NON STANDARD SIGN



R10-3E

SIGNAL DISPLAY SEQUENCE CHART

G-GREEN
Y-YELLOW
R-RED
-G-G. ARROW
-Y-Y. ARROW
W-WALK * *
DW-DON'T WALK

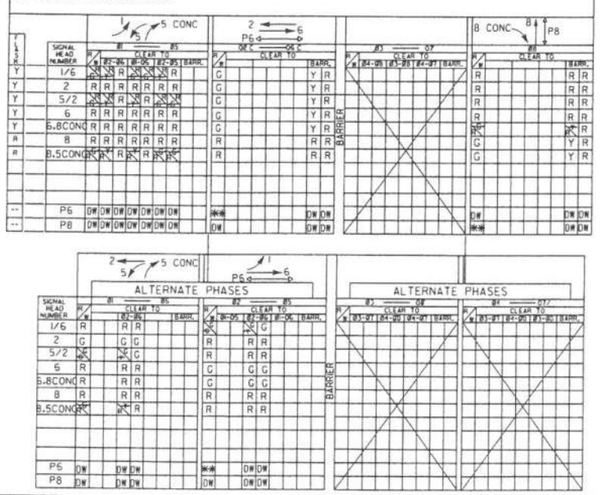
** WHEN CALLED, DISPLAY SOLID 'WALKING PERSON' AND TIMES OUT WALK TIMING; THEN DISPLAYS FLASHING 'UPRAISED HAND' AND TIMES WALK CLEARANCE (DON'T WALK TIMING), THEN DISPLAYS A SOLID 'UPRAISED HAND'

PHASE ON(A)	NON-CONFLICTING PHASE (B)	CONFLICTING PHASE *
1	5, 6, P6	2, 8, P8
2	5, 6, P6	1, 6, P8
5	1, 2	6, 8, P6, P8
6	1, 2, P6	5, 8, P8
8	P8	1, 2, 5, 6, P6

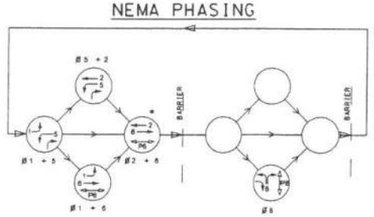
'C' = COORDINATE Ø2 : Ø6

NOTE A: ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE OMITTED.

NOTE B: WHEN ONE PHASE IS ON ALONE, ANY NON-CONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL (SEE CHART).
* CONFLICTING PHASES REQUIRE A CLEARANCE INTERVAL.



NEMA PHASING



NOTE: ACTUATED PHASES HAVING NO CALL, SHALL BE SKIPPED.

* ___STREET COORDINATED

FLASHING OPERATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 25491 ANDREW P. NICHOLS

SOUTH CAROLINA DENNIS CORPORATION NO. 3103 CERTIFICATE OF AUTHORIZATION

0 30 60 90 120

ROUTE NUMBER	US 17		SIX MILE RD
APPROACH DIRECTION	EB	WB	NB
SIGNAL DESIGN SPEED	45	45	35
GRADE (%)	0*	0*	0*

* ESTIMATED

DATE	REVISIONS

DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION

TRAFFIC SIGNAL PLAN

SPECIFIC LOCATION
US 17 AT SIX MILE ROAD

CITY	COUNTY
APPROVED BY	APPROVED BY
DIR. OF TRAFFIC ENGINEERING	ENGINEERING

DESIGNED	APN
DRAWN	MLW
CHECKED	XX
REVIEWED	XX
RECOMMENDED	

SCALE	DATE	SHEET NO.	INDEX NO.
1" = 30'	NOVEMBER 2009	SP1	

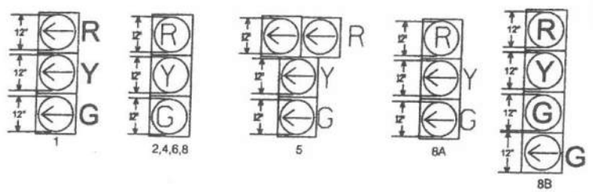
FED.RD. DIV. NO.	STATE	COUNTY	FILE	PROJ.	ROUTE	SHEET NO.	TOTAL SHEETS
	SC				US 17		TS-9

DETECTOR INSTALLATION CHART

PHASE / LOOP LTR*	DETECTOR AMP NO.	DETECTOR CHAN NO.	WIRED TO PHASE(S)	LOCK X	NON-LOCK X	PULSE X	PRES X	OPERATION DELAY SEC	OPERATION EXT SEC	SPECIAL FEATURES TIME OF DAY-TOD, SWITCHING, etc.	LOOP & VIDEO DESIGN SIZE I	LOOP & VIDEO DESIGN NO.OF TURNS	LOOP & VIDEO DESIGN DIST. FROM ℄
Ø1A			1		X		X			VIDEO	6 X 40		0
Ø1B			1		X		X			VIDEO	6 X 40		0
Ø2A			2	X			X				6 X 30	3	255
Ø2B			2	X			X				6 X 30	3	385
Ø4			4		X		X			VIDEO	6 X 40		0
Ø5			5		X		X			VIDEO	6 X 40		0
Ø6A			6	X			X				6 X 30	3	255
Ø6B			6	X			X				6 X 30	3	385
Ø8A			8		X		X			VIDEO	6 X 40		0
Ø8B			8		X		X			VIDEO	6 X 40		0

SIGNAL TIMINGS

	PHASE 1	2	3	4	5	6	7	8
WALK		7		7		7		7
DON'T WALK		18		18		18		21
MIN INITIAL	4	18		4	4	18		18
MAX INITIAL		18				18		
ADD/VEH		2.8				2.8		
VEH EXT	2.5	3.8		2.5	2.5	3.8		2.5
TIM BFR REDUC		18				18		
TIME TO REDUC		25				25		
MIN GAP		2.5				2.5		
MAX LIMIT	25	75		25	25	75		75
MAXIMUM 2	25	75		25	25	75		75
YELLOW	4.3	4.3		4.3	4.3	4.3		4.3
RED CLEAR	2.2	2.4		4.6	2.4	2.4		4.6



SIGNAL EQUIPMENT

EIGHT PHASE FULLY ACTUATED STANDARD TYPE 2070 CONTROLLER WITH FLASHER, SIGNAL MONITOR UNIT, AND BASE- MOUNTED 10S CABINET.

EXT. ▭ PROP. ▬

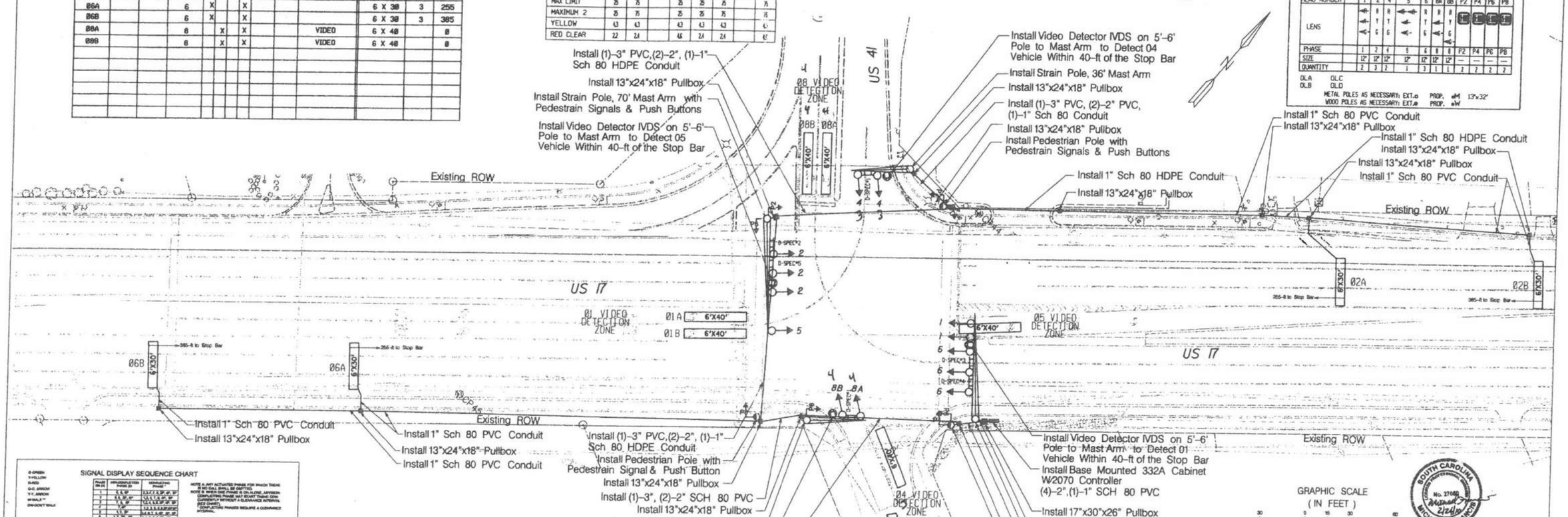
PEDESTRIAN SIGNALS: EXT. P PROP. P W/BCT. & SIGN

VEHICLE SIGNALS: EXT. ○→ PROP. ○→

HEAD NUMBER		1	2	4	5	6	8A	8B	P2	P4	P6	P8
LENS		R	R	R	←R	R	R	R				
		Y	Y	Y	←Y	Y	←Y	Y				
		G	G	G	←G	G	←G	G				
PHASE		1	2	4	5	6	8	8	P2	P4	P6	P8
SIZE		12"	12"	12"	12"	12"	12"	12"	—	—	—	—
QUANTITY		2	3	2	1	3	1	1	2	2	2	2

OLA OLC
OLB OLD

METAL POLES AS NECESSARY: EXT.○ PROP. ●M 13'x32'
VIDEO POLES AS NECESSARY: EXT.● PROP. ●W



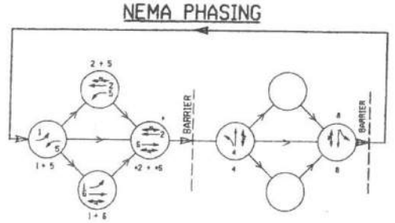
SIGNAL DISPLAY SEQUENCE CHART

SIGNAL DISPLAY SEQUENCE (PREFERENTIAL PHASING)

ALTERNATE PHASES

ALTERNATE PHASES

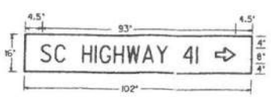
NEMA PHASING

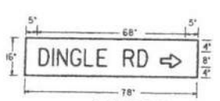


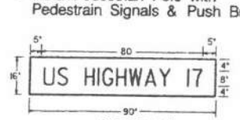
NOTE: ACTUATED PHASES HAVING NO CALL SHALL BE SKIPPED

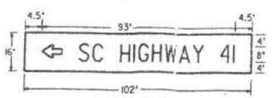
• R-S STREET COORDINATED

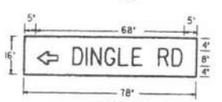
FLASHING OPERATION











GRAPHIC SCALE (IN FEET)
30 0 15 30 60
1" = 30'

SOUTH CAROLINA No. 27048 MICHAEL L. FRANCIS 2/24/10

SOUTH CAROLINA CARTER & BURGESS, INC NO. 164 CERTIFICATE OF AUTHORIZATION

CARTER & BURGESS, INC., a JACOBS COMPANY

DATE	REVISIONS

DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION

SUBJECT TITLE: TRAFFIC SIGNAL PLAN

SPECIFIC LOCATION: US 17 at US 41

		CITY	COUNTY
DESIGNED	WSM	APPROVED BY	APPROVED BY
DRAWN	WSM		
CHECKED	DAK		
REVIEWED	MF	SCALE	DATE
RECOMMENDED		1" = 30'	February 2010

SHEET NO. | INDEX NO.

PROJ. ROAD DESIG. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
	SC	CHARLESTON			US 17 & S-504		

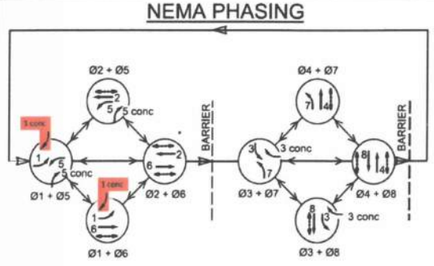
SIGNAL EQUIPMENT

ONE (1) 8-PHASE FULLY ACTUATED STANDARD 2070 CONTROLLER WITH FLASHER, SIGNAL MONITOR UNIT, AND BASE-MOUNTED 332A CABINET; EXT. PROP.
8 MODEL 222, (2)-CHANNEL VEHICLE DETECTOR UNITS
8 PEDESTRIAN PUSH BUTTONS;
8 PEDESTRIAN SIGNALS; EXT. PROP.
3 PEDESTRIAN PEDESTALS;
VEHICLE SIGNALS; EXT. PROP.

HEAD NUMBER	1,2F	2	2,3 CONC	3,4F	4	4,5 CONC	5,6F	6	7,8F	8	8, 5 CONC	2P	4P	6P	8P
LENS		R Y G	R Y G		R Y G	R Y G		R Y G		R Y G	R Y G				
PHASE	1,OLA	2	2,3 CONC	3,OLB	4	4,5 CONC	5,OLC	6	7,OLD	8	8, 5 CONC	2P	4P	6P	8P
SIZE	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	16"	16"	16"	16"
QUANTITY	1	1	1	1	1	1	1	3	1	1	1	2	2	2	2

OLA = Ø1+Ø2 (FYA) OLC = Ø5+Ø6 (FYA)
OLB = Ø3+Ø4 (FYA) OLD = Ø7+Ø8 (FYA)
METAL POLES AS NECESSARY; EXT. PROP.
WOOD POLES AS NECESSARY; EXT. PROP.

NEMA PHASING



NOTE: ACTUATED PHASES HAVING NO CALL, SHALL BE SKIPPED

* ____ STREET COORDINATED

FLASHING OPERATION

Sign A
R10-12Aa30

Sign B
D3-1

Sign C
D3-1

Sign D
D3-1

Sign E
D3-1

Sign F
D3-1

R10-3eL
9" X 15"

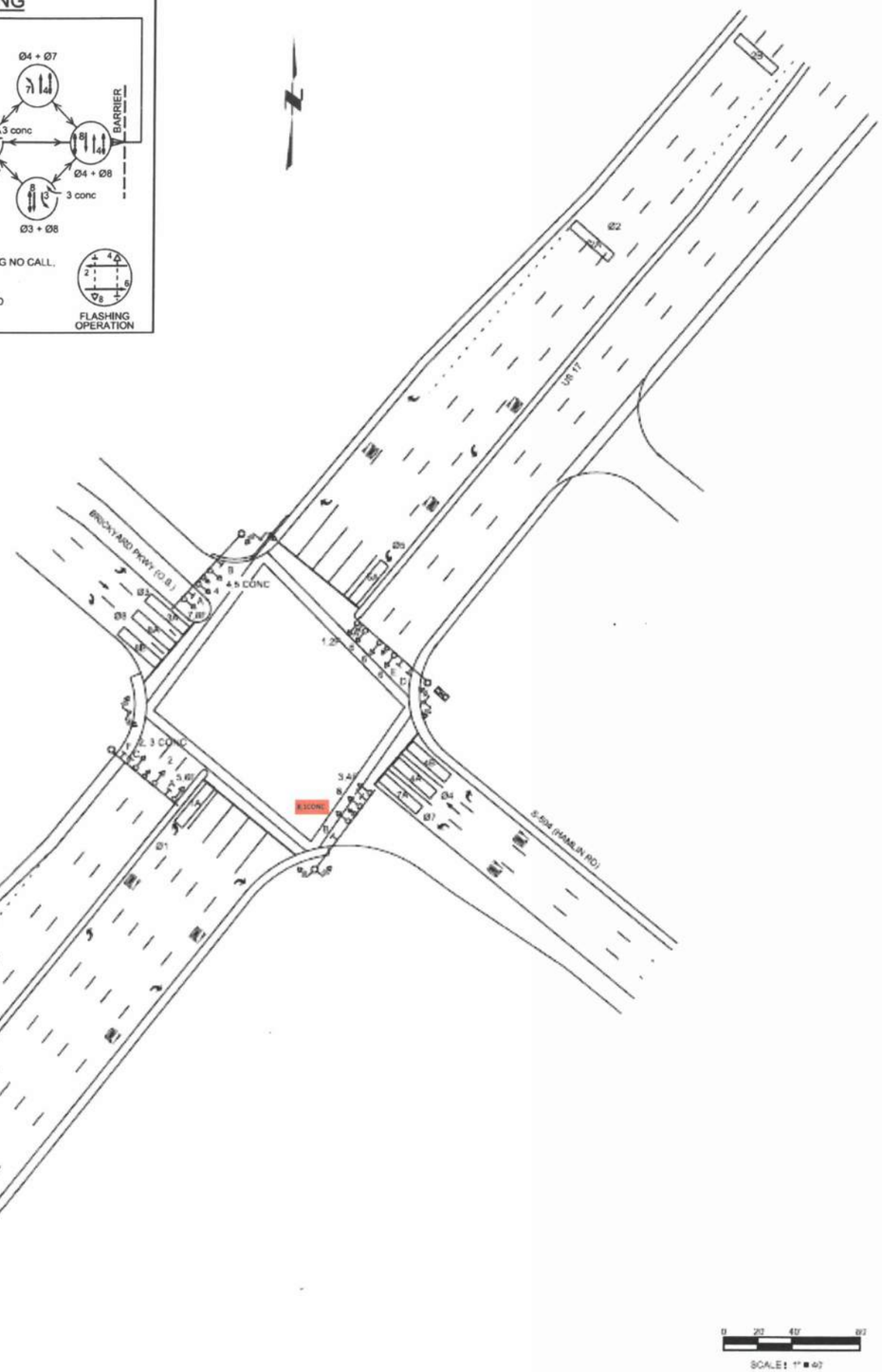
R10-3eR
9" X 15"

LOOP DETECTOR INSTALLATION CHART

PHASE LOOP NUMBER	DETECTOR AMP NO.	DETECTOR CHAN NO.	WIRED TO PHASE(S)	LOCK	NON-LOCK	PULSE	PRES	OPERATION DELAY SEC	OPERATION EXT SEC	SPECIAL FEATURES TIME OF DAY/DOG SWITCHING, etc.	LOOP DESIGN SIZE X	LOOP DESIGN NO. OF TURNS	LOOP DESIGN DIST. FROM S/L
1A			1		X		X			VIDEO DETECTION	6'X30'		
2A			2	X			X				6'X30'	4	252'
2B			2	X			X				6'X30'	4	375'
3A										VIDEO DETECTION	6'X30'		
4A			4		X		X			VIDEO DETECTION	6'X30'		
4B			4		X		X			VIDEO DETECTION	6'X30'		
5A			5		X		X			VIDEO DETECTION	6'X30'		
6A			6	X			X				6'X30'	4	250'
6B			6	X			X				6'X30'	4	383'
7A			7		X		X			VIDEO DETECTION	6'X30'		
8A			8		X		X			VIDEO DETECTION	6'X30'		
8B			8		X		X			VIDEO DETECTION	6'X30'		

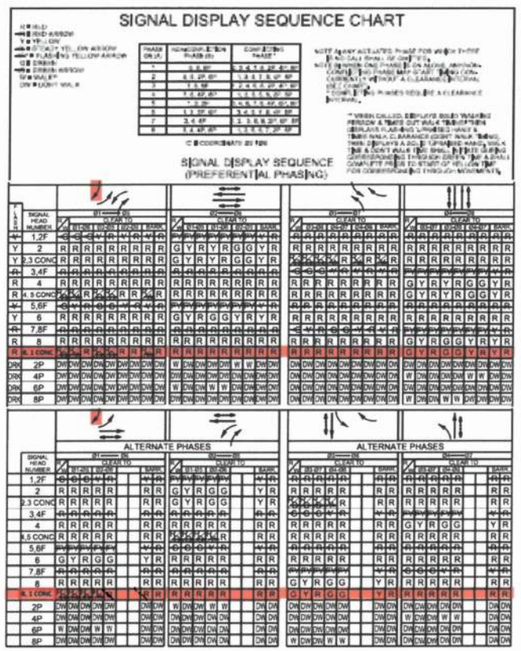
SIGNAL TIMINGS

INTERVAL	PHASE 1	2	3	4	5	6	7	8
WALK		7		7		7		7
DON'T WALK		33		38		29		36
MIN INITIAL	6	15	6	8	6	15	6	8
MAX INITIAL		24				24		
ADD/VEH		0,6				0,6		
VEH EXT	2,5	3,5	2,5	3,0	2,5	3,5	2,5	3,0
TIM BFR REDUC		25				25		
TIME TO REDUC		10				10		
MIN GAP		2,5				2,5		
MAX LIMIT	15	45	15	20	15	45	15	20
MAXIMUM 2								
YELLOW	4,4	4,4	3,4	3,4	4,4	4,4	3,4	3,4
RED CLEAR	3,9	3,9	3,6	3,6	3,9	3,9	3,6	3,6

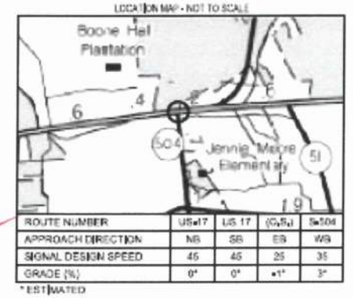


0 20 40 80
SCALE: 1" = 40'

SIGNAL DISPLAY SEQUENCE CHART



LOCATION MAP - NOT TO SCALE



ROUTE NUMBER	US-17	US 17	(O.S.)	S-504
APPROACH DIRECTION	NB	SB	EB	WB
SIGNAL DESIGN SPEED	45	45	25	35
GRADE (%)	0*	0*	+1*	3*

*ESTIMATED

12/9/18

DATE	REVISION DESCRIPTION
REV. BY	
09/16	MATCH EXISTING CONDITIONS
CTR	

DESIGNED
DRAWN CTR
REVIEWED

SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION
CHARLESTON S.C.

SUBJECT TITLE: SIGNAL PLAN

SPECIFIC LOCATION: US 17 & S-504 (HAMLIN RD) / BRICKYARD PKWY (O.S.)

CITY: MT. PLEASANT COUNTY: CHARLESTON

APPROVED BY
DISTRICT 6 & TRAFFIC ENGINEER
DISTRICT ENGINEERING ADMINISTRATOR

SCALE	DATE	SHEET NO.	INDEX NO.
1"=40'	09/16		

DETECTOR INSTALLATION CHART

PHASE / LOOP LTR*	DETECTOR AMP NO.	DETECTOR CHAN NO.	WIRED TO PHASE(S)	OPERATION LOCK	OPERATION NON-LOCK	OPERATION PULSE	OPERATION PRES	OPERATION DELAY SEC	OPERATION EXT SEC	SPECIAL FEATURES TIME OF DAY-TOD, SWITCHING, etc.	LOOP & VIDEO DESIGN SIZE	LOOP & VIDEO DESIGN NO.OF TURNS	LOOP & VIDEO DESIGN DIST. FROM ⊕
Ø1			1		X		X			VIDEO	6 X 40		0
Ø2A			2	X			X				6 X 30		255
Ø2B			2	X			X				6 X 30		385
Ø4A			4		X		X			VIDEO	6 X 40		0
Ø4B			4		X		X			VIDEO	6 X 40		0
Ø4C			4		X		X	10		VIDEO	6 X 40		0
Ø5			5		X		X			VIDEO	6 X 40		0
Ø6A			6	X			X				6 X 30		255
Ø6B			6	X			X				6 X 30		385
Ø8A			8		X		X			VIDEO	6 X 40		0
Ø8B			8		X		X			VIDEO	6 X 40		0
Ø8C			8		X		X	10		VIDEO	6 X 40		0

PEDESTRIAN SIGNS

P2,4,P6,P8

4,5CON, 8,1CON

V6,3&5,7/4

2,4,6,8

FED. ROAD DIST. NO.	STATE	COUNTY	PROJ.	PROJ.	ROUTE	SHEET NO.	TOTAL SHEETS
	SC				US 17		TS-8

SIGNAL EQUIPMENT

EIGHT PHASE FULLY ACTUATED STANDARD TYPE 2078 CONTROLLER WITH FLASHER, SIGNAL MONITOR UNIT, AND BASE-MOUNTED 332 CABINET.

EXT. ▭ PROP. ▬

PEDESTRIAN SIGNALS: EXT. P PROP. P W/ACT. & SIGN

VEHICLE SIGNALS: EXT. ○→ PROP. ○→

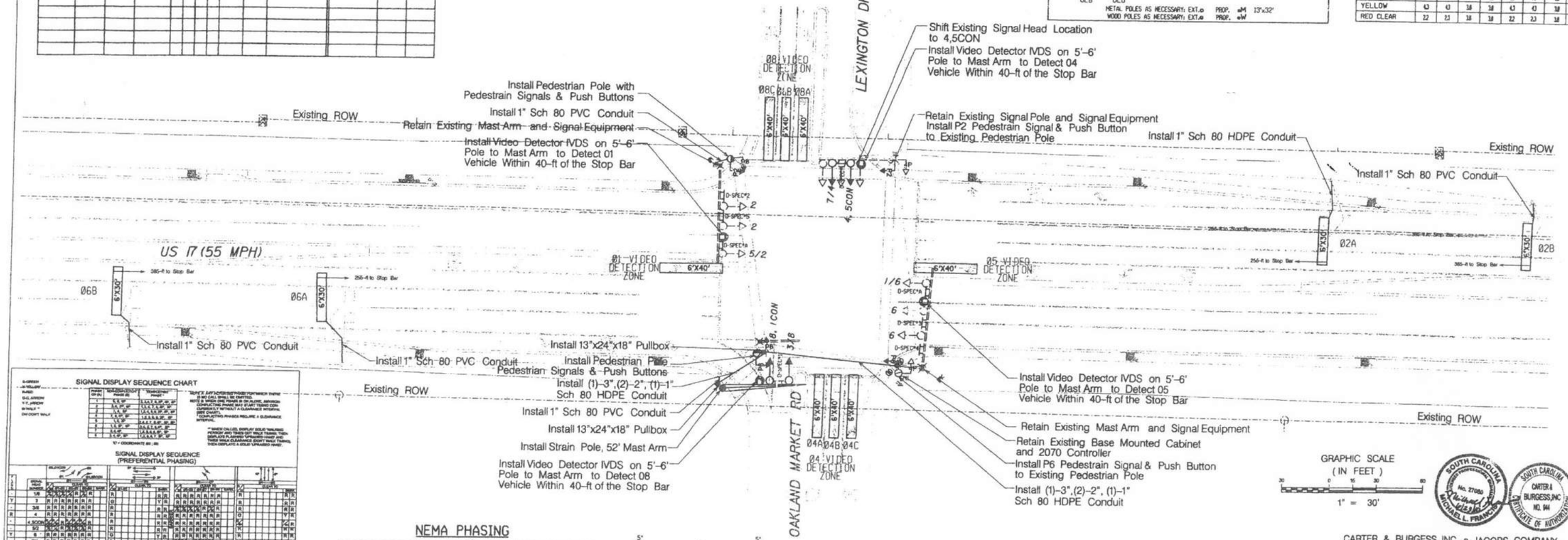
HEAD NUMBER	1/6	2	3/8	4,5CON	5/2	6	7/4	8,1CON	P2	P4	P6	P8
LENS	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G				
PHASE	1/6	2	3/8	4	5/2	6	7/4	8	P2	P4	P6	P8
SIZE	12"	12"	12"	12"	12"	12"	12"	12"	—	—	—	—
QUANTITY			1	1			1	1	2	2	2	2

OLA OLC
OLB OLD

METAL POLES AS NECESSARY; EXT.○ PROP. ⊿M 13'x32'
WOOD POLES AS NECESSARY; EXT.○ PROP. ⊿W

SIGNAL TIMINGS

	PHASE 1	2	3	4	5	6	7	8
WALK		7		7		7		7
DON'T WALK		25		31		11		21
MIN INITIAL	4	31	4	4	4	31	4	4
MAX INITIAL		31				31		
ADD/VEH		2.1				2.1		
VEH EXT	2.5	3.1	2.5	2.5	2.5	3.1	2.5	2.5
TIM BFR REDUC		31				31		
TIME TO REDUC		25				25		
MIN GAP		2.5				2.3		
MAX LIMIT	25	75	25	25	25	75	25	75
MAXIMUM 2	25	75	25	25	25	75	25	75
YELLOW	4.3	4.3	3.8	3.8	4.3	4.3	3.8	3.8
RED CLEAR	2.2	2.3	3.8	3.8	2.2	2.3	3.8	3.8



GRAPHIC SCALE (IN FEET)

30 0 15 30 60

1" = 30'

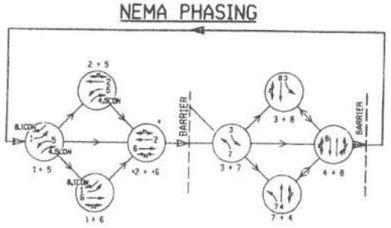
SIGNAL DISPLAY SEQUENCE CHART

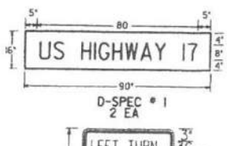
SIGNAL DISPLAY SEQUENCE (PREFERENTIAL PHASING)

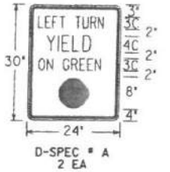
ALTERNATE PHASES

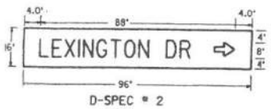
ALTERNATE PHASES

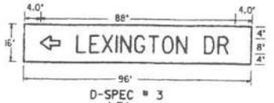
NEMA PHASING











CARTER & BURGESS, INC., a JACOBS COMPANY

DATE	REVISIONS

DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION

SUBJECT TITLE: TRAFFIC SIGNAL PLAN

SPECIFIC LOCATION: US 17 at Lexington Drive

CITY MOUNT PLEASANT | COUNTY

		APPROVED BY	APPROVED BY
DESIGNED	WSM		
DRAWN	WSM		
CHECKED	DAK		
REVIEWED	MF		
RECOMMENDED			

SCALE	DATE	SHEET NO.	INDEX NO.
1" = 30'	June 2010		

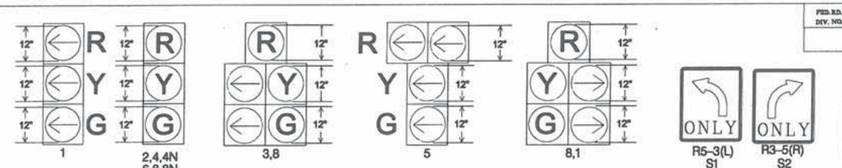
FED.RD. DIV. NO.	STATE	COUNTY	FILE	PROJ.	ROUTE	SHEET NO.	TOTAL SHEETS
	SC				US 17		TS-9

DETECTOR INSTALLATION CHART

PHASE/ LOOP LTR*	DETECTOR AMP NO.	DETECTOR CHAN NO.	WIRED TO PHASE(S)	OPERATION LOCK (X)	OPERATION NON-LOCK (X)	OPERATION PULSE (X)	OPERATION PRES (X)	OPERATION DELAY SEC	OPERATION EXT SEC	SPECIAL FEATURES TIME OF DAY-TOD, SWITCHING, etc.	LOOP & VIDEO DESIGN SIZE '	LOOP & VIDEO DESIGN NO.OF TURNS	LOOP & VIDEO DESIGN DIST. FROM ⚓
Ø1A			1		X		X			VIDEO	6 X 40		0
Ø1B			1		X		X			VIDEO	6 X 40		0
Ø2A			2	X			X				6 X 30		255
Ø2B			2	X			X				6 X 30		385
Ø4A			4		X		X			VIDEO	6 X 40		0
Ø4B			4		X		X			VIDEO	6 X 40		0
Ø5A			5		X		X			VIDEO	6 X 40		0
Ø6A			6	X			X				6 X 30		255
Ø6B			6	X			X				6 X 30		385
Ø8A			8		X		X			VIDEO	6 X 40		0
Ø8B			8		X		X			VIDEO	6 X 40		0
Ø8C			8		X		X	10		VIDEO	6 X 40		0

SIGNAL TIMINGS

	PHASE 1	2	3	4	5	6	7	8
WALK		7		7		7		7
DON'T WALK		25		35		26		46
MIN INITIAL	3	30		4	4	30		4
MAX INITIAL		30				30		
ADD/VEH		2.0				2.0		
VEH EXT	2.5	3.0		2.5	2.5	3.0		2.5
TIM BFR REDUC		30				30		
TIME TO REDUC		25				25		
MIN GAP		2.5				2.5		
MAX LIMIT	25	75		60	25	75		64
MAXIMUM 2	25	75		60	25	75		64
YELLOW	4.3	4.3		3.0	4.3	4.3		3.0
RED CLEAR	2.0	2.3		3.0	2.1	2.3		3.0



— SIGNAL EQUIPMENT —

PROPOSED 8 PHASE FULLY ACTUATED STANDARD 170 CONTROLLER WITH FLASHER, SIGNAL MONITOR UNIT, AND BASE-MOUNTED 332A CABINET. EXT. ☐ PROP. ■

4 MODEL 222, (2)-CHANNEL VEHICLE DETECTOR UNITS

PEDESTRIAN SIGNALS: EXT. P PROP. P W/ACT. & SIGN

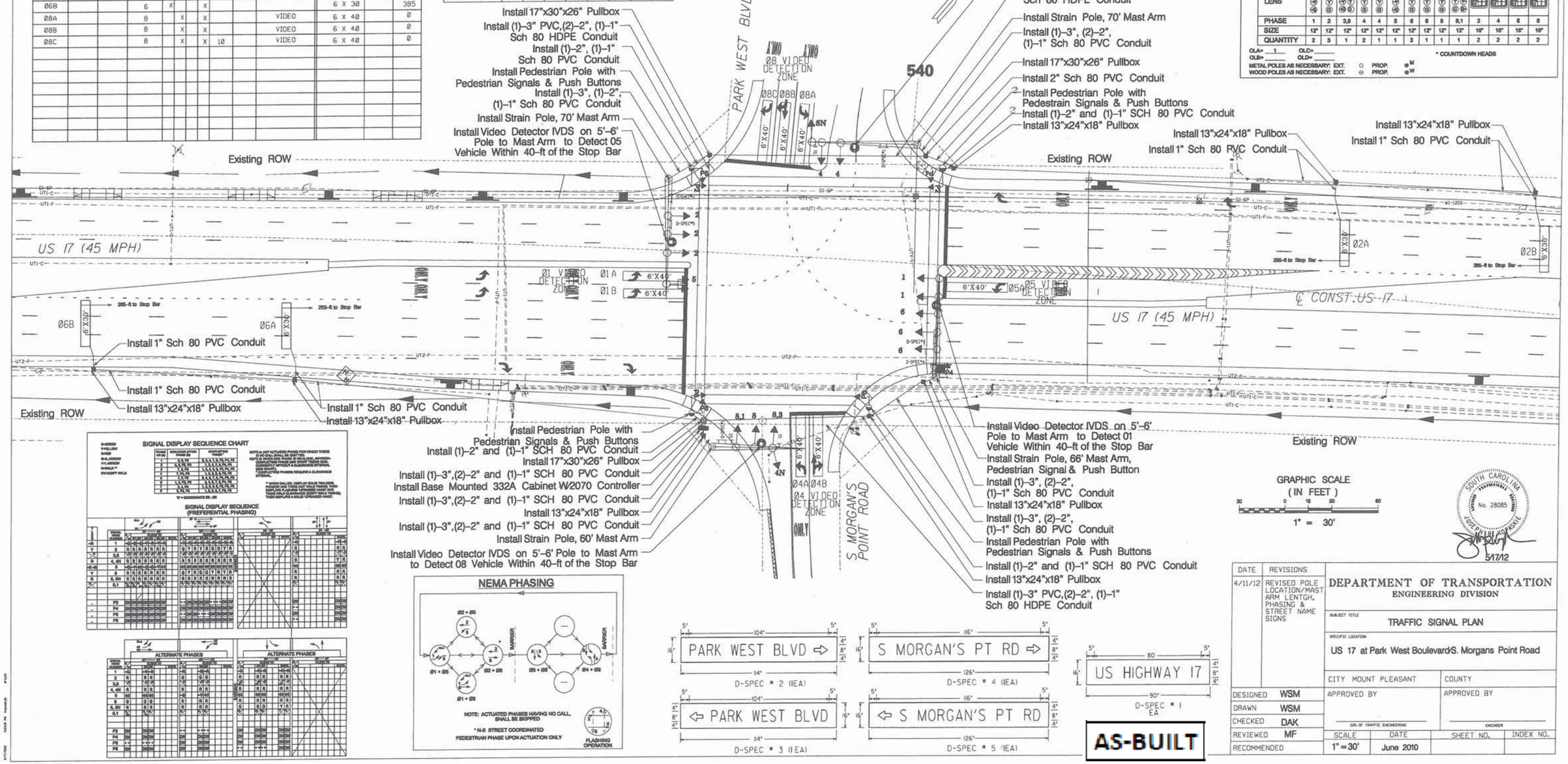
VEHICLE SIGNALS: EXT. ○▷ PROP. ○▶

SIGNAL NUMBER	1	2	3,8	4	4N	5	6	8	8N	8,1	P2 *	P4 *	P6 *	P8 *
LENS	(R)(Y)(G)	(R)(Y)(G)	(R)(Y)(G)	(R)(Y)(G)	(R)(Y)(G)	(R)(Y)(G)	(R)(Y)(G)	(R)(Y)(G)	(R)(Y)(G)	(R)(Y)(G)	▲ ▲	▲ ▲	▲ ▲	▲ ▲
PHASE	1	2	3,8	4	4	5	6	8	8	8,1	2	4	6	8
SIZE	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	16"	16"	16"	16"
QUANTITY	2	3	1	2	1	1	3	1	1	1	2	2	2	2

OLA= 1 OLC= ____ OLB= ____ OLD= ____ * COUNTDOWN HEADS

METAL POLES AS NECESSARY: EXT. ○ PROP. ●M

WOOD POLES AS NECESSARY: EXT. ⊖ PROP. ●W



AS-BUILT

GRAPHIC SCALE (IN FEET)
30 0 15 30 60
1" = 30'

SOUTH CAROLINA No. 28085 REGISTERED PROFESSIONAL ENGINEER JOSEPH M. CASTELLANO 5/17/12

DATE	REVISIONS
4/11/12	REVISED POLE LOCATION/MAST ARM LENTGH, PHASING & STREET NAME SIGNS

DEPARTMENT OF TRANSPORTATION
ENGINEERING DIVISION

SUBJECT TITLE: TRAFFIC SIGNAL PLAN

SPECIFIC LOCATION: US 17 at Park West Boulevard/S. Morgans Point Road

CITY MOUNT PLEASANT | COUNTY

DESIGNED	WSM
DRAWN	WSM
CHECKED	DAK
REVIEWED	MF
RECOMMENDED	

APPROVED BY ____ DIR. OF TRAFFIC ENGINEERING

APPROVED BY ____ ENGINEER

SCALE	DATE	SHEET NO.	INDEX NO.
1"=30'	June 2010		

FED. ROAD DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
	SC	CHARLESTON			US 17	C4.2	

SIGNAL EQUIPMENT

ONE (1) 8 PHASE FULLY ACTUATED STANDARD 2070 CONTROLLER WITH FLASHER, SIGNAL MONITOR UNIT, AND BASE - MOUNTED 332A CABINET. EXT. □ PROP. ■

8 MODEL 222, (4)-CHANNEL VEHICLE DETECTOR UNITS

PEDESTRIAN SIGNALS: EXT. △P PROP. △P W/ACT. & SIGN

VEHICLE SIGNALS: EXT. ○→ PROP. ●→

HEAD NUMBER	1,2F	2	4	5,6F	6	8	P2	P4	P6	P8
LENS	R Y FY G	R Y G	R Y G	R Y FY G	R Y G	R Y G				
PHASE	1	2	4	5	6	8	P2	P4	P6	P8
SIZE	12"	12"	12"	12"	12"	12"	16"	16"	16"	16"
QUANTITY	EX	EX	EX	EX	1	EX	EX	EX	EX	EX

OLA 21=20 (FYA) OLC 25=06 (FYA)
OLB____ OLD____

METAL POLES AS NECESSARY: EXT. ○ PROP. ●M
WOOD POLES AS NECESSARY: EXT. ⊖ PROP. ●W

W3-3

THOMAS & HUTTON
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682 Johnnie Dodds Boulevard • Suite 100
PO Box 1522
Mt. Pleasant, SC 29465-1522
p.843.849.0200 f.843.849.0203
www.thomasandhutton.com

NEMA PHASING

NOTE: ACTUATED PHASES HAVING NO CALL, SHALL BE SKIPPED

* N - S STREET COORDINATED

SIGNAL DISPLAY SEQUENCE CHART

G-GREEN
Y-YELLOW
R-RED
↑-RED ARROW
↑-STEADY YELLOW ARROW
↑FY-FLASHING YELLOW ARROW
↑-GREEN ARROW
W-WALK **
DW-DON'T WALK

PHASE ON (N)	NON-CONFLICTION PHASE (S)	CONFLICTING PHASE *
1	5, 6, 8P	2,3,4,7,8,2P,4P, 8P
2	5,6, 2P, 6P	1,3,4,7, 8,4P, 8P
3	7, 8, 4P	1,2,4,5,6,2P,4P, 6P
4	7, 8,4P, 8P	1,2,3,5, 6, 2P, 6P
5	1,6, 2P	3,4,6,7, 8,4P, 6P, 8P
6	1,5, 2P, 6P	3,4, 5, 7, 8,4P, 8P
7	3,4,4P	1,2,5,6,8, 2P, 6P
8	3,4,4P, 8P	1,2,5,6,7, 2P, 6P

"O" = COORDINATE Ø2 ; Ø6

NOTE A: ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE OMITTED.
NOTE B: WHEN ONE PHASE IS ON ALONE, ANY NON-CONFLICTING PHASE MAY START TIMING CON-CURRENTLY WITHOUT A CLEARANCE INTERVAL (SEE GRAPHIC).
** CONFLICTING PHASES REQUIRE A CLEARANCE INTERVAL.

** WHEN CALLED, DISPLAY SOLID 'WALKING PERSON' AND TIMED OUT WALK TIMING, THEN DISPLAYS FLASHING 'UPRAISED HAND' AND TIMED WALK CLEARANCE (DON'T WALK TIMING), THEN DISPLAYS A SOLID 'UPRAISED HAND'.

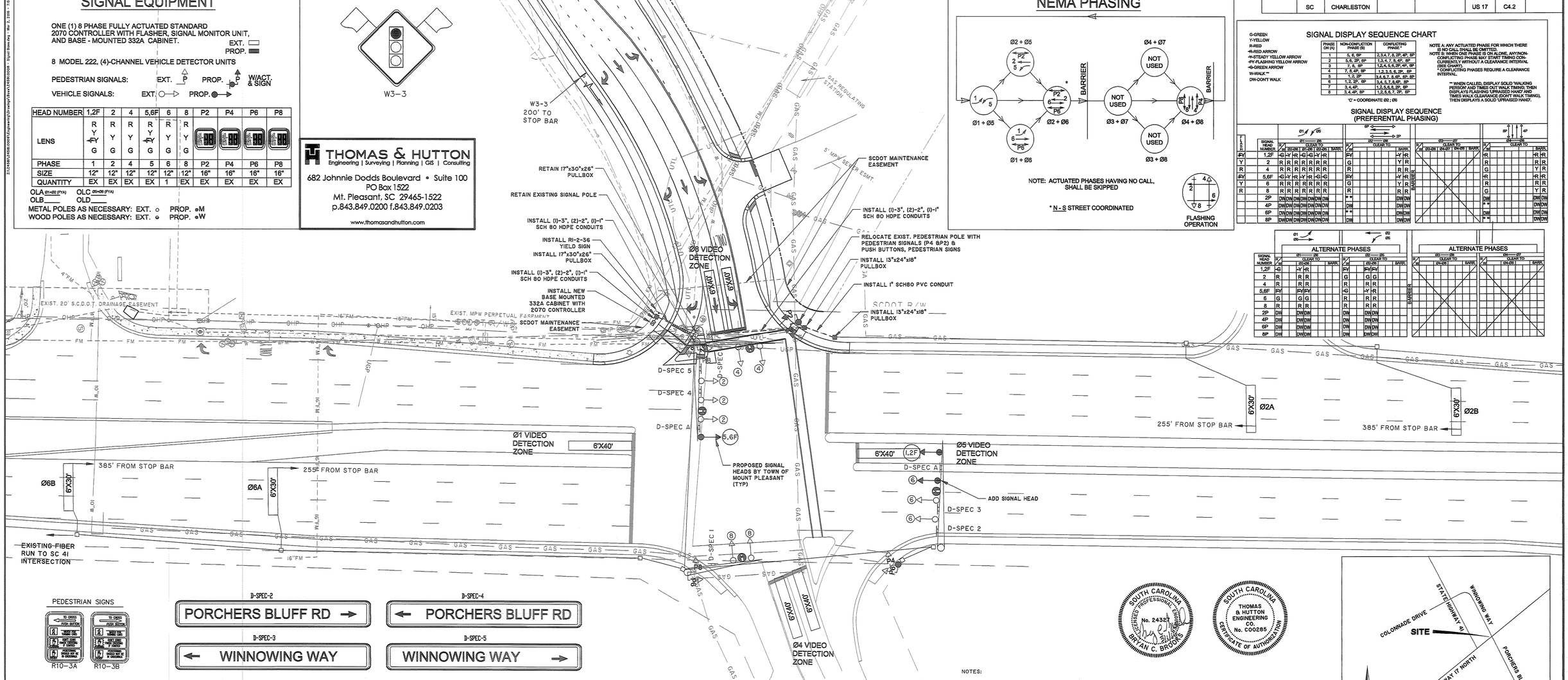
SIGNAL DISPLAY SEQUENCE (PREFERENTIAL PHASING)

SIGNAL DISPLAY NUMBER	Ø1 (Ø5) CLEAR TO Ø2 (Ø6)	Ø1 (Ø5) CLEAR TO Ø3 (Ø7)	Ø1 (Ø5) CLEAR TO Ø4 (Ø8)	BARR.	Ø2 (Ø6) CLEAR TO Ø1 (Ø5)	Ø2 (Ø6) CLEAR TO Ø3 (Ø7)	Ø2 (Ø6) CLEAR TO Ø4 (Ø8)	BARR.	Ø3 (Ø7) CLEAR TO Ø1 (Ø5)	Ø3 (Ø7) CLEAR TO Ø2 (Ø6)	Ø3 (Ø7) CLEAR TO Ø4 (Ø8)	BARR.	Ø4 (Ø8) CLEAR TO Ø1 (Ø5)	Ø4 (Ø8) CLEAR TO Ø2 (Ø6)	Ø4 (Ø8) CLEAR TO Ø3 (Ø7)	BARR.
1,2F	G-Y	R	R-G	Y-R												
2	R	R	R	R	G				R				R			
4	R	R	R	R					G				R			
5,6F	FY	R	R	R					FY				R			
6	G	R	R	R	G								R			
8	R	R	R	R	R				G							
2P	DW	R	R	R	DW				DW				DW			
4P	DW	R	R	R	DW				DW				DW			
6P	DW	R	R	R	DW				DW				DW			
8P	DW	R	R	R	DW				DW				DW			

NOTE: ACTUATED PHASES HAVING NO CALL, SHALL BE SKIPPED

ALTERNATE PHASES

SIGNAL DISPLAY NUMBER	Ø1 (Ø5) CLEAR TO Ø2 (Ø6)	Ø1 (Ø5) CLEAR TO Ø3 (Ø7)	Ø1 (Ø5) CLEAR TO Ø4 (Ø8)	BARR.	Ø2 (Ø6) CLEAR TO Ø1 (Ø5)	Ø2 (Ø6) CLEAR TO Ø3 (Ø7)	Ø2 (Ø6) CLEAR TO Ø4 (Ø8)	BARR.	Ø3 (Ø7) CLEAR TO Ø1 (Ø5)	Ø3 (Ø7) CLEAR TO Ø2 (Ø6)	Ø3 (Ø7) CLEAR TO Ø4 (Ø8)	BARR.	Ø4 (Ø8) CLEAR TO Ø1 (Ø5)	Ø4 (Ø8) CLEAR TO Ø2 (Ø6)	Ø4 (Ø8) CLEAR TO Ø3 (Ø7)	BARR.
1,2F	G	Y	R													
2	R	R	R		G	G	G									
4	R	R	R		R	R	R									
5,6F	FY	R	FY	FY	G	Y	R									
6	G	R	G		R	R	R									
8	R	R	R		R	R	R									
2P	DW	R	DW	DW	DW	DW	DW									
4P	DW	R	DW	DW	DW	DW	DW									
6P	DW	R	DW	DW	DW	DW	DW									
8P	DW	R	DW	DW	DW	DW	DW									



PEDESTRIAN SIGNS

R10-3A R10-3B

D-SPEC-2
PORCHERS BLUFF RD →

D-SPEC-4
← PORCHERS BLUFF RD

D-SPEC-3
← WINNOWING WAY

D-SPEC-5
WINNOWING WAY →

GRAPHIC SCALE

30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

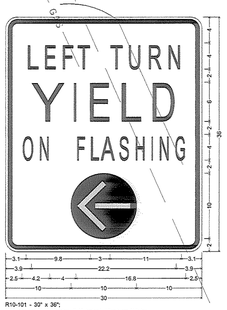
SIGNAL TIMINGS

INTERVAL	PHASE 1	2	3	4	5	6	7	8
WALK		7		7		7		7
DON'T WALK		15		36		30		32
MIN INITIAL	4	30		4	4	30		4
MAX INITIAL		30				30		
ADD/VEH		2.0				2.0		
VEH EXT	2.5	3.1		2.5	2.5	3.1		2.5
TIM BFR REDUC		30				30		
TIME TO REDUC		25				25		
MIN GAP		2.5				2.5		
MAX LIMIT	25	75		25	25	75		25
MAXIMUM 2	25	75		25	25	75		25
YELLOW	4.3	4.3		4.3	4.3	4.3		4.3
RED CLEAR	1.9	2.3		2.7	2.1	2.3		2.7

LOOP DETECTOR INSTALLATION CHART

PHASE/ LOOP LTR#	DETECTOR AMP NO.	DETECTOR CHAN NO.	WIRED TO PHASE(S)	LOCK	NON-LOCK	PULSE	PRES	OPERATION DELAY SEC	OPERATION EXT SEC	SPECIAL FEATURES TIME OF DAY-TOD, SWITCHING, etc.	LOOP DESIGN SIZE X	LOOP DESIGN NO.OF TURNS	LOOP DESIGN DIST. FROM $
1			1		X		X			VIDEO	6x40		0
2A			2	X			X				6X30		255'
2B			2	X			X				6X30		385'
4A			4		X		X			VIDEO	6X40		0
4B			4		X		X			VIDEO	6X40		0
5			5		X		X			VIDEO	6X40		0
6A			6	X			X				6X30		255'
6B			6	X			X				6X30		385'
8A			8		X		X			VIDEO	6X40		0
8B			8		X		X			VIDEO	6X40		0

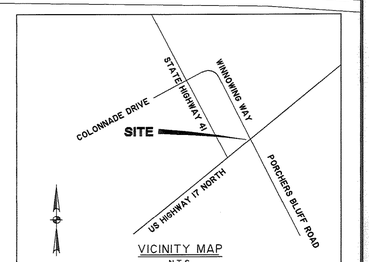
D-SPEC-A
R10-12A-30



R10-101 - 30" x 36";
1.5" Radius, 0.6" Border, 0.4" Indent, Black on White;
"LEFT TURN" C; "YIELD" D; "ON FLASHING" B; FYA symbol;

NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS.
2. CONTRACTOR SHALL COORDINATE AND CONDUCT PRECONSTRUCTION MEETING ON SITE WITH OWNER, ENGINEER, SCDOT AND TOWN OF MOUNT PLEASANT. CONTACT SCDOT DISTRICT 6 TRAFFIC SIGNAL SHOP (BRIAN HOLT- 843-740-1668 AND TOWN OF MOUNT PLEASANT (VINCENT ANDERSON- 843-884-1229) FOR PRECONSTRUCTION MEETING, PERMITTING AND COORDINATION FOR ALL SIGNAL WORK INSPECTION.
3. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES WILL BE INVESTIGATED AND VERIFIED IN THE FIELD BY THE CONTRACTOR BEFORE STARTING WORK. THE LOCATION OF ALL KNOWN INTERFERENCES BASED ON THE BEST INFORMATION AVAILABLE HAS BEEN SHOWN ON THE DRAWINGS, BUT THIS INFORMATION MAY NOT BE COMPLETE. EXCAVATION IN THE VICINITY OF EXISTING STRUCTURES AND UTILITIES SHALL BE CAREFULLY DONE BY HAND. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE TO AND FOR MAINTENANCE AND PROTECTION OF EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE UTILITY COMPANIES ANY RELOCATION, ADJUSTMENT, REPLACEMENT, OR PROTECTION OF UTILITY FACILITIES.
4. NEW POLE LOCATIONS, PULL BOX LOCATIONS, AND BORE LOCATIONS, ARE APPROXIMATE. CONTRACTOR TO ADJUST AS NECESSARY DURING PERMITTING PROCESS PRIOR TO ORDERING MATERIALS.
5. CONTRACTOR WILL FOLLOW SCDOT "PROCEDURE FOR THE INSTALLATION OR REPLACEMENT OF NEW TRAFFIC SIGNALS".
6. ALL SIGNAL EQUIPMENT SHALL MEET CURRENT SCDOT AND TOWN OF MOUNT PLEASANT STANDARDS.
7. SIGNAL TIMING TO BE ADJUSTED BY TOWN OF MOUNT PLEASANT AND/OR SCDOT.
8. EXISTING CONTROLLER, CONTROLLER CABINET AND SALVAGEABLE SIGNAL EQUIPMENT SHALL BE RETURNED TO TOWN OF MOUNT PLEASANT.



VICINITY MAP
N.T.S.

ROUTE NUMBER	HIGHWAY 17		PORCHERS BLUFF	
APPROACH DIRECTION	NB	SB	EB	WB
SIGNAL DESIGN SPEED	45	45	25	40
GRADE (%)	0*	0*	0*	0*

* ESTIMATED

DATE	REVISIONS
11/3/15	REV PER SCDOT COMMENTS

DESIGNED	BCB
DRAWN	BCB
CHECKED	ERG
REVIEWED	JJI
RECOMMENDED	___

SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION ENGINEERING DIVISION COLUMBIA, S.C.

SUBJECT TITLE: SIGNAL DESIGN

SPECIFIC LOCATION: HWY 17 & WINNOWING WAY

CITY: MOUNT PLEASANT COUNTY: CHARLESTON

APPROVED BY

DISTRICT # __ TRAFFIC ENGINEER ENGINEER

SCALE	DATE	SHEET NO.	INDEX NO.
1"= 30'	09/02/15	C4.2	

STATE	COUNTY	D&F PROJECT NO.	CTC PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
S.C.	CHARLESTON	31450.05	816-0-20-12			TS01

SIGNAL HEAD DISPLAY CHART												
HEAD #	1, 2F	2	4F	4	4,5conc	5, 6F	6	7, 8F	8	8,1conc	2P/6P	4P/8P
DISPLAY	◄R ◄Y ◄FY ◄G	R Y G	◄R ◄Y ◄FY	R Y G	R Y ◄Y G ◄G	◄R ◄Y ◄FY ◄G	R Y G	◄R ◄Y ◄FY ◄G	R Y G	R Y ◄Y G ◄G		
PHASE	1, OLA	2	OLB	4	4,5	5, OLC	6	7, OLD	8	8,1	2P/6P	4P/8P
SIZE	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	16"	16"
QUANTITY	1	2	1	1	1	1	2	1	1	1	4	4

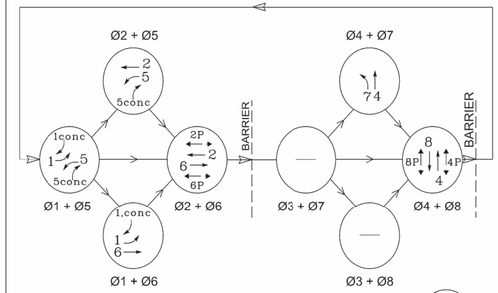
EQUIPMENT INFORMATION	
CONTROLLER	CONTRACTOR SUPPLIED 2070L
CABINET	CONTRACTOR SUPPLIED 332
SOFTWARE	APOGEE STREETWISE
CABINET MOUNT	CONCRETE BASE
PHASES USED	1,2,4,5,6,7,8,2P,4P,6P,8P
OVERLAPS	OLA=Ø1+Ø2, OLB=Ø4, ØLC=O5+Ø6, ØLD=O7+Ø8 /

INSTALL PEDESTRIAN PUSH BUTTON SIGNS

R10-3eL R10-3eR

R10-12A-30 SIGN "A"

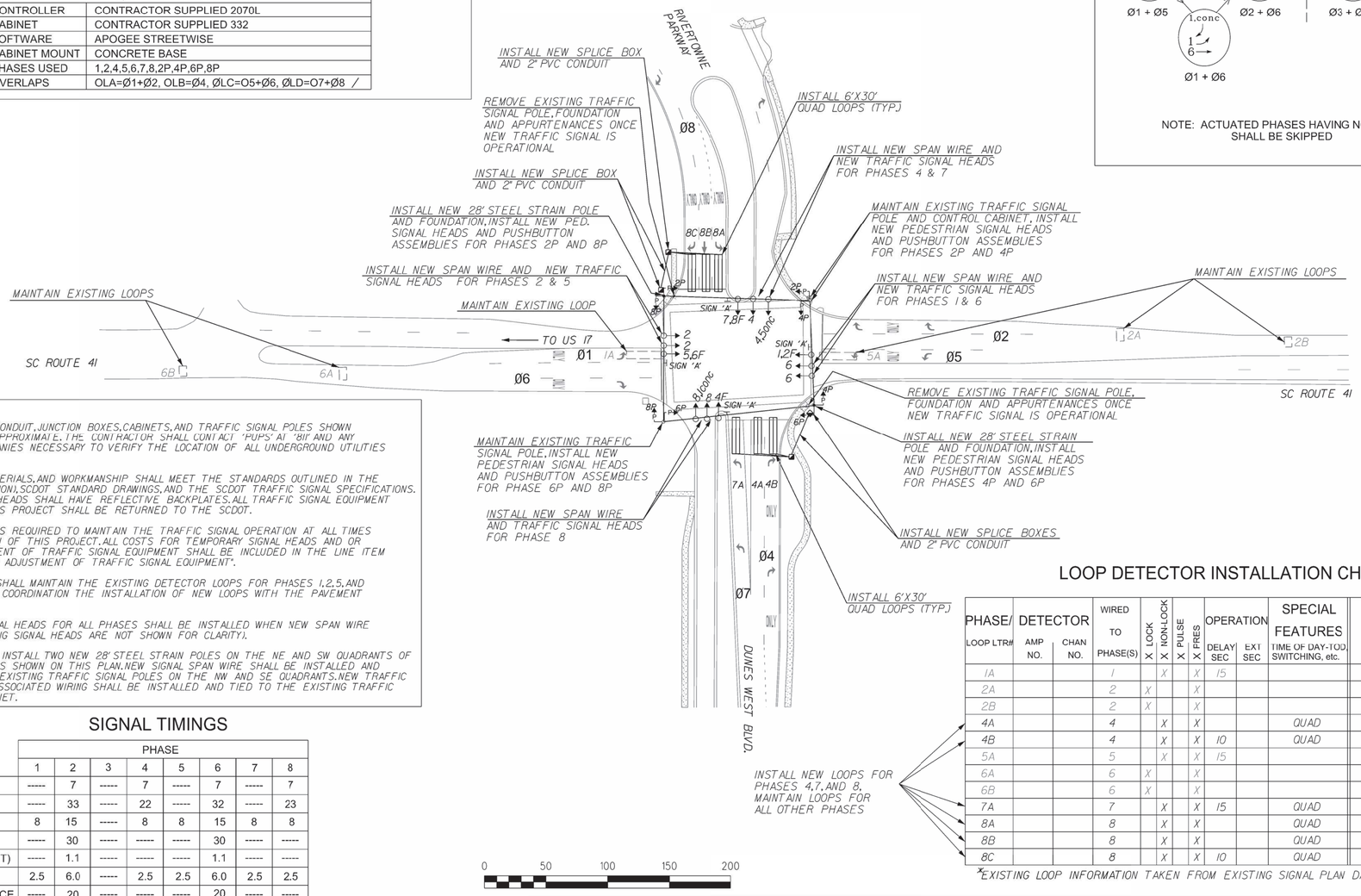
NEMA PHASING



NOTE: ACTUATED PHASES HAVING NO CALL, SHALL BE SKIPPED

FLASHING OPERATION

TABLE OF OPERATION	PHASE IN OPERATION								
SIGNAL HEAD #	Ø1 + Ø5	Ø1 + Ø6	Ø2 + Ø5	Ø2 + Ø6	Ø3 + Ø7	Ø3 + Ø8	Ø4 + Ø7	Ø4 + Ø8	FLASH
1,2F	◄G	◄G	◄FY	◄FY			◄R	◄R	◄Y
2	R	R	G	G			R	R	Y
4F	◄R	◄R	◄R	◄R			◄FY	◄FY	◄R
4	R	R	R	R			G	G	R
4,5conc	~~R~~ G	R	~~R~~ G	R			G	G	R
5,6F	◄G	◄FY	◄G	◄FY			◄R	◄R	◄Y
6	R	G	R	G			R	R	Y
7,8F	◄R	◄R	◄R	◄R			◄G	◄FY	◄R
8	R	R	R	R			R	G	R
8,1conc	~~R~~ G	~~R~~ G	R	R			R	G	R
2P	DW	DW	DW	W			DW	DW	DRK
4P	DW	DW	DW	DW			DW	W	DRK
6P	DW	DW	DW	W			DW	DW	DRK
8P	DW	DW	DW	DW			DW	W	DRK



NOTES:

1. THE LOCATION OF CONDUIT, JUNCTION BOXES, CABINETS, AND TRAFFIC SIGNAL POLES SHOWN ON THE PLAN ARE APPROXIMATE. THE CONTRACTOR SHALL CONTACT "PUPS" AT "811" AND ANY OTHER UTILITY COMPANIES NECESSARY TO VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES BEFORE DIGGING.

2. ALL EQUIPMENT, MATERIALS, AND WORKMANSHIP SHALL MEET THE STANDARDS OUTLINED IN THE MUTCD (LATEST EDITION), SCDOT STANDARD DRAWINGS, AND THE SCDOT TRAFFIC SIGNAL SPECIFICATIONS. ALL TRAFFIC SIGNAL HEADS SHALL HAVE REFLECTIVE BACKPLATES. ALL TRAFFIC SIGNAL EQUIPMENT REMOVED DURING THIS PROJECT SHALL BE RETURNED TO THE SCDOT.

3. THE CONTRACTOR IS REQUIRED TO MAINTAIN THE TRAFFIC SIGNAL OPERATION AT ALL TIMES DURING CONSTRUCTION OF THIS PROJECT. ALL COSTS FOR TEMPORARY SIGNAL HEADS AND OR TEMPORARY ADJUSTMENT OF TRAFFIC SIGNAL EQUIPMENT SHALL BE INCLUDED IN THE LINE ITEM BID FOR "TEMPORARY ADJUSTMENT OF TRAFFIC SIGNAL EQUIPMENT".

4. THE CONTRACTOR SHALL MAINTAIN THE EXISTING DETECTOR LOOPS FOR PHASES 1, 2, 5, AND 6. CONTRACTOR SHALL COORDINATION THE INSTALLATION OF NEW LOOPS WITH THE PAVEMENT MARKING PLANS.

5. NEW TRAFFIC SIGNAL HEADS FOR ALL PHASES SHALL BE INSTALLED WHEN NEW SPAN WIRE IS INSTALLED. (EXISTING SIGNAL HEADS ARE NOT SHOWN FOR CLARITY).

7. CONTRACTOR SHALL INSTALL TWO NEW 28' STEEL STRAIN POLES ON THE NE AND SW QUADRANTS OF THE INTERSECTION AS SHOWN ON THIS PLAN. NEW SIGNAL SPAN WIRE SHALL BE INSTALLED AND CONNECTED TO THE EXISTING TRAFFIC SIGNAL POLES ON THE NW AND SE QUADRANTS. NEW TRAFFIC SIGNAL HEADS AND ASSOCIATED WIRING SHALL BE INSTALLED AND TIED TO THE EXISTING TRAFFIC SIGNAL CONTROL CABINET.

SIGNAL TIMINGS

INTERVAL	PHASE							
	1	2	3	4	5	6	7	8
WALK	-----	7	-----	7	-----	7	-----	7
DON'T WALK	-----	33	-----	22	-----	32	-----	23
MIN GREEN	8	15	-----	8	8	15	8	8
MAX INITIAL	-----	30	-----	-----	-----	30	-----	-----
ADDED INIT (SEC/ACT)	-----	1.1	-----	-----	-----	1.1	-----	-----
PASSAGE	2.5	6.0	-----	2.5	2.5	6.0	2.5	2.5
TIME BEFORE REDUCE	-----	20	-----	-----	-----	20	-----	-----
TIME TO REDUCE	-----	15	-----	-----	-----	15	-----	-----
MIN GAP	-----	2.3	-----	-----	-----	2.3	-----	-----
MAX LIMIT	25	90	-----	25	25	90	25	25
MAXIMUM 2	-----	-----	-----	-----	-----	-----	-----	-----
YELLOW	3.0	4.7	-----	3.6	3.0	4.7	3.0	3.6
RED CLEAR	3.6	2.1	-----	2.9	3.8	2.1	3.3	2.9
RECALL	OFF	MIN	-----	OFF	OFF	MIN	OFF	OFF

LOOP DETECTOR INSTALLATION CHART

PHASE/ LOOP LTR#	DETECTOR AMP NO.	DETECTOR CHAN NO.	WIRED TO PHASE(S)	LOCK X	NON-LOCK X	PULSE X	PRES X	OPERATION DELAY SEC	OPERATION EXT SEC	SPECIAL FEATURES TIME OF DAY-TOD, SWITCHING, etc.	LOOP DESIGN SIZE X	LOOP DESIGN NO.OF TURNS	LOOP DESIGN DIST. FROM ℄
1A			1		X		X	15			6'X30' *	2-4-2 *	-2' *
2A			2	X			X				*	*	255' *
2B			2	X			X				*	*	385' *
4A			4		X		X			QUAD	6'X30'	2-4-2	-2'
4B			4		X		X	10		QUAD	6'X30'	2-4-2	-2'
5A			5		X		X	15			*	*	*
6A			6	X			X				*	*	255' *
6B			6	X			X				*	*	385' *
7A			7		X		X	15		QUAD	6'X30'	2-4-2	-2'
8A			8		X		X			QUAD	6'X30'	2-4-2	-2'
8B			8		X		X			QUAD	6'X30'	2-4-2	-2'
8C			8		X		X	10		QUAD	6'X30'	2-4-2	-2'

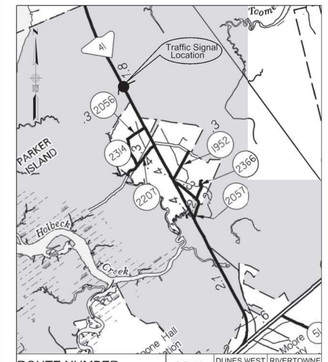
* EXISTING LOOP INFORMATION TAKEN FROM EXISTING SIGNAL PLAN DATED 10/28/2011.

STANDARD DRAWINGS FOR TRAFFIC SIGNAL

See sheets DI-D32 for SCDOT Standard Drawings.

DRAWING NO.	DRAWING DESCRIPTION
675-105-01	SIGNAL LOCATION DETAIL
675-105-02	SIGNAL HEADS
675-105-03	PED. HEADS PED. PEDESTAL POLE FOUNDATION
675-110-00	TYPICAL WIRE AND CABLE USAGE (FOR 8 PHASE CABINETS)
675-115-01	WOOD POLE / SPANWIRE SERVICE, GROUNDING, AND BONDING
675-115-02	POLES
675-120-00	DETECTORS
675-130-01	CABINET
675-130-03	CABINET

Copies of SCDOT Standard Drawings are available at the following web address http://www.scdot.org/doing/sd_Disclaimer.aspx



ROUTE NUMBER	SC 41		DUNES WEST BLVD	RIVERTOWNE PKWY
APPROACH DIRECTION	NB	SB	WB	EB
SIGNAL DESIGN SPEED*	50	50	35	25
GRADE (%) *	0.0±	0.0±	0.0±	0.0±

* BASED ON SIGNAL PLAN DATED 10/28/2011

SOUTH CAROLINA — DAVIS & FLOYD, INC. — No. C00538 — CERTIFICATE OF AUTHORIZATION

Bryan D. Webb — 4/13/15 — REGISTERED PROFESSIONAL ENGINEER — No. 20544 — BRYAN D. WEBB — NORTH CAROLINA

DAVIS & FLOYD

SINCE 1954

WWW.DAVISFLOYD.COM

3229 W. MONTAGUE AVENUE
NORTH CHARLESTON, SC 29418
(843) 554-8602

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
3			
2			
1			

DCN. LRE DATE
R/W DATE
CHK. BDW DATE

CHARLESTON COUNTY
CTC PROGRAM

RIVERTOWNE PKWY. AND DUNES WEST BLVD.
RIGHT TURN LANE ADDITIONS

TRAFFIC SIGNAL PLAN

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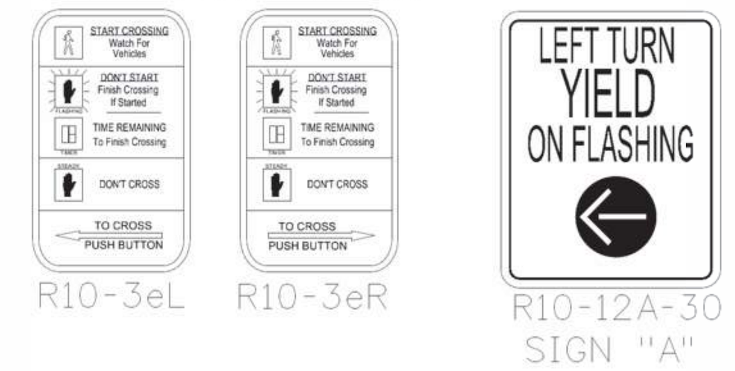
STATE	COUNTY	D&F PROJECT NO.	CTC PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
S.C.	CHARLESTON	31450.05	816-0-20-12			TS01

SIGNAL HEAD DISPLAY CHART

HEAD #	1, 2F	2	4F	4	4,5conc	5, 6F	6	7, 8F	8	8,1conc	2P/6P	4P/8P
DISPLAY	←R ←Y ←FY ←G	R Y G	←R ←Y ←FY	R Y G	R Y →Y G →G	←R ←Y ←FY ←G	R Y G	←R ←Y ←FY ←G	R Y G	R Y →Y G →G		
PHASE	1, OLA	2	OLB	4	4,5	5, OLC	6	7, OLD	8	8,1	2P/6P	4P/8P
SIZE	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	16"	16"
QUANTITY	1	2	1	1	1	1	2	1	1	1	4	4



EQUIPMENT INFORMATION

CONTROLLER	CONTRACTOR SUPPLIED 2070L
CABINET	CONTRACTOR SUPPLIED 332
SOFTWARE	APOGEE STREETWISE
CABINET MOUNT	CONCRETE BASE
PHASES USED	1,2,4,5,6,7,8,2P,4P,6P,8P
OVERLAPS	OLA=Ø1+Ø2, OLB=Ø4, ØLC=O5+Ø6, ØLD=O7+Ø8 /

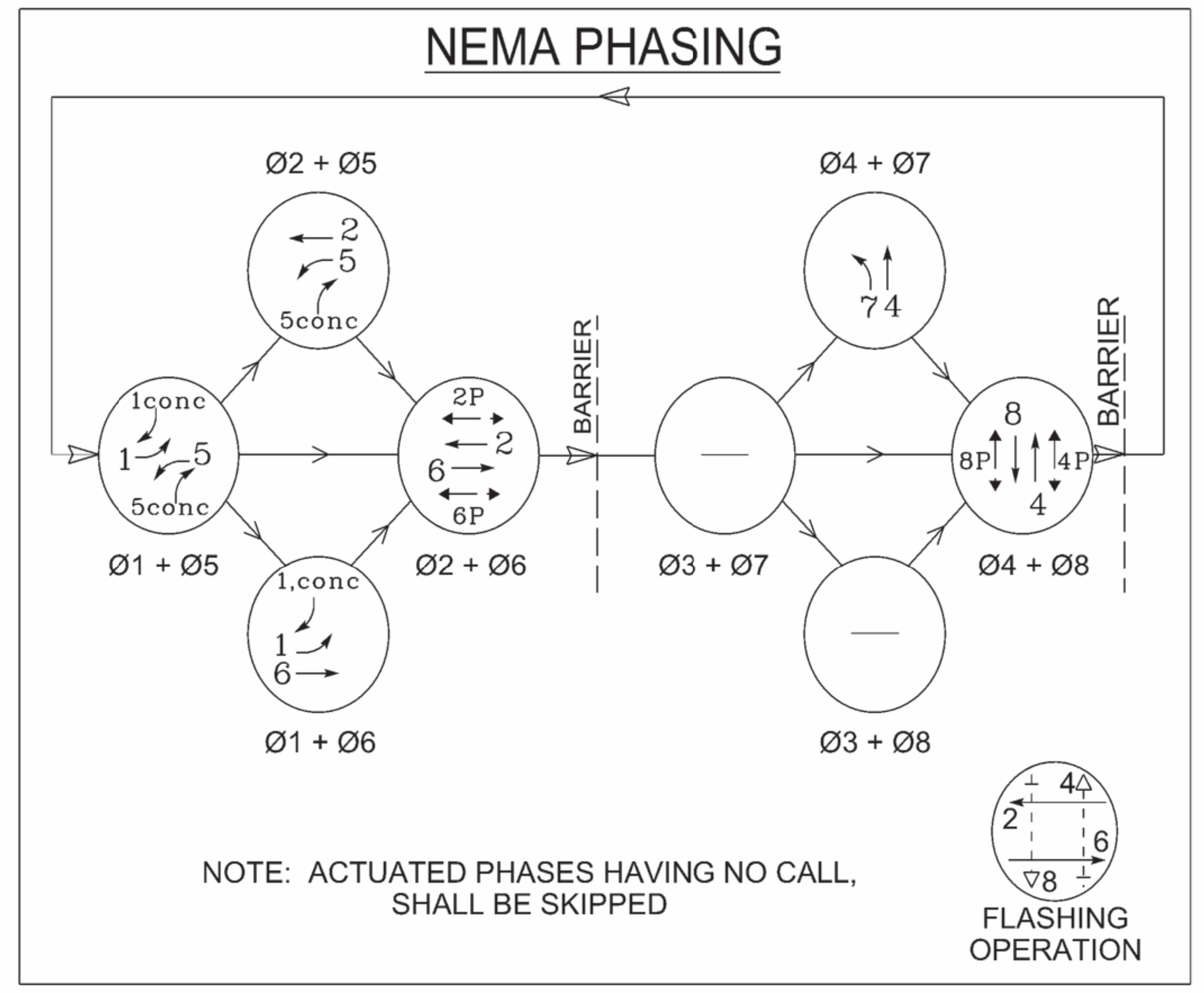
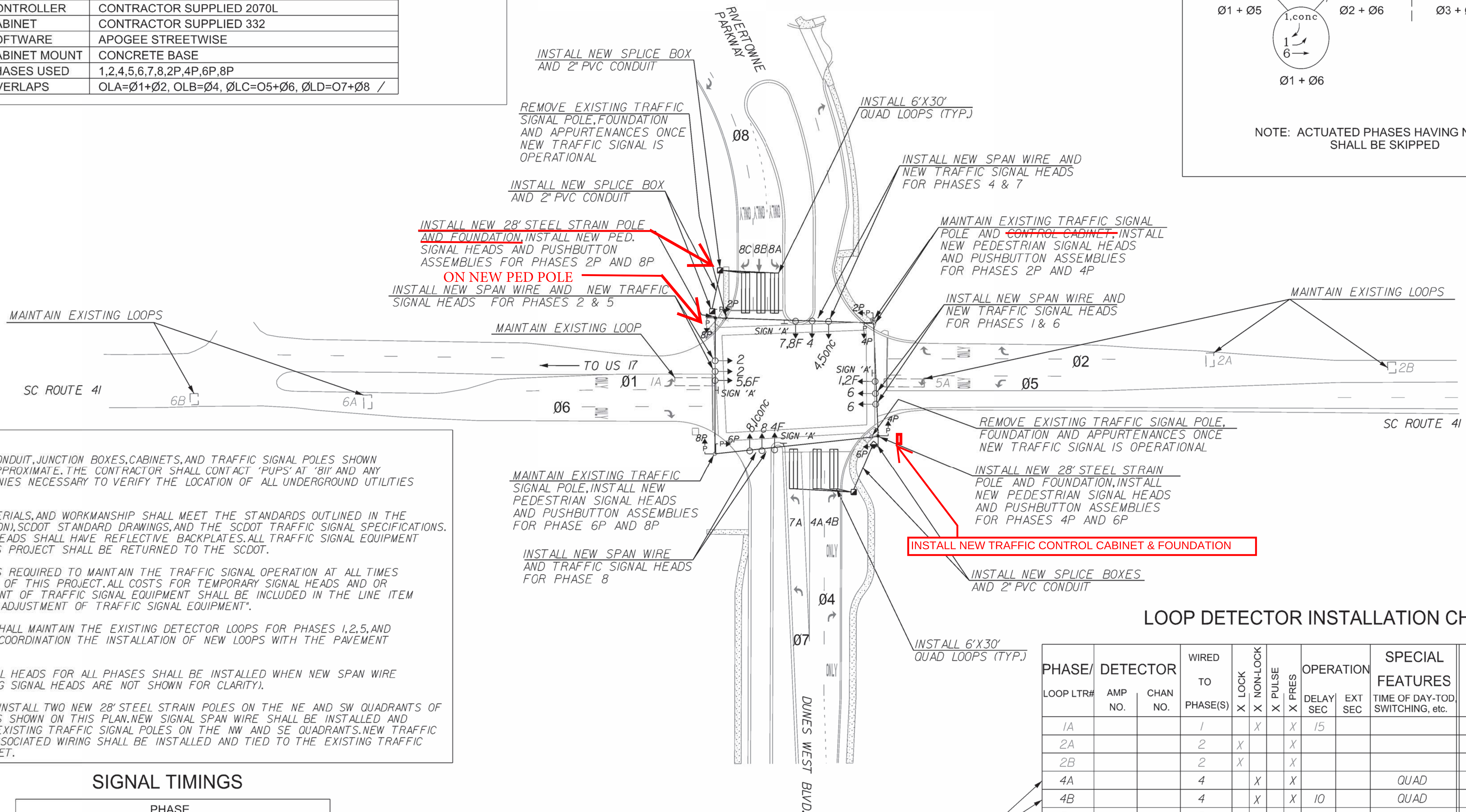


TABLE OF OPERATION	PHASE IN OPERATION								
SIGNAL HEAD #	Ø1 + Ø5	Ø1 + Ø6	Ø2 + Ø5	Ø2 + Ø6	Ø3 + Ø7	Ø3 + Ø8	Ø4 + Ø7	Ø4 + Ø8	FLASH
1,2F	←G	←G	←FY	←FY			←R	←R	←Y
2	R	R	G	G			R	R	Y
4F	←R	←R	←R	←R			←FY	←FY	←R
4	R	R	R	R			G	G	R
4,5conc	R/→G	R	R/→G	R			G	G	R
5,6F	←G	←FY	←G	←FY			←R	←R	←Y
6	R	G	R	G			R	R	Y
7,8F	←R	←R	←R	←R			←G	←FY	←R
8	R	R	R	R			R	G	R
8,1conc	R/→G	R/→G	R	R			R	G	R
2P	DW	DW	DW	W			DW	DW	DRK
4P	DW	DW	DW	DW			DW	W	DRK
6P	DW	DW	DW	W			DW	DW	DRK
8P	DW	DW	DW	DW			DW	W	DRK



STANDARD DRAWINGS FOR TRAFFIC SIGNAL

See sheets D1-D32 for SCDOT Standard Drawings.

DRAWING NO.	DRAWING DESCRIPTION
675-105-01	SIGNAL LOCATION DETAIL
675-105-02	SIGNAL HEADS
675-105-03	PED.HEADS PED.PEDESTAL POLE FOUNDATION
675-110-00	TYPICAL WIRE AND CABLE USAGE (FOR 8 PHASE CABINETS)
675-115-01	WOOD POLE / SPANWIRE SERVICE, GROUNDING, AND BONDING
675-115-02	POLES
675-120-00	DETECTORS
675-130-01	CABINET
675-130-03	CABINET

Copies of SCDOT Standard Drawings are available at the following web address http://www.scdot.org/doing/sd_Disclaimer.aspx

NOTES:

1.THE LOCATION OF CONDUIT, JUNCTION BOXES, CABINETS, AND TRAFFIC SIGNAL POLES SHOWN ON THE PLAN ARE APPROXIMATE. THE CONTRACTOR SHALL CONTACT 'PUPS' AT '811' AND ANY OTHER UTILITY COMPANIES NECESSARY TO VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES BEFORE DIGGING.

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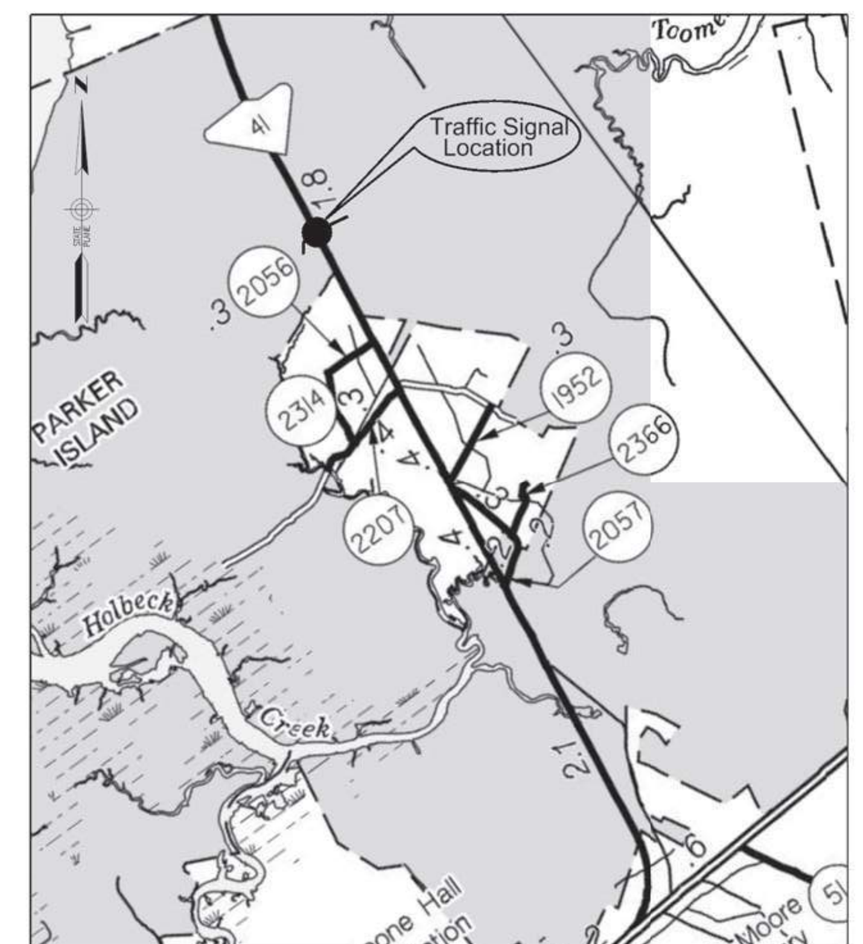
LOOP DETECTOR INSTALLATION CHART

PHASE/ LOOP LTR#	DETECTOR AMP NO.	DETECTOR CHAN NO.	WIRED TO PHASE(S)	X LOCK	X NON-LOCK	X PULSE	X PRES	OPERATION DELAY SEC	OPERATION EXT SEC	SPECIAL FEATURES TIME OF DAY-TOD, SWITCHING, etc.	LOOP DESIGN SIZE X	NO. OF TURNS	DIST. FROM ℄
1A			1		X		X	15			6'X30'*	2-4-2*	+2'*
2A			2	X			X				*	*	255'*
2B			2	X			X				*	*	385'*
4A			4		X		X			QUAD	6'X30'	2-4-2	-2'
4B			4		X		X	10		QUAD	6'X30'	2-4-2	-2'
5A			5		X		X	15			*	*	*
6A			6	X			X				*	*	255'*
6B			6	X			X				*	*	385'*
7A			7		X		X	15		QUAD	6'X30'	2-4-2	-2'
8A			8		X		X			QUAD	6'X30'	2-4-2	-2'
8B			8		X		X			QUAD	6'X30'	2-4-2	-2'
8C			8		X		X	10		QUAD	6'X30'	2-4-2	-2'

*EXISTING LOOP INFORMATION TAKEN FROM EXISTING SIGNAL PLAN DATED 10/28/2011.



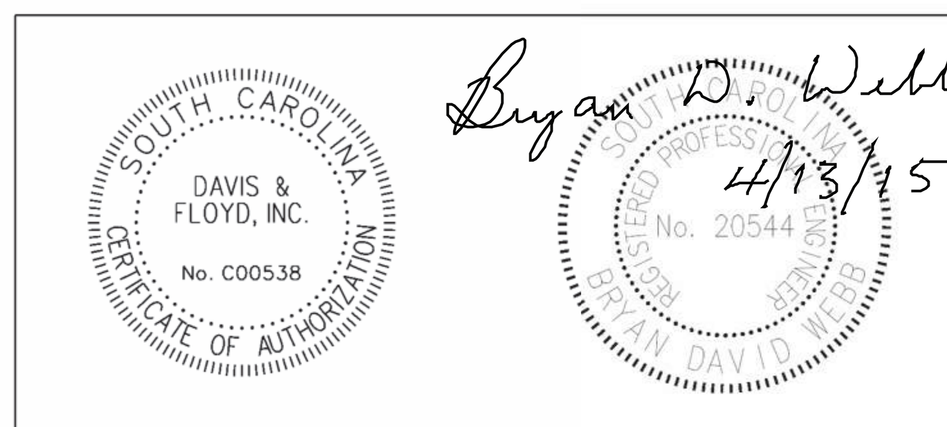
ROUTE NUMBER	SC 41		DUNES WEST BLVD	RIVERTOWNE PKWY
APPROACH DIRECTION	NB	SB	WB	EB
SIGNAL DESIGN SPEED*	50	50	35	25
GRADE (%) *	0.0±	0.0±	0.0±	0.0±

* BASED ON SIGNAL PLAN DATED 10/28/2011

SIGNAL TIMINGS

INTERVAL	PHASE 1	2	3	4	5	6	7	8
WALK	-----	7	-----	7	-----	7	-----	7
DON'T WALK	-----	33	-----	22	-----	32	-----	23
MIN GREEN	8	15	-----	8	8	15	8	8
MAX INITIAL	-----	30	-----	-----	-----	30	-----	-----
ADDED INIT (SEC/ACT)	-----	1.1	-----	-----	-----	1.1	-----	-----
PASSAGE	2.5	6.0	-----	2.5	2.5	6.0	2.5	2.5
TIME BEFORE REDUCE	-----	20	-----	-----	-----	20	-----	-----
TIME TO REDUCE	-----	15	-----	-----	-----	15	-----	-----
MIN GAP	-----	2.3	-----	-----	-----	2.3	-----	-----
MAX LIMIT	25	90	-----	25	25	90	25	25
MAXIMUM 2	-----	-----	-----	-----	-----	-----	-----	-----
YELLOW	3.0	4.7	-----	3.6	3.0	4.7	3.0	3.6
RED CLEAR	3.6	2.1	-----	2.9	3.8	2.1	3.3	2.9
RECALL	OFF	MIN	-----	OFF	OFF	MIN	OFF	OFF

0 50 100 150 200



DAVIS & FLOYD

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3229 W. MONTAGUE AVENUE CHARLESTON, SC 29418 (843) 554-8602

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
3			
2			
1			

DGN. LRE DATE
R/W DATE
CHK. BDW DATE

CHARLESTON COUNTY
CTC PROGRAM

RIVERTOWNE PKWY. AND DUNES WEST BLVD.
RIGHT TURN LANE ADDITIONS

AS-BUILT TRAFFIC SIGNAL PLAN

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2P = 13Ø
4P = 14
6P = 15
8 = 16

COUNTY	ROUTE NAME	ROUTE NO.	SHEET NO.
CHARLESTON	HIGHWAY 41	SC 41	TS1

SIGNAL EQUIPMENT

ONE (1) EXISTING 8-PHASE FULLY ACTUATED STANDARD 2070 CONTROLLER WITH FLASHER, SIGNAL MONITOR UNIT, AND BASE-MOUNTED 332A CABINET. EXT. □ PROP. ■

ONE (1) NEW AND THREE (3) EXISTING MODEL 222, 2-CHANNEL VEHICLE DETECTOR UNITS

PEDESTRIAN SIGNALS: EXT. △P PROP. ▲P W/ACT. &SIGN

VEHICLE SIGNALS: EXT. ○→ PROP. ●→

HEAD NUMBER	2	4A	4B	6	6,4conc	4P
LENS	R Y G	R ◄Y► ◄G	R Y G ◄G	R Y G	R Y Y► G G►	
PHASE	2	4	4	6	6,4	4P
SIZE	12"	12"	12"	12"	12"	16"
QUANTITY	2	1	1	1	1	2

OLA:
OLB:
OLC:
OLD:

METAL POLES W/O MAST ARMS: EXT. ○M PROP. ●M

METAL POLES W/ MAST ARMS: EXT. ◻ PROP. ●

WOOD POLES AS NECESSARY: EXT. ◒W PROP. ●W

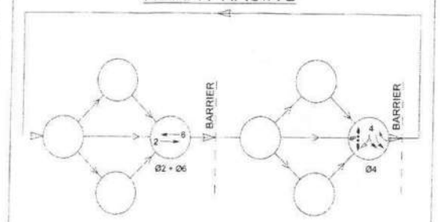
SPLICE BOXES AS NECESSARY: EXT. ◪ PROP. ◪

INDUCTANCE LOOPS AS NECESSARY: EXT. ═ PROP. ▭

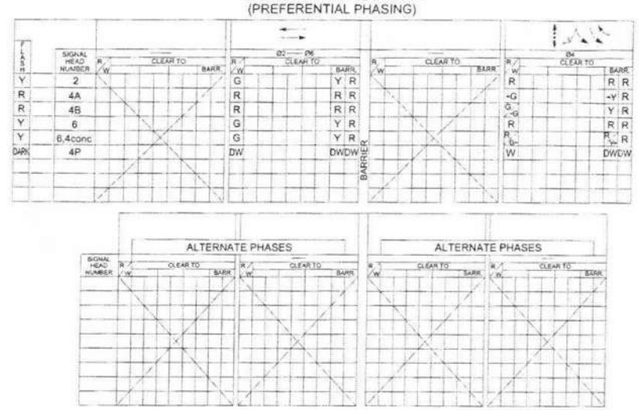
GUYS AS NECESSARY: EXT. → PROP. →●

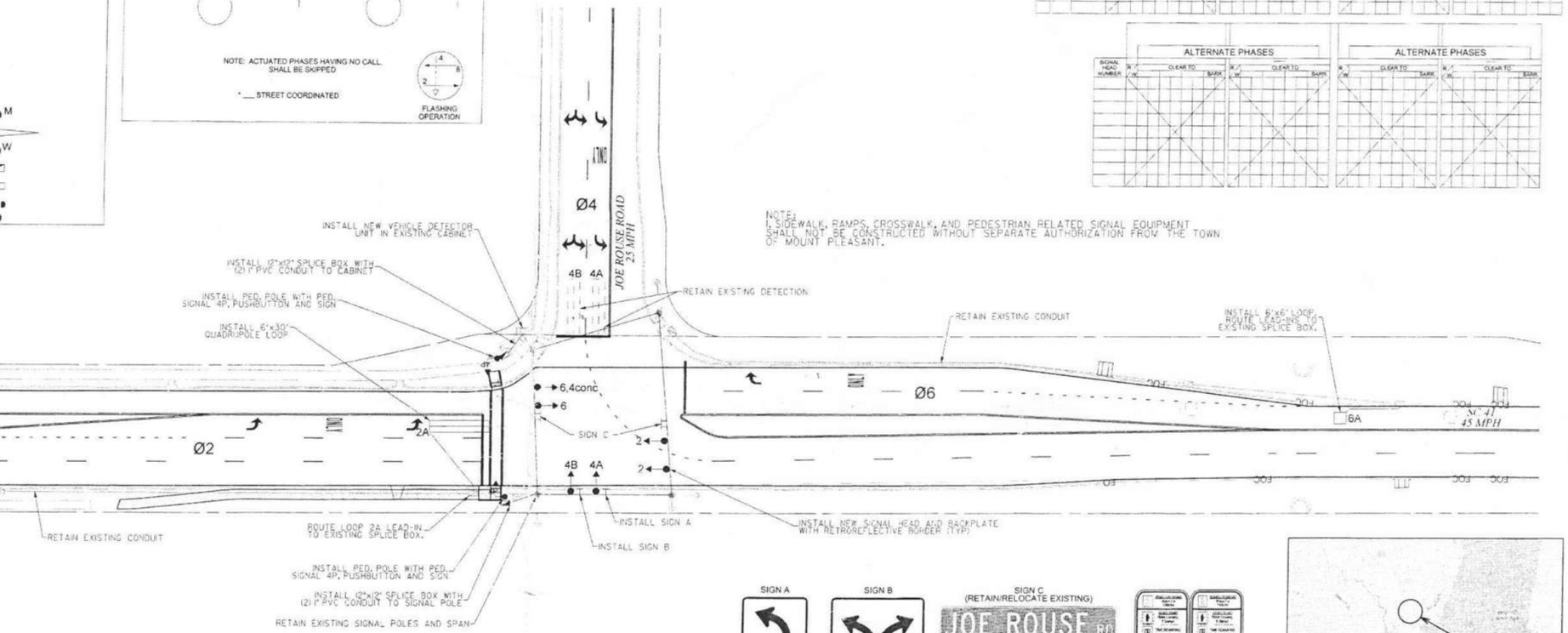
WIRELESS DETECTORS AS NECESSARY: EXT. ○ PROP. ●

NEMA PHASING



SIGNAL DISPLAY SEQUENCE (PREFERENTIAL PHASING)





NOTE:
1. SIDEWALK, RAMPS, CROSSWALK, AND PEDESTRIAN RELATED SIGNAL EQUIPMENT SHALL NOT BE CONSTRUCTED WITHOUT SEPARATE AUTHORIZATION FROM THE TOWN OF MOUNT PLEASANT.

SIGNAL TIMINGS

INTERVAL	PHASE 2	PHASE 4	PHASE 6
WALK	-	7	-
DON'T WALK	-	16	-
MIN INITIAL	20	8	20
MAX INITIAL	37	-	37
ADD/VEH	1.5	-	2.5
VEH EXT	6.0	3.0	6.0
TIME BFR REDUCE	30	-	30
TIME TO REDUCE	15	-	15
MIN GAP	2.5	-	2.5
MAX LIMIT	75	30	75
MAXIMUM 2	-	-	-
YELLOW	4.4	3.0	4.4
RED CLEAR	1.6	3.5	1.6

DETECTOR INSTALLATION CHART

PHASE/ LOOP LTR#	DETECTOR AMP NO.	DETECTOR CHAN NO.	WIRED TO PHASE(S)	LOCK	NON-LOCK	PULSE	PRES	OPERATION DELAY SEC	OPERATION EXT SEC	SPECIAL FEATURES TIME OF DAY-TOD, SWITCHING, etc.	LOOP DESIGN SIZE _X_	LOOP DESIGN NO. OF TURNS	LOOP DESIGN DIST. FROM ℄
2A	1	---	2	-	X	-	X	---	---	QUADRUPOLE	6'x30'	2-4-2	-3'
2B	2	---	2	X	-	-	X	---	---	---	6'x6'	4	330'
2C	2	---	2	X	-	-	X	---	---	---	6'x6'	4	330'
4A	3	---	4	-	X	-	X	---	---	RETAIN EXISTING	6'x30'	2-4-2	-2'
4B	3	---	4	-	X	-	X	---	---	RETAIN EXISTING	6'x30'	2-4-2	-2'
6A	4	---	6	X	-	-	X	---	---	---	6'x6'	4	330'

NOTES:
1. CONTRACTOR SHALL COORDINATE WITH EXISTING UTILITIES FOR CONDUIT PLACEMENT.
2. RETURN EXISTING SIGNAL EQUIPMENT TO THE SCDOT DISTRICT SIX SIGNAL SHOP.
3. PROVIDE A CONTINUOUS RUN OF 4 CONDUCTOR GRAY TO EACH LOOP. 4 CONDUCTOR GRAY SHALL NOT BE SPLICED FROM THE CABINET TO THE LOOP LEAD INS.
4. INSTALL BACKPLATES WITH RETROREFLECTIVE BORDERS ON ALL VEHICULAR SIGNAL HEADS.
5. SET LOOP DETECTOR DELAY TO ZERO FOR LOOP 4B.

SIGN A

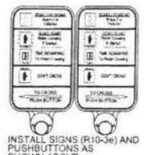

R3-05L-30

SIGN B

R3-6,6-42

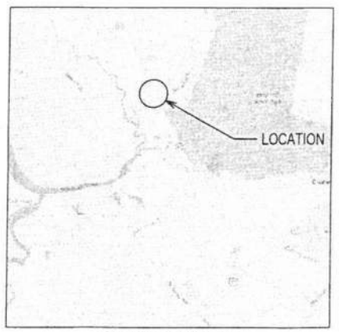
SIGN C (RETAIN/RELOCATE EXISTING)


D3-1


INSTALL SIGNS (R10-3e) AND PUSHBUTTONS AS SHOWN ABOVE

ROUTE NUMBER	SC 41		JOE ROUSE ROAD
APPROACH DIRECTION	NB	SB	WB
SIGNAL DESIGN SPEED	45	45	25
GRADE (%)	0.0%*	0.0%*	0.0%*

* ESTIMATED



SCALE IN FEET
0 30 60 120

THE TOWN OF Mount Pleasant
SOUTH CAROLINA

PLANS PREPARED BY:
Stantec
Stantec Consulting Services Inc.
4969 Centre Pointe Drive Suite 200
North Charleston, SC 29418
www.stantec.com

SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC. No. C02190 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA No. 25214 JAMES R. FISHER

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
3			
2			
1			

TOPO. ____ DATE ____
DNG. ____ DATE ____
R/W ____ DATE ____

PLAN SCALE 1" = ____
PROF SCALE 1" = ____ HORIZ
SCALE 1" = ____ VERT

TOWN OF MOUNT PLEASANT
SOUTH CAROLINA

SC HIGHWAY 41 &
JOE ROUSE ROAD
TRAFFIC SIGNAL PLAN

SCALE: 1"=30' RTE. SC 41

User: sebaker
U:\TIO\active\TI001683\Design\DGN\Plan_Sheets\TI001683_2L_tsi.dgn
5/3/2017

SHEET NO.	TOTAL SHEETS
1	4

INDEX OF SHEETS		
SHEET NO.	DESCRIPTION	SHEET SUBTOTALS
1	TITLE SHEET	1
2	SUMMARY OF ESTIMATED QUANTITIES	1
PM1	PAVEMENT MARKING & SIGNING PLAN	1
TS1	TRAFFIC SIGNAL PLAN	1
TOTAL		4

THE TOWN OF Mount Pleasant
SOUTH CAROLINA

PROPOSED PLANS
FOR

SC HIGHWAY 41 & HARPERS FERRY WAY
TRAFFIC SIGNAL INSTALLATION (MAST ARM)

Hydraulic Design Reference for these plans is the:

2009

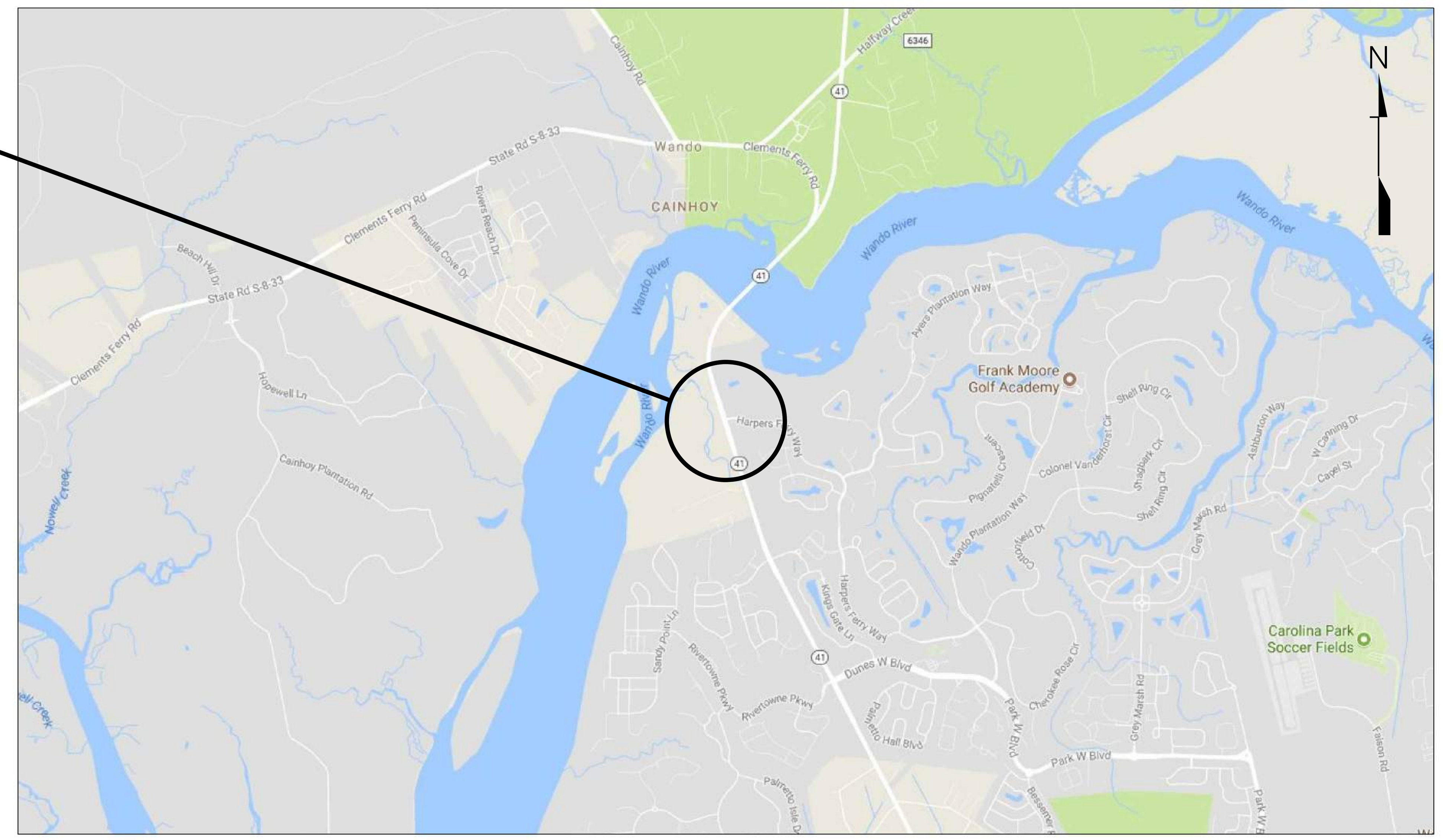
Edition of SCDOT's "Requirements for Hydraulic Design Studies"

Design Reference for these plans is the:

2001

AASHTO "A Policy on Geometric Design of Highways and Streets"

SC 41 & HARPERS FERRY WAY INTERSECTION



TOWN OF MOUNT PLEASANT

LAYOUT

SCALE 1 INCH = N.T.S. FEET

NPDES PERMIT INFORMATION	
Disturbed Area =	N/A Acre(s)
Permitted Area =	N/A Acre(s)

Approximate Location of Roadway is

	Latitude	Longitude
Begin	32°54'52"	79°49'40"
End	32°54'52"	79°49'40"

Hydraulic and NPDES Design provided by:

N/A

Designs may be obtained from the SCDOT Regional Production Group

	SC 41 (HIGHWAY 41)	HARPERS FERRY WAY	TOTAL
NET LENGTH OF ROADWAY	-	-	- MILES
NET LENGTH OF BRIDGES	-	-	- MILES
NET LENGTH OF PROJECT	-	-	- MILES
LENGTH OF EXCEPTIONS	-	-	- MILES
GROSS LENGTH OF PROJECT	-	-	- MILES

LAYOUT
EQUALITIES IN STATIONING
SCALE 1 INCH = N.T.S. FEET

NOTE: EXCEPT AS MAY OTHERWISE BE SPECIFIED ON THE PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIALS AND WORKMANSHIP ON THIS PROJECT SHALL CONFORM TO THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2007 EDITION) AND THE STANDARD DRAWINGS FOR ROAD CONSTRUCTION IN EFFECT AT THE TIME OF LETTING.

TRAFFIC DATA SC 41		
2016	ADT	22,625
2036	ADT	27,605
TRUCKS	2	%

3 DAYS BEFORE DIGGING IN SOUTH CAROLINA

CALL 811

SOUTH CAROLINA 811 (SC811)
www.SC811.COM
ALL UTILITIES MAY NOT BE A MEMBER OF SC811

CONSULTING ENGINEERING FIRM

Stantec

Stantec Consulting Services
4969 Centre Pointe Drive, Suite 200
North Charleston, SC 29418
Tel: 843.740.7700
Fax: 843.740.7707
www.stantec.com

ENGINEER OF RECORD

SOUTH CAROLINA ★ STANTEC CONSULTING SERVICES, INC. No. C02310 ★ CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA ★ LICENSED PROFESSIONAL ENGINEER No. 32068 ★ STUART W. DAY

FOR CONSTRUCTION : [signature] 10-9-17

User: aegan
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10/9/2017

COUNTY	PROJECT ID	ROUTE NO.	ROUTE NAME	SHEET NO.
CHARLESTON	-----	SC 41	HIGHWAY 41	2

SUMMARY OF ESTIMATED QUANTITIES

SECTION	ITEM	QUANTITY	UNIT
1031000	MOBILIZATION	1.000	LS
1032010	BONDS AND INSURANCE	1.000	LS
1071100	TRAFFIC CONTROL	1.000	LS
6271010	4" WHITE SOLID LINES (PVT. EDGE LINES) THERMO.- 90 MIL.	80.000	LF
6271025	24" WHITE SOLID LINES (STOP/DIAG LINES)-THERMO.-125 MIL	76.000	LF
6271030	WHITE SINGLE ARROWS (LT, STRGHT, RT) THERMO.-125 MIL	3.000	EA
6271035	WHITE WORD MESSAGE "ONLY" -THERMOPLASTIC - 125 MIL	5.000	EA
6319505	REMOVAL OF PAVEMENT MARKINGS	85.000	LF
6319515	REMOVAL OF PAVEMENT MARKINGS	2.000	EA
6531210	U-SECTION POST FOR SIGN SUPPORTS -3P	52.000	LF
6510105	FLAT SHEET,TYPE III,FIXED SIZE	40.000	SF
6750275	F&I 1" SCHEDULE 80 PVC CONDUIT	40.000	LF
6750278	FURNISH & INSTALL 2.0" SCHEDULE 80 PVC CONDUIT	60.000	LF
675027C	FURNISH & INSTALL 3.0" SCHEDULE 80 PVC CONDUIT	20.000	LF
6770393	NO. 14 COPPER WIRE, 8 CONDUCTOR (BLACK)	425.000	LF
6800499	F&I ELECTRICAL SERVICE FOR TRAFFIC SIGNAL	1.000	EA
6800528	17"X30"X18"D. ELEC. FLUSH UNDGRD.ENCLOS-(STR.POLY.CONC.)HD	1.000	EA
6845511	F&I - CONTR 332/336 CABINET ASSEMBLY - BASE MOUNTED	1.000	EA
6865731	F&I - 12" 1-WAY-3 SECTION (R.Y.G.) VEHICLE TRAFFIC SIGNAL	6.000	EA
6865834	BACKPLATE W/ RETROREFL. BORDERS FOR TRAFF. SIG.	6.000	EA
6886040	FURNISH & INSTALL VIDEO DETECTION SYSTEM W/HARDWARE & LEAD-IN	1.000	EA
6886042	FURNISH & INSTALL ADD'L CAMERAS W/HARDWARE & LEAD-IN	2.000	EA
6888179	DESIGN, FURNISH & INSTALL STEEL POLE WITH MAST ARM INCLUDING FOUNDATION	1.000	EA

THE FOLLOWING QUANTITIES ARE NOT SHOWN IN DETAIL ON THE PLANS BUT ARE INCLUDED IN THE SUMMARY OF ESTIMATED QUANTITIES AND MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER.

GENERAL INCLUSIONS

ITEM	QUANTITY	UNIT	COMMENTS
SILT FENCE	100.000	LF	AS NEEDED

PROJECT NOTES

1. TRAFFIC CONTROL
   PERFORM TRAFFIC CONTROL FOR SIGNAL IMPROVEMENTS IN ACCORDANCE WITH SCDOT STANDARDS AND TRAFFIC SIGNAL SPECIAL PROVISIONS - TRAFFIC CONTROL, FOR TRAFFIC SIGNAL PROJECTS. REFER TO THIS SPECIAL PROVISION FOR LANE CLOSURE RESTRICTIONS AND CONSTRUCTION RESTRICTIONS.

2. SCDOT STANDARD DRAWINGS
   PERFORM ALL WORK IN ACCORDANCE WITH CURRENT SCDOT STANDARD DRAWINGS (MOST RECENTLY REVISED JANUARY 2013) AND TRAFFIC SIGNAL SPECIAL PROVISIONS - TRAFFIC CONTROL, FOR TRAFFIC SIGNAL PROJECTS.

3. HOURLY LANE CLOSURE RESTRICTIONS
   FOR SC 41, LANE CLOSURES ARE PROHIBITED MONDAY-FRIDAY BETWEEN THE HOURS OF 6AM-7PM, SATURDAY AND SUNDAY BETWEEN THE HOURS OF 6AM-7PM,

4. TRAFFIC SIGNAL VEHICLE DETECTORS
   PAY ITEMS 6886040 AND 6886042 WILL USE THERMAL VIDEO DETECTION AS DIRECTED BY THE TOWN OF MOUNT PLEASANT.

PLANS PREPARED BY:

Stantec

Stantec Consulting Services
4969 Centre Pointe Drive, Suite 200
North Charleston, SC 29418
Tel: 843.740.7700
Fax: 843.740.7707
www.stantec.com

SOUTH CAROLINA — STANTEC CONSULTING SERVICES, INC. — No. C02310 — CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA — REGISTERED PROFESSIONAL ENGINEER — No. 32068 — STUART W. [illegible]
10-9-17

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
3			
2			
1			

TOPO. _____ DATE _____
DWG. _____ DATE _____
R/W _____ DATE _____
GROUP ____ - ____

TOWN OF MOUNT PLEASANT
SOUTH CAROLINA

SC 41 (HIGHWAY 41) &
HARPERS FERRY WAY
SUMMARY OF ESTIMATED QUANTITIES

SCALE: 1" = 30' RTE. SC 41

User: aegan
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10/9/2017

COUNTY	PROJECT ID	ROUTE NO.	ROUTE NAME	SHEET NO.
CHARLESTON	-----	SC 41	HIGHWAY 41	PM1

INSTALL SIGN ASSEMBLY "B" 270' IN ADVANCE OF STOP LINE

PRIVATE VARIABLE WIDTH R/W PER PB L16 0393 A.C.E.

270' TO STOP LINE

HARPERS FERRY WAY (PRIVATE ROADWAY) 30 MPH

PRIVATE VARIABLE WIDTH R/W PER PB L16 0393 A.C.E.

INSTALL SOLID WHITE THERMOPLASTIC ARROWS AND ONLYS PER STD. DWG. 625-410-00 (TYP.)

INSTALL (4)x10 LF OF 4" SOLID WHITE THERMOPLASTIC (10'-30' SKIP)

INSTALL 40 LF OF 4" SOLID WHITE THERMOPLASTIC

INSTALL 24 LF OF 24" SOLID WHITE THERMOPLASTIC

REMOVE EXISTING MARKINGS BEYOND NEW STOP LINE

REMOVE EXISTING MARKINGS BEYOND NEW STOP LINE

INSTALL 27 LF OF 24" SOLID WHITE THERMOPLASTIC

EXISTING 100' S.C.E.&G. POWERLINE EASEMENT

EXISTING S.C.E.&G. AND CPW UTILITY EASEMENT

PRESENT 37.5' R/W 10.241 A.C.E.

PRES. TRANSITION R/W PER PB L16 0393 A.C.E.

INSTALL SIGN ASSEMBLY "A" 625' IN ADVANCE OF STOP LINE (NOT SHOWN TO SCALE)

PRES. TRANSITION R/W PER PB L16 0393 A.C.E.

625' TO STOP LINE

REMOVE EXISTING ARROW AND ONLY

SC 41 55 MPH

SC 41 55 MPH

625' TO STOP LINE

INSTALL SIGN ASSEMBLY "A" 625' IN ADVANCE OF STOP LINE (NOT SHOWN TO SCALE)

PRESENT 37.5' R/W 10.241 A.C.E.

PRESENT 37.5' R/W 10.241 A.C.E.

INSTALL SOLID WHITE THERMOPLASTIC ARROW AND ONLY PER STD. DWG. 625-410-00

INSTALL 25 LF OF 24" SOLID WHITE THERMOPLASTIC

Wetlands

Wetlands

Wetlands

(2) 24" RCP

18" RCP

18" RCP

NOTES:
1. UTILITIES SHOWN ARE FOR REFERENCE ONLY.
2. INSTALL ONE SIGN ASSEMBLY "A" FOR EACH DIRECTION OF TRAVEL ALONG SC 41 AT 625' IN ADVANCE OF THE STOP LINE AND ONE SIGN ASSEMBLY "B" FOR HARPERS FERRY WAY AT 270' IN ADVANCE OF THE STOP LINE.

SIGN ASSEMBLY "A"

ORANGE FLAGS- 16" x 16"

NEW W16-15P-24

W3-3-36 1-3P-18

HARPERS FERRY WAY W16-8P

INSTALL ONE SIGN ASSEMBLY "A" FOR EACH DIRECTION OF TRAVEL ALONG SC 41 AT 625' IN ADVANCE OF THE STOP LINE.

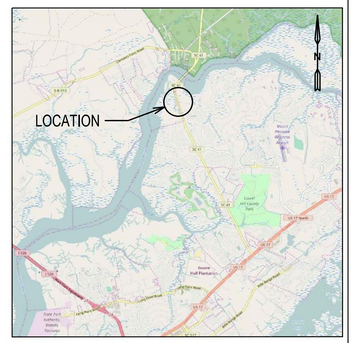
SIGN ASSEMBLY "B"

ORANGE FLAGS- 16" x 16"

NEW W16-15P-24

W3-3-30 1-3P-16

INSTALL ONE SIGN ASSEMBLY "B" ALONG HARPERS FERRY WAY AT 270' IN ADVANCE OF THE STOP LINE.



SCALE IN FEET

0 30 60 120

PLANS PREPARED BY:
Stantec
Stantec Consulting Services
4969 Centre Pointe Drive, Suite 200
North Charleston, SC 29418
Tel: 843.740.7700
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www.stantec.com

STANTEC CONSULTING SERVICES, INC. No. C02310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 32068 BRUCE W. STUART 10-9-17

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
3			
2			
1			

TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

TOWN OF MOUNT PLEASANT
SOUTH CAROLINA

SC 41 (HIGHWAY 41) &
HARPERS FERRY WAY
SIGNING AND MARKING PLAN

SCALE: 1" = 30' RTE. SC 41

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10/9/2017

COUNTY	PROJECT ID	ROUTE NO.	ROUTE NAME	SHEET NO.
CHARLESTON	-----	SC 41	HIGHWAY 41	TS1

SIGNAL EQUIPMENT

ONE (1) NEW 8-PHASE FULLY ACTUATED STANDARD 2070 CONTROLLER WITH FLASHER, SIGNAL MONITOR UNIT, AND BASE-MOUNTED 332A CABINET.

EXT. ☐ PROP. ■

VEHICLE SIGNALS: EXT. ○→ PROP. ●→

HEAD NUMBER	2	4	6
LENS	R	R	R
	Y	Y	Y
	G	G	G
PHASE	2	4	6
SIZE	12"	12"	12"
QUANTITY	2	2	2

OLA: OLC:
OLB: OLD:

METAL POLES W/ MAST ARMS: EXT. PROP.
SPLICE BOXES AS NECESSARY: EXT. PROP.
VIDEO DETECTOR UNITS AS NECESSARY: EXT. PROP.
GUYS AS NECESSARY: EXT. PROP.

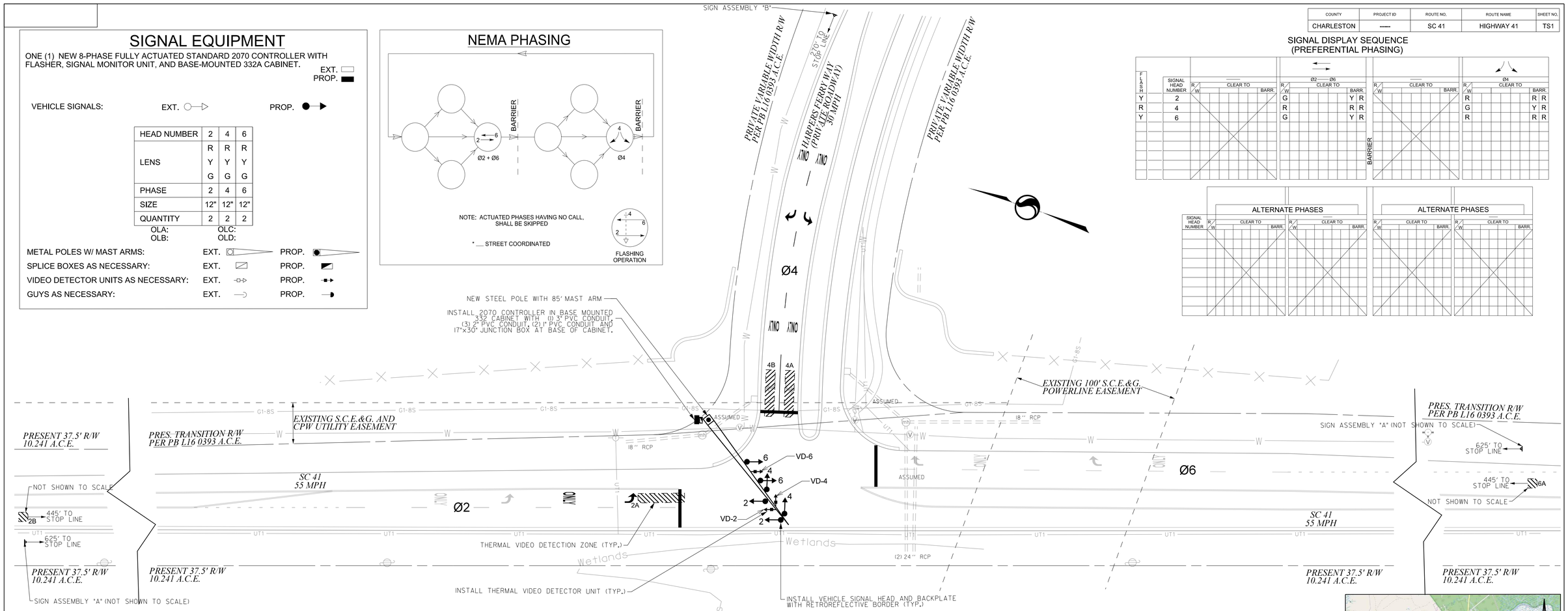
NEMA PHASING

NOTE: ACTUATED PHASES HAVING NO CALL, SHALL BE SKIPPED

* __ STREET COORDINATED

FLASHING OPERATION

SIGNAL DISPLAY SEQUENCE (PREFERENTIAL PHASING)



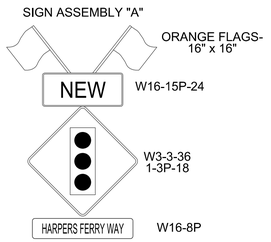
NOTES:
1. REFER TO THE MOST CURRENT EDITION OF THE SCDOT STANDARD DRAWINGS FOR ALL WORK WITHIN SCDOT RIGHT OF WAY.
2. REFER TO SCDOT STANDARD DRAWING SECTION 675-000 FOR ALL WORK RELATING TO TRAFFIC SIGNALS.
3. UTILITIES SHOWN ARE FOR REFERENCE ONLY.
4. CONTRACTOR SHALL COORDINATE WITH EXISTING UTILITIES FOR POLE PLACEMENT.
5. VIDEO DETECTION ZONES, EQUIPMENT AND ASSOCIATED SYSTEM OPERATING PARAMETERS WILL BE DEPLOYED BY SIGNAL SUB CONTRACTOR (RHYTHM ENGINEERING).
6. INSTALL ONE SIGN ASSEMBLY "A" FOR EACH DIRECTION OF TRAVEL ALONG SC 41 AT 625' IN ADVANCE OF THE STOP LINE AND ONE SIGN ASSEMBLY "B" ALONG HARPERS FERRY WAY AT 270' IN ADVANCE OF THE STOP LINE.
7. REMOVE "NEW" PLAQUES AND FLAGS FROM SIGN ASSEMBLIES "A" AND "B" A MINIMUM OF TWO MONTHS AND MAXIMUM OF SIX MONTHS AFTER SIGNAL ACTIVATION.

SIGNAL TIMINGS

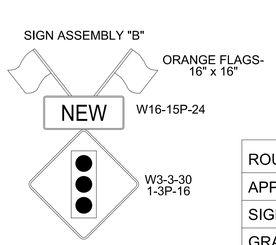
INTERVAL	PHASE 2	PHASE 4	PHASE 6
WALK	-	-	-
DON'T WALK	-	-	-
MIN INITIAL	15	6	15
MAX INITIAL	49	-	49
ADD/VEH	2.5	-	2.5
VEH EXT	6.0	3.0	6.0
TIME BFR REDUCE	20	-	20
TIME TO REDUCE	15	-	15
MIN GAP	3.0	-	3.0
MAX LIMIT	60	30	60
MAXIMUM 2	-	-	-
YELLOW	5.1	3.0	5.1
RED CLEAR	1.3	3.1	1.3

DETECTOR INSTALLATION CHART

PHASE/ LOOP LTR#	DETECTOR AMP NO.	DETECTOR CHAN NO.	WIRED TO PHASE(S)	LOCK	NON-LOCK	PULSE	PRES	OPERATION DELAY SEC	OPERATION EXT SEC	SPECIAL FEATURES TIME OF DAY-TOD, SWITCHING, etc.	LOOP DESIGN SIZE _X_	LOOP DESIGN NO.OF TURNS	LOOP DESIGN DIST. FROM ℄
2A	---	---	2	-	X	-	X	---	---	THERMAL VIDEO	6'x30'	---	-3'
2B	---	---	2	X	-	-	X	---	---	THERMAL VIDEO	6'x6'	---	445'
4A	---	---	4	-	X	-	X	---	---	THERMAL VIDEO	6'x30'	---	-3'
4B	---	---	4	-	X	-	X	10	---	THERMAL VIDEO	6'x30'	---	-3'
6A	---	---	6	X	-	-	X	---	---	THERMAL VIDEO	6'x6'	---	445'



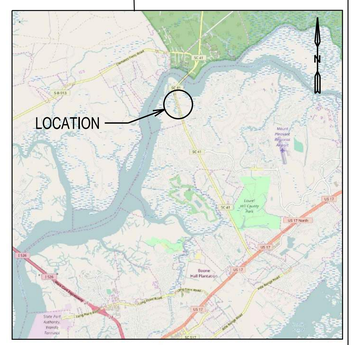
INSTALL ONE SIGN ASSEMBLY "A" FOR EACH DIRECTION OF TRAVEL ALONG SC 41 AT 625' IN ADVANCE OF THE STOP LINE.



INSTALL ONE SIGN ASSEMBLY "B" ALONG HARPERS FERRY WAY AT 270' IN ADVANCE OF THE STOP LINE.

ROUTE NUMBER	SC 41		HARPERS FERRY WAY
APPROACH DIRECTION	NB	SB	WB
SIGNAL DESIGN SPEED	55	55	30
GRADE (%)	*0%	*0%	*0%

* ESTIMATED



SCALE IN FEET

0 30 60 120

PLANS PREPARED BY:

Stantec

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4969 Centre Pointe Drive, Suite 200
North Charleston, SC 29418
Tel: 843.740.7700
Fax: 843.740.7707
www.stantec.com

SOUTH CAROLINA STANTEC CONSULTING SERVICES, INC. No. C02310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 32068 STUART W. [illegible]
10-9-17

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
3			
2			
1			

TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

TOWN OF MOUNT PLEASANT
SOUTH CAROLINA

SC 41 (HIGHWAY 41) &
HARPERS FERRY WAY
TRAFFIC SIGNAL PLAN

SCALE: 1" = 30' RTE. SC 41

User: aegan
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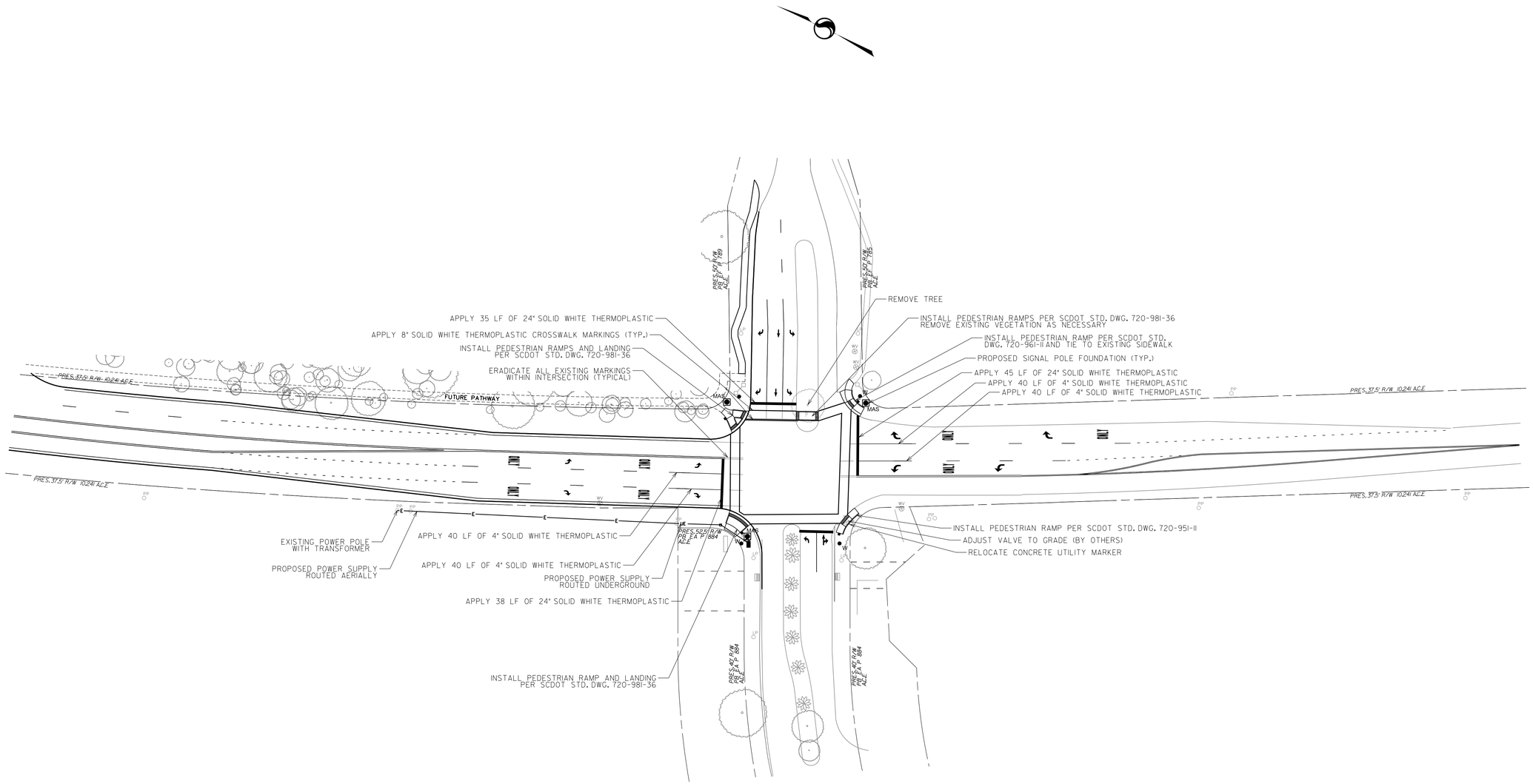
10/9/2017

FED. ROAD DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
3	S.C.	CHARLESTON	---	---	SC 41	PM1	3



SCALE IN FEET

0 40 80 160

PLANS PREPARED BY:

Stantec

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North Charleston, SC 29418
Tel: 843.740.7700
Fax: 843.740.7707
www.stantec.com

STANTEC CONSULTING SERVICES, INC. No. C02310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 32068 STUART W. SMITH
3-8-19

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
3			
2			
1			

TOPO. _____ DATE _____
DWG. _____ DATE _____
R/W _____ DATE _____
GROUP ____ - ____

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

TOWN OF MOUNT PLEASANT
SC 41 & PLANTERS POINT BOULEVARD
& WOODPARK DRIVE
PAVEMENT MARKING PLAN

SCALE: 1" = 40' RTE. SC 41

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U:\171002131\transportation\roadway\drawings\plan_sheets\171002131_01_pml.dgn
3/8/2019

FED. ROAD DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
3	S.C.	CHARLESTON	---	---	SC 41	TS1	3

SIGNAL EQUIPMENT

ONE (1) NEW 8-PHASE FULLY ACTUATED STANDARD 2070 CONTROLLER WITH FLASHER, SIGNAL MONITOR UNIT, AND BASE-MOUNTED 332 CABINET.

FOUR (4) NEW HAWKEYE RADAR VEHICLE DETECTOR UNITS

EXT. ▭ PROP. ▬

PEDESTRIAN SIGNALS: EXT. △ P PROP. ▲ P W/ACT. &SIGN

VEHICLE SIGNALS: EXT. ○→ PROP. ●→

HEAD NUMBER	2	4	6	8	2P	4P	6P	8P
LENS	R Y G	R Y G	R Y G	R Y G				
PHASE	2	4	6	8	2P	4P	6P	8P
SIZE	12"	12"	12"	12"	16"	16"	16"	16"
QUANTITY	2	2	2	2	2	2	2	2

OLA: OLC:
OLB: OLD:

METAL POLES W/ MAST ARMS: EXT. MAS PROP. MAS

WOOD POLES AS NECESSARY: EXT. W PROP. W

SPLICE BOXES AS NECESSARY: EXT. ▨ PROP. ▰

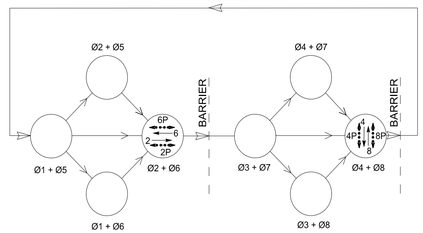
INDUCTANCE LOOPS AS NECESSARY: EXT. ⊏⊐ PROP. ▭

RADAR DETECTION UNITS: EXT. ▭→ PROP. ▬→

RADAR DETECTION ZONES: EXT. ▨ PROP. ▨

BACKGUYS AS NECESSARY: EXT. → PROP. →

NEMA PHASING



SIGNAL TIMINGS

	PHASE			
	2	4	6	8
WALK	7	7	7	7
DON'T WALK	23	20	24	26
MIN INITIAL	15	8	15	8
MAX INITIAL	49	-	49	-
ADD/VEH	2.5	-	2.5	-
VEH EXT	6.0	2.5	6.0	2.5
TIME BFR REDUCE	20	-	20	-
TIME TO REDUCE	15	-	15	-
MIN GAP	3.0	-	3.0	-
MAX LIMIT	60	45	60	45
MAXIMUM 2	-	-	-	-
YELLOW	5.1	3.0	5.1	3.0
RED CLEAR	1.5	3.3	1.5	3.3

INTERVAL

SIGNAL DISPLAY SEQUENCE CHART

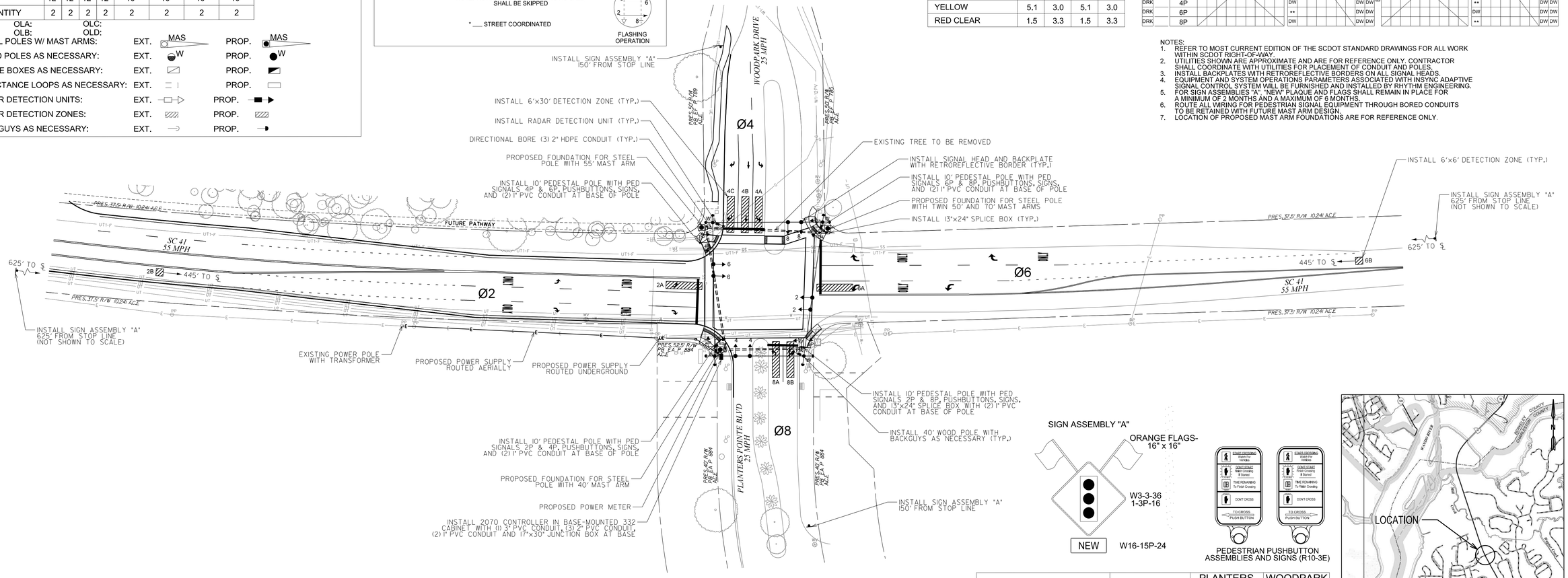
PHASE ON (A)	NON-CONFLICTION PHASE (B)	CONFLICTING PHASE *
2	6,2P,6P	4,8,4P,8P
4	8,4P,8P	2,6,2P,6P
6	2,2P,6P	4,8,4P,8P
8	4,4P,8P	2,6,2P,6P

NOTE A: ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE OMITTED.
NOTE B: WHEN ONE PHASE IS ON ALONE, ANY NON-CONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL (SEE CHART).
* CONFLICTING PHASES REQUIRE A CLEARANCE INTERVAL.

SIGNAL DISPLAY SEQUENCE (PREFERENTIAL PHASING)

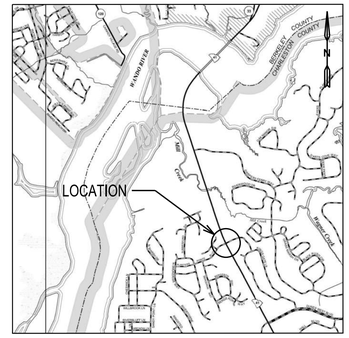
** WHEN CALLED, TIMES WALK, THEN CLEARANCE TIME FLASHING DON'T WALK, THEN GOES STEADY DON'T WALK

NOTES:
1. REFER TO MOST CURRENT EDITION OF THE SCDOT STANDARD DRAWINGS FOR ALL WORK WITHIN SCDOT RIGHT-OF-WAY.
2. UTILITIES SHOWN ARE APPROXIMATE AND ARE FOR REFERENCE ONLY. CONTRACTOR SHALL COORDINATE WITH UTILITIES FOR PLACEMENT OF CONDUIT AND POLES.
3. INSTALL BACKPLATES WITH RETROREFLECTIVE BORDERS ON ALL SIGNAL HEADS.
4. EQUIPMENT AND SYSTEM OPERATIONS PARAMETERS ASSOCIATED WITH INSYNC ADAPTIVE SIGNAL CONTROL SYSTEM WILL BE FURNISHED AND INSTALLED BY RHYTHM ENGINEERING.
5. FOR SIGN ASSEMBLIES "A", "NEW" PLAQUE AND FLAGS SHALL REMAIN IN PLACE FOR A MINIMUM OF 2 MONTHS AND A MAXIMUM OF 6 MONTHS.
6. ROUTE ALL WIRING FOR PEDESTRIAN SIGNAL EQUIPMENT THROUGH BORED CONDUITS TO BE RETAINED WITH FUTURE MAST ARM DESIGN.
7. LOCATION OF PROPOSED MAST ARM FOUNDATIONS ARE FOR REFERENCE ONLY.



SIGN ASSEMBLY "A"

PEDESTRIAN PUSHBUTTON ASSEMBLIES AND SIGNS (R10-3E)



DETECTOR INSTALLATION CHART

PHASE/ LOOP LTR#	DETECTOR AMP NO.	DETECTOR CHAN NO.	WIRED TO PHASE(S)	OPERATION LOCK	OPERATION NON-LOCK	OPERATION PULSE	OPERATION PRES	OPERATION DELAY SEC	OPERATION EXT SEC	SPECIAL FEATURES TIME OF DAY-TOD, SWITCHING, etc.	LOOP DESIGN SIZE _X_	LOOP DESIGN NO.OF TURNS	LOOP DESIGN DIST. FROM ℄
2A	---	---	2	-	X	-	X	---	---	RADAR	6'x30'	---	-3'
2B	---	---	2	X	-	-	X	---	---	RADAR	6'x6'	---	445'
4A	---	---	4	-	X	-	X	---	---	RADAR	6'x30'	---	-3'
4B	---	---	4	-	X	-	X	---	---	RADAR	6'x30'	---	-3'
4C	---	---	4	-	X	-	X	10	---	RADAR	6'x30'	---	-3'
6A	---	---	6	-	X	-	X	---	---	RADAR	6'x30'	---	-3'
6B	---	---	6	X	-	-	X	---	---	RADAR	6'x6'	---	445'
8A	---	---	8	-	X	-	X	---	---	RADAR	6'x30'	---	-3'
8B	---	---	8	-	X	-	X	8	---	RADAR	6'x30'	---	-3'

ROUTE NUMBER	SC 41		PLANTERS POINTE BLVD	WOODPARK DRIVE
APPROACH DIRECTION	NB	SB	EB	WB
SIGNAL DESIGN SPEED	55	55	25	25
GRADE (%)	*0%	*0%	*0%	*0%

*ESTIMATED

PLANS PREPARED BY:
Stantec
Stantec Consulting Services
4969 Centre Pointe Drive, Suite 200
North Charleston, SC 29418
Tel: 843.740.7700
Fax: 843.740.7707
www.stantec.com

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION STANTEC CONSULTING SERVICES, INC. No. C00310

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 32088 STUART W. [illegible] 3-8-19

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
3			
2			
1			

TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

TOWN OF MOUNT PLEASANT
SC 41 & PLANTERS POINT BOULEVARD & WOODPARK DRIVE
(SIGNAL ID _____)
INTERIM TRAFFIC SIGNAL PLAN

SCALE: 1" = 40' RTE. SC 41

FED. ROAD DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
3	S.C.	CHARLESTON	---	---	SC 41	TS2	3

SIGNAL EQUIPMENT

ONE (1) EXISTING 8-PHASE FULLY ACTUATED STANDARD 2070 CONTROLLER WITH FLASHER, SIGNAL MONITOR UNIT, AND BASE-MOUNTED 332 CABINET.

FOUR (4) EXISTING HAWKEYE RADAR VEHICLE DETECTOR UNITS

EXT. ▭ PROP. ▬

PEDESTRIAN SIGNALS: EXT. △ P PROP. ▲ P W/ACT. &SIGN

VEHICLE SIGNALS: EXT. ○→ PROP. ●→

HEAD NUMBER	2	4	6	8	2P	4P	6P	8P
LENS	R Y G	R Y G	R Y G	R Y G				
PHASE	2	4	6	8	2P	4P	6P	8P
SIZE	12"	12"	12"	12"	16"	16"	16"	16"
QUANTITY	2	2	2	2	2	2	2	2

OLA: OLC:
OLB: OLD:

METAL POLES W/ MAST ARMS: EXT. ○ MAS PROP. ● MAS

WOOD POLES AS NECESSARY: EXT. ◒ W PROP. ● W

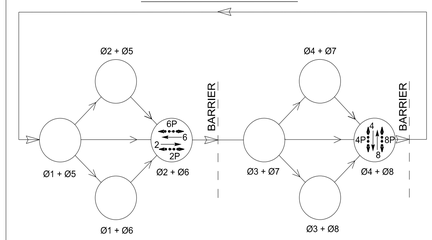
SPLICE BOXES AS NECESSARY: EXT. ▨ PROP. ▰

INDUCTANCE LOOPS AS NECESSARY: EXT. ⌶ PROP. ▭

RADAR DETECTION UNITS: EXT. ▭→ PROP. ▬→

RADAR DETECTION ZONES: EXT. ▨ PROP. ▨

NEMA PHASING



SIGNAL TIMINGS

	PHASE 2	4	6	8
WALK	7	7	7	7
DON'T WALK	23	20	24	26
MIN INITIAL	15	8	15	8
MAX INITIAL	49	-	49	-
ADD/VEH	2.5	-	2.5	-
VEH EXT	6.0	2.5	6.0	2.5
TIME BFR REDUCE	20	-	20	-
TIME TO REDUCE	15	-	15	-
MIN GAP	3.0	-	3.0	-
MAX LIMIT	60	45	60	45
MAXIMUM 2	-	-	-	-
YELLOW	5.1	3.0	5.1	3.0
RED CLEAR	1.5	3.3	1.5	3.3

INTERVAL

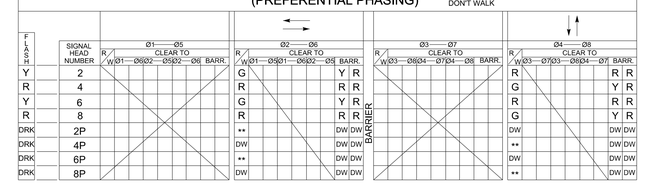
SIGNAL DISPLAY SEQUENCE CHART

PHASE ON (A)	NON-CONFLICTION PHASE (B)	CONFLICTING PHASE *
2	6,2P,6P	4,8,4P,8P
4	8,4P,8P	2,6,2P,6P
6	2,2P,6P	4,8,4P,8P
8	4,4P,8P	2,6,2P,6P

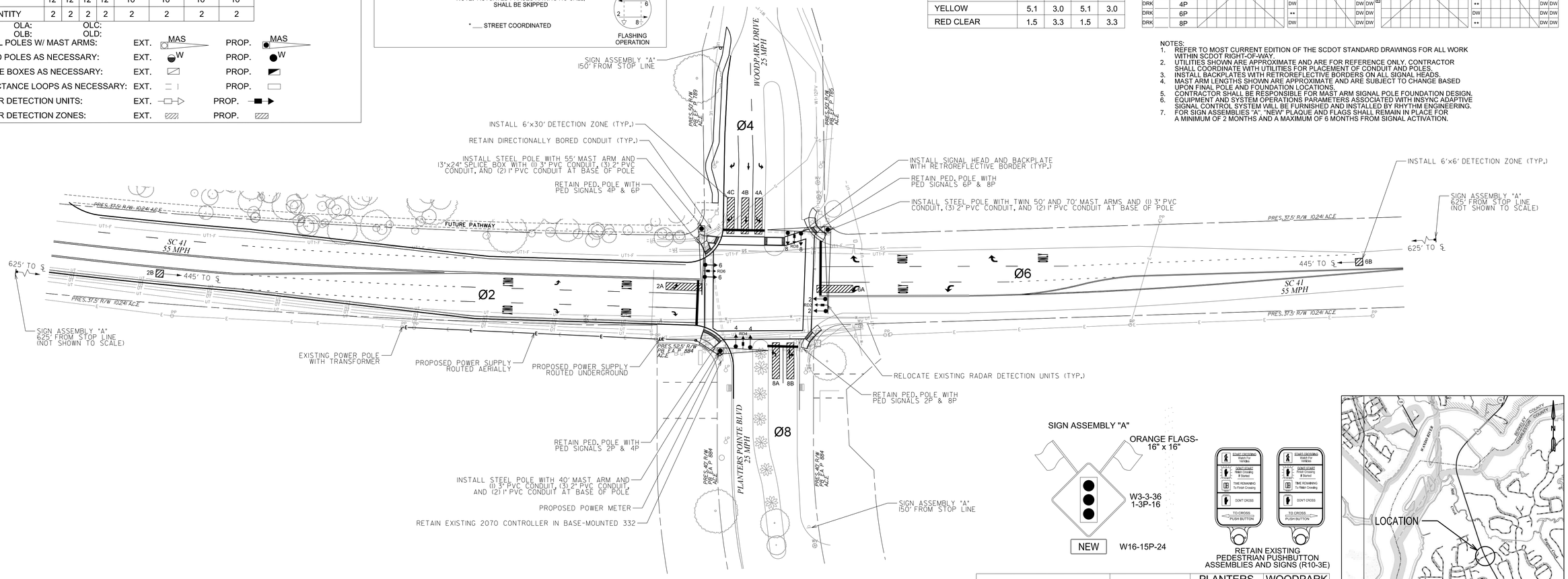
NOTE A: ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE OMITTED.
NOTE B: WHEN ONE PHASE IS ON ALONE, ANY NON-CONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL (SEE CHART).
* CONFLICTING PHASES REQUIRE A CLEARANCE INTERVAL.

SIGNAL DISPLAY SEQUENCE (PREFERENTIAL PHASING)

** WHEN CALLED, TIMES WALK, THEN CLEARANCE TIME FLASHING DON'T WALK, THEN GOES STEADY DON'T WALK

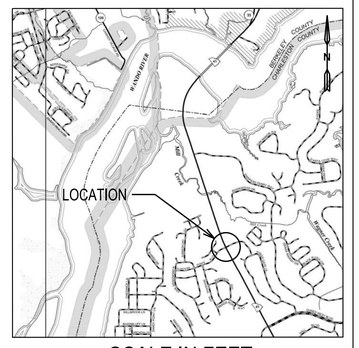


NOTES:
1. REFER TO MOST CURRENT EDITION OF THE SCDOT STANDARD DRAWINGS FOR ALL WORK WITHIN SCDOT RIGHT-OF-WAY.
2. UTILITIES SHOWN ARE APPROXIMATE AND ARE FOR REFERENCE ONLY. CONTRACTOR SHALL COORDINATE WITH UTILITIES FOR PLACEMENT OF CONDUIT AND POLES.
3. INSTALL BACKPLATES WITH RETROREFLECTIVE BORDERS ON ALL SIGNAL HEADS.
4. MAST ARM LENGTHS SHOWN ARE APPROXIMATE AND ARE SUBJECT TO CHANGE BASED UPON FINAL POLE AND FOUNDATION LOCATIONS.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR MAST ARM SIGNAL POLE FOUNDATION DESIGN.
6. EQUIPMENT AND SYSTEM OPERATIONS PARAMETERS ASSOCIATED WITH INSYNC ADAPTIVE SIGNAL CONTROL SYSTEM WILL BE FURNISHED AND INSTALLED BY RHYTHM ENGINEERING.
7. FOR SIGN ASSEMBLIES "A", "NEW" PLAQUE AND FLAGS SHALL REMAIN IN PLACE FOR A MINIMUM OF 2 MONTHS AND A MAXIMUM OF 6 MONTHS FROM SIGNAL ACTIVATION.



SIGN ASSEMBLY "A"

RETAIN EXISTING PEDESTRIAN PUSHBUTTON ASSEMBLIES AND SIGNS (R10-3E)



SCALE IN FEET

0 40 80 160

ROUTE NUMBER	SC 41		PLANTERS POINTE BLVD	WOODPARK DRIVE
APPROACH DIRECTION	NB	SB	EB	WB
SIGNAL DESIGN SPEED	55	55	25	25
GRADE (%)	*0%	*0%	*0%	*0%

*ESTIMATED

DETECTOR INSTALLATION CHART

PHASE/ LOOP LTR#	DETECTOR AMP NO.	DETECTOR CHAN NO.	WIRED TO PHASE(S)	LOCK X	NON-LOCK X	PULSE X	PRES X	OPERATION DELAY SEC	OPERATION EXT SEC	SPECIAL FEATURES TIME OF DAY-TOD, SWITCHING, etc.	LOOP DESIGN SIZE _X_	NO.OF TURNS	DIST. FROM ℄
2A	---	---	2	-	X	-	X	---	---	RADAR	6'x30'	---	-3'
2B	---	---	2	X	-	-	X	---	---	RADAR	6'x6'	---	445'
4A	---	---	4	-	X	-	X	---	---	RADAR	6'x30'	---	-3'
4B	---	---	4	-	X	-	X	---	---	RADAR	6'x30'	---	-3'
4C	---	---	4	-	X	-	X	10	---	RADAR	6'x30'	---	-3'
6A	---	---	6	-	X	-	X	---	---	RADAR	6'x30'	---	-3'
6B	---	---	6	X	-	-	X	---	---	RADAR	6'x6'	---	445'
8A	---	---	8	-	X	-	X	---	---	RADAR	6'x30'	---	-3'
8B	---	---	8	-	X	-	X	8	---	RADAR	6'x30'	---	-3'

PLANS PREPARED BY:
Stantec
Stantec Consulting Services
4969 Centre Pointe Drive, Suite 200
North Charleston, SC 29418
Tel: 843.740.7700
Fax: 843.740.7707
www.stantec.com

STANTEC CONSULTING SERVICES, INC. No. C00310 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 32088 STUART W. SMITH 3-8-19

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
3			
2			
1			

TOPO. _____ DATE _____
DWG. _____ DATE _____ GROUP ____ - ____
R/W _____ DATE _____

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

TOWN OF MOUNT PLEASANT
SC 41 & PLANTERS POINT BOULEVARD & WOODPARK DRIVE
(SIGNAL ID _____)
MAST ARM TRAFFIC SIGNAL PLAN

SCALE: 1" = 40' RTE. SC 41

User: aegan
U:\170021\3\transportation\roadway\drawings\plan_sheets\170021\3_03_ts2.dgn
3/8/2019

STATE	COUNTY	D&F PROJECT NO.	CTC PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
S.C.	CHARLESTON	31450.05	816-0-20-12			TS01

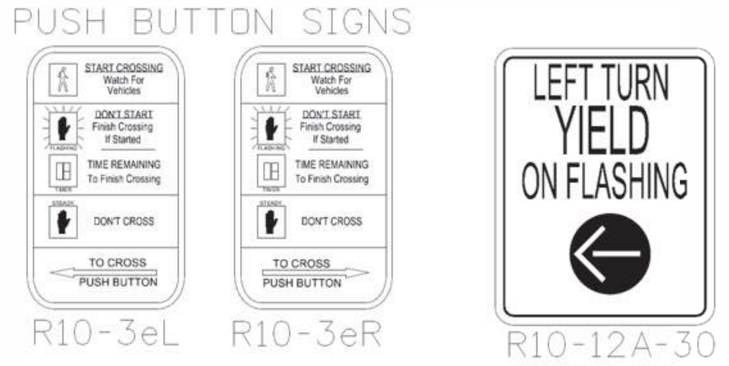
SIGNAL HEAD DISPLAY CHART

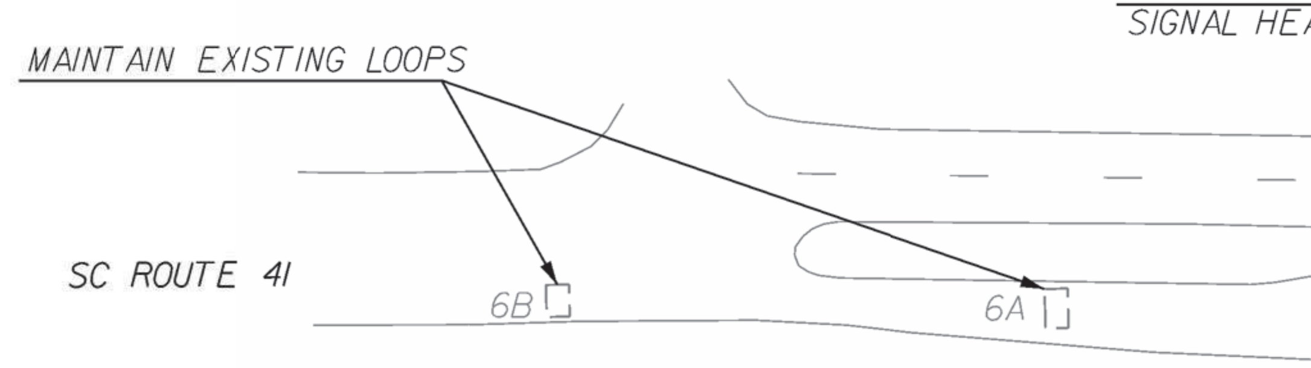
HEAD #	1, 2F	2	4F	4	4,5conc	5, 6F	6	7, 8F	8	8,1conc	2P/6P	4P/8P
DISPLAY	←R ←Y ←FY ←G	R Y G	←R ←Y ←FY	R Y G	R Y →Y G →G	←R ←Y ←FY ←G	R Y G	←R ←Y ←FY ←G	R Y G	R Y →Y G →G		
PHASE	1, OLA	2	OLB	4	4,5	5, OLC	6	7, OLD	8	8,1	2P/6P	4P/8P
SIZE	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	16"	16"
QUANTITY	1	2	1	1	1	1	2	1	1	1	4	4

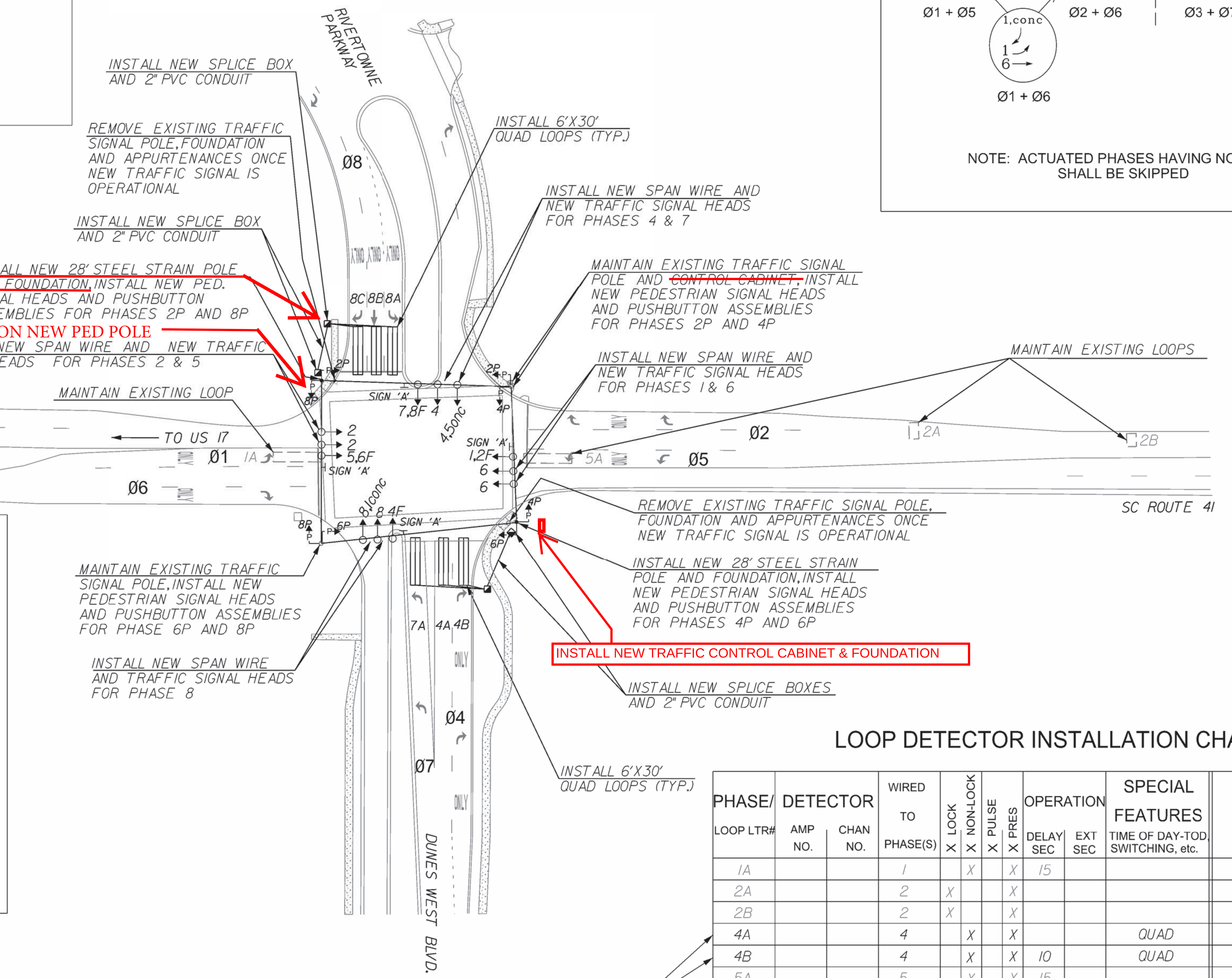
EQUIPMENT INFORMATION

CONTROLLER	CONTRACTOR SUPPLIED 2070L
CABINET	CONTRACTOR SUPPLIED 332
SOFTWARE	APOGEE STREETWISE
CABINET MOUNT	CONCRETE BASE
PHASES USED	1,2,4,5,6,7,8,2P,4P,6P,8P
OVERLAPS	OLA=Ø1+Ø2, OLB=Ø4, ØLC=O5+Ø6, ØLD=O7+Ø8 /

INSTALL PEDESTRIAN PUSH BUTTON SIGNS







NEMA PHASING

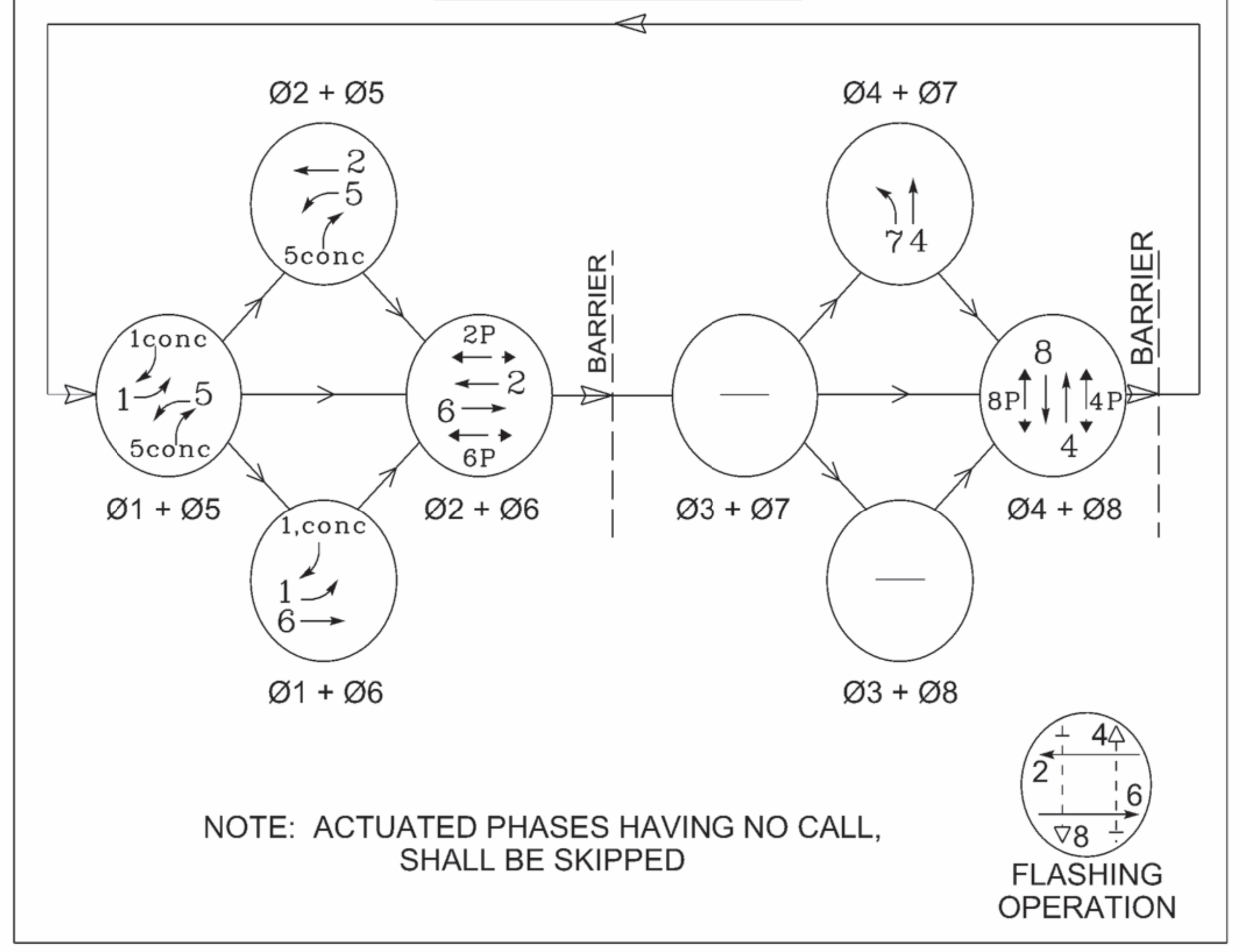


TABLE OF OPERATION SIGNAL HEAD #	PHASE IN OPERATION Ø1 + Ø5	Ø1 + Ø6	Ø2 + Ø5	Ø2 + Ø6	Ø3 + Ø7	Ø3 + Ø8	Ø4 + Ø7	Ø4 + Ø8	FLASH
1,2F	←G	←G	←FY	←FY			←R	←R	←Y
2	R	R	G	G			R	R	Y
4F	←R	←R	←R	←R			←FY	←FY	←R
4	R	R	R	R			G	G	R
4,5conc	R/G	R	R/G	R			G	G	R
5,6F	←G	←FY	←G	←FY			←R	←R	←Y
6	R	G	R	G			R	R	Y
7,8F	←R	←R	←R	←R			←G	←FY	←R
8	R	R	R	R			R	G	R
8,1conc	R/G	R/G	R	R			R	G	R
2P	DW	DW	DW	W			DW	DW	DRK
4P	DW	DW	DW	DW			DW	W	DRK
6P	DW	DW	DW	W			DW	DW	DRK
8P	DW	DW	DW	DW			DW	W	DRK

STANDARD DRAWINGS FOR TRAFFIC SIGNAL

See sheets D1-D32 for SCDOT Standard Drawings.

DRAWING NO.	DRAWING DESCRIPTION
675-105-01	SIGNAL LOCATION DETAIL
675-105-02	SIGNAL HEADS
675-105-03	PED.HEADS PED.PEDESTAL POLE FOUNDATION
675-110-00	TYPICAL WIRE AND CABLE USAGE (FOR 8 PHASE CABINETS)
675-115-01	WOOD POLE / SPANWIRE SERVICE,GROUNDING,AND BONDING
675-115-02	POLES
675-120-00	DETECTORS
675-130-01	CABINET
675-130-03	CABINET

Copies of SCDOT Standard Drawings are available at the following web address http://www.scdot.org/doing/sd_Disclaimer.aspx

NOTES:

1.THE LOCATION OF CONDUIT,JUNCTION BOXES,CABINETS,AND TRAFFIC SIGNAL POLES SHOWN ON THE PLAN ARE APPROXIMATE.THE CONTRACTOR SHALL CONTACT 'PUPS' AT '811' AND ANY OTHER UTILITY COMPANIES NECESSARY TO VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES BEFORE DIGGING.

2.ALL EQUIPMENT,MATERIALS,AND WORKMANSHIP SHALL MEET THE STANDARDS OUTLINED IN THE MUTCD (LATEST EDITION),SCDOT STANDARD DRAWINGS,AND THE SCDOT TRAFFIC SIGNAL SPECIFICATIONS. ALL TRAFFIC SIGNAL HEADS SHALL HAVE REFLECTIVE BACKPLATES.ALL TRAFFIC SIGNAL EQUIPMENT REMOVED DURING THIS PROJECT SHALL BE RETURNED TO THE SCDOT.

3.THE CONTRACTOR IS REQUIRED TO MAINTAIN THE TRAFFIC SIGNAL OPERATION AT ALL TIMES DURING CONSTRUCTION OF THIS PROJECT.ALL COSTS FOR TEMPORARY SIGNAL HEADS AND OR TEMPORARY ADJUSTMENT OF TRAFFIC SIGNAL EQUIPMENT SHALL BE INCLUDED IN THE LINE ITEM BID FOR "TEMPORARY ADJUSTMENT OF TRAFFIC SIGNAL EQUIPMENT".

4.THE CONTRACTOR SHALL MAINTAIN THE EXISTING DETECTOR LOOPS FOR PHASES 1,2,5,AND 6.CONTRACTOR SHALL COORDINATION THE INSTALLATION OF NEW LOOPS WITH THE PAVEMENT MARKING PLANS.

5.NEW TRAFFIC SIGNAL HEADS FOR ALL PHASES SHALL BE INSTALLED WHEN NEW SPAN WIRE IS INSTALLED.(EXISTING SIGNAL HEADS ARE NOT SHOWN FOR CLARITY).

7.CONTRACTOR SHALL INSTALL TWO NEW 28' STEEL STRAIN POLES ON THE NE AND SW QUADRANTS OF THE INTERSECTION AS SHOWN ON THIS PLAN.NEW SIGNAL SPAN WIRE SHALL BE INSTALLED AND CONNECTED TO THE EXISTING TRAFFIC SIGNAL POLES ON THE NW AND SE QUADRANTS.NEW TRAFFIC SIGNAL HEADS AND ASSOCIATED WIRING SHALL BE INSTALLED AND TIED TO THE EXISTING TRAFFIC SIGNAL CONTROL CABINET.

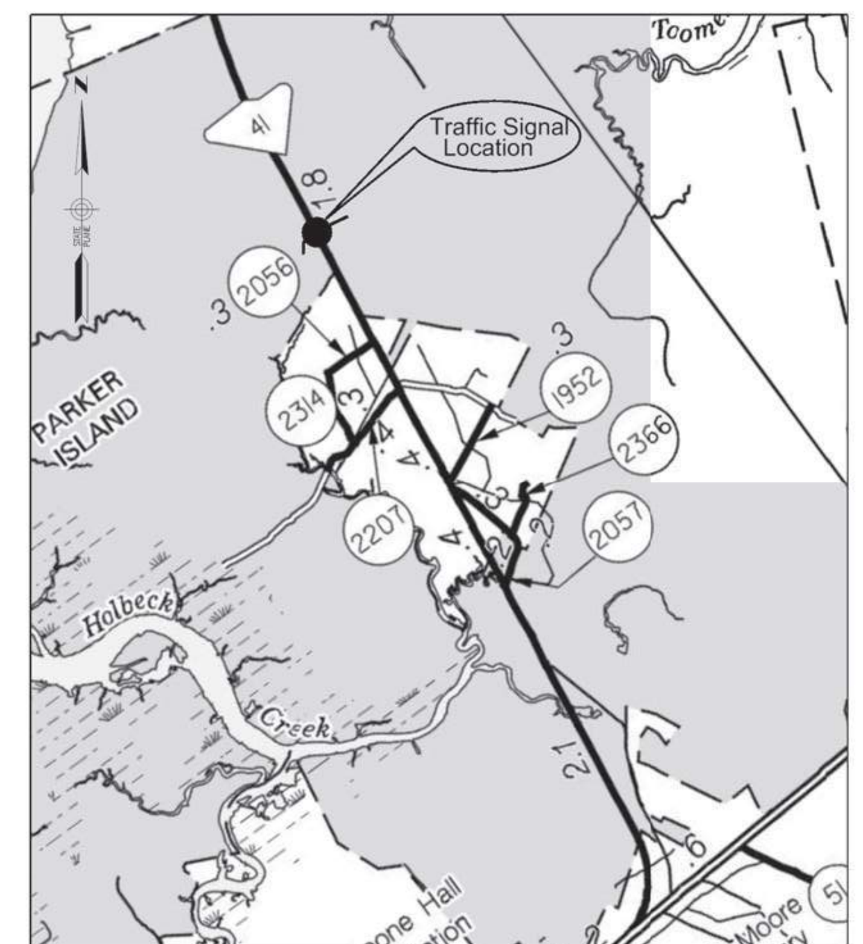
SIGNAL TIMINGS

INTERVAL	PHASE 1	2	3	4	5	6	7	8
WALK	-----	7	-----	7	-----	7	-----	7
DON'T WALK	-----	33	-----	22	-----	32	-----	23
MIN GREEN	8	15	-----	8	8	15	8	8
MAX INITIAL	-----	30	-----	-----	-----	30	-----	-----
ADDED INIT (SEC/ACT)	-----	1.1	-----	-----	-----	1.1	-----	-----
PASSAGE	2.5	6.0	-----	2.5	2.5	6.0	2.5	2.5
TIME BEFORE REDUCE	-----	20	-----	-----	-----	20	-----	-----
TIME TO REDUCE	-----	15	-----	-----	-----	15	-----	-----
MIN GAP	-----	2.3	-----	-----	-----	2.3	-----	-----
MAX LIMIT	25	90	-----	25	25	90	25	25
MAXIMUM 2	-----	-----	-----	-----	-----	-----	-----	-----
YELLOW	3.0	4.7	-----	3.6	3.0	4.7	3.0	3.6
RED CLEAR	3.6	2.1	-----	2.9	3.8	2.1	3.3	2.9
RECALL	OFF	MIN	-----	OFF	OFF	MIN	OFF	OFF

LOOP DETECTOR INSTALLATION CHART

PHASE/ LOOP LTR#	DETECTOR AMP NO.	CHAN NO.	WIRED TO PHASE(S)	X LOCK	X NON-LOCK	X PULSE	X PRES	OPERATION DELAY SEC	EXT SEC	SPECIAL FEATURES TIME OF DAY-TOD, SWITCHING, etc.	LOOP DESIGN SIZE X	NO.OF TURNS	DIST. FROM ℄
1A			1		X		X	15			6'X30'*	2-4-2*	+2'*
2A			2	X			X				*	*	255'*
2B			2	X			X				*	*	385'*
4A			4		X		X			QUAD	6'X30'	2-4-2	-2'
4B			4		X		X	10		QUAD	6'X30'	2-4-2	-2'
5A			5		X		X	15			*	*	*
6A			6	X			X				*	*	255'*
6B			6	X			X				*	*	385'*
7A			7		X		X	15		QUAD	6'X30'	2-4-2	-2'
8A			8		X		X			QUAD	6'X30'	2-4-2	-2'
8B			8		X		X			QUAD	6'X30'	2-4-2	-2'
8C			8		X		X	10		QUAD	6'X30'	2-4-2	-2'

*EXISTING LOOP INFORMATION TAKEN FROM EXISTING SIGNAL PLAN DATED 10/28/2011.



ROUTE NUMBER	SC 41		DUNES WEST BLVD	RIVERTOWNE PKWY
APPROACH DIRECTION	NB	SB	WB	EB
SIGNAL DESIGN SPEED*	50	50	35	25
GRADE (%) *	0.0±	0.0±	0.0±	0.0±

* BASED ON SIGNAL PLAN DATED 10/28/2011

SOUTH CAROLINA DAVIS & FLOYD, INC. No. C00538 CERTIFICATE OF AUTHORIZATION

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 20544 BRYAN DAVID WEBB

Bryan D. Webb 4/13/15

DAVIS & FLOYD

SINCE 1954

WWW.DAVISFLOYD.COM

3229 W. MONTAGUE AVENUE CHARLESTON, SC 29418 (843) 554-8602

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
3			
2			
1			

DGN. LRE DATE
R/W DATE
CHK. BDW DATE

CHARLESTON COUNTY
CTC PROGRAM

RIVERTOWNE PKWY. AND DUNES WEST BLVD.
RIGHT TURN LANE ADDITIONS

AS-BUILT TRAFFIC SIGNAL PLAN

TUNNELESS 100sec

Current Weekly Events

Day of Week	Priority	From - To
Sunday	1	12:00 AM - 8:00 AM
Sunday	1	10:00 PM - 12:00 AM
Monday	1	12:00 AM - 6:00 AM
Monday	1	10:00 PM - 12:00 AM
Tuesday	1	12:00 AM - 6:00 AM
Tuesday	1	10:00 PM - 12:00 AM
Wednesday	1	12:00 AM - 6:00 AM
Wednesday	1	10:00 PM - 12:00 AM
Thursday	1	12:00 AM - 6:00 AM
Thursday	1	10:00 PM - 12:00 AM
Friday	1	12:00 AM - 6:00 AM
Friday	1	10:00 PM - 12:00 AM
Saturday	1	12:00 AM - 8:00 AM
Saturday	1	10:00 PM - 12:00 AM

AM 180sec

Current Weekly Events

Day of Week	Priority	From - To
Monday	1	6:00 AM - 7:05 AM
Monday	1	7:30 AM - 9:00 AM
Tuesday	1	6:00 AM - 7:05 AM
Tuesday	1	7:30 AM - 9:00 AM
Wednesday	1	6:00 AM - 7:05 AM
Wednesday	1	7:30 AM - 9:00 AM
Thursday	1	6:00 AM - 7:05 AM
Thursday	1	7:30 AM - 9:00 AM
Friday	1	6:00 AM - 7:05 AM
Friday	1	7:30 AM - 9:00 AM

AM 180sec HAMLIN PROTECTED LEFT

Current Weekly Events

Day of Week	Priority	From - To
Monday	1	7:05 AM - 7:30 AM
Tuesday	1	7:05 AM - 7:30 AM
Wednesday	1	7:05 AM - 7:30 AM
Thursday	1	7:05 AM - 7:30 AM
Friday	1	7:05 AM - 7:30 AM

MIDDAY 160sec

Current Weekly Events

Day of Week	Priority	From - To
Monday	1	9:00 AM - 2:30 PM
Tuesday	1	9:00 AM - 2:30 PM
Wednesday	1	9:00 AM - 2:30 PM
Thursday	1	9:00 AM - 2:30 PM
Friday	1	9:00 AM - 2:30 PM

OFF PEAK 135sec

Current Weekly Events

Day of Week	Priority	From - To
Sunday	1	8:00 AM - 10:00 PM
Monday	1	6:45 PM - 10:00 PM
Tuesday	1	6:45 PM - 10:00 PM
Wednesday	1	6:45 PM - 10:00 PM
Thursday	1	6:45 PM - 10:00 PM
Friday	1	6:45 PM - 10:00 PM
Saturday	1	8:00 AM - 10:00 PM

PM 180sec

Current Weekly Events

Day of Week	Priority	From - To
Monday	1	2:30 PM - 6:45 PM
Tuesday	1	2:30 PM - 6:45 PM
Wednesday	1	2:30 PM - 6:45 PM
Thursday	1	2:30 PM - 6:45 PM
Friday	1	2:30 PM - 6:45 PM

Appendix C

Traffic Count Data

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

SC 41 s/o Colonnade Dr

Day: Wednesday
Date: 4/29/2015

City: Charleston
Project #: SC15_9159_003

DAILY TOTALS	NB	SB	EB	WB	Total
	12,882	13,870	0	0	26,752

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	14		12		0	0	26		12:00	206		243		0	0	449	
00:15	20		8		0	0	28		12:15	209		248		0	0	457	
00:30	12		3		0	0	15		12:30	277		214		0	0	491	
00:45	10	56	4	27	0	0	14	83	12:45	229	921	210	915	0	0	439	1836
01:00	4		7		0	0	11		13:00	215		218		0	0	433	
01:15	9		2		0	0	11		13:15	232		197		0	0	429	
01:30	3		5		0	0	8		13:30	247		178		0	0	425	
01:45	5	21	2	16	0	0	7	37	13:45	215	909	210	803	0	0	425	1712
02:00	4		1		0	0	5		14:00	239		199		0	0	438	
02:15	11		2		0	0	13		14:15	275		217		0	0	492	
02:30	4		3		0	0	7		14:30	212		210		0	0	422	
02:45	2	21	0	6	0	0	2	27	14:45	269	995	192	818	0	0	461	1813
03:00	3		4		0	0	7		15:00	251		189		0	0	440	
03:15	7		3		0	0	10		15:15	290		192		0	0	482	
03:30	3		9		0	0	12		15:30	276		235		0	0	511	
03:45	5	18	8	24	0	0	13	42	15:45	262	1079	208	824	0	0	470	1903
04:00	1		5		0	0	6		16:00	312		168		0	0	480	
04:15	10		5		0	0	15		16:15	307		216		0	0	523	
04:30	13		14		0	0	27		16:30	291		179		0	0	470	
04:45	7	31	22	46	0	0	29	77	16:45	330	1240	203	766	0	0	533	2006
05:00	16		31		0	0	47		17:00	302		180		0	0	482	
05:15	7		42		0	0	49		17:15	248		236		0	0	484	
05:30	19		66		0	0	85		17:30	332		239		0	0	571	
05:45	20	62	85	224	0	0	105	286	17:45	308	1190	207	862	0	0	515	2052
06:00	35		104		0	0	139		18:00	281		236		0	0	517	
06:15	52		166		0	0	218		18:15	321		251		0	0	572	
06:30	45		208		0	0	253		18:30	306		177		0	0	483	
06:45	59	191	333	811	0	0	392	1002	18:45	248	1156	192	856	0	0	440	2012
07:00	50		395		0	0	445		19:00	225		129		0	0	354	
07:15	87		384		0	0	471		19:15	227		99		0	0	326	
07:30	108		363		0	0	471		19:30	183		90		0	0	273	
07:45	110	355	336	1478	0	0	446	1833	19:45	170	805	95	413	0	0	265	1218
08:00	122		346		0	0	468		20:00	180		84		0	0	264	
08:15	131		347		0	0	478		20:15	169		76		0	0	245	
08:30	108		327		0	0	435		20:30	154		78		0	0	232	
08:45	101	462	355	1375	0	0	456	1837	20:45	156	659	35	273	0	0	191	932
09:00	147		307		0	0	454		21:00	126		52		0	0	178	
09:15	140		282		0	0	422		21:15	135		37		0	0	172	
09:30	135		257		0	0	392		21:30	83		29		0	0	112	
09:45	155	577	283	1129	0	0	438	1706	21:45	87	431	37	155	0	0	124	586
10:00	183		225		0	0	408		22:00	83		24		0	0	107	
10:15	155		242		0	0	397		22:15	61		17		0	0	78	
10:30	164		251		0	0	415		22:30	61		19		0	0	80	
10:45	163	665	231	949	0	0	394	1614	22:45	41	246	19	79	0	0	60	325
11:00	163		226		0	0	389		23:00	33		18		0	0	51	
11:15	139		233		0	0	372		23:15	31		14		0	0	45	
11:30	166		265		0	0	431		23:30	31		11		0	0	42	
11:45	210	678	247	971	0	0	457	1649	23:45	19	114	7	50	0	0	26	164
TOTALS		3137		7056				**10193**	**TOTALS**		9745		6814				**16559**
SPLIT %		30.8%		69.2%				**38.1%**	**SPLIT %**		58.9%		41.1%				**61.9%**

DAILY TOTALS	NB	SB	EB	WB	Total
	12,882	13,870	0	0	26,752

AM Peak Hour	11:45	07:00					**07:30**		**PM Peak Hour**	18:00	18:00					**18:00**		
AM Pk Volume	902	1478					**1863**		**PM Pk Volume**	1242	933					**2175**		
Pk Hr Factor	0.814	0.935					**0.974**		**Pk Hr Factor**	0.900	0.853					**0.879**		
7 - 9 Volume	817	2853	0	0			**3670**		**4 - 6 Volume**	2430	1628	0	0			**4058**		
7 - 9 Peak Hour	07:30	07:00					**07:30**		**4 - 6 Peak Hour**	16:00	17:00					**16:45**		
7 - 9 Pk Volume	471	1478	0	0			**1863**		**4 - 6 Pk Volume**	1240	862	0	0			**2070**		
Pk Hr Factor	0.899	0.935	0.000	0.000			**0.974**		**Pk Hr Factor**	0.939	0.902	0.000	0.000			**0.906**		

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

SC 41 n/o Planters Pointe Blvd

Day: Wednesday
Date: 4/29/2015

City: Charleston
Project #: SC15_9159_001

DAILY TOTALS	NB	SB	EB	WB	Total
	7,026	7,499	0	0	14,525

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	5		7		0	0	12		12:00	94		99		0	0	193	
00:15	3		9		0	0	12		12:15	88		126		0	0	214	
00:30	5		7		0	0	12		12:30	121		134		0	0	255	
00:45	3	16	7	30	0	0	10	46	12:45	111	414	109	468	0	0	220	882
01:00	4		2		0	0	6		13:00	97		163		0	0	260	
01:15	1		0		0	0	1		13:15	92		169		0	0	261	
01:30	0		3		0	0	3		13:30	97		162		0	0	259	
01:45	6	11	0	5	0	0	6	16	13:45	93	379	173	667	0	0	266	1046
02:00	2		0		0	0	2		14:00	98		152		0	0	250	
02:15	1		2		0	0	3		14:15	127		157		0	0	284	
02:30	1		2		0	0	3		14:30	110		176		0	0	286	
02:45	1	5	0	4	0	0	1	9	14:45	118	453	108	593	0	0	226	1046
03:00	3		0		0	0	3		15:00	116		104		0	0	220	
03:15	1		4		0	0	5		15:15	129		119		0	0	248	
03:30	1		3		0	0	4		15:30	156		97		0	0	253	
03:45	7	12	5	12	0	0	12	24	15:45	128	529	140	460	0	0	268	989
04:00	2		0		0	0	2		16:00	112		116		0	0	228	
04:15	9		1		0	0	10		16:15	150		120		0	0	270	
04:30	11		9		0	0	20		16:30	140		151		0	0	291	
04:45	12	34	6	16	0	0	18	50	16:45	131	533	181	568	0	0	312	1101
05:00	24		5		0	0	29		17:00	124		187		0	0	311	
05:15	23		19		0	0	42		17:15	135		215		0	0	350	
05:30	40		26		0	0	66		17:30	141		174		0	0	315	
05:45	58	145	55	105	0	0	113	250	17:45	132	532	181	757	0	0	313	1289
06:00	75		41		0	0	116		18:00	143		144		0	0	287	
06:15	92		61		0	0	153		18:15	126		149		0	0	275	
06:30	116		109		0	0	225		18:30	121		144		0	0	265	
06:45	138	421	137	348	0	0	275	769	18:45	119	509	105	542	0	0	224	1051
07:00	110		130		0	0	240		19:00	99		85		0	0	184	
07:15	102		114		0	0	216		19:15	98		97		0	0	195	
07:30	109		123		0	0	232		19:30	112		68		0	0	180	
07:45	116	437	110	477	0	0	226	914	19:45	83	392	80	330	0	0	163	722
08:00	118		111		0	0	229		20:00	89		67		0	0	156	
08:15	121		116		0	0	237		20:15	79		53		0	0	132	
08:30	116		144		0	0	260		20:30	73		44		0	0	117	
08:45	98	453	109	480	0	0	207	933	20:45	68	309	54	218	0	0	122	527
09:00	94		108		0	0	202		21:00	53		40		0	0	93	
09:15	92		95		0	0	187		21:15	59		44		0	0	103	
09:30	73		107		0	0	180		21:30	61		34		0	0	95	
09:45	103	362	105	415	0	0	208	777	21:45	41	214	26	144	0	0	67	358
10:00	82		87		0	0	169		22:00	33		37		0	0	70	
10:15	104		79		0	0	183		22:15	28		20		0	0	48	
10:30	95		93		0	0	188		22:30	26		22		0	0	48	
10:45	74	355	84	343	0	0	158	698	22:45	16	103	18	97	0	0	34	200
11:00	90		91		0	0	181		23:00	22		6		0	0	28	
11:15	83		103		0	0	186		23:15	10		9		0	0	19	
11:30	88		96		0	0	184		23:30	7		16		0	0	23	
11:45	101	362	88	378	0	0	189	740	23:45	7	46	11	42	0	0	18	88
TOTALS		2613		2613				5226	TOTALS		4413		4886				9299
SPLIT %		50.0%		50.0%				36.0%	SPLIT %		47.5%		52.5%				64.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	7,026	7,499	0	0	14,525

AM Peak Hour	07:45	06:45					06:45		PM Peak Hour	17:45	17:15					17:30		
AM Pk Volume	471	504					963		PM Pk Volume	551	757					1289		
Pk Hr Factor	0.973	0.920					0.875		Pk Hr Factor	0.913	0.830					0.944		
7 - 9 Volume	890	957	0	0			1847		4 - 6 Volume	1065	1325	0	0			2390		
7 - 9 Peak Hour	07:45	07:45					07:45		4 - 6 Peak Hour	16:15	16:45					17:00		
7 - 9 Pk Volume	471	481	0	0			952		4 - 6 Pk Volume	545	757	0	0			1289		
Pk Hr Factor	0.973	0.835	0.000	0.000			0.915		Pk Hr Factor	0.908	0.880	0.000	0.000			0.921		

Prepared by NDS/ATD

Prepared by National Data & Surveying Services

VOLUME

SC 41 s/o Dunes West Blvd

Day: Wednesday
Date: 4/29/2015

City: Charleston
Project #: SC15_9159_002

DAILY TOTALS	NB	SB	EB	WB	Total
	8,681	9,114	0	0	17,795

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	11		8		0	0	19		12:00	166		126		0	0	292	
00:15	8		5		0	0	13		12:15	164		175		0	0	339	
00:30	5		7		0	0	12		12:30	197		150		0	0	347	
00:45	7	31	7	27	0	0	14	58	12:45	198	725	149	600	0	0	347	1325
01:00	3		3		0	0	6		13:00	156		166		0	0	322	
01:15	4		2		0	0	6		13:15	175		199		0	0	374	
01:30	3		2		0	0	5		13:30	181		193		0	0	374	
01:45	1	11	0	7	0	0	1	18	13:45	165	677	206	764	0	0	371	1441
02:00	3		1		0	0	4		14:00	185		192		0	0	377	
02:15	8		1		0	0	9		14:15	149		194		0	0	343	
02:30	2		2		0	0	4		14:30	149		178		0	0	327	
02:45	0	13	0	4	0	0		17	14:45	136	619	140	704	0	0	276	1323
03:00	3		0		0	0	3		15:00	121		91		0	0	212	
03:15	4		2		0	0	6		15:15	121		130		0	0	251	
03:30	0		6		0	0	6		15:30	140		101		0	0	241	
03:45	4	11	4	12	0	0	8	23	15:45	124	506	113	435	0	0	237	941
04:00	1		3		0	0	4		16:00	194		111		0	0	305	
04:15	4		2		0	0	6		16:15	210		140		0	0	350	
04:30	12		12		0	0	24		16:30	225		134		0	0	359	
04:45	7	24	14	31	0	0	21	55	16:45	217	846	145	530	0	0	362	1376
05:00	13		13		0	0	26		17:00	216		138		0	0	354	
05:15	9		28		0	0	37		17:15	230		178		0	0	408	
05:30	18		43		0	0	61		17:30	212		167		0	0	379	
05:45	17	57	64	148	0	0	81	205	17:45	220	878	153	636	0	0	373	1514
06:00	35		63		0	0	98		18:00	136		131		0	0	267	
06:15	46		90		0	0	136		18:15	136		128		0	0	264	
06:30	42		147		0	0	189		18:30	136		120		0	0	256	
06:45	54	177	209	509	0	0	263	686	18:45	125	533	104	483	0	0	229	1016
07:00	39		277		0	0	316		19:00	114		75		0	0	189	
07:15	78		222		0	0	300		19:15	125		83		0	0	208	
07:30	75		221		0	0	296		19:30	129		77		0	0	206	
07:45	77	269	181	901	0	0	258	1170	19:45	107	475	84	319	0	0	191	794
08:00	100		203		0	0	303		20:00	124		68		0	0	192	
08:15	99		192		0	0	291		20:15	113		68		0	0	181	
08:30	94		223		0	0	317		20:30	112		40		0	0	152	
08:45	78	371	216	834	0	0	294	1205	20:45	105	454	41	217	0	0	146	671
09:00	119		166		0	0	285		21:00	92		38		0	0	130	
09:15	104		158		0	0	262		21:15	93		34		0	0	127	
09:30	92		130		0	0	222		21:30	69		20		0	0	89	
09:45	112	427	166	620	0	0	278	1047	21:45	58	312	25	117	0	0	83	429
10:00	126		131		0	0	257		22:00	61		31		0	0	92	
10:15	136		151		0	0	287		22:15	47		15		0	0	62	
10:30	125		130		0	0	255		22:30	40		10		0	0	50	
10:45	123	510	118	530	0	0	241	1040	22:45	29	177	17	73	0	0	46	250
11:00	119		151		0	0	270		23:00	22		8		0	0	30	
11:15	106		161		0	0	267		23:15	25		13		0	0	38	
11:30	116		136		0	0	252		23:30	18		7		0	0	25	
11:45	156	497	131	579	0	0	287	1076	23:45	16	81	6	34	0	0	22	115
TOTALS		2398		4202				6600	TOTALS		6283		4912				11195
SPLIT %		36.3%		63.7%				37.1%	SPLIT %		56.1%		43.9%				62.9%

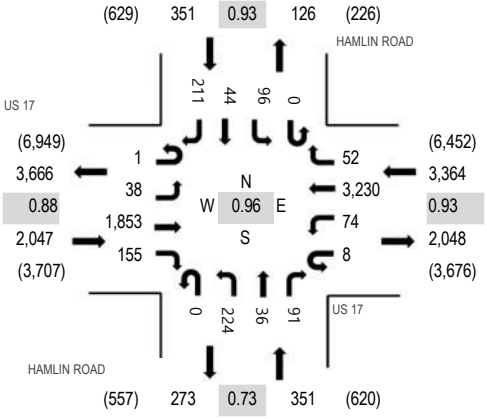
DAILY TOTALS	NB	SB	EB	WB	Total
	8,681	9,114	0	0	17,795

AM Peak Hour	11:45	06:45						11:45	PM Peak Hour	17:00	13:45						17:30
AM Pk Volume	683	929						1265	PM Pk Volume	888	790						1514
Pk Hr Factor	0.867	0.838						0.496	Pk Hr Factor	0.954	0.934						0.846
7 - 9 Volume	640	1735	0	0				2375	4 - 6 Volume	1724	1166	0	0				2890
7 - 9 Peak Hour	08:00	07:00						08:00	4 - 6 Peak Hour	16:30	17:00						17:00
7 - 9 Pk Volume	371	901	0	0				1205	4 - 6 Pk Volume	888	636	0	0				1514
Pk Hr Factor	0.928	0.813	0.000	0.000				0.950	Pk Hr Factor	0.965	0.893	0.000	0.000				0.928

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

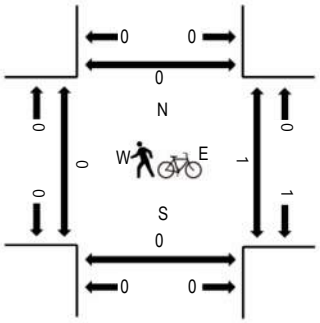
Location: A HAMLIN ROAD & US 17 AM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	US 17 Eastbound				US 17 Westbound				HAMLIN ROAD Northbound				HAMLIN ROAD Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	7	332	74	0	36	735	5	0	52	14	14	0	17	43	38	1,367	5,989	0	0	0	0
7:15 AM	0	8	407	40	0	16	787	10	0	78	18	25	0	20	8	66	1,483	6,113	0	1	0	0
7:30 AM	0	5	472	18	1	14	865	26	0	44	8	31	0	26	13	63	1,586	5,932	0	0	0	0
7:45 AM	1	12	523	46	4	12	813	8	0	32	2	16	0	32	9	43	1,553	5,656	0	0	0	0
8:00 AM	0	13	451	51	3	32	765	8	0	70	8	19	0	18	14	39	1,491	5,419	0	0	0	0
8:15 AM	0	12	355	29	3	23	687	8	0	72	6	37	0	17	10	43	1,302		2	2	0	0
8:30 AM	0	14	400	20	5	14	749	11	0	27	1	14	0	13	5	37	1,310		0	0	0	0
8:45 AM	0	11	386	20	4	10	788	10	0	6	1	25	0	6	0	49	1,316		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	40	0	0	0	35	0	0	2	0	0	0	0	0	0	77
Lights	1	37	1,745	146	8	72	3,141	50	0	213	34	84	0	94	44	209	5,878
Mediums	0	1	68	9	0	2	54	2	0	9	2	7	0	2	0	2	158
Total	1	38	1,853	155	8	74	3,230	52	0	224	36	91	0	96	44	211	6,113

All Traffic Data Services Inc.
(303) 216-2439
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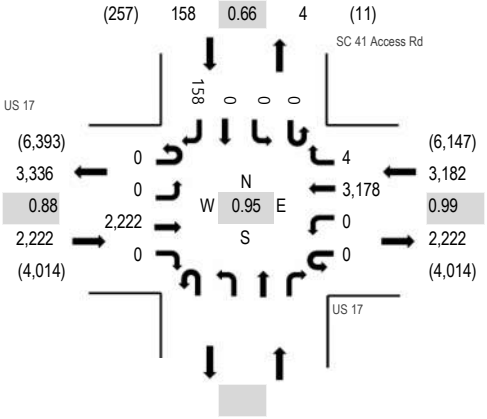
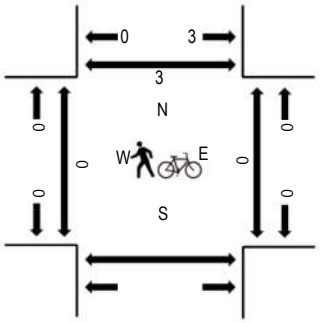
Location: B SC 41 Access Rd & US 17 AM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	US 17 Eastbound				US 17 Westbound				SC 41 Access Rd Northbound				SC 41 Access Rd Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	332	0	0	0	789	4					0	0	0	4	1,129	5,355	0	0		0
7:15 AM	0	0	473	0	0	0	809	0					0	0	0	42	1,324	5,562	0	0		1
7:30 AM	0	0	568	0	0	0	809	0					0	0	0	60	1,437	5,486	0	0		0
7:45 AM	0	0	639	0	0	0	781	0					0	0	0	45	1,465	5,313	0	0		2
8:00 AM	0	0	542	0	0	0	779	4					0	0	0	11	1,336	5,063	0	0		0
8:15 AM	0	0	499	0	0	0	721	2					0	0	0	26	1,248		0	0		0
8:30 AM	0	0	502	0	0	0	717	0					0	0	0	45	1,264		0	0		0
8:45 AM	0	0	459	0	0	0	731	1					0	0	0	24	1,215		0	0		0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	83	0	0	0	34	0					0	0	0	1	118
Lights	0	0	2,119	0	0	0	3,077	4					0	0	0	154	5,354
Mediums	0	0	20	0	0	0	67	0					0	0	0	3	90
Total	0	0	2,222	0	0	0	3,178	4					0	0	0	158	5,562

All Traffic Data Services Inc.
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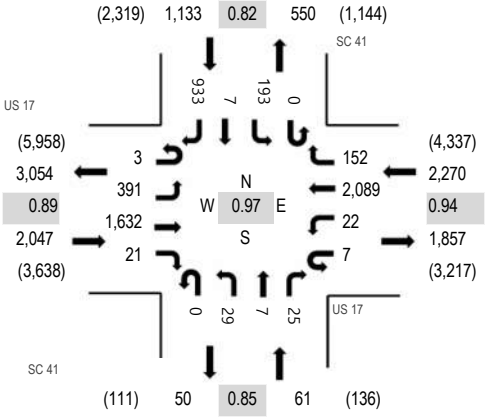
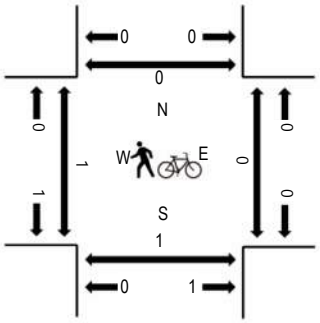
Location: C SC 41 & US 17 AM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	US 17 Eastbound				US 17 Westbound				SC 41 Northbound				SC 41 Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	2	64	291	3	0	3	475	32	0	15	1	3	0	62	3	301	1,255	5,397	0	0	0	0
7:15 AM	3	81	360	9	0	2	549	38	0	9	2	8	0	39	2	235	1,337	5,511	1	0	1	0
7:30 AM	0	91	422	5	2	8	558	39	0	11	2	8	0	38	0	194	1,378	5,446	0	0	0	0
7:45 AM	0	109	462	3	5	6	520	43	0	8	2	2	0	48	3	216	1,427	5,291	0	0	0	0
8:00 AM	0	110	388	4	0	6	462	32	0	1	1	7	0	68	2	288	1,369	5,033	0	0	0	0
8:15 AM	1	94	303	10	2	11	491	43	0	15	6	7	0	48	2	239	1,272		0	0	0	0
8:30 AM	0	128	302	5	0	4	478	54	0	9	4	5	0	34	2	198	1,223		0	0	0	0
8:45 AM	0	122	258	8	2	5	425	42	0	3	3	4	1	39	5	252	1,169		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	5	33	0	0	0	33	1	0	0	0	0	0	0	0	4	76
Lights	3	374	1,532	21	7	22	2,016	145	0	29	6	25	0	185	7	907	5,279
Mediums	0	12	67	0	0	0	40	6	0	0	1	0	0	8	0	22	156
Total	3	391	1,632	21	7	22	2,089	152	0	29	7	25	0	193	7	933	5,511

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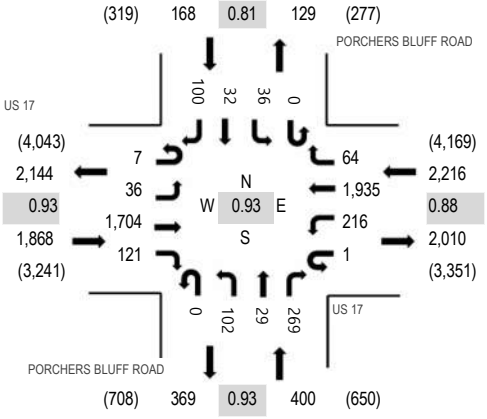
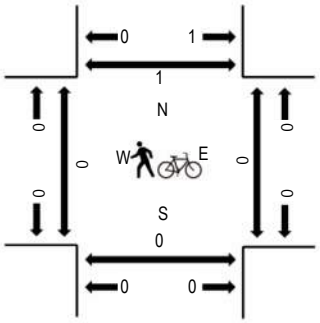
Location: D PORCHERS BLUFF ROAD & US 17 AM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	US 17 Eastbound				US 17 Westbound				PORCHERS BLUFF ROAD Northbound				PORCHERS BLUFF ROAD Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	2	4	291	54	0	49	451	16	0	27	8	34	0	10	11	13	970	4,487	0	0	0	0
7:15 AM	2	11	349	28	0	53	560	22	0	26	9	71	0	15	8	20	1,174	4,652	0	0	0	0
7:30 AM	0	9	446	23	1	62	552	17	0	28	5	65	0	4	11	23	1,246	4,479	0	0	0	0
7:45 AM	3	4	462	30	0	43	401	13	0	15	2	72	0	15	10	27	1,097	4,149	0	0	0	0
8:00 AM	2	12	447	40	0	58	422	12	0	33	13	61	0	2	3	30	1,135	3,892	0	0	0	1
8:15 AM	0	14	317	38	0	44	463	21	0	22	6	39	0	5	7	25	1,001		0	1	0	0
8:30 AM	4	11	291	26	0	32	428	19	0	25	10	27	0	11	5	27	916		0	0	0	0
8:45 AM	3	11	272	35	0	32	376	22	0	17	6	29	0	15	6	16	840		0	1	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	31	3	0	1	36	0	0	1	0	0	0	0	0	0	72
Lights	7	35	1,604	111	1	215	1,863	62	0	96	27	262	0	34	32	100	4,449
Mediums	0	1	69	7	0	0	36	2	0	5	2	7	0	2	0	0	131
Total	7	36	1,704	121	1	216	1,935	64	0	102	29	269	0	36	32	100	4,652

All Traffic Data Services Inc.
(303) 216-2439
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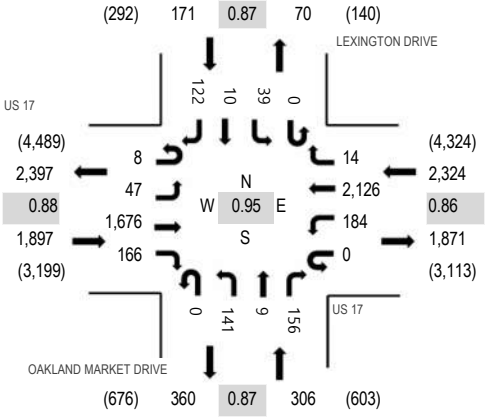
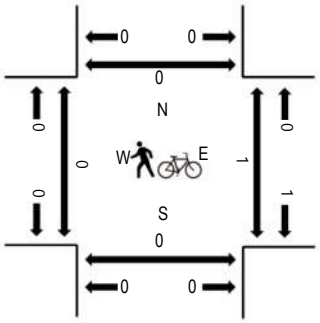
Location: E OAKLAND MARKET DRIVE & US 17 AM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	US 17 Eastbound				US 17 Westbound				OAKLAND MARKET DRIVE Northbound				LEXINGTON DRIVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	7	298	34	0	37	510	3	0	34	1	25	0	4	2	34	989	4,620	0	0	0	0
7:15 AM	4	18	355	52	0	44	635	2	0	38	2	31	0	9	3	39	1,232	4,698	0	0	0	0
7:30 AM	0	14	434	37	0	45	539	1	0	38	3	49	0	7	4	31	1,202	4,482	0	0	0	0
7:45 AM	4	11	481	42	0	40	490	8	0	39	0	37	0	18	2	25	1,197	4,183	0	1	0	0
8:00 AM	0	4	406	35	0	55	462	3	0	26	4	39	0	5	1	27	1,067	3,798	0	0	0	0
8:15 AM	4	6	279	45	1	52	510	4	0	43	4	34	0	7	4	23	1,016		1	0	0	0
8:30 AM	5	13	279	31	0	38	415	4	0	52	5	34	0	5	1	21	903		0	0	1	0
8:45 AM	2	13	249	37	0	35	384	7	0	38	3	24	0	3	0	17	812		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	31	0	0	0	35	0	0	0	0	0	0	0	0	0	66
Lights	8	45	1,577	166	0	184	2,046	13	0	141	9	155	0	38	10	120	4,512
Mediums	0	2	68	0	0	0	45	1	0	0	0	1	0	1	0	2	120
Total	8	47	1,676	166	0	184	2,126	14	0	141	9	156	0	39	10	122	4,698

All Traffic Data Services Inc.
(303) 216-2439
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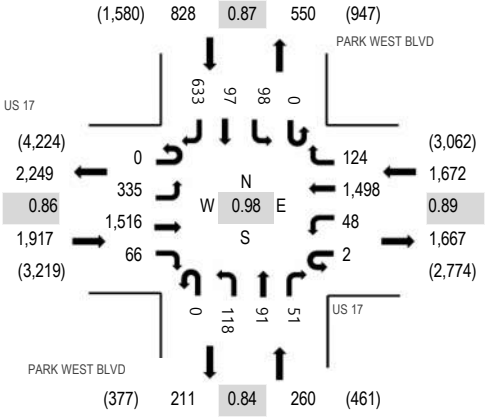
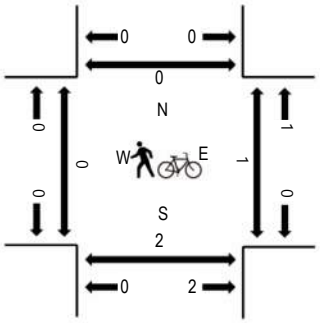
Location: F PARK WEST BLVD & US 17 AM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	US 17 Eastbound				US 17 Westbound				PARK WEST BLVD Northbound				PARK WEST BLVD Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	67	244	10	0	8	309	32	0	32	17	5	0	18	15	164	921	4,450	0	0	0	0
7:15 AM	0	85	281	14	1	11	431	27	0	25	22	9	0	19	37	191	1,153	4,677	0	0	0	0
7:30 AM	0	79	378	19	1	10	385	22	0	37	20	6	0	20	33	179	1,189	4,598	0	0	2	0
7:45 AM	0	97	442	17	0	13	340	33	0	26	23	15	0	30	17	134	1,187	4,262	0	0	0	0
8:00 AM	0	74	415	16	0	14	342	42	0	30	26	21	0	29	10	129	1,148	3,872	0	0	0	0
8:15 AM	1	63	283	16	0	14	383	22	0	21	19	6	0	36	31	179	1,074		0	0	0	0
8:30 AM	0	68	256	15	2	7	309	7	0	33	12	7	0	16	9	112	853		0	0	0	1
8:45 AM	0	53	210	16	1	6	269	21	0	31	16	2	0	21	19	132	797		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	2	29	0	0	0	32	0	0	2	0	0	0	0	0	0	65
Lights	0	323	1,430	63	2	48	1,431	118	0	112	91	51	0	97	96	627	4,489
Mediums	0	10	57	3	0	0	35	6	0	4	0	0	0	1	1	6	123
Total	0	335	1,516	66	2	48	1,498	124	0	118	91	51	0	98	97	633	4,677

All Traffic Data Services Inc.
(303) 216-2439
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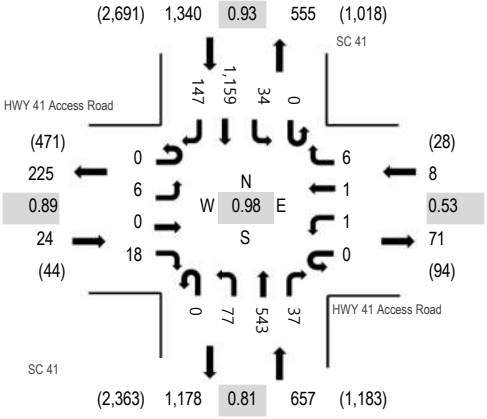
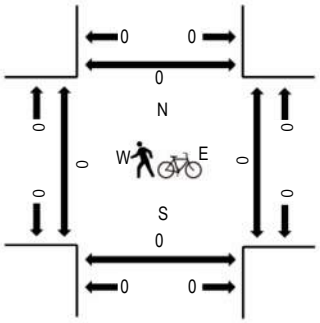
Location: G SC 41 & HWY 41 Access Road AM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:15 AM - 08:30 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	HWY 41 Access Road Eastbound				HWY 41 Access Road Westbound				SC 41 Northbound				SC 41 Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	1	0	0	0	1	0	1	1	12	91	1	0	0	376	11	495	1,917	0	0	0	0
7:15 AM	0	2	0	5	0	0	0	2	1	14	105	3	0	3	279	43	457	1,930	0	0	0	0
7:30 AM	0	3	1	3	0	2	0	8	0	27	105	5	0	3	233	70	460	1,991	0	0	0	0
7:45 AM	0	1	0	4	0	0	1	5	0	17	139	5	0	2	280	51	505	2,022	0	0	0	0
8:00 AM	0	2	0	4	0	1	0	2	0	8	120	5	0	4	346	16	508	2,029	0	0	0	0
8:15 AM	0	2	0	3	0	0	0	0	0	23	127	10	0	6	302	45	518		0	0	0	0
8:30 AM	0	2	0	6	0	0	0	1	0	29	165	9	0	4	226	49	491		0	0	0	0
8:45 AM	0	0	0	5	0	0	1	3	0	17	131	13	0	20	285	37	512		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	6	0	0	0	3	1	10
Lights	0	6	0	17	0	1	1	6	0	76	511	37	0	34	1,137	138	1,964
Mediums	0	0	0	1	0	0	0	0	0	1	26	0	0	0	19	8	55
Total	0	6	0	18	0	1	1	6	0	77	543	37	0	34	1,159	147	2,029

All Traffic Data Services Inc.
(303) 216-2439
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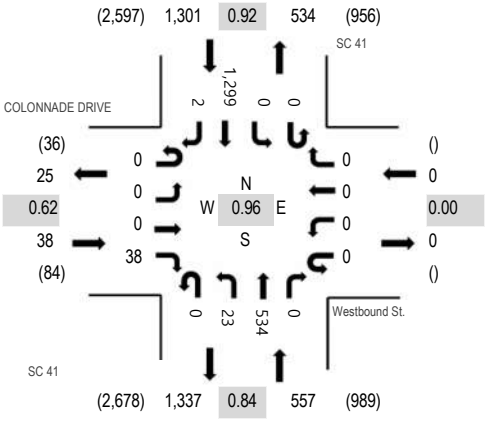
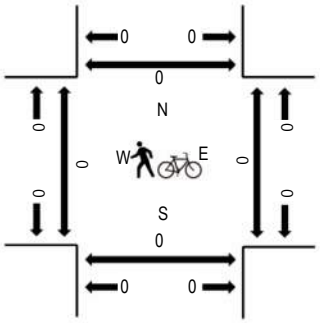
Location: H SC 41 & Westbound St. AM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 08:15 AM - 08:30 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	COLONNADE DRIVE Eastbound				Westbound St. Westbound				SC 41 Northbound				SC 41 Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	21	0	0	0	0	0	1	75	0	0	0	361	1	459	1,787	0	0	0	0
7:15 AM	0	0	0	11	0	0	0	0	0	3	107	0	0	0	329	0	450	1,807	0	0	0	0
7:30 AM	0	0	0	12	0	0	0	0	0	4	112	0	0	0	284	0	412	1,852	0	0	0	0
7:45 AM	0	0	0	8	0	0	0	0	0	5	138	0	0	0	315	0	466	1,896	0	0	0	0
8:00 AM	0	0	0	14	0	0	0	0	0	4	107	0	0	0	354	0	479	1,883	0	0	0	0
8:15 AM	0	0	0	7	0	0	0	0	0	5	133	0	0	0	349	1	495		0	0	0	0
8:30 AM	0	0	0	9	0	0	0	0	0	9	156	0	0	0	281	1	456		0	0	0	0
8:45 AM	0	0	0	2	0	0	0	0	0	2	128	0	0	0	321	0	453		0	0	0	0

Peak Rolling Hour Flow Rates

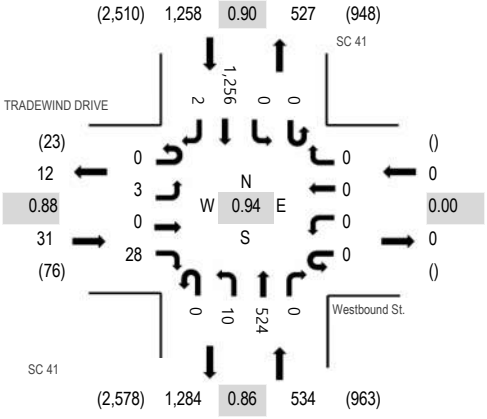
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	6	0	0	0	4	0	10
Lights	0	0	0	37	0	0	0	0	0	21	509	0	0	0	1,270	2	1,839
Mediums	0	0	0	1	0	0	0	0	0	2	19	0	0	0	25	0	47
Total	0	0	0	38	0	0	0	0	0	23	534	0	0	0	1,299	2	1,896

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

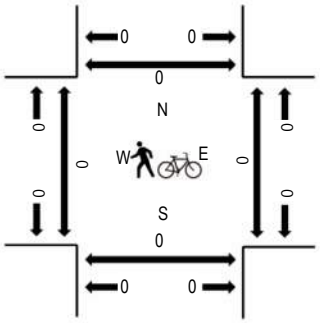
Location: I SC 41 & Westbound St. AM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 08:15 AM - 08:30 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	TRADEWIND DRIVE Eastbound				Westbound St. Westbound				SC 41 Northbound				SC 41 Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	13	0	0	0	0	0	1	76	0	0	0	350	1	441	1,733	0	0	0	0
7:15 AM	0	0	0	13	0	0	0	0	0	2	107	0	0	0	332	0	454	1,748	0	0	0	0
7:30 AM	0	2	0	12	0	0	0	0	0	6	106	0	0	0	267	0	393	1,778	0	0	0	0
7:45 AM	0	1	0	8	0	0	0	0	0	3	131	0	0	0	302	0	445	1,823	0	0	0	0
8:00 AM	0	0	0	10	0	0	0	0	0	1	112	0	0	0	332	1	456	1,816	0	0	0	0
8:15 AM	0	1	0	4	0	0	0	0	0	3	128	0	0	0	348	0	484		0	0	0	0
8:30 AM	0	1	0	6	0	0	0	0	0	3	153	0	0	0	274	1	438		0	0	0	0
8:45 AM	0	0	0	5	0	0	0	0	0	1	130	0	0	0	302	0	438		0	0	0	0

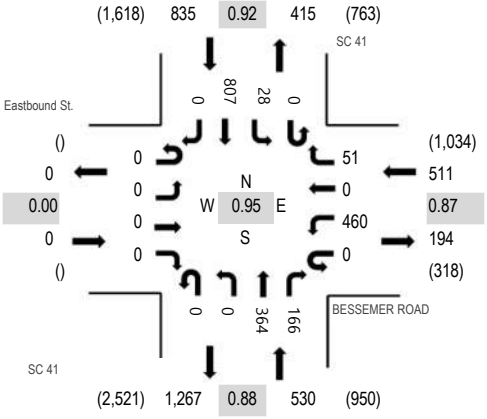
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	1	0	0	0	0	0	1	6	0	0	0	21	0	29
Lights	0	3	0	27	0	0	0	0	0	9	500	0	0	0	1,227	2	1,768
Mediums	0	0	0	0	0	0	0	0	0	0	18	0	0	0	8	0	26
Total	0	3	0	28	0	0	0	0	0	10	524	0	0	0	1,256	2	1,823

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

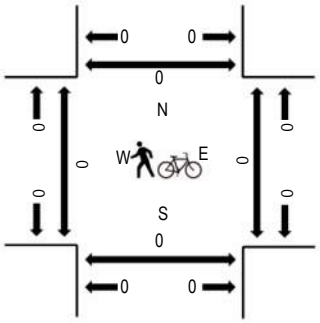
Location: J SC 41 & BESSEMER ROAD AM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 08:15 AM - 08:30 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	Eastbound St. Eastbound				BESSEMER ROAD Westbound				SC 41 Northbound				SC 41 Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	0	0	129	0	6	0	0	67	22	0	4	223	0	451	1,735	0	0	0	0
7:15 AM	0	0	0	0	0	141	0	6	0	0	74	27	0	3	196	0	447	1,740	0	0	0	0
7:30 AM	0	0	0	0	0	103	0	7	0	0	81	22	0	4	161	0	378	1,788	0	0	0	0
7:45 AM	0	0	0	0	0	107	0	18	0	0	89	49	0	7	189	0	459	1,876	0	0	0	0
8:00 AM	0	0	0	0	0	141	0	12	0	0	75	32	0	5	191	0	456	1,867	0	0	0	0
8:15 AM	0	0	0	0	0	129	0	5	0	0	101	34	0	3	223	0	495		0	0	0	0
8:30 AM	0	0	0	0	0	83	0	16	0	0	99	51	0	13	204	0	466		0	0	0	0
8:45 AM	0	0	0	0	0	117	0	14	0	0	93	34	0	8	184	0	450		0	0	0	0

Peak Rolling Hour Flow Rates

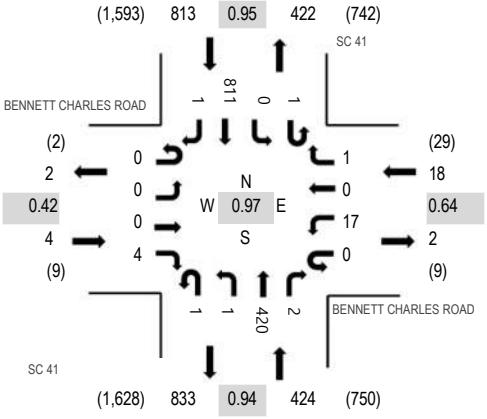
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	2	0	0	0	0	4	1	0	0	3	0	10
Lights	0	0	0	0	0	455	0	51	0	0	349	159	0	25	783	0	1,822
Mediums	0	0	0	0	0	3	0	0	0	0	11	6	0	3	21	0	44
Total	0	0	0	0	0	460	0	51	0	0	364	166	0	28	807	0	1,876

All Traffic Data Services Inc.

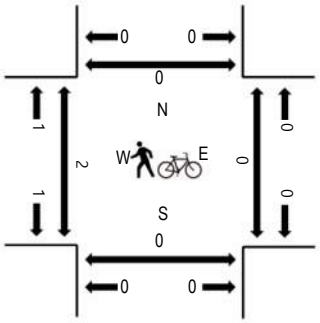
(303) 216-2439
www.alltrafficdata.net

Location: K SC 41 & BENNETT CHARLES ROAD AM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:30 AM - 08:45 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	BENNETT CHARLES ROAD Eastbound				BENNETT CHARLES ROAD Westbound				SC 41 Northbound				SC 41 Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	3	0	6	0	1	0	0	52	0	0	0	212	0	274	1,122	0	0	0	0
7:15 AM	0	0	0	2	0	0	0	0	0	0	98	1	0	0	216	0	317	1,154	0	0	0	0
7:30 AM	0	0	0	0	0	1	0	0	0	0	91	6	0	0	173	0	271	1,154	0	0	0	0
7:45 AM	0	0	0	0	0	3	0	0	0	0	78	0	0	0	179	0	260	1,208	0	0	0	0
8:00 AM	0	0	0	0	0	5	0	1	1	0	102	0	0	0	197	0	306	1,259	0	0	0	0
8:15 AM	0	0	0	3	0	2	0	0	0	1	104	0	0	0	207	0	317		0	0	0	0
8:30 AM	0	0	0	1	0	7	0	0	0	0	103	0	1	0	212	1	325		0	0	0	0
8:45 AM	0	0	0	0	0	3	0	0	0	0	111	2	0	0	195	0	311		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	5	0	0	0	3	0	8
Lights	0	0	0	4	0	17	0	1	1	1	399	2	1	0	786	1	1,213
Mediums	0	0	0	0	0	0	0	0	0	0	16	0	0	0	22	0	38
Total	0	0	0	4	0	17	0	1	1	1	420	2	1	0	811	1	1,259

All Traffic Data Services Inc.

(303) 216-2439
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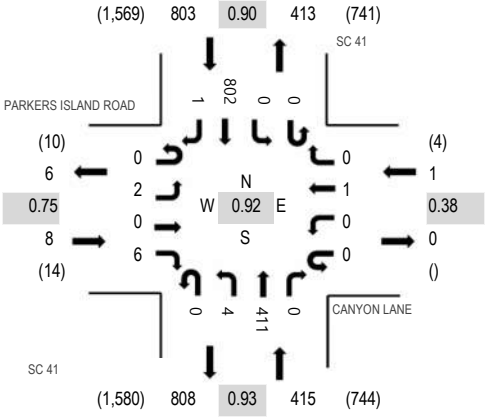
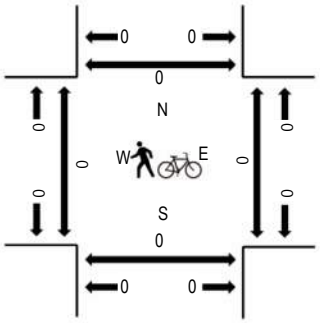
Location: L SC 41 & CANYON LANE AM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:30 AM - 08:45 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	PARKERS ISLAND ROAD Eastbound				CANYON LANE Westbound				SC 41 Northbound				SC 41 Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	1	0	0	0	1	0	0	57	0	0	0	209	0	268	1,104	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	97	0	0	0	212	0	309	1,130	0	0	0	0
7:30 AM	0	2	0	1	0	0	0	0	0	1	84	0	0	0	173	0	261	1,122	0	2	0	0
7:45 AM	0	0	0	2	0	2	0	0	0	3	87	0	0	0	172	0	266	1,196	0	0	0	0
8:00 AM	0	1	0	1	0	0	0	0	0	1	98	0	0	0	193	0	294	1,227	0	0	0	0
8:15 AM	0	0	0	2	0	0	0	0	0	1	95	0	0	0	203	0	301		0	0	0	0
8:30 AM	0	0	0	1	0	0	1	0	0	0	111	0	0	0	221	1	335		0	0	0	0
8:45 AM	0	1	0	2	0	0	0	0	0	2	107	0	0	0	185	0	297		0	0	0	0

Peak Rolling Hour Flow Rates

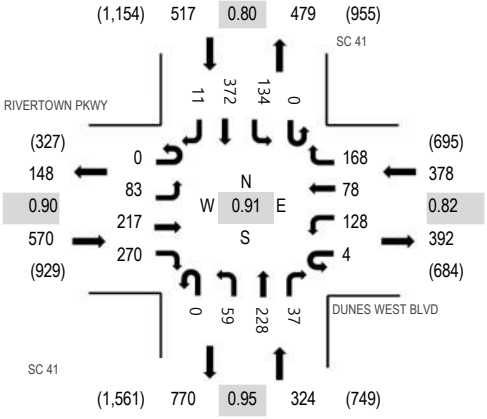
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	5	0	0	0	4	0	9
Lights	0	1	0	6	0	0	1	0	0	4	388	0	0	0	780	1	1,181
Mediums	0	1	0	0	0	0	0	0	0	0	18	0	0	0	18	0	37
Total	0	2	0	6	0	0	1	0	0	4	411	0	0	0	802	1	1,227

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

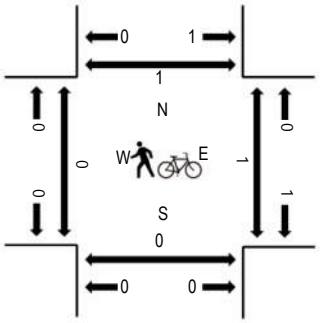
Location: M SC 41 & DUNES WEST BLVD AM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	RIVERTOWN PKWY Eastbound				DUNES WEST BLVD Westbound				SC 41 Northbound				SC 41 Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	22	58	79	0	31	11	33	0	4	44	8	0	41	96	3	430	1,789	0	1	0	0
7:15 AM	0	24	54	79	1	44	29	52	0	21	59	10	0	25	90	1	489	1,771	0	0	0	0
7:30 AM	0	19	64	56	0	25	19	48	0	21	60	6	0	33	101	3	455	1,707	0	0	0	0
7:45 AM	0	18	41	56	3	28	19	35	0	13	65	13	0	35	85	4	415	1,728	0	0	0	0
8:00 AM	0	22	29	50	0	50	8	50	0	29	56	15	0	20	83	0	412	1,738	0	0	0	0
8:15 AM	0	15	20	47	0	16	15	43	0	27	65	14	0	30	121	12	425		0	0	0	0
8:30 AM	0	18	15	58	1	25	19	34	0	24	69	14	0	51	142	6	476		0	0	0	0
8:45 AM	0	6	20	59	1	20	6	29	0	20	69	23	0	39	120	13	425		0	0	0	1

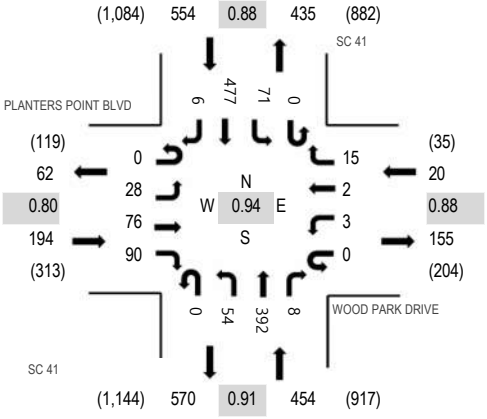
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	1	0	0	0	0	0	0	3	0	0	1	1	0	6
Lights	0	82	212	265	4	127	73	164	0	57	219	36	0	122	362	8	1,731
Mediums	0	1	5	4	0	1	5	4	0	2	6	1	0	11	9	3	52
Total	0	83	217	270	4	128	78	168	0	59	228	37	0	134	372	11	1,789

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

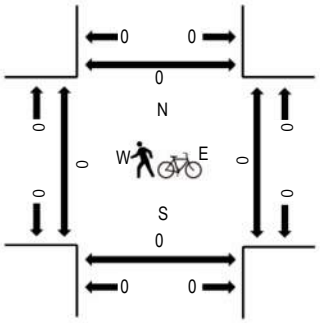
Location: N SC 41 & WOOD PARK DRIVE AM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:00 AM - 07:15 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	PLANTERS POINT BLVD Eastbound				WOOD PARK DRIVE Westbound				SC 41 Northbound				SC 41 Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	7	16	38	0	1	0	4	0	4	96	2	0	13	142	3	326	1,222	0	0	0	0
7:15 AM	0	13	19	18	0	0	0	6	0	26	99	4	0	22	101	1	309	1,170	0	0	0	0
7:30 AM	0	5	18	22	0	2	2	1	0	17	99	1	0	24	126	0	317	1,175	0	0	0	0
7:45 AM	0	3	23	12	0	0	0	4	0	7	98	1	0	12	108	2	270	1,129	0	0	0	0
8:00 AM	0	9	13	10	0	1	0	5	1	15	116	1	1	17	84	1	274	1,127	0	0	0	0
8:15 AM	0	7	7	22	0	2	0	2	0	12	113	1	0	7	141	0	314		0	0	0	0
8:30 AM	0	2	0	21	0	0	1	1	0	15	93	1	0	1	133	3	271		0	0	1	0
8:45 AM	0	8	0	20	0	1	0	2	0	7	88	0	0	1	138	3	268		0	0	0	0

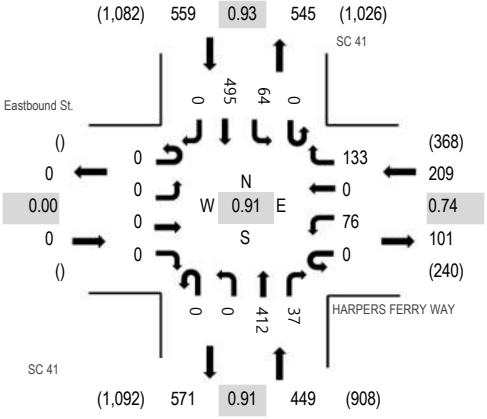
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
Lights	0	28	71	88	0	3	1	15	0	50	386	7	0	71	448	4	1,172
Mediums	0	0	5	2	0	0	1	0	0	4	5	1	0	0	29	2	49
Total	0	28	76	90	0	3	2	15	0	54	392	8	0	71	477	6	1,222

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

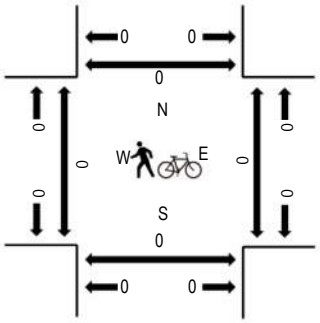
Location: 0 SC 41 & HARPERS FERRY WAY AM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:00 AM - 07:15 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	Eastbound St. Eastbound				HARPERS FERRY WAY Westbound				SC 41 Northbound				SC 41 Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	0	0	28	0	43	0	0	107	9	0	13	135	0	335	1,217	0	0	0	0
7:15 AM	0	0	0	0	0	20	0	24	0	0	112	8	0	11	104	0	279	1,162	0	0	0	0
7:30 AM	0	0	0	0	0	18	0	34	0	0	99	9	0	18	127	0	305	1,185	0	0	0	0
7:45 AM	0	0	0	0	0	10	0	32	0	0	94	11	0	22	129	0	298	1,167	0	0	0	0
8:00 AM	0	0	0	0	2	10	0	25	0	0	109	18	0	12	104	0	280	1,141	0	0	0	0
8:15 AM	0	0	0	0	0	15	0	28	0	0	111	17	0	22	109	0	302		0	0	0	0
8:30 AM	0	0	0	0	0	19	0	23	0	0	80	12	0	29	124	0	287		0	0	0	0
8:45 AM	0	0	0	0	0	28	0	9	0	0	96	16	0	11	112	0	272		0	0	0	0

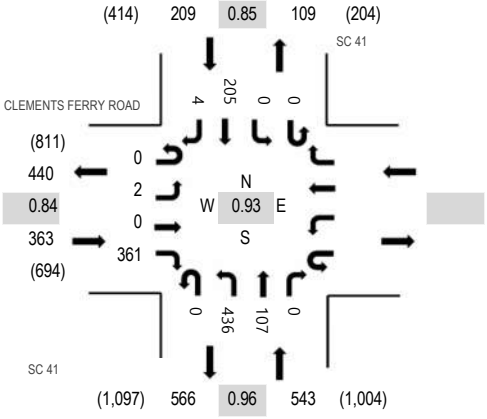
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	1	0	0	0	0	0	2	0	2	0	0	5
Lights	0	0	0	0	0	72	0	123	0	0	408	30	0	37	467	0	1,137
Mediums	0	0	0	0	0	3	0	10	0	0	4	5	0	25	28	0	75
Total	0	0	0	0	0	76	0	133	0	0	412	37	0	64	495	0	1,217

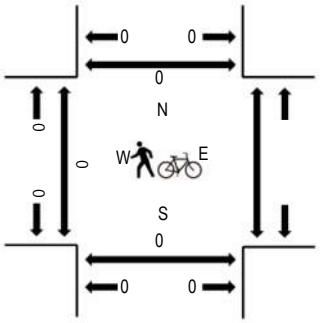
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: P SC 41 & CLEMENTS FERRY ROAD AM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	CLEMENTS FERRY ROAD Eastbound				Westbound				SC 41 Northbound				SC 41 Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	0	66					0	108	19	0	0	0	50	1	244	1,085	0		0	0
7:15 AM	0	1	0	96					0	114	27	0	0	0	59	1	298	1,115	0		0	0
7:30 AM	0	0	0	108					0	118	24	0	0	0	49	2	301	1,090	0		0	0
7:45 AM	0	0	0	85					0	89	30	0	0	0	38	0	242	1,038	0		0	0
8:00 AM	0	1	0	72					0	115	26	0	0	0	59	1	274	1,027	0		0	0
8:15 AM	0	0	0	85					0	98	27	0	0	0	62	1	273		0		0	0
8:30 AM	0	2	0	89					0	95	21	0	0	0	42	0	249		0		0	0
8:45 AM	0	1	0	88					0	68	25	0	0	0	49	0	231		0		0	0

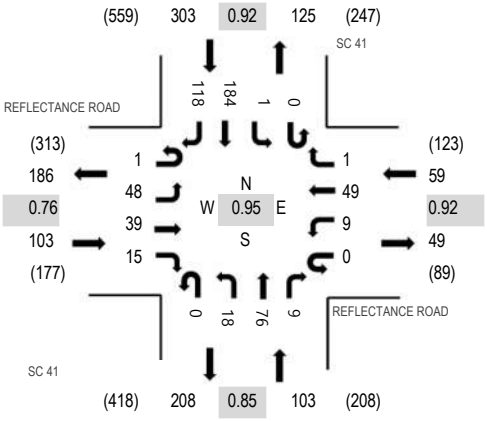
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	3					0	0	1	0	0	0	4	1	9
Lights	0	2	0	345					0	432	85	0	0	0	169	3	1,036
Mediums	0	0	0	13					0	4	21	0	0	0	32	0	70
Total	0	2	0	361					0	436	107	0	0	0	205	4	1,115

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

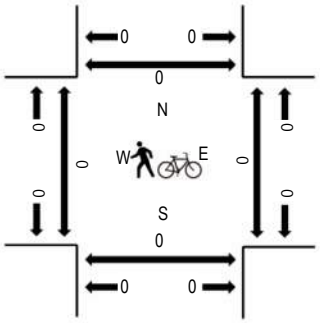
Location: Q SC 41 & REFLECTANCE ROAD AM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	REFLECTANCE ROAD Eastbound				REFLECTANCE ROAD Westbound				SC 41 Northbound				SC 41 Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	1	11	9	4	0	1	18	0	0	6	16	0	0	0	45	37	148	568	0	0	0	0
7:15 AM	0	7	11	3	0	3	8	0	0	1	20	3	0	0	44	20	120	531	0	0	0	0
7:30 AM	0	18	11	5	0	3	10	0	0	6	17	1	0	0	47	32	150	565	0	0	0	0
7:45 AM	0	12	8	3	0	2	13	1	0	5	23	5	0	1	48	29	150	528	0	0	0	0
8:00 AM	0	7	9	1	0	6	9	0	0	3	16	5	0	0	35	20	111	499	0	0	0	0
8:15 AM	0	12	5	1	0	6	11	1	0	4	27	3	0	0	63	21	154		0	0	0	0
8:30 AM	0	9	4	4	0	7	10	0	0	3	15	5	0	2	31	23	113		0	0	0	0
8:45 AM	0	16	4	2	0	7	7	0	0	2	19	3	0	0	47	14	121		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	1	17	1	0	0	0	3	0	0	0	1	0	0	0	3	20	46
Lights	0	31	37	12	0	9	42	1	0	12	64	8	0	1	146	87	450
Mediums	0	0	1	3	0	0	4	0	0	6	11	1	0	0	35	11	72
Total	1	48	39	15	0	9	49	1	0	18	76	9	0	1	184	118	568

All Traffic Data Services Inc.
(303) 216-2439
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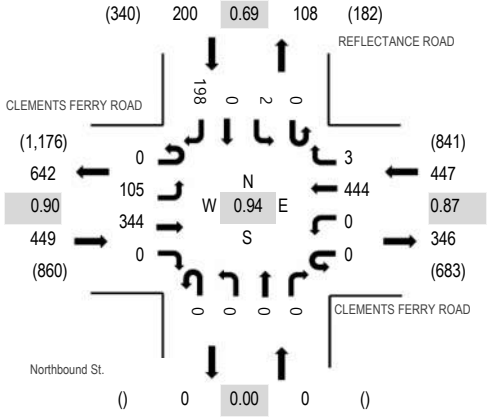
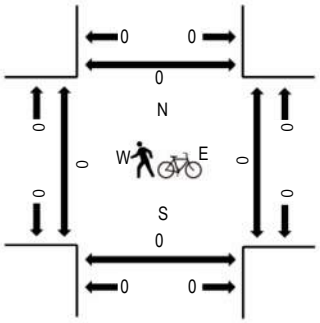
Location: R Northbound St. & CLEMENTS FERRY ROAD AM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:00 AM - 07:15 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	CLEMENTS FERRY ROAD Eastbound				CLEMENTS FERRY ROAD Westbound				Northbound St. Northbound				REFLECTANCE ROAD Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	23	85	0	0	0	110	1	0	0	0	0	0	0	0	72	291	1,096	0	0	0	0
7:15 AM	0	26	71	0	0	0	130	0	0	0	0	0	0	1	0	39	267	1,061	0	0	0	0
7:30 AM	0	33	92	0	0	0	113	2	0	0	0	0	0	0	0	40	280	1,044	0	0	0	0
7:45 AM	0	23	96	0	0	0	91	0	0	0	0	0	0	1	0	47	258	991	0	0	0	0
8:00 AM	0	19	86	0	0	0	117	0	0	0	0	0	0	0	0	34	256	945	0	0	0	0
8:15 AM	0	21	77	0	0	0	108	0	0	0	0	0	0	0	0	44	250		0	0	0	0
8:30 AM	0	15	89	0	0	0	89	0	0	0	0	0	0	0	0	34	227		0	0	0	0
8:45 AM	0	19	85	0	0	0	80	0	0	0	0	0	0	0	0	28	212		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	19	3	0	0	0	1	0	0	0	0	0	0	0	0	23	46
Lights	0	81	324	0	0	0	442	3	0	0	0	0	0	2	0	150	1,002
Mediums	0	5	17	0	0	0	1	0	0	0	0	0	0	0	0	25	48
Total	0	105	344	0	0	0	444	3	0	0	0	0	0	2	0	198	1,096

All Traffic Data Services Inc.
(303) 216-2439
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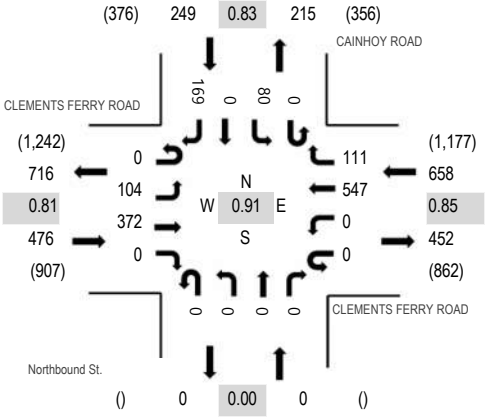
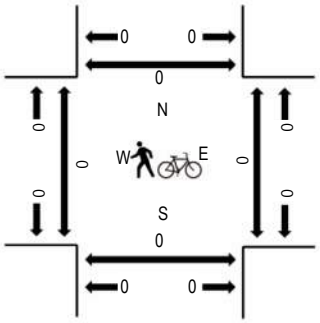
Location: S Northbound St. & CLEMENTS FERRY ROAD AM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	CLEMENTS FERRY ROAD Eastbound				CLEMENTS FERRY ROAD Westbound				Northbound St. Northbound				CAINHOY ROAD Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	25	69	0	0	0	171	23	0	0	0	0	0	20	0	48	356	1,383	0	0	0	0
7:15 AM	0	35	92	0	0	0	149	29	0	0	0	0	0	16	0	59	380	1,317	0	0	0	0
7:30 AM	0	26	123	0	0	0	111	31	0	0	0	0	0	17	0	33	341	1,213	0	0	0	0
7:45 AM	0	18	88	0	0	0	116	28	0	0	0	0	0	27	0	29	306	1,147	0	0	0	0
8:00 AM	0	22	79	0	0	0	129	23	0	0	0	0	0	12	0	25	290	1,077	0	0	0	0
8:15 AM	0	18	88	0	0	0	120	13	0	0	0	0	0	15	0	22	276		0	0	0	0
8:30 AM	0	19	110	0	0	0	115	15	0	0	0	0	0	6	0	10	275		0	0	0	0
8:45 AM	0	10	85	0	0	0	83	21	0	0	0	0	0	15	0	22	236		0	0	0	0

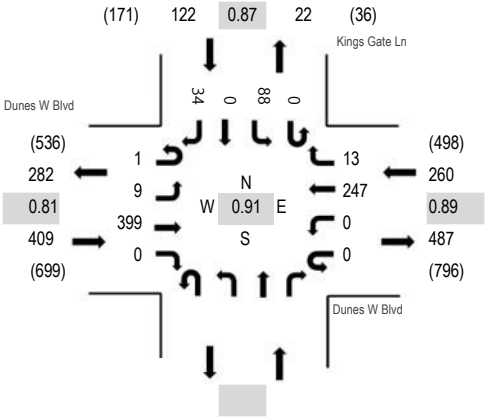
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	17	15	0	0	0	11	13	0	0	0	0	0	7	0	15	78
Lights	0	84	341	0	0	0	517	91	0	0	0	0	0	69	0	144	1,246
Mediums	0	3	16	0	0	0	19	7	0	0	0	0	0	4	0	10	59
Total	0	104	372	0	0	0	547	111	0	0	0	0	0	80	0	169	1,383

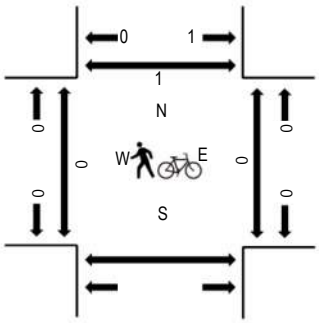
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: #1 Kings Gate Ln & Dunes W Blvd AM
Date and Start Time: Tuesday, March 12, 2019
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	Dunes W Blvd Eastbound				Dunes W Blvd Westbound				Northbound				Kings Gate Ln Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	3	97	0	0	0	57	3					0	32	0	3	195	791	0	0		0
7:15 AM	1	3	75	0	0	0	68	5					0	25	0	10	187	747	0	0		0
7:30 AM	0	1	103	0	0	0	66	3					0	9	0	10	192	688	0	0		0
7:45 AM	0	2	124	0	0	0	56	2					0	22	0	11	217	649	0	0		1
8:00 AM	0	2	88	0	0	0	44	2					0	7	0	8	151	577	0	0		0
8:15 AM	0	0	65	0	0	0	56	0					0	7	0	0	128		0	0		0
8:30 AM	0	2	58	0	0	0	77	2					0	5	0	9	153		0	0		0
8:45 AM	0	3	72	0	1	0	53	3					0	6	0	7	145		0	0		0

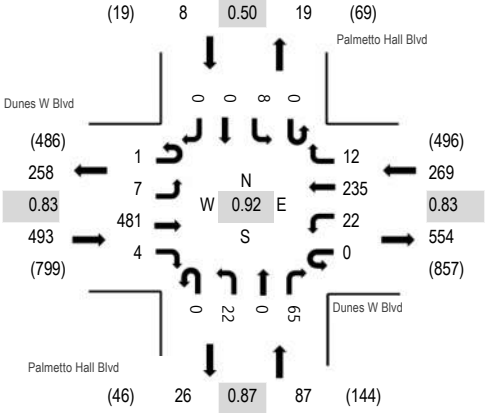
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0					0	0	0	0	0
Lights	1	9	381	0	0	0	236	11					0	87	0	32	757
Mediums	0	0	18	0	0	0	11	2					0	1	0	2	34
Total	1	9	399	0	0	0	247	13					0	88	0	34	791

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

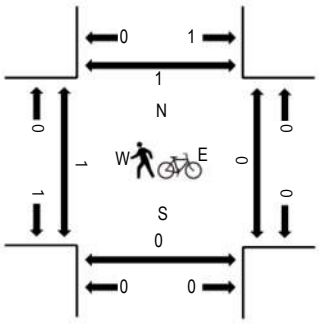
Location: #2 Palmetto Hall Blvd & Dunes W Blvd AM
Date and Start Time: Tuesday, March 12, 2019
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	Dunes W Blvd Eastbound				Dunes W Blvd Westbound				Palmetto Hall Blvd Northbound				Palmetto Hall Blvd Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	1	2	128	1	0	2	49	2	0	8	0	12	0	4	0	0	209	857	0	0	0	0
7:15 AM	0	1	98	1	0	6	75	0	0	2	0	18	0	0	0	0	201	802	0	0	0	0
7:30 AM	0	2	111	0	0	9	64	4	0	5	0	17	0	2	0	0	214	751	0	0	0	0
7:45 AM	0	2	144	2	0	5	47	6	0	7	0	18	0	2	0	0	233	688	0	0	0	1
8:00 AM	0	6	87	2	0	2	39	2	0	5	0	10	0	1	0	0	154	601	0	0	0	0
8:15 AM	0	8	56	6	0	3	48	11	0	4	0	8	0	6	0	0	150		0	0	2	0
8:30 AM	0	6	55	2	0	1	60	5	0	12	0	7	0	3	0	0	151		0	0	0	0
8:45 AM	0	10	65	3	0	1	53	2	0	7	0	4	0	1	0	0	146		0	2	0	1

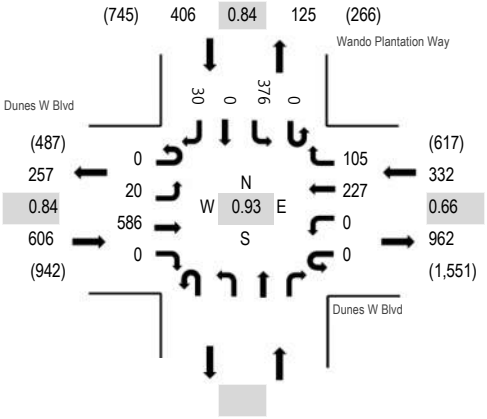
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	1	7	461	4	0	21	219	11	0	22	0	64	0	7	0	0	817
Mediums	0	0	20	0	0	1	16	1	0	0	0	1	0	1	0	0	40
Total	1	7	481	4	0	22	235	12	0	22	0	65	0	8	0	0	857

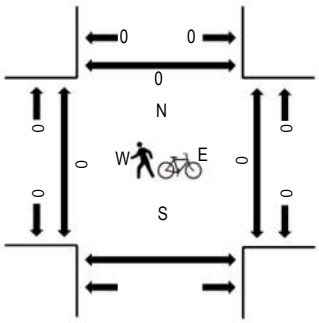
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: #3 Wando Plantation Way & Dunes W Blvd AM
Date and Start Time: Tuesday, March 12, 2019
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	Dunes W Blvd Eastbound				Dunes W Blvd Westbound				Northbound				Wando Plantation Way Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	7	152	0	0	0	34	19					0	93	0	13	318	1,344	0	0		0
7:15 AM	0	3	124	0	0	0	75	55					0	80	0	4	341	1,316	0	0		0
7:30 AM	0	6	134	0	0	0	74	19					0	90	0	2	325	1,223	0	0		0
7:45 AM	0	4	176	0	0	0	44	12					0	113	0	11	360	1,132	0	0		0
8:00 AM	0	5	105	0	0	0	36	29					0	106	0	9	290	960	0	0		0
8:15 AM	0	5	70	0	0	0	55	36					0	71	0	11	248		0	0		0
8:30 AM	0	11	68	0	0	0	50	31					1	57	0	16	234		0	0		0
8:45 AM	0	11	61	0	0	0	36	12					0	51	0	17	188		0	0		0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	0	0					0	0	0	0	1
Lights	0	20	564	0	0	0	213	103					0	373	0	28	1,301
Mediums	0	0	21	0	0	0	14	2					0	3	0	2	42
Total	0	20	586	0	0	0	227	105					0	376	0	30	1,344

All Traffic Data Services Inc.
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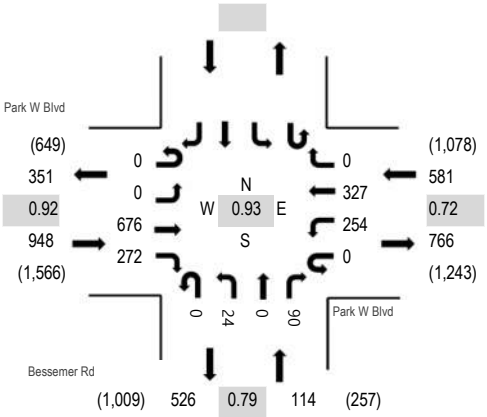
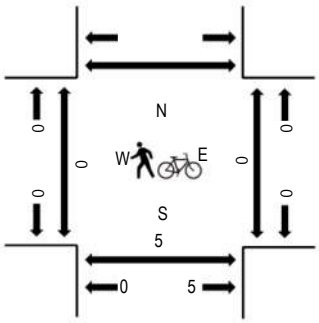
Location: #4 Bessemer Rd & Park W Blvd AM
Date and Start Time: Tuesday, March 12, 2019
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	Park W Blvd Eastbound				Park W Blvd Westbound				Bessemer Rd Northbound				Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	180	77	0	91	59	0	0	4	0	21					432	1,643	0	0	0	
7:15 AM	0	0	117	88	0	74	129	0	0	12	0	21					441	1,590	0	0	0	
7:30 AM	0	0	180	51	0	43	88	0	0	4	0	26					392	1,464	0	0	1	
7:45 AM	0	0	199	56	0	46	51	0	0	4	0	22					378	1,357	0	0	0	
8:00 AM	0	0	145	78	0	63	63	0	0	9	0	21					379	1,258	0	0	0	
8:15 AM	0	0	92	55	0	52	80	0	0	13	0	23					315		0	0	2	
8:30 AM	0	0	60	61	0	61	71	0	0	7	0	25					285		0	0	0	
8:45 AM	0	0	77	50	0	63	44	0	0	11	0	34					279		0	0	1	

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	2	0	0	0	0	0	0	0	0	0					2
Lights	0	0	653	268	0	253	310	0	0	22	0	86					1,592
Mediums	0	0	21	4	0	1	17	0	0	2	0	4					49
Total	0	0	676	272	0	254	327	0	0	24	0	90					1,643

All Traffic Data Services Inc.
(303) 216-2439
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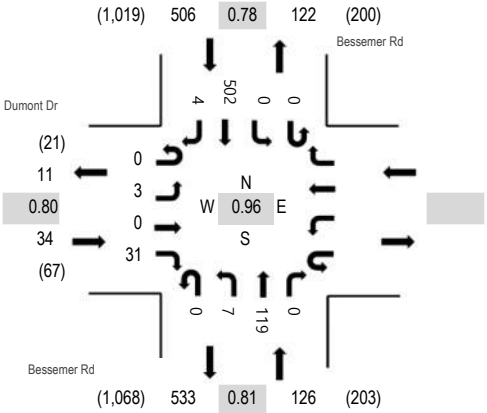
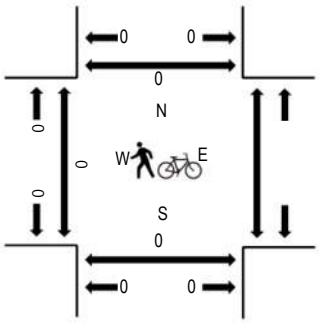
Location: #5 Bessemer Rd & Dumont Dr AM
Date and Start Time: Tuesday, March 12, 2019
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:45 AM - 09:00 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	Dumont Dr Eastbound				Westbound				Bessemer Rd Northbound				Bessemer Rd Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	1	0	11					0	2	12	0	0	0	165	0	191	623	0		0	0
7:15 AM	0	1	0	4					0	1	28	0	0	0	155	2	191	603	0		0	0
7:30 AM	0	1	0	5					0	1	17	0	0	0	84	2	110	568	0		0	0
7:45 AM	0	3	0	7					0	1	15	0	0	0	104	1	131	623	0		0	1
8:00 AM	0	2	0	8					0	1	22	0	0	0	135	3	171	666	0		0	0
8:15 AM	0	0	0	4					0	2	29	0	0	0	120	1	156		0		0	0
8:30 AM	0	0	0	11					0	2	31	0	0	0	121	0	165		0		0	0
8:45 AM	0	1	0	8					0	2	37	0	0	0	126	0	174		0		0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0					0	0	0	0	0	0	0	0	0
Lights	0	3	0	31					0	7	116	0	0	0	499	4	660
Mediums	0	0	0	0					0	0	3	0	0	0	3	0	6
Total	0	3	0	31					0	7	119	0	0	0	502	4	666

All Traffic Data Services

1 SIX MILE ROAD & US 17 AM
Tuesday, September 19, 2017

Peak Hour
07:15 AM - 08:15 AM
Peak 15-Minutes
07:45 AM - 08:00 AM

Traffic Counts - All Vehicles

	US 17					US 17					SIX MILE ROAD					Southbound St.						
	Eastbound					Westbound					Northbound					Southbound						
Time	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total	Rolling Hour
7:00 AM	3	0	316	16	0	0	31	569	0	0	0	10	0	21	0	0	0	0	0	0	966	4,347
7:15 AM	2	0	373	18	0	0	19	614	0	0	0	26	0	25	0	0	0	0	0	0	1,077	4,445
7:30 AM	6	0	378	16	0	0	33	640	0	0	0	19	0	35	0	0	0	0	0	0	1,127	4,345
7:45 AM	4	0	425	12	0	1	32	658	0	0	0	9	0	36	0	0	0	0	0	0	1,177	4,232
8:00 AM	6	0	375	15	0	2	35	591	0	0	0	17	0	23	0	0	0	0	0	0	1,064	4,092
8:15 AM	6	0	320	12	0	0	29	570	0	0	0	15	0	25	0	0	0	0	0	0	977	0
8:30 AM	9	0	343	14	0	2	38	559	0	0	0	10	0	39	0	0	0	0	0	0	1,014	0
8:45 AM	6	0	342	13	0	2	42	580	0	0	0	13	0	39	0	0	0	0	0	0	1,037	0

Peak Rolling Hour Flow Rates

	Eastbound					Westbound					Northbound					Southbound					
Vehicle Type	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total
Articulated Trucks	0	0	41	3	0	0	1	38	0	0	0	0	0	1	0	0	0	0	0	0	84
Lights	18	0	1,446	55	0	3	112	2,418	0	0	0	59	0	109	0	0	0	0	0	0	4,220
Mediums	0	0	64	3	0	0	6	47	0	0	0	12	0	9	0	0	0	0	0	0	141
Total	18	0	1,551	61	0	3	119	2,503	0	0	0	71	0	119	0	0	0	0	0	0	4,445

All Traffic Data Services

2 SIX MILE ROAD & Westbound St. AM

Tuesday, September 19, 2017

Peak Hour
07:15 AM - 08:15 AM
Peak 15-Minutes
07:15 AM - 07:30 AM

Traffic Counts - All Vehicles

	SWEETGRASS BASKET PKWY					Westbound St.					SIX MILE ROAD					SIX MILE ROAD						
	Eastbound					Westbound					Northbound					Southbound						
Time	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total	Rolling Hour
7:00 AM	0	7	0	12	0	0	0	0	0	0	0	32	32	0	0	0	0	21	14	0	118	596
7:15 AM	0	20	0	18	0	0	0	0	0	0	0	67	28	0	0	0	0	24	11	0	168	618
7:30 AM	0	9	0	13	0	0	0	0	0	0	0	56	41	0	0	0	0	23	19	0	161	558
7:45 AM	0	13	0	15	0	0	0	0	0	0	0	44	34	0	0	0	0	21	22	0	149	530
8:00 AM	0	12	0	15	0	0	0	0	0	0	0	48	25	0	0	0	0	23	17	0	140	523
8:15 AM	0	14	0	11	0	0	0	0	0	0	0	24	24	0	0	0	0	27	8	0	108	0
8:30 AM	0	13	0	5	0	0	0	0	0	0	0	42	37	0	0	0	0	24	12	0	133	0
8:45 AM	0	11	0	15	0	0	0	0	0	0	0	34	41	0	0	0	0	23	18	0	142	0

Peak Rolling Hour Flow Rates

	Eastbound					Westbound					Northbound					Southbound					
Vehicle Type	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total
Articulated Trucks	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	5
Lights	0	37	0	52	0	0	0	0	0	0	0	212	125	0	0	0	0	84	65	0	575
Mediums	0	15	0	9	0	0	0	0	0	0	0	3	3	0	0	0	0	5	3	0	38
Total	0	54	0	61	0	0	0	0	0	0	0	215	128	0	0	0	0	91	69	0	618

All Traffic Data Services

3 SIX MILE ROAD & RIFLE RANGE ROAD AM

Tuesday, September 19, 2017

Peak Hour
07:15 AM - 08:15 AM
Peak 15-Minutes
07:45 AM - 08:00 AM

Traffic Counts - All Vehicles

	RIFLE RANGE ROAD					RIFLE RANGE ROAD					SIX MILE ROAD					SIX MILE ROAD						
	Eastbound					Westbound					Northbound					Southbound						
Time	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total	Rolling Hour
7:00 AM	0	8	62	15	0	0	1	107	25	0	0	22	16	7	0	0	20	15	11	0	309	1,578
7:15 AM	0	6	78	16	0	0	5	145	56	0	0	19	20	6	0	0	19	17	7	0	394	1,679
7:30 AM	0	7	99	13	0	0	5	171	46	0	0	18	17	4	0	0	13	14	7	0	414	1,606
7:45 AM	0	10	137	16	0	0	7	185	22	0	0	18	16	9	0	0	16	10	15	0	461	1,503
8:00 AM	0	7	104	10	0	0	3	176	34	0	0	21	13	6	0	0	11	16	9	0	410	1,342
8:15 AM	0	10	75	12	0	0	5	143	18	0	0	13	8	4	0	0	8	18	7	0	321	0
8:30 AM	0	11	58	9	0	0	2	133	31	0	0	13	20	5	0	0	2	12	15	0	311	0
8:45 AM	0	14	58	13	0	0	1	117	26	0	1	17	19	3	0	0	8	10	13	0	300	0

Peak Rolling Hour Flow Rates

	Eastbound					Westbound					Northbound					Southbound					
Vehicle Type	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total
Articulated Trucks	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	1	0	0	5
Lights	0	30	402	53	0	0	20	668	155	0	0	76	64	22	0	0	49	51	38	0	1,628
Mediums	0	0	16	2	0	0	0	7	3	0	0	0	2	3	0	0	8	5	0	0	46
Total	0	30	418	55	0	0	20	677	158	0	0	76	66	25	0	0	59	57	38	0	1,679

All Traffic Data Services

4 HAMLIN ROAD & RIFLE RANGE ROAD AM

Tuesday, September 19, 2017

Peak Hour
07:15 AM - 08:15 AM
Peak 15-Minutes
08:00 AM - 08:15 AM

Traffic Counts - All Vehicles

	RIFLE RANGE ROAD					RIFLE RANGE ROAD					HAMLIN ROAD					HAMLIN ROAD						
	Eastbound					Westbound					Northbound					Southbound						
Time	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total	Rolling Hour
7:00 AM	0	45	39	0	0	0	0	99	27	0	0	1	6	0	0	0	7	4	39	0	267	1,367
7:15 AM	0	32	63	3	0	0	2	122	18	0	0	6	3	0	0	0	9	1	95	0	354	1,487
7:30 AM	0	23	81	2	0	0	0	181	11	0	0	3	4	1	0	0	13	1	57	0	377	1,426
7:45 AM	0	41	107	5	0	0	0	156	16	0	0	1	4	0	0	0	2	1	36	0	369	1,297
8:00 AM	0	55	89	1	0	0	0	124	21	0	0	3	0	0	0	0	11	1	82	0	387	1,160
8:15 AM	0	33	47	1	0	0	0	104	13	0	0	4	2	1	0	0	10	2	76	0	293	0
8:30 AM	0	11	50	2	0	0	0	120	14	0	0	4	5	1	0	0	6	3	32	0	248	0
8:45 AM	0	11	63	0	0	0	2	99	13	0	0	4	1	2	0	0	12	1	24	0	232	0

Peak Rolling Hour Flow Rates

	Eastbound					Westbound					Northbound					Southbound					
Vehicle Type	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total
Articulated Trucks	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Lights	0	144	329	10	0	0	2	579	62	0	0	13	9	0	0	0	30	4	266	0	1,448
Mediums	0	7	11	1	0	0	0	3	4	0	0	0	2	1	0	0	5	0	4	0	38
Total	0	151	340	11	0	0	2	583	66	0	0	13	11	1	0	0	35	4	270	0	1,487

All Traffic Data Services

6 Northbound St. & US 17 AM
Tuesday, September 19, 2017

Peak Hour
07:15 AM - 08:15 AM
Peak 15-Minutes
07:45 AM - 08:00 AM

Traffic Counts - All Vehicles

	US 17					US 17					Northbound St.					LONG POINT ROAD						
	Eastbound					Westbound					Northbound					Southbound						
Time	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total	Rolling Hour
7:00 AM	0	9	321	0	0	0	0	603	227	0	0	0	0	0	0	0	117	0	14	0	1,291	5,741
7:15 AM	1	12	378	0	0	0	0	642	266	0	0	0	0	0	0	0	126	0	22	0	1,447	5,925
7:30 AM	0	16	380	0	0	0	0	652	267	0	0	0	0	0	0	0	140	0	27	0	1,482	5,722
7:45 AM	0	14	433	0	0	0	0	656	242	0	0	0	0	0	0	0	152	0	24	0	1,521	5,526
8:00 AM	0	17	399	0	0	0	0	619	262	0	0	0	0	0	0	0	156	0	22	0	1,475	5,296
8:15 AM	0	18	339	0	0	0	0	566	222	0	0	0	0	0	0	0	78	0	21	0	1,244	0
8:30 AM	0	15	346	0	0	0	0	585	236	0	0	0	0	0	0	0	82	0	22	0	1,286	0
8:45 AM	0	25	333	0	0	0	0	602	222	0	0	0	0	0	0	0	84	0	25	0	1,291	0

Peak Rolling Hour Flow Rates

	Eastbound					Westbound					Northbound					Southbound					
Vehicle Type	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total
Articulated Trucks	0	0	42	0	0	0	0	39	0	0	0	0	0	0	0	0	0	0	0	0	81
Lights	1	57	1,484	0	0	0	0	2,474	1,030	0	0	0	0	0	0	0	560	0	92	0	5,698
Mediums	0	2	64	0	0	0	0	56	7	0	0	0	0	0	0	0	14	0	3	0	146
Total	1	59	1,590	0	0	0	0	2,569	1,037	0	0	0	0	0	0	0	574	0	95	0	5,925

All Traffic Data Services

7 HAMLIN ROAD & Westbound St. AM

Tuesday, September 19, 2017

Peak Hour
07:15 AM - 08:15 AM
Peak 15-Minutes
07:15 AM - 07:30 AM

Traffic Counts - All Vehicles

	BILLY SWAILS					Westbound St.					HAMLIN ROAD					HAMLIN ROAD						
	Eastbound					Westbound					Northbound					Southbound						
Time	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total	Rolling Hour
7:00 AM	0	0	0	0	0	0	44	0	78	0	0	0	55	18	0	0	40	9	0	0	244	798
7:15 AM	0	0	0	0	0	0	89	0	88	0	0	0	43	9	0	0	32	24	0	0	285	804
7:30 AM	0	0	0	0	0	0	28	0	28	0	0	0	45	3	0	0	3	29	0	0	136	709
7:45 AM	0	0	0	0	0	0	25	0	26	0	0	0	54	9	0	0	2	17	0	0	133	658
8:00 AM	0	0	0	0	0	0	73	0	76	0	0	0	70	4	0	0	2	25	0	0	250	601
8:15 AM	0	0	0	0	0	0	48	0	63	0	0	0	44	1	0	0	0	34	0	0	190	0
8:30 AM	0	0	0	0	0	0	10	0	7	0	0	0	31	1	0	0	3	33	0	0	85	0
8:45 AM	0	0	0	0	0	0	9	0	8	0	0	0	21	2	0	0	1	35	0	0	76	0

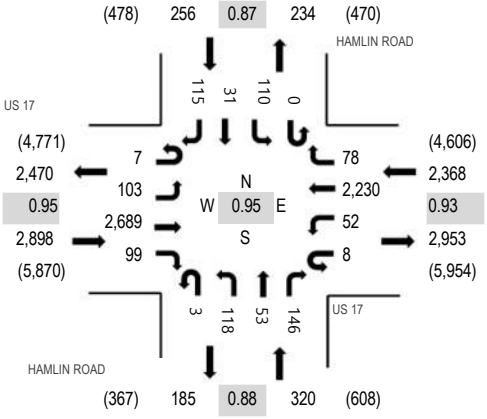
Peak Rolling Hour Flow Rates

	Eastbound					Westbound					Northbound					Southbound					
Vehicle Type	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total
Articulated Trucks	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2
Lights	0	0	0	0	0	0	213	0	216	0	0	0	197	25	0	0	39	89	0	0	779
Mediums	0	0	0	0	0	0	2	0	1	0	0	0	14	0	0	0	0	6	0	0	23
Total	0	0	0	0	0	0	215	0	218	0	0	0	212	25	0	0	39	95	0	0	804

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

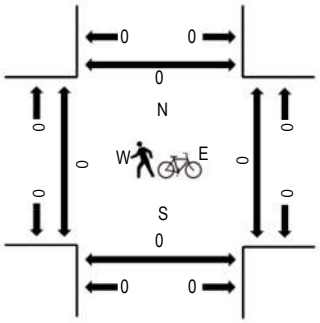
Location: A HAMLIN ROAD & US 17 PM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:15 PM - 04:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	US 17 Eastbound				US 17 Westbound				HAMLIN ROAD Northbound				HAMLIN ROAD Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	2	34	692	25	3	17	596	22	0	32	17	33	0	22	7	23	1,525	5,842	0	0	0	0
4:15 PM	2	28	739	21	2	7	552	20	0	40	16	35	0	30	5	33	1,530	5,764	0	0	0	0
4:30 PM	3	23	498	26	1	16	557	18	3	21	8	36	0	36	9	31	1,286	5,724	0	0	0	0
4:45 PM	0	18	760	27	2	12	525	18	0	25	12	42	0	22	10	28	1,501	5,835	0	0	0	0
5:00 PM	0	32	688	34	1	10	524	24	0	23	13	38	0	33	6	21	1,447	5,720	0	0	0	0
5:15 PM	0	18	693	34	3	5	585	20	0	24	8	35	0	23	6	36	1,490		0	0	0	0
5:30 PM	1	29	688	26	1	13	505	19	0	19	9	40	0	21	0	26	1,397		0	0	0	0
5:45 PM	0	30	671	28	1	13	493	21	0	22	13	44	0	21	7	22	1,386		0	0	1	0

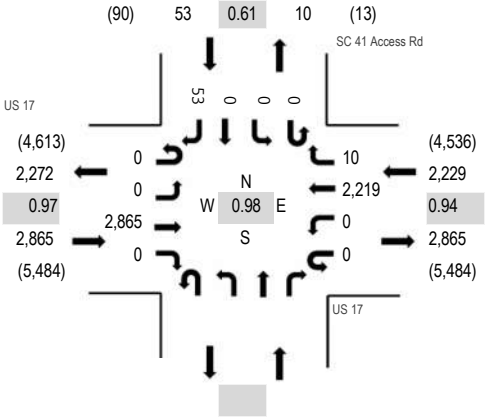
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	23	0	0	0	20	0	0	0	0	0	0	0	0	1	45
Lights	7	101	2,621	99	8	49	2,128	76	3	118	53	142	0	108	29	112	5,654
Mediums	0	1	45	0	0	3	82	2	0	0	0	4	0	2	2	2	143
Total	7	103	2,689	99	8	52	2,230	78	3	118	53	146	0	110	31	115	5,842

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

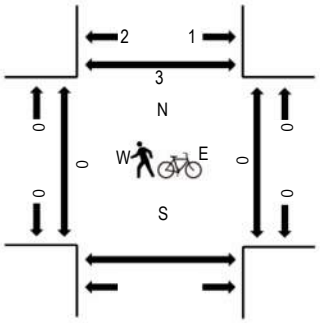
Location: B SC 41 Access Rd & US 17 PM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	US 17 Eastbound				US 17 Westbound				SC 41 Access Rd Northbound				SC 41 Access Rd Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	610	0	0	0	617	0					0	0	0	10	1,237	5,002	0	0		0
4:15 PM	0	0	700	0	0	0	567	2					0	0	0	10	1,279	5,078	0	0		2
4:30 PM	0	0	637	0	0	0	598	1					0	0	0	7	1,243	5,112	0	0		1
4:45 PM	0	0	694	0	0	0	539	3					0	0	0	7	1,243	5,147	0	0		0
5:00 PM	0	0	732	0	0	0	572	1					0	0	0	8	1,313	5,108	0	0		1
5:15 PM	0	0	699	0	0	0	597	2					0	0	0	15	1,313		0	0		0
5:30 PM	0	0	740	0	0	0	511	4					0	0	0	23	1,278		0	0		1
5:45 PM	0	0	672	0	0	0	522	0					0	0	0	10	1,204		0	0		0

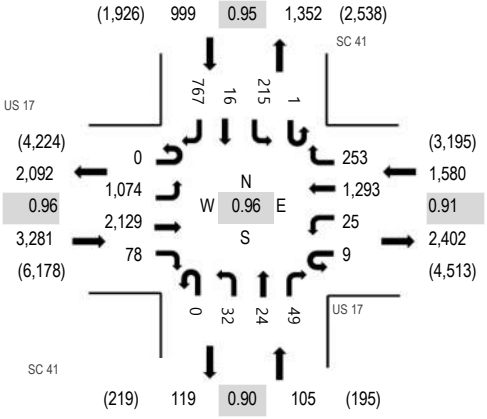
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total
Articulated Trucks	0	0	18	0	0	0	12	0					0	0	0	0	30
Lights	0	0	2,810	0	0	0	2,167	10					0	0	0	51	5,038
Mediums	0	0	37	0	0	0	40	0					0	0	0	2	79
Total	0	0	2,865	0	0	0	2,219	10					0	0	0	53	5,147

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

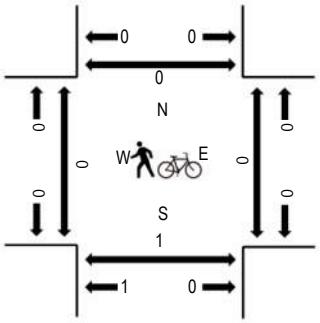
Location: C SC 41 & US 17 PM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	US 17 Eastbound				US 17 Westbound				SC 41 Northbound				SC 41 Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	1	233	457	17	5	10	400	30	0	6	4	8	0	33	4	159	1,367	5,529	0	0	0	0
4:15 PM	1	260	530	14	2	4	349	50	0	6	5	11	1	52	3	175	1,463	5,713	0	0	0	0
4:30 PM	2	210	365	14	0	10	360	67	0	6	6	10	0	49	2	185	1,286	5,755	0	0	0	0
4:45 PM	1	262	514	16	0	3	275	50	0	8	7	13	1	62	3	198	1,413	5,950	0	0	1	0
5:00 PM	0	271	535	18	4	6	374	62	0	7	4	10	1	62	8	189	1,551	5,965	0	0	0	0
5:15 PM	0	276	511	25	0	5	343	73	0	8	6	15	0	49	0	194	1,505		0	0	0	0
5:30 PM	0	273	562	16	4	9	294	66	0	10	8	12	0	48	3	176	1,481		0	0	0	0
5:45 PM	0	254	521	19	1	5	282	52	0	7	6	12	0	56	5	208	1,428		0	0	0	0

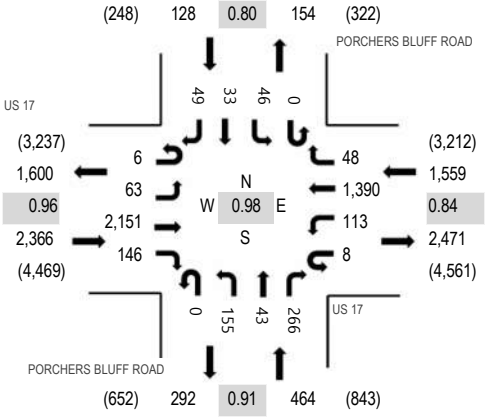
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	11	0	0	0	15	1	0	0	0	0	0	0	0	0	28
Lights	0	1,065	2,100	77	9	25	1,260	249	0	29	24	49	1	213	15	760	5,876
Mediums	0	8	18	1	0	0	18	3	0	3	0	0	0	2	1	7	61
Total	0	1,074	2,129	78	9	25	1,293	253	0	32	24	49	1	215	16	767	5,965

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

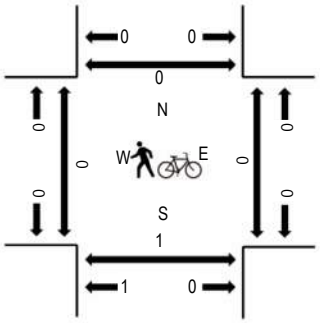
Location: D PORCHERS BLUFF ROAD & US 17 PM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	US 17 Eastbound				US 17 Westbound				PORCHERS BLUFF ROAD Northbound				PORCHERS BLUFF ROAD Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	2	15	423	47	0	44	430	17	0	22	13	45	0	10	7	13	1,088	4,255	0	0	0	0
4:15 PM	2	17	515	54	1	35	366	14	0	34	14	56	0	15	5	14	1,142	4,297	0	0	0	0
4:30 PM	2	23	405	35	1	46	335	9	0	38	9	42	0	13	10	8	976	4,309	0	0	0	0
4:45 PM	1	16	497	49	0	25	317	13	0	42	8	56	0	11	3	11	1,049	4,474	0	0	1	0
5:00 PM	1	10	523	40	3	25	380	13	0	28	10	64	0	10	9	14	1,130	4,517	0	0	0	0
5:15 PM	2	12	534	34	1	25	386	12	0	38	11	65	0	15	5	14	1,154		0	0	0	0
5:30 PM	1	18	560	40	1	34	335	10	0	46	10	65	0	8	5	8	1,141		0	0	0	0
5:45 PM	2	23	534	32	3	29	289	13	0	43	12	72	0	13	14	13	1,092		0	0	0	0

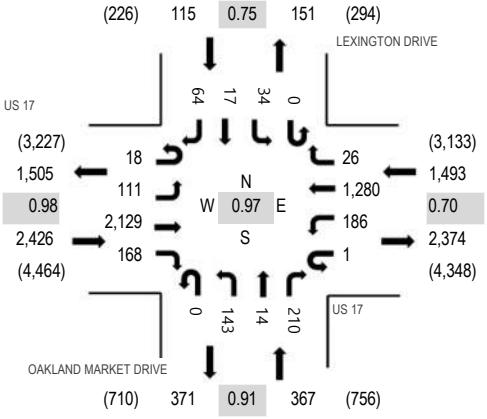
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	12	0	0	0	11	0	0	1	0	0	0	0	0	0	24
Lights	6	63	2,122	145	8	112	1,360	48	0	151	43	265	0	46	33	49	4,451
Mediums	0	0	17	1	0	1	19	0	0	3	0	1	0	0	0	0	42
Total	6	63	2,151	146	8	113	1,390	48	0	155	43	266	0	46	33	49	4,517

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

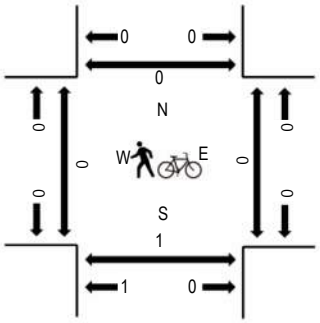
Location: E OAKLAND MARKET DRIVE & US 17 PM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	US 17 Eastbound				US 17 Westbound				OAKLAND MARKET DRIVE Northbound				LEXINGTON DRIVE Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	3	21	425	34	0	51	527	6	0	35	6	45	0	9	2	16	1,180	4,178	0	0	0	0
4:15 PM	3	25	482	55	0	29	305	8	0	55	5	48	0	8	4	23	1,050	4,109	0	0	0	0
4:30 PM	2	20	364	33	0	39	322	5	0	51	7	47	0	7	3	11	911	4,190	0	0	0	0
4:45 PM	5	29	483	54	1	30	312	5	0	42	6	42	0	13	5	10	1,037	4,396	0	0	0	0
5:00 PM	6	32	527	42	1	38	325	6	0	44	3	45	0	15	7	20	1,111	4,401	0	0	0	0
5:15 PM	3	22	522	47	0	54	360	4	0	38	3	55	0	5	5	13	1,131		0	0	0	0
5:30 PM	3	36	540	41	0	45	322	6	0	34	4	61	0	7	1	17	1,117		0	0	0	0
5:45 PM	6	21	540	38	0	49	273	10	0	27	4	49	0	7	4	14	1,042		0	0	1	0

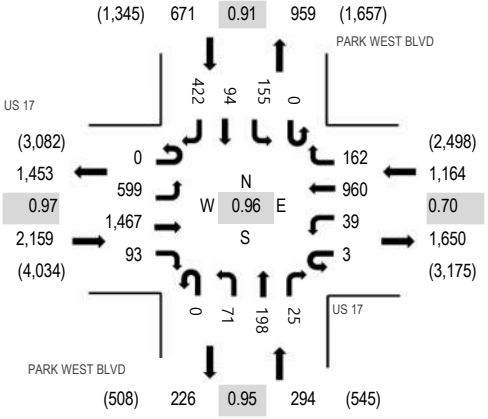
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	11	0	0	0	10	0	0	0	0	0	0	0	0	0	21
Lights	18	111	2,100	168	1	184	1,249	26	0	142	14	209	0	34	17	64	4,337
Mediums	0	0	18	0	0	2	21	0	0	1	0	1	0	0	0	0	43
Total	18	111	2,129	168	1	186	1,280	26	0	143	14	210	0	34	17	64	4,401

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

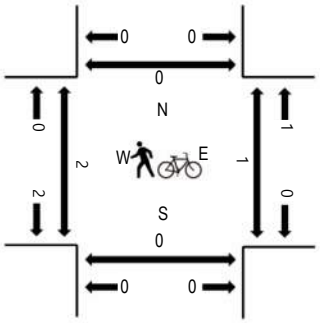
Location: F PARK WEST BLVD & US 17 PM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	US 17 Eastbound				US 17 Westbound				PARK WEST BLVD Northbound				PARK WEST BLVD Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	99	308	19	0	29	411	38	0	25	35	8	0	42	36	121	1,171	4,134	1	0	0	0
4:15 PM	0	126	387	23	0	17	268	30	0	16	26	14	0	25	26	94	1,052	4,009	0	0	0	1
4:30 PM	0	97	328	24	0	8	236	29	0	13	31	14	0	39	30	106	955	4,076	0	1	0	1
4:45 PM	0	125	317	22	2	18	223	25	0	17	37	15	0	26	30	99	956	4,205	0	0	0	1
5:00 PM	0	135	369	19	0	12	240	29	0	16	49	10	0	38	22	107	1,046	4,288	1	0	0	0
5:15 PM	0	158	358	33	2	4	270	48	0	24	48	6	0	41	26	101	1,119		0	0	0	0
5:30 PM	0	152	353	26	1	7	239	45	0	15	56	3	0	43	22	122	1,084		0	1	0	0
5:45 PM	0	154	387	15	0	16	211	40	0	16	45	6	0	33	24	92	1,039		0	0	0	0

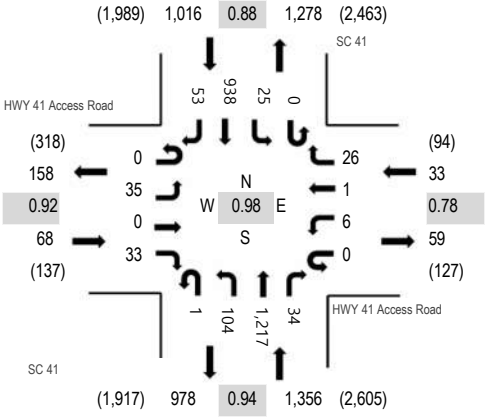
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	8	0	0	0	10	0	0	0	0	0	0	0	0	0	19
Lights	0	596	1,440	92	3	39	936	159	0	70	198	25	0	155	94	419	4,226
Mediums	0	2	19	1	0	0	14	3	0	1	0	0	0	0	0	3	43
Total	0	599	1,467	93	3	39	960	162	0	71	198	25	0	155	94	422	4,288

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

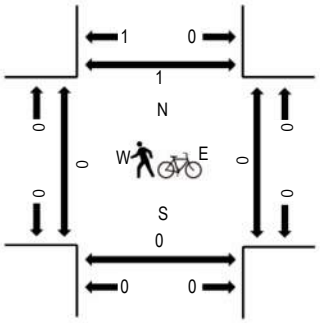
Location: G SC 41 & HWY 41 Access Road PM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 04:45 PM - 05:00 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	HWY 41 Access Road Eastbound				HWY 41 Access Road Westbound				SC 41 Northbound				SC 41 Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	16	0	4	0	4	0	16	0	22	257	5	0	3	194	11	532	2,357	0	0	0	0
4:15 PM	0	4	1	11	0	3	2	15	0	34	298	19	0	7	225	10	629	2,441	0	0	0	0
4:30 PM	0	9	0	5	0	3	0	7	0	28	265	7	0	6	222	12	564	2,444	0	2	0	1
4:45 PM	0	8	0	9	0	3	1	8	1	31	271	9	0	12	261	18	632	2,473	0	0	0	1
5:00 PM	0	12	0	7	0	3	0	8	0	24	302	11	0	5	230	14	616	2,468	0	0	0	0
5:15 PM	0	10	0	8	0	0	0	6	0	20	334	7	0	2	230	15	632		0	0	0	0
5:30 PM	0	5	0	9	0	0	0	4	0	29	310	7	0	6	217	6	593		0	0	0	0
5:45 PM	0	8	0	11	0	1	0	10	1	26	280	7	0	13	255	15	627		0	0	0	0

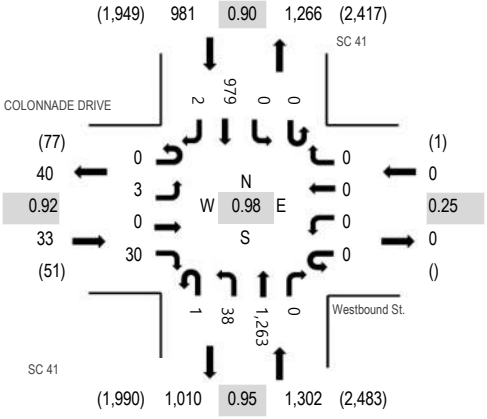
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	2	6
Lights	0	35	0	33	0	6	1	26	1	103	1,203	34	0	25	925	50	2,442
Mediums	0	0	0	0	0	0	0	0	0	1	10	0	0	0	13	1	25
Total	0	35	0	33	0	6	1	26	1	104	1,217	34	0	25	938	53	2,473

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

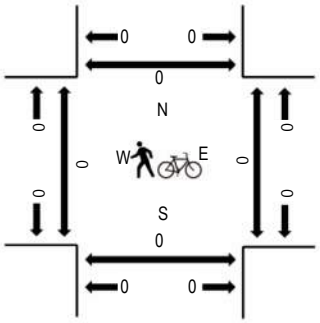
Location: H SC 41 & Westbound St. PM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	COLONNADE DRIVE Eastbound				Westbound St. Westbound				SC 41 Northbound				SC 41 Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	5	0	0	0	0	0	9	276	0	0	0	201	2	493	2,168	0	0	0	0
4:15 PM	0	1	0	2	0	0	0	0	0	6	319	0	0	0	237	0	565	2,251	0	0	0	0
4:30 PM	0	0	0	4	0	1	0	0	0	6	272	0	0	0	244	1	528	2,277	0	0	0	0
4:45 PM	0	0	0	6	0	0	0	0	0	11	282	0	1	0	280	2	582	2,310	0	0	0	0
5:00 PM	0	0	0	8	0	0	0	0	0	9	315	0	0	0	244	0	576	2,316	0	0	0	0
5:15 PM	0	1	0	6	0	0	0	0	0	7	335	0	0	0	241	1	591		0	0	0	0
5:30 PM	0	2	0	7	0	0	0	0	1	11	319	0	0	0	220	1	561		0	0	0	0
5:45 PM	0	0	0	9	0	0	0	0	0	11	294	0	0	0	274	0	588		0	0	0	0

Peak Rolling Hour Flow Rates

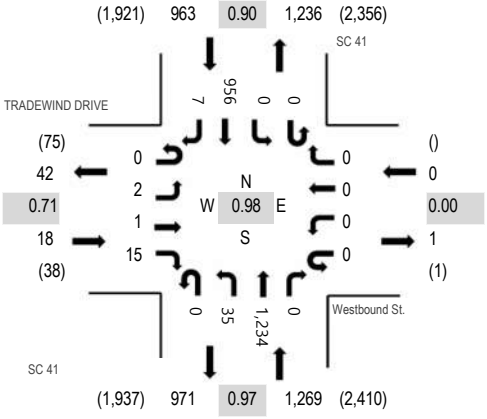
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	4
Lights	0	3	0	30	0	0	0	0	1	38	1,252	0	0	0	966	2	2,292
Mediums	0	0	0	0	0	0	0	0	0	0	9	0	0	0	11	0	20
Total	0	3	0	30	0	0	0	0	1	38	1,263	0	0	0	979	2	2,316

All Traffic Data Services Inc.

(303) 216-2439
www.alltrafficdata.net

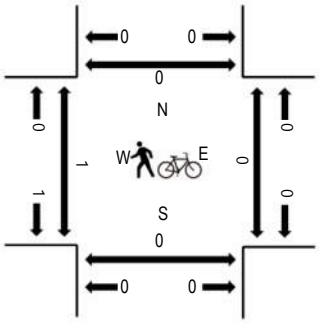
Location: I SC 41 & Westbound St. PM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	TRADEWIND DRIVE Eastbound				Westbound St. Westbound				SC 41 Northbound				SC 41 Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	1	0	5	0	0	0	0	0	9	264	0	0	0	205	4	488	2,119	0	0	0	0
4:15 PM	0	1	0	3	0	0	0	0	1	7	317	0	0	0	225	2	556	2,186	0	0	0	0
4:30 PM	0	0	0	3	0	0	0	0	0	2	264	0	0	0	239	3	511	2,204	0	0	0	0
4:45 PM	0	0	0	7	0	0	0	0	0	4	273	0	0	0	278	2	564	2,243	0	0	0	0
5:00 PM	0	0	0	2	0	0	0	0	0	11	304	0	0	0	238	0	555	2,250	0	0	0	0
5:15 PM	0	1	0	2	0	0	0	0	0	10	317	0	0	0	243	1	574		0	0	0	0
5:30 PM	0	1	1	5	0	0	0	0	0	6	320	0	0	0	215	2	550		0	0	0	0
5:45 PM	0	0	0	6	0	0	0	0	0	8	293	0	0	0	260	4	571		0	0	0	0

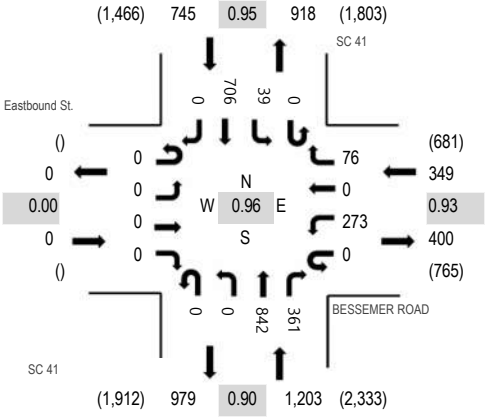
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	2	0	0	0	11	0	13
Lights	0	2	1	15	0	0	0	0	0	35	1,223	0	0	0	942	7	2,225
Mediums	0	0	0	0	0	0	0	0	0	0	9	0	0	0	3	0	12
Total	0	2	1	15	0	0	0	0	0	35	1,234	0	0	0	956	7	2,250

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

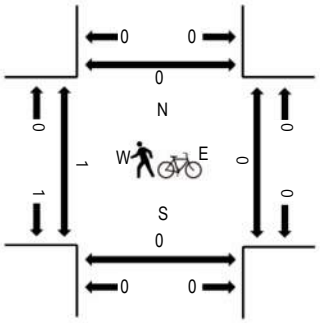
Location: J SC 41 & BESSEMER ROAD PM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:30 PM - 05:45 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	Eastbound St. Eastbound				BESSEMER ROAD Westbound				SC 41 Northbound				SC 41 Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	0	0	50	0	20	0	0	181	77	0	13	173	0	514	2,193	0	0	0	0
4:15 PM	0	0	0	0	0	71	0	23	0	0	228	87	0	9	152	0	570	2,247	1	0	0	0
4:30 PM	0	0	0	0	0	63	0	20	0	0	207	77	0	5	181	0	553	2,251	0	0	0	0
4:45 PM	0	0	0	0	0	74	0	11	0	0	190	84	0	8	189	0	556	2,297	0	0	0	0
5:00 PM	0	0	0	0	0	71	0	17	0	0	203	97	0	5	175	0	568	2,287	1	0	0	0
5:15 PM	0	0	0	0	0	69	0	23	0	0	219	77	0	14	172	0	574		0	0	0	0
5:30 PM	0	0	0	0	0	59	0	25	0	0	230	103	0	12	170	0	599		0	0	0	0
5:45 PM	0	0	0	0	0	63	0	22	0	0	184	89	0	8	180	0	546		0	0	0	0

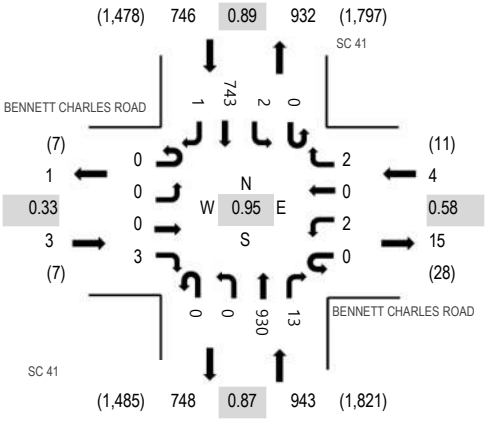
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	4
Lights	0	0	0	0	0	266	0	76	0	0	831	359	0	37	699	0	2,268
Mediums	0	0	0	0	0	7	0	0	0	0	8	2	0	2	6	0	25
Total	0	0	0	0	0	273	0	76	0	0	842	361	0	39	706	0	2,297

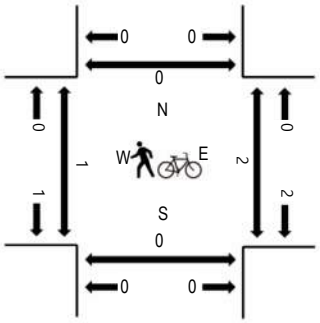
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: K SC 41 & BENNETT CHARLES ROAD PM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:30 PM - 05:45 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	BENNETT CHARLES ROAD Eastbound				BENNETT CHARLES ROAD Westbound				SC 41 Northbound				SC 41 Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	1	0	2	0	1	0	0	0	1	193	2	0	1	178	0	379	1,621	1	0	0	0
4:15 PM	0	0	0	0	0	1	0	0	0	2	257	2	0	0	162	0	424	1,644	0	0	0	0
4:30 PM	0	0	0	0	0	2	0	1	0	1	233	3	0	3	174	0	417	1,637	0	1	0	0
4:45 PM	0	0	0	1	0	2	0	0	0	2	180	2	0	0	214	0	401	1,667	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	1	0	0	218	1	0	0	182	0	402	1,696	1	0	0	0
5:15 PM	0	0	0	1	0	0	0	0	0	0	221	4	0	1	190	0	417		0	0	0	0
5:30 PM	0	0	0	0	0	0	0	1	0	0	267	4	0	0	175	0	447		0	0	0	0
5:45 PM	0	0	0	2	0	2	0	0	0	0	224	4	0	1	196	1	430		0	0	0	0

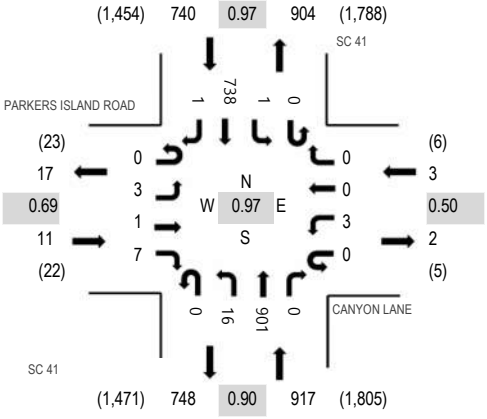
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3
Lights	0	0	0	3	0	2	0	2	0	0	923	12	0	2	734	1	1,679
Mediums	0	0	0	0	0	0	0	0	0	0	5	1	0	0	8	0	14
Total	0	0	0	3	0	2	0	2	0	0	930	13	0	2	743	1	1,696

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

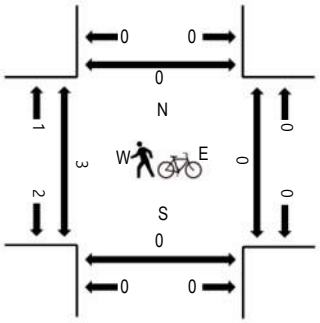
Location: L SC 41 & CANYON LANE PM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:30 PM - 05:45 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	PARKERS ISLAND ROAD Eastbound				CANYON LANE Westbound				SC 41 Northbound				SC 41 Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	4	0	0	0	0	1	2	201	1	0	1	172	1	383	1,616	0	0	0	0
4:15 PM	0	0	0	1	0	1	0	0	0	0	261	0	0	0	156	0	419	1,634	0	0	0	0
4:30 PM	0	1	0	2	0	1	0	1	0	0	225	0	0	0	188	1	419	1,639	0	0	0	0
4:45 PM	0	0	0	3	0	0	0	0	0	1	195	1	0	0	194	1	395	1,649	0	0	0	0
5:00 PM	0	0	0	2	0	1	0	0	0	2	215	0	0	1	180	0	401	1,671	2	0	0	0
5:15 PM	0	1	0	0	0	1	0	0	0	2	226	0	0	0	193	1	424		1	0	0	0
5:30 PM	0	1	1	2	0	1	0	0	0	6	248	0	0	0	170	0	429		0	0	0	0
5:45 PM	0	1	0	3	0	0	0	0	0	6	212	0	0	0	195	0	417		0	0	0	0

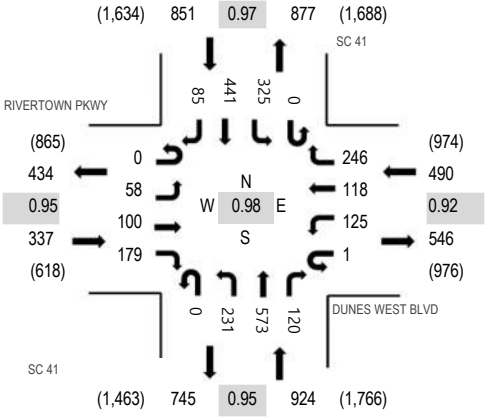
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
Lights	0	3	1	7	0	3	0	0	0	16	890	0	0	1	730	1	1,652
Mediums	0	0	0	0	0	0	0	0	0	0	9	0	0	0	8	0	17
Total	0	3	1	7	0	3	0	0	0	16	901	0	0	1	738	1	1,671

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

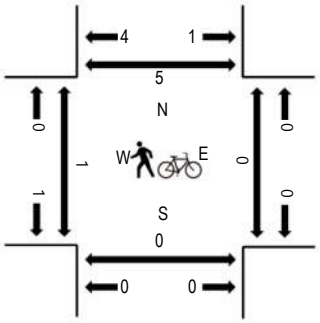
Location: M SC 41 & DUNES WEST BLVD PM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	RIVERTOWN PKWY Eastbound				DUNES WEST BLVD Westbound				SC 41 Northbound				SC 41 Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	19	22	31	1	29	40	49	0	59	97	23	0	64	112	26	572	2,390	0	0	0	1
4:15 PM	0	11	16	33	0	28	48	73	0	65	154	30	0	62	104	16	640	2,448	0	0	0	0
4:30 PM	0	9	16	52	0	32	17	57	0	46	151	33	0	74	105	26	618	2,469	0	0	0	0
4:45 PM	0	14	19	39	0	33	24	53	0	42	124	18	0	52	120	22	560	2,509	0	0	1	0
5:00 PM	0	14	19	49	0	37	26	60	0	54	133	26	0	75	113	24	630	2,602	0	0	0	1
5:15 PM	0	18	25	44	1	39	25	68	0	64	140	27	0	85	110	15	661		1	0	0	0
5:30 PM	0	12	27	50	0	21	34	69	0	59	143	34	0	91	100	18	658		0	0	0	0
5:45 PM	0	14	29	36	0	28	33	49	0	54	157	33	0	74	118	28	653		0	0	0	2

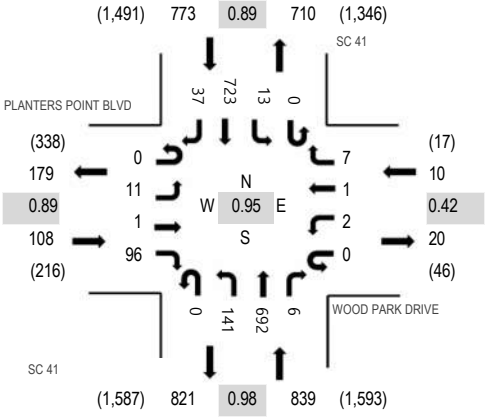
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	0	3
Lights	0	56	100	179	1	125	117	244	0	231	562	120	0	325	433	85	2,578
Mediums	0	2	0	0	0	0	1	1	0	0	9	0	0	0	8	0	21
Total	0	58	100	179	1	125	118	246	0	231	573	120	0	325	441	85	2,602

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

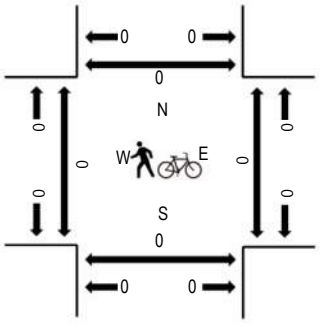
Location: N SC 41 & WOOD PARK DRIVE PM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	PLANTERS POINT BLVD Eastbound				WOOD PARK DRIVE Westbound				SC 41 Northbound				SC 41 Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	2	0	21	0	0	0	0	0	30	106	4	0	4	181	6	354	1,587	0	3	0	0
4:15 PM	0	0	0	22	0	2	0	0	0	30	185	2	0	4	163	9	417	1,645	0	0	0	0
4:30 PM	0	4	0	24	0	1	0	3	0	43	176	1	0	4	154	11	421	1,681	0	0	0	0
4:45 PM	0	7	0	28	0	1	0	0	0	22	153	2	0	5	169	8	395	1,705	0	0	0	0
5:00 PM	0	2	0	30	0	1	1	0	0	31	169	2	0	4	162	10	412	1,730	0	0	0	0
5:15 PM	0	7	0	17	0	0	0	1	0	28	181	2	0	3	205	9	453		0	0	0	0
5:30 PM	0	2	1	31	0	1	0	5	0	34	179	1	0	5	177	9	445		0	0	0	0
5:45 PM	0	0	0	18	0	0	0	1	0	48	163	1	0	1	179	9	420		0	0	0	0

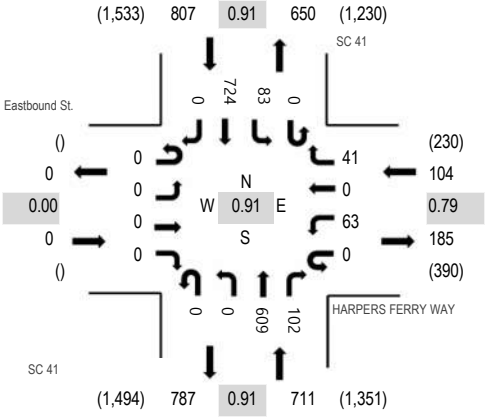
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5
Lights	0	11	1	96	0	2	1	7	0	141	678	6	0	13	714	37	1,707
Mediums	0	0	0	0	0	0	0	0	0	0	9	0	0	0	9	0	18
Total	0	11	1	96	0	2	1	7	0	141	692	6	0	13	723	37	1,730

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

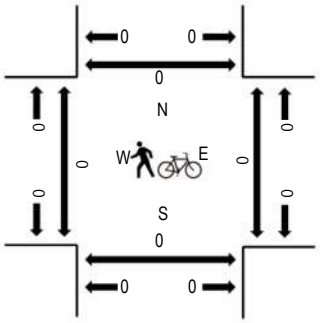
Location: 0 SC 41 & HARPERS FERRY WAY PM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	Eastbound St. Eastbound				HARPERS FERRY WAY Westbound				SC 41 Northbound				SC 41 Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	0	0	20	0	16	0	0	96	29	0	27	162	0	350	1,492	0	0	0	0
4:15 PM	0	0	0	0	0	21	0	6	0	0	146	24	0	20	159	0	376	1,527	0	0	0	0
4:30 PM	0	0	0	0	0	17	0	6	0	0	155	29	0	25	154	0	386	1,598	0	0	0	0
4:45 PM	0	0	0	0	0	20	0	20	0	0	135	26	0	25	154	0	380	1,614	0	0	0	0
5:00 PM	0	0	0	0	0	14	0	10	0	0	145	22	0	27	167	0	385	1,622	0	0	0	0
5:15 PM	0	0	0	0	0	15	0	15	0	0	167	29	0	15	206	0	447		0	0	0	0
5:30 PM	0	0	0	0	0	10	0	9	0	0	160	25	0	14	184	0	402		0	0	0	0
5:45 PM	0	0	0	0	0	24	0	7	0	0	137	26	0	27	167	0	388		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4
Lights	0	0	0	0	0	62	0	40	0	0	596	101	0	83	716	0	1,598
Mediums	0	0	0	0	0	1	0	1	0	0	9	1	0	0	8	0	20
Total	0	0	0	0	0	63	0	41	0	0	609	102	0	83	724	0	1,622

All Traffic Data Services Inc.
(303) 216-2439
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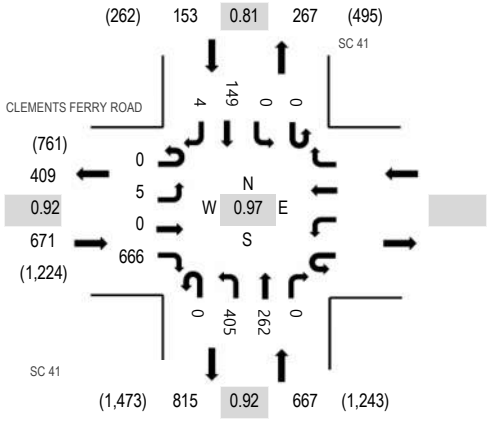
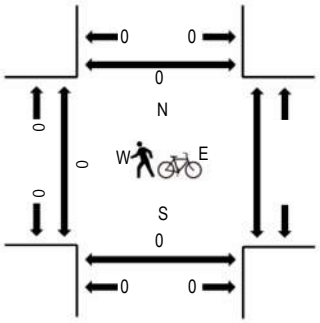
Location: P SC 41 & CLEMENTS FERRY ROAD PM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:30 PM - 05:45 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	CLEMENTS FERRY ROAD Eastbound				Westbound				SC 41 Northbound				SC 41 Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	143					0	66	34	0	0	0	23	0	266	1,342	0		0	0
4:15 PM	0	0	0	148					0	96	86	0	0	0	37	0	367	1,439	0		0	0
4:30 PM	0	0	0	152					0	99	61	0	0	0	24	2	338	1,446	0		0	0
4:45 PM	0	1	0	182					0	98	62	0	0	0	25	3	371	1,491	0		0	0
5:00 PM	0	1	0	158					0	98	69	0	0	0	36	1	363	1,387	0		0	0
5:15 PM	0	1	0	150					0	112	70	0	0	0	41	0	374		0		0	0
5:30 PM	0	2	0	176					0	97	61	0	0	0	47	0	383		0		0	0
5:45 PM	0	1	0	109					0	88	46	0	0	0	22	1	267		0		0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	1					0	2	3	0	0	0	0	1	7
Lights	0	5	0	660					0	398	253	0	0	0	147	2	1,465
Mediums	0	0	0	5					0	5	6	0	0	0	2	1	19
Total	0	5	0	666					0	405	262	0	0	0	149	4	1,491

All Traffic Data Services Inc.
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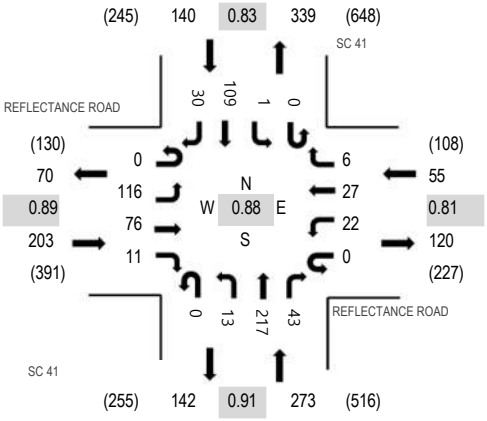
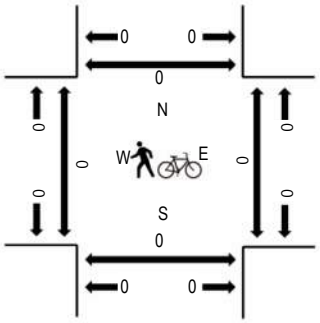
Location: Q SC 41 & REFLECTANCE ROAD PM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	REFLECTANCE ROAD Eastbound				REFLECTANCE ROAD Westbound				SC 41 Northbound				SC 41 Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	33	16	2	0	7	6	2	0	2	40	6	0	0	19	11	144	603	0	0	0	0
4:15 PM	0	31	22	5	0	5	6	0	0	3	54	7	0	0	26	4	163	639	0	0	0	0
4:30 PM	0	23	17	4	0	6	8	1	0	2	60	10	0	1	14	5	151	666	0	0	0	0
4:45 PM	0	24	18	1	0	4	6	1	0	7	43	11	0	0	23	7	145	671	0	0	0	0
5:00 PM	0	29	26	1	0	8	4	2	0	4	61	12	0	1	21	11	180	657	0	0	0	0
5:15 PM	0	31	19	7	0	6	10	2	0	2	65	13	0	0	27	8	190		0	0	0	0
5:30 PM	0	32	13	2	0	4	7	1	0	0	48	7	0	0	38	4	156		0	0	0	0
5:45 PM	0	19	16	0	0	5	7	0	0	1	46	12	0	0	20	5	131		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	21	3	0	0	0	1	0	0	1	2	0	0	0	1	12	41
Lights	0	93	71	11	0	20	23	6	0	12	210	42	0	1	106	18	613
Mediums	0	2	2	0	0	2	3	0	0	0	5	1	0	0	2	0	17
Total	0	116	76	11	0	22	27	6	0	13	217	43	0	1	109	30	671

All Traffic Data Services Inc.

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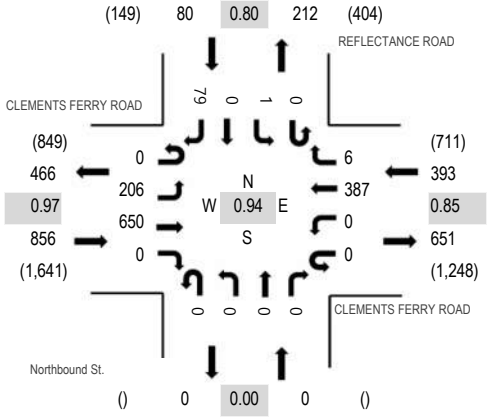
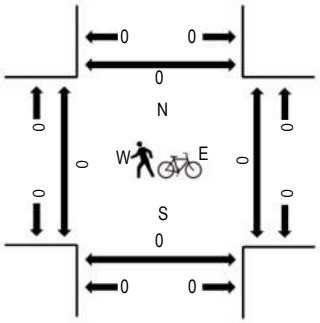
Location: R Northbound St. & CLEMENTS FERRY ROAD PM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	CLEMENTS FERRY ROAD Eastbound				CLEMENTS FERRY ROAD Westbound				Northbound St. Northbound				REFLECTANCE ROAD Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	50	148	0	0	0	73	0	0	0	0	0	0	0	0	20	291	1,232	0	0	0	0
4:15 PM	0	55	143	0	0	0	76	0	0	0	0	0	0	2	0	15	291	1,268	0	0	0	0
4:30 PM	0	47	156	0	0	0	97	1	0	0	0	0	0	0	0	14	315	1,329	0	0	0	0
4:45 PM	0	48	172	0	0	0	94	1	0	0	0	0	0	0	0	20	335	1,314	0	0	0	0
5:00 PM	0	59	162	0	0	0	83	2	0	0	0	0	0	0	0	21	327	1,269	0	0	0	0
5:15 PM	0	52	160	0	0	0	113	2	0	0	0	0	0	1	0	24	352		0	0	0	0
5:30 PM	0	43	158	0	0	0	86	0	0	0	0	0	0	0	0	13	300		0	0	0	0
5:45 PM	0	43	145	0	0	0	82	1	0	0	0	0	0	1	0	18	290		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	23	1	0	0	0	2	0	0	0	0	0	0	0	0	14	40
Lights	0	178	644	0	0	0	371	6	0	0	0	0	0	1	0	60	1,260
Mediums	0	5	5	0	0	0	14	0	0	0	0	0	0	0	0	5	29
Total	0	206	650	0	0	0	387	6	0	0	0	0	0	1	0	79	1,329

All Traffic Data Services Inc.

(303) 216-2439
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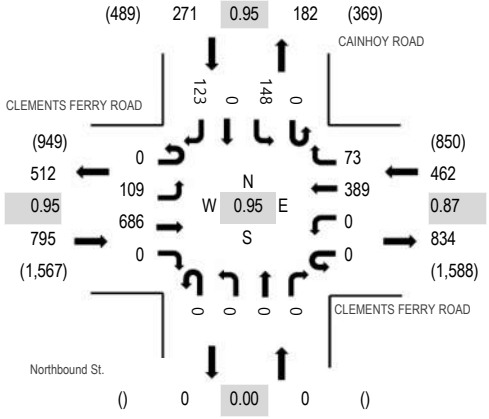
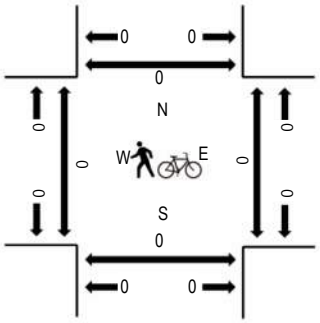
Location: S Northbound St. & CLEMENTS FERRY ROAD PM
Date and Start Time: Tuesday, September 19, 2017
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 04:45 PM - 05:00 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	CLEMENTS FERRY ROAD Eastbound				CLEMENTS FERRY ROAD Westbound				Northbound St. Northbound				CAINHOY ROAD Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	33	165	0	0	0	86	5	0	0	0	0	0	24	0	22	335	1,464	0	0	0	0
4:15 PM	0	31	162	0	0	0	78	19	0	0	0	0	0	37	0	34	361	1,511	0	0	0	0
4:30 PM	0	24	165	0	0	0	95	15	0	0	0	0	0	34	0	34	367	1,528	0	0	0	0
4:45 PM	0	28	184	0	0	0	92	24	0	0	0	0	0	38	0	35	401	1,507	0	0	0	0
5:00 PM	0	38	175	0	0	0	83	20	0	0	0	0	0	40	0	26	382	1,442	0	0	0	0
5:15 PM	0	19	162	0	0	0	119	14	0	0	0	0	0	36	0	28	378		0	0	0	0
5:30 PM	0	28	172	0	0	0	73	19	0	0	0	0	0	26	0	28	346		0	0	0	0
5:45 PM	0	29	152	0	0	0	85	23	0	0	0	0	0	16	0	31	336		0	0	0	0

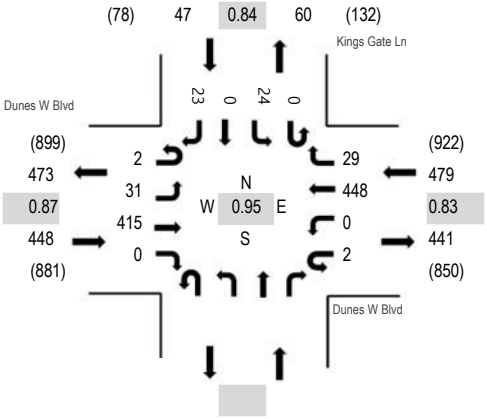
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	12	19	0	0	0	8	9	0	0	0	0	0	7	0	18	73
Lights	0	93	658	0	0	0	366	62	0	0	0	0	0	141	0	100	1,420
Mediums	0	4	9	0	0	0	15	2	0	0	0	0	0	0	0	5	35
Total	0	109	686	0	0	0	389	73	0	0	0	0	0	148	0	123	1,528

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

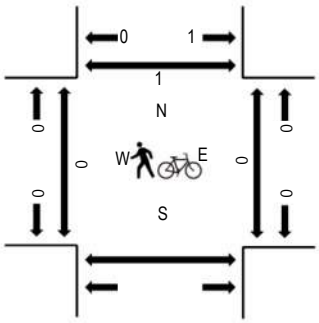
Location: #1 Kings Gate Ln & Dunes W Blvd PM
Date and Start Time: Tuesday, March 12, 2019
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 04:45 PM - 05:00 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	Dunes W Blvd Eastbound				Dunes W Blvd Westbound				Northbound				Kings Gate Ln Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	12	84	0	1	0	95	9					0	1	0	6	208	954	0	0		0
4:15 PM	0	4	94	0	0	0	138	6					0	2	0	6	250	974	0	0		0
4:30 PM	0	6	103	0	1	0	109	8					0	9	0	3	239	958	0	0		0
4:45 PM	2	13	120	0	0	0	100	9					0	6	0	7	257	956	0	0		0
5:00 PM	0	8	98	0	1	0	101	6					0	7	0	7	228	927	0	0		1
5:15 PM	1	6	107	0	0	0	104	8					0	6	0	2	234		0	0		0
5:30 PM	0	11	105	0	1	0	105	6					0	5	0	4	237		0	0		1
5:45 PM	0	12	95	0	0	0	106	8					0	4	0	3	228		0	0		1

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0					0	0	0	0	0
Lights	2	31	407	0	2	0	439	27					0	21	0	23	952
Mediums	0	0	8	0	0	0	9	2					0	3	0	0	22
Total	2	31	415	0	2	0	448	29					0	24	0	23	974

All Traffic Data Services Inc.
(303) 216-2439
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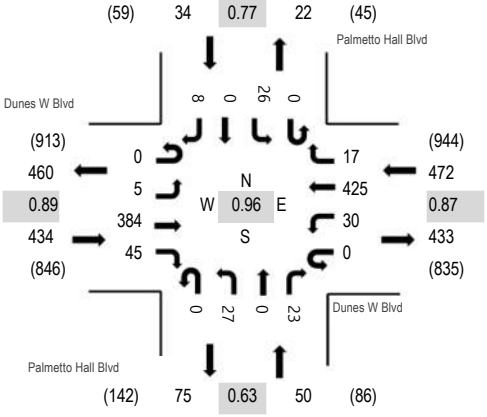
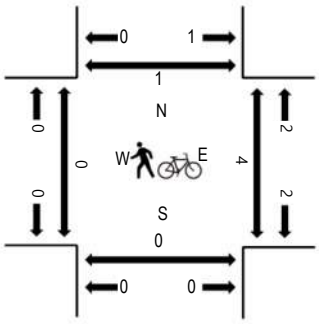
Location: #2 Palmetto Hall Blvd & Dunes W Blvd PM
Date and Start Time: Tuesday, March 12, 2019
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 04:45 PM - 05:00 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	Dunes W Blvd Eastbound				Dunes W Blvd Westbound				Palmetto Hall Blvd Northbound				Palmetto Hall Blvd Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	2	79	8	0	8	104	2	0	0	0	7	0	3	0	5	218	974	0	0	0	0
4:15 PM	0	4	80	11	0	9	125	5	0	1	0	5	0	6	0	4	250	990	0	0	0	0
4:30 PM	0	1	101	9	0	9	109	5	0	7	0	3	0	4	0	1	249	985	0	2	0	0
4:45 PM	0	0	109	18	0	9	98	3	0	7	0	5	0	6	0	2	257	983	0	0	0	0
5:00 PM	0	0	94	7	0	3	93	4	0	12	0	10	0	10	0	1	234	961	0	2	0	1
5:15 PM	0	1	98	12	0	8	105	2	0	2	0	9	0	3	0	5	245		0	0	0	0
5:30 PM	0	2	103	9	0	6	112	3	0	6	0	3	0	2	0	1	247		0	0	2	0
5:45 PM	0	6	85	7	0	9	108	5	0	4	0	5	0	5	0	1	235		0	0	2	0

Peak Rolling Hour Flow Rates

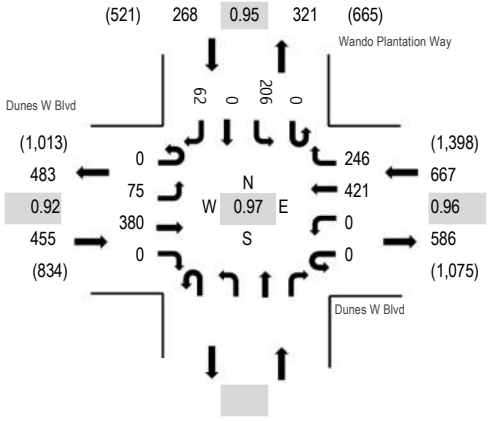
Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Lights	0	5	373	45	0	30	415	17	0	27	0	23	0	26	0	8	969
Mediums	0	0	11	0	0	0	9	0	0	0	0	0	0	0	0	0	20
Total	0	5	384	45	0	30	425	17	0	27	0	23	0	26	0	8	990

All Traffic Data Services Inc.

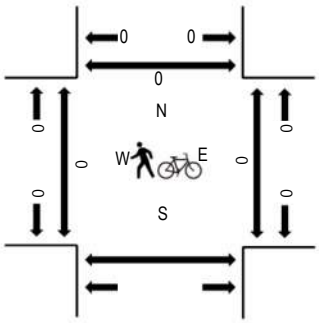
(303) 216-2439
www.alltrafficdata.net

Location: #3 Wando Plantation Way & Dunes W Blvd PM
Date and Start Time: Tuesday, March 12, 2019
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:30 PM - 05:45 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	Dunes W Blvd Eastbound				Dunes W Blvd Westbound				Northbound				Wando Plantation Way Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	18	66	0	0	0	110	83					0	43	0	16	336	1,372	0	0		0
4:15 PM	0	16	83	0	0	0	124	77					0	43	0	25	368	1,378	0	0		0
4:30 PM	0	13	91	0	0	0	97	58					0	39	0	27	325	1,358	0	0		0
4:45 PM	0	25	98	0	0	0	102	46					0	56	0	16	343	1,390	0	0		0
5:00 PM	0	25	89	0	0	0	93	68					0	53	0	14	342	1,381	0	0		0
5:15 PM	0	17	85	0	0	0	111	67					0	52	0	16	348		0	0		0
5:30 PM	0	8	108	0	0	0	115	65					0	45	0	16	357		0	0		0
5:45 PM	0	18	74	0	0	0	121	61					0	50	0	10	334		0	0		0

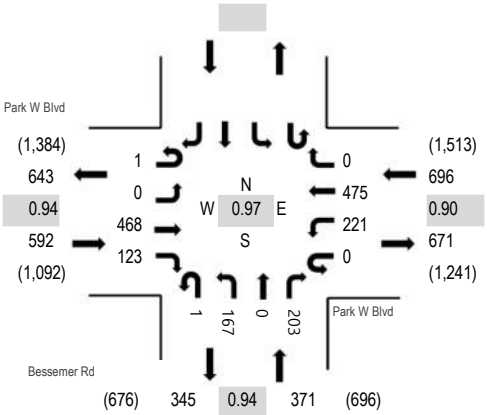
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0					0	0	0	0	0
Lights	0	75	377	0	0	0	416	245					0	205	0	59	1,377
Mediums	0	0	3	0	0	0	5	1					0	1	0	3	13
Total	0	75	380	0	0	0	421	246					0	206	0	62	1,390

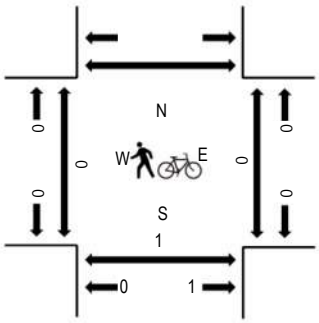
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: #4 Bessemer Rd & Park W Blvd PM
Date and Start Time: Tuesday, March 12, 2019
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	Park W Blvd Eastbound				Park W Blvd Westbound				Bessemer Rd Northbound				Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	1	0	89	24	0	57	160	0	1	39	0	44					415	1,648	0	0	1	
4:15 PM	0	0	103	29	1	58	165	0	0	35	0	43					434	1,635	0	0	0	
4:30 PM	0	0	99	24	1	61	126	0	0	31	0	46					388	1,627	0	0	0	
4:45 PM	1	0	121	35	0	64	112	0	0	30	0	48					411	1,659	0	0	0	
5:00 PM	0	0	113	30	0	54	104	0	1	57	0	43					402	1,653	0	0	0	
5:15 PM	0	0	119	24	0	51	134	0	0	38	0	60					426		0	0	1	
5:30 PM	0	0	115	34	0	52	125	0	0	42	0	52					420		0	0	0	
5:45 PM	0	0	98	33	0	44	144	0	0	40	0	46					405		0	0	0	

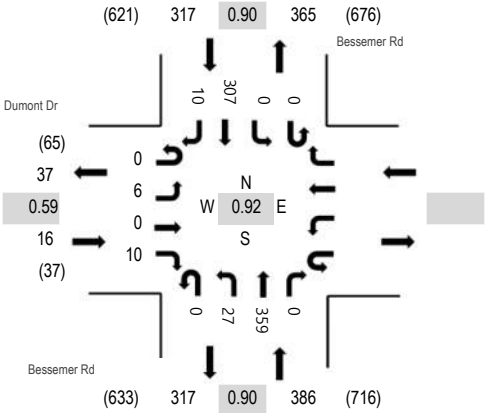
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0					0
Lights	1	0	465	122	0	219	472	0	1	166	0	202					1,648
Mediums	0	0	3	1	0	2	3	0	0	1	0	1					11
Total	1	0	468	123	0	221	475	0	1	167	0	203					1,659

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

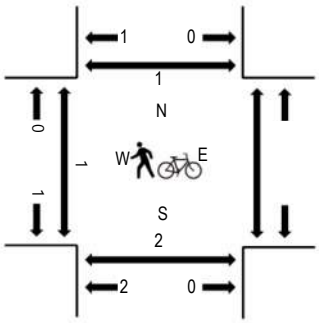
Location: #5 Bessemer Rd & Dumont Dr PM
Date and Start Time: Tuesday, March 12, 2019
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	Dumont Dr Eastbound				Westbound				Bessemer Rd Northbound				Bessemer Rd Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	1					0	2	84	0	0	0	76	2	165	669	0		0	0
4:15 PM	0	3	0	8					0	6	70	0	0	0	79	2	168	699	0		0	0
4:30 PM	0	1	0	5					0	10	75	0	0	0	74	0	165	699	0		0	0
4:45 PM	0	1	0	2					0	7	70	0	0	0	88	3	171	719	0		0	0
5:00 PM	0	1	0	5					0	8	101	0	0	0	78	2	195	705	0		0	0
5:15 PM	0	3	0	2					0	3	89	0	0	0	69	2	168		1		0	1
5:30 PM	0	1	0	1					0	9	99	0	0	0	72	3	185		0		0	0
5:45 PM	0	1	0	2					0	6	77	0	0	0	71	0	157		0		0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0					0	0	0	0	0	0	0	0	0
Lights	0	6	0	10					0	27	356	0	0	0	304	10	713
Mediums	0	0	0	0					0	0	3	0	0	0	3	0	6
Total	0	6	0	10					0	27	359	0	0	0	307	10	719

All Traffic Data Services

1 SIX MILE ROAD & US 17 PM
Tuesday, September 19, 2017

Peak Hour
05:00 PM - 06:00 PM
Peak 15-Minutes
05:00 PM - 05:15 PM

Traffic Counts - All Vehicles

	US 17					US 17					SIX MILE ROAD					Southbound St.						
	Eastbound					Westbound					Northbound					Southbound						
Time	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total	Rolling Hour
4:00 PM	2	0	590	19	0	1	34	485	0	0	0	20	0	55	0	0	0	0	0	0	1,206	4,681
4:15 PM	4	0	581	22	0	0	44	423	0	0	0	19	0	51	0	0	0	0	0	0	1,144	4,747
4:30 PM	7	0	603	24	0	2	29	428	0	0	0	33	0	66	0	0	0	0	0	0	1,192	4,828
4:45 PM	3	0	552	34	0	0	44	420	0	0	0	22	0	64	0	0	0	0	0	0	1,139	4,830
5:00 PM	2	0	661	41	0	2	43	439	0	0	0	23	0	61	0	0	0	0	0	0	1,272	4,835
5:15 PM	1	0	635	31	0	0	33	421	0	0	0	22	0	82	0	0	0	0	0	0	1,225	0
5:30 PM	1	0	604	45	0	2	29	420	0	0	0	14	0	79	0	0	0	0	0	0	1,194	0
5:45 PM	6	0	605	30	0	3	22	383	0	0	0	26	0	69	0	0	0	0	0	0	1,144	0

Peak Rolling Hour Flow Rates

	Eastbound					Westbound					Northbound					Southbound					
Vehicle Type	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total
Articulated Trucks	0	0	10	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	22
Lights	10	0	2,474	146	0	7	125	1,618	0	0	0	83	0	287	0	0	0	0	0	0	4,750
Mediums	0	0	21	1	0	0	2	33	0	0	0	2	0	4	0	0	0	0	0	0	63
Total	10	0	2,505	147	0	7	127	1,663	0	0	0	85	0	291	0	0	0	0	0	0	4,835

All Traffic Data Services

2 SIX MILE ROAD & Westbound St. PM

Tuesday, September 19, 2017

Peak Hour
04:45 PM - 05:45 PM
Peak 15-Minutes
05:30 PM - 05:45 PM

Traffic Counts - All Vehicles

	SWEETGRASS BASKET PKWY					Westbound St.					SIX MILE ROAD					SIX MILE ROAD						
	Eastbound					Westbound					Northbound					Southbound						
Time	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total	Rolling Hour
4:00 PM	0	24	0	34	0	0	0	0	0	0	0	30	22	0	0	0	0	40	9	0	159	671
4:15 PM	0	25	0	31	0	0	0	0	0	0	0	25	32	0	0	0	0	34	12	0	159	747
4:30 PM	0	25	0	32	0	0	0	0	0	0	1	16	35	0	0	0	0	29	16	0	154	803
4:45 PM	0	31	0	49	0	0	0	0	0	0	0	17	23	0	0	0	0	64	15	0	199	904
5:00 PM	0	33	0	65	0	0	0	0	0	0	0	26	25	0	0	0	0	79	7	0	235	883
5:15 PM	0	41	0	46	0	0	0	0	0	0	0	20	38	0	0	0	0	61	9	0	215	0
5:30 PM	0	38	0	77	0	0	0	0	0	0	0	11	37	0	0	0	0	77	15	0	255	0
5:45 PM	0	32	0	55	0	0	0	0	0	0	0	18	29	0	0	0	0	36	8	0	178	0

Peak Rolling Hour Flow Rates

	Eastbound					Westbound					Northbound					Southbound					
Vehicle Type	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Lights	0	141	0	235	0	0	0	0	0	0	0	73	119	0	0	0	0	278	44	0	890
Mediums	0	2	0	2	0	0	0	0	0	0	0	1	4	0	0	0	0	2	2	0	13
Total	0	143	0	237	0	0	0	0	0	0	0	74	123	0	0	0	0	281	46	0	904

All Traffic Data Services

3 SIX MILE ROAD & RIFLE RANGE ROAD PM

Tuesday, September 19, 2017

Peak Hour
04:45 PM - 05:45 PM
Peak 15-Minutes
05:15 PM - 05:30 PM

Traffic Counts - All Vehicles

	RIFLE RANGE ROAD					RIFLE RANGE ROAD					SIX MILE ROAD					SIX MILE ROAD						
	Eastbound					Westbound					Northbound					Southbound						
Time	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total	Rolling Hour
4:00 PM	0	7	129	16	0	0	6	111	24	0	0	8	14	2	0	0	25	15	14	0	371	1,622
4:15 PM	0	13	127	18	0	0	9	133	26	0	0	20	12	3	0	0	30	14	11	0	416	1,707
4:30 PM	0	15	149	14	0	0	4	104	22	0	0	12	8	6	0	0	33	10	15	0	392	1,760
4:45 PM	0	20	165	31	0	0	8	91	12	0	0	7	11	5	0	0	61	19	13	0	443	1,833
5:00 PM	0	13	170	15	0	0	1	92	23	0	0	16	9	2	0	0	77	13	25	0	456	1,789
5:15 PM	0	16	196	20	0	0	1	93	20	0	0	16	16	5	0	0	56	15	15	0	469	0
5:30 PM	0	14	171	15	0	0	5	79	15	0	0	14	11	8	0	0	101	18	14	0	465	0
5:45 PM	0	16	170	16	0	0	0	73	14	0	0	8	11	10	0	0	61	13	7	0	399	0

Peak Rolling Hour Flow Rates

	Eastbound					Westbound					Northbound					Southbound					
Vehicle Type	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Lights	0	62	699	80	0	0	15	355	68	0	0	52	46	20	0	0	294	65	64	0	1,820
Mediums	0	1	3	1	0	0	0	0	2	0	0	1	1	0	0	0	1	0	2	0	12
Total	0	63	702	81	0	0	15	355	70	0	0	53	47	20	0	0	295	65	67	0	1,833

All Traffic Data Services

4 HAMLIN ROAD & RIFLE RANGE ROAD PM

Tuesday, September 19, 2017

Peak Hour
05:00 PM - 06:00 PM
Peak 15-Minutes
05:15 PM - 05:30 PM

Traffic Counts - All Vehicles

	RIFLE RANGE ROAD					RIFLE RANGE ROAD					HAMLIN ROAD					HAMLIN ROAD						
	Eastbound					Westbound					Northbound					Southbound						
Time	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total	Rolling Hour
4:00 PM	0	33	112	5	0	0	0	113	20	0	0	5	1	1	0	0	11	1	46	0	348	1,361
4:15 PM	0	29	122	5	0	0	0	107	10	0	0	3	2	0	0	0	12	2	19	0	311	1,368
4:30 PM	0	38	128	3	0	0	1	91	15	0	0	3	3	0	0	0	12	2	31	0	327	1,465
4:45 PM	0	53	161	9	0	0	2	85	16	0	0	4	1	1	0	0	14	3	26	0	375	1,539
5:00 PM	0	59	156	8	0	0	1	76	9	0	0	3	0	0	0	0	16	1	26	0	355	1,546
5:15 PM	0	50	210	4	0	0	2	69	17	0	0	5	2	2	0	0	15	1	31	0	408	0
5:30 PM	0	56	211	3	0	0	5	68	12	0	0	0	3	1	0	0	15	1	26	0	401	0
5:45 PM	0	55	194	3	0	0	0	68	19	0	0	3	6	0	0	0	9	8	17	0	382	0

Peak Rolling Hour Flow Rates

	Eastbound					Westbound					Northbound					Southbound					
Vehicle Type	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	220	770	18	0	0	8	281	56	0	0	11	11	3	0	0	55	10	98	0	1,541
Mediums	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	2	0	5
Total	0	220	771	18	0	0	8	281	57	0	0	11	11	3	0	0	55	11	100	0	1,546

All Traffic Data Services

6 Northbound St. & US 17 PM
Tuesday, September 19, 2017

Peak Hour
04:45 PM - 05:45 PM
Peak 15-Minutes
05:00 PM - 05:15 PM

Traffic Counts - All Vehicles

	US 17					US 17					Northbound St.					LONG POINT ROAD						
	Eastbound					Westbound					Northbound					Southbound						
Time	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total	Rolling Hour
4:00 PM	0	34	607	0	0	0	0	491	165	0	0	0	0	0	0	0	185	0	15	0	1,497	5,811
4:15 PM	1	37	588	0	0	0	0	462	175	0	0	0	0	0	0	0	195	0	30	0	1,488	5,825
4:30 PM	1	33	599	0	0	0	0	435	154	0	0	0	0	0	0	0	183	0	25	0	1,430	5,841
4:45 PM	1	26	544	0	0	0	0	443	158	0	0	0	0	0	0	0	186	0	38	0	1,396	5,908
5:00 PM	2	35	677	0	0	0	0	448	143	0	0	0	0	0	0	0	182	0	24	0	1,511	5,905
5:15 PM	5	38	644	0	0	0	0	449	180	0	0	0	0	0	0	0	159	0	29	0	1,504	0
5:30 PM	2	35	672	0	0	0	0	419	142	0	0	0	0	0	0	0	208	0	19	0	1,497	0
5:45 PM	0	36	609	0	0	0	0	379	161	0	0	0	0	0	0	0	185	0	23	0	1,393	0

Peak Rolling Hour Flow Rates

	Eastbound					Westbound					Northbound					Southbound					
Vehicle Type	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total
Articulated Trucks	0	0	13	0	0	0	0	10	1	0	0	0	0	0	0	0	0	0	0	0	24
Lights	10	132	2,501	0	0	0	0	1,705	615	0	0	0	0	0	0	0	731	0	110	0	5,804
Mediums	0	2	23	0	0	0	0	44	7	0	0	0	0	0	0	0	4	0	0	0	80
Total	10	134	2,537	0	0	0	0	1,759	623	0	0	0	0	0	0	0	735	0	110	0	5,908

All Traffic Data Services

7 HAMLIN ROAD & Westbound St. PM

Tuesday, September 19, 2017

Peak Hour
04:30 PM - 05:30 PM
Peak 15-Minutes
04:45 PM - 05:00 PM

Traffic Counts - All Vehicles

	BILLY SWAILS					Westbound St.					HAMLIN ROAD					HAMLIN ROAD						
	Eastbound					Westbound					Northbound					Southbound						
Time	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total	Rolling Hour
4:00 PM	0	0	0	0	0	0	15	0	30	0	0	0	55	2	0	0	9	36	0	0	147	508
4:15 PM	0	0	0	0	0	0	6	0	20	0	0	0	39	1	0	0	4	29	0	0	99	488
4:30 PM	0	0	0	0	0	1	10	0	15	0	0	0	54	2	0	0	9	37	0	0	128	512
4:45 PM	0	0	0	0	0	0	5	0	9	0	0	0	62	9	0	0	12	37	0	0	134	511
5:00 PM	0	0	0	0	0	0	8	0	9	0	0	0	56	12	0	0	4	38	0	0	127	504
5:15 PM	0	0	0	0	0	0	11	0	8	0	0	0	59	7	0	0	3	35	0	0	123	0
5:30 PM	0	0	0	0	0	0	6	0	9	0	0	0	70	5	0	0	5	32	0	0	127	0
5:45 PM	0	0	0	0	0	0	6	0	9	0	0	0	67	9	0	0	4	32	0	0	127	0

Peak Rolling Hour Flow Rates

	Eastbound					Westbound					Northbound					Southbound					
Vehicle Type	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lights	0	0	0	0	0	1	34	0	41	0	0	0	231	30	0	0	28	146	0	0	511
Mediums	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Total	0	0	0	0	0	1	34	0	41	0	0	0	231	30	0	0	28	147	0	0	512

Appendix D

Calibration Report

SC 41 DRAFT Microsimulation Model Development and Calibration Report

SC 41 from Harpers Ferry Way to US 17
and US 17 from Six Mile Road to Park West Boulevard
Mount Pleasant, South Carolina

Prepared for:
Charleston County

Prepared by:
Stantec Consulting Services Inc.
4969 Centre Pointe Drive
Suite 200
North Charleston, SC 29418-6952

May 29, 2019

Sign-off Sheet

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Executive Summary

Stantec conducted a traffic analysis using VISSIM microsimulation software to evaluate the existing traffic conditions along nearly 4-mile sections of US 17 and SC 41 in Mount Pleasant, South Carolina. The study area includes seven (7) intersections along US 17 from 6 Mile Road to Park West Boulevard and eleven (11) intersections along SC 41 from US 17 to Harpers Ferry Way. This report addresses the existing conditions for the AM and PM peak periods and the methodology used to calibrate the microsimulation model. The tables below show a summary of the simulated multilane highway operations for the existing conditions models.

SC 41 Northbound		
Segment Description	**AM Peak Hour** LOS (Density [veh/mi/ln])	**PM Peak Hour** LOS (Density [veh/mi/ln])
End of network to Harpers Ferry Way	A (10.6)	A (10.6)
Harpers Ferry Way to Planters Point Boulevard/Wood Park Drive	A (8.8)	B (11.4)
Planters Point Boulevard/ Wood Park Drive to Rivertowne Parkway/Dunes West Boulevard	A (9.9)	B (14.8)
Rivertowne Parkway/Dunes West Boulevard to Parkers Island Road/Canyon Lane	B (11.9)	D (26.3)
Parkers Island Road/Canyon Lane to Bennett Charles Road/Sunchaser Lane	A (8.3)	B (17.6)
Bennett Charles Road/Sunchaser Lane to Joe Rouse Road	A (8.4)	B (18.0)
Joe Rouse Road to Tradewind Drive	B (13.5)	E (35.9)
Tradewind Dr to Colonnade Drive	A (10.9)	C (24.9)
US 17 Access Rd to Colonnade Drive	B (11.4)	D (26.7)
US 17 to US 17 Access Road	B (12.1)	C (19.2)

SC 41 Southbound		
Segment Description	**AM Peak Hour** LOS (Density [veh/mi/ln]))	**PM Peak Hour** LOS (Density [veh/mi/ln]))
US 17 to US 17 Access Road	F (111.7)	F (55.3)
US 17 Access Rd to Colonnade Drive	F (96.3)	C (24.8)
Colonnade Dr to Tradewind Drive	F (98.6)	C (23.3)
Tradewind Dr to Joe Rouse Road	F (99.5)	C (23.1)
Joe Rouse Road to Bennett Charles Road/Sunchaser Lane	F (99.9)	C (24.8)
Bennett Charles Road/Sunchaser Lane to Parkers Islto Road/Canyon Lane	F (59.7)	B (17.3)
Parkers Island Road/Canyon Lane to Rivertowne Parkway/Dunes West Boulevard	D (28.6)	B (17.3)
Rivertowne Parkway/Dunes West Boulevard to Planters Point Boulevard/ Wood Park Drive	C (18.6)	E (35.8)
Planters Point Boulevard/Wood Park Drive to Harpers Ferry Way	A (11.0)	B (15.4)
Harpers Ferry Way to end of network	A (10.1)	B (15.0)

US 17 Eastbound		
Segment Description	**AM Peak Hour** LOS (Density [veh/mi/ln]))	**PM Peak Hour** LOS (Density [veh/mi/ln]))
End of network to Park West Boulevard/South Morgan's Point Road	A (10.7)	B (11.6)
Park West Boulevard/South Morgan's Point Road to Lexington Drive/Oakland Market	C (18.7)	D (26.1)
Lexington Drive/Oakland Market to Winnowing Way/Porchers Bluff	C (18.5)	C (21.3)
Winnowing Way/Porchers Bluff to SC 41/Dingle Road	C (19.2)	C (18.1)
SC 41/Dingle Road to Brickyard Parkway/Hamlin Road	C (25.5)	F (45.0)
Brickyard Parkway/Hamlin Road to Long Point Road	B (18.0)	D (26.9)
Long Point Road to Six Mile Road	C (21.7)	D (34.4)
Six Mile Road to end of network	A (10.3)	C (18.0)

US 17 Westbound		
Segment Description	**AM Peak Hour** LOS (Density [veh/mi/ln]))	**PM Peak Hour** LOS (Density [veh/mi/ln]))
End of network to Six Mile Road	B (17.8)	B (12.6)
Six Mile Road to Long Point Road	C (22.4)	B (15.0)
Long Point Road to Brickyard Parkway/Hamlin Road	D (30.1)	C (19.8)
Brickyard Parkway/Hamlin Road to SC 41/Dingle Road	D (33.6)	C (22.3)
SC 41 to SC 41/Dingle Road to Winnowing Way/Porchers Bluff	D (30.1)	F (78.9)
Winnowing Way/Porchers Bluff to Lexington Drive/Oakland Market	C (21.1)	E (35.3)
Lexington Drive/Oakland Market toPark West Boulevard/South Morgan's Point Road	C (22.6)	C (20.3)
Park West Boulevard/South Morgan's Point Road to end of network	B (17.3)	C (18.1)

1.0 INTRODUCTION

This report evaluates the existing traffic conditions along nearly 4-mile sections of US 17 and SC 41 in Mount Pleasant, South Carolina. The study area includes seven (7) intersections along US 17 from 6 Mile Road to Park West Boulevard and eleven (11) intersections along SC 41 from US 17 to Harpers Ferry Way.

This area has mostly urban residential land uses with some commercial land uses along US 17. SC 41 is a heavily traveled road in Mount Pleasant, South Carolina, connecting US 17 to residential communities and to I-526. These sections of US 17 and SC 41 have some truck traffic generated by industrial land uses north of the study area. Nucor Steel and BP Chemical are the two main industrial businesses north of this area.

The analysis presented in this report includes eighteen (18) existing intersections along US 17 and SC 41:

1) US 17 & Six Mile Road;
2) US 17 & Long Point Road;
3) US 17 & Brickyard Parkway/Hamlin Road;
4) US 17 & SC 41;
5) US 17 & Winnowing Way/Porchers Bluff;
6) US 17 & Lexington Drive/Oakland Market Drive;
7) US 17 & Park West Boulevard/South Morgan's Point Road;
8) SC 41 & Old SC 41/Gregorie Ferry Road
9) SC 41 & Colonnade Drive
10) SC 41 & Tradewind Drive
11) SC 41 & Joe Rouse Road
12) SC 41 & Bennett Charles Road
13) SC 41 & Sunchaser Lane
14) SC 41 & Parkers Island Road
15) SC 41 & Canyon Lane
16) SC 41 & Rivertowne Parkway/Dunes West Boulevard
17) SC 41 & Planters Point Boulevard/Wood Park Drive; and
18) SC 41 & Harpers Ferry Way.

1.1 OBJECTIVE

The intent of this study is to evaluate the existing and future conditions along SC 41 and US 17 and determine what improvements will be required now and in the future in order to mitigate the additional traffic demand and growth in the area. This report serves as the documentation for the development and calibration of the existing conditions model for the AM and PM peak hours.

2.0 STUDY METHODOLOGY

2.1 MODELING APPROACH

The first step in the model development was to estimate the travel demand in an origin-destination (OD) matrix format. The base year OD estimation was performed using the TFlowFuzzy module in VISUM. The TFlowFuzzy process requires three input data – a network, a seed OD trip table, and observed traffic count data. The coverage of the network and the zone structure are the same as in VISSIM.

The main sources of data used in the development of the OD matrix were the statewide travel demand model, and hourly turning movement counts. The link volumes obtained from the statewide model were used as an independent source to assess the reasonableness of the VISUM assigned volumes for the OD matrix.

The observed traffic count data includes the AM and PM turning movement count data collected at all the intersections in the network. The observed traffic count data were checked and balanced against each other for consistency.

The OD estimation process involved a series of trip assignment and OD trip table adjustments performed by the TFlowFuzzy module. After trips were assigned to the network, the assigned volumes were compared against the observed traffic count data. The estimated OD matrices were adjusted to provide simulated volumes similar to the counted volumes while maintaining an accurate level of congestion along US 17 and SC 41.

The comparisons of the observed and estimated traffic volumes are shown in **Figures 1** and **2**, in Section 2.3.

2.2 NETWORK ELEMENTS

2.2.1 Geometric Data

Geometric data such as link length, number of lanes, turning length storage, lane width, and curvature were obtained using aerial imagery provided by Bing© maps within the VISSIM 8.0 software.

Grades were not expected to have a significant impact on traffic operations in the area and were therefore left at zero throughout the model.

2.2.2 Traffic Control Data

Intersection signal timing information was obtained from the Town of Mount Pleasant and was coded into the network such that simulated timings should match the existing field timings. However, the signals along US 17 operate as part of an adaptive signal system; therefore, the timings in use on the day(s) data collection was performed may not perfectly match the timings entered into VISSIM. Signal design plans were either obtained using SCDOT's TEAMS or provided by the Town of Mount Pleasant.

2.2.3 Demand Data

Turning movement counts were collected from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM on Tuesday, September 19, 2018. School was in session when all counts were taken, so as to capture a typical peak weekday. Turning movement counts were performed in 15-minute increments and were classified by vehicle type.

2.3 CALIBRATION

Parking lots and nodes were added to the network and the estimated demand OD tables (for cars and trucks) were assigned. As a starting point, paths were checked for abnormalities. Unreasonable and illogical paths were closed off in the model. This section discusses the calibration approach and the efforts involved in the calibration process.

2.3.1 Volumes

Data collection points were placed at various locations throughout the network to compare the simulated volumes to the turning movement provided. A summary of this comparison for the AM and PM peak hours is shown in **Figures 1** and **2**, respectively. Note that the value of R^2, which measures the goodness of fit between the observed and the estimated values are displayed in the exhibits. A high R^2 value suggests the estimated values are very close to the estimates. A value of one (1) indicates a perfect match.

Figure 1 – Existing (2018) AM Peak Hour Volume Comparison

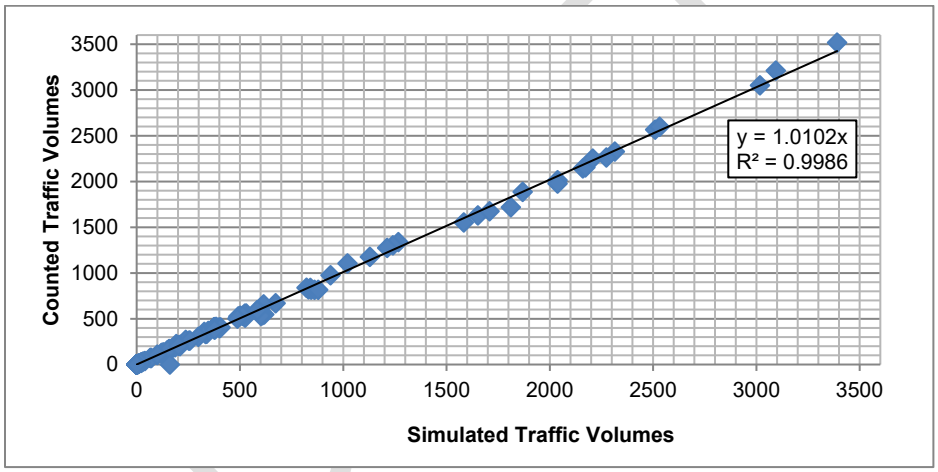
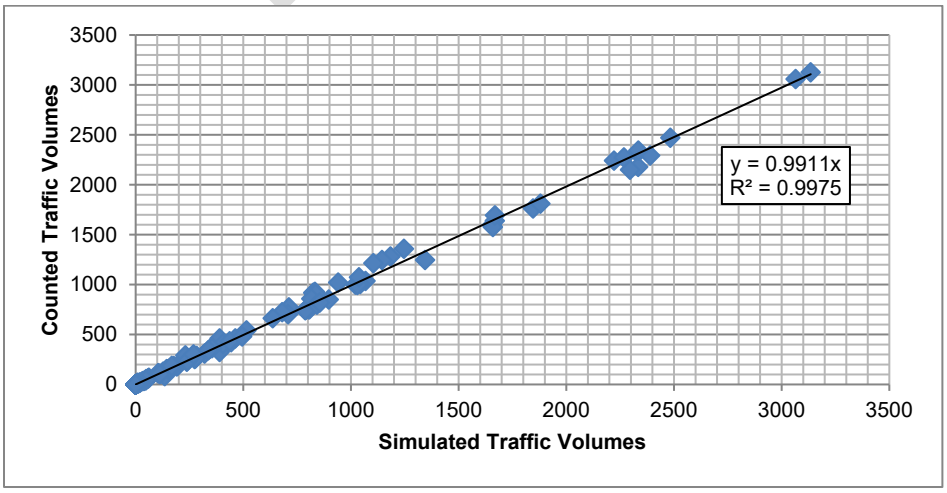


Figure 2 – Existing (2018) PM Peak Hour Volume Comparison



In addition to the above comparison, the guidelines set in the Federal Highway Administration's (FHWA's) "*Traffic Analysis Toolbox Volume II: Guidelines for Applying Traffic Microsimulation Modeling Software"*, dated July 2004, were used as a general guide for what targets and criteria to establish. The following data-driven criteria from the toolbox were established for this model.

Hourly flows, model versus observed:

- Individual link flows within 15% for Flow ≤700 vehicles per hour (vph), for ≥85% of cases
- Individual link flows within 100 vph for 700 vph < Flow ≤ 2700 vph, for ≥85% of cases
- Individual link flows within 400 vph for Flow > 2700 vph, for ≥85% of cases
- Sum of all link flows within 5% of sum of all link counts
- GEH Statistic <5 for individual link flows, ≥85% of cases
- GEH Statistic for sum of all link flows: <4 for sum of all link counts
- % Root mean squared error (%RMSE) < 15%

Two of the criteria use the GEH statistic, an empirical formula developed in the 1970's. The GEH statistic is calculated using the following formula, where M is the hourly traffic volume from the model and C is the real-world hourly traffic count:

$$GEH = \sqrt{\frac{2(M-C)^2}{M+C}}$$

The GEH statistic is intended to help normalize acceptable variation between count and model volumes for various sized roadways. However, when the criteria is a threshold that 85% of all individual links must meet a specific GEH value (in this case GEH < 5), it weighs the value of all roads equally. Matching count volumes of a very low-volume road is as relevant as matching count volumes of a high-volume interstate. Further, the aggregate GEH criteria is erratic in that a negative variation between count and model flow on one link can be offset and negated by an equally positive variation on another link. Therefore, an alternative statistic, Root-Mean-Square Error (RMSE), which weighs the value of matching counts by the volume of the roadway and aggregates the absolute variation of each link, is considered to be a better target.

Tables 1 through 4 outline the results of these comparisons for the existing base year model.

Table 1 – GEH Statistics

	Network-Wide	FHWA Target
Existing AM	2.8	<4
Existing PM	0.7	<4

Table 2 – Hourly Flow Comparisons – AM Peak Hour

Calibration Target			Calibration Results		
Observed Link Flows	**Within**	**Target % of Cases**	**# of Cases Meeting Target**	**Total # of Cases**	**% of Cases Meeting Target**
< 700 vph	100 vph	85%	64	73	88%
700 vph – 2700 vph	15%	85%	26	26	100%
> 2700 vph	400 vph	85%	3	3	100%

Table 3 – Hourly Flow Comparisons – PM Peak Hour

Calibration Target			Calibration Results		
Observed Link Flows	**Within**	**Target % of Cases**	**# of Cases Meeting Target**	**Total # of Cases**	**% of Cases Meeting Target**
< 700 vph	100 vph	85%	47	55	85%
700 vph – 2700 vph	15%	85%	38	43	88%
> 2700 vph	400 vph	85%	2	2	100%

Table 4 – Travel Time Comparisons

Travel Times	Calibration Target		Calibration Results		
	Within	**Target % of Cases**	**# of Cases Meeting Target**	**Total # of Cases**	**% of Cases Meeting Target**
Existing AM	15%	85%	4	4	100%
Existing PM	15%	85%	4	4	100%

2.3.2 Travel Times

Travel time data was collected using field-measured data. AM travel time runs were collected from 6:30 AM to 9:30 AM and PM travel time runs were collected from 3:30 PM to 6:30 PM. Peak hour travel times for SC 41 northbound and southbound were measured on Thursday, March 14, 2019. Peak hour travel times for US 17 eastbound and westbound were measured on Tuesday, March 18, 2019.

Figures 3 and 4, on the following pages, show the comparison of field-measured travel times and the simulated travel times in VISSIM for the AM and PM peak hours, respectively.

Figure 3 – Existing (2018) AM Peak Hour Travel Time Comparison

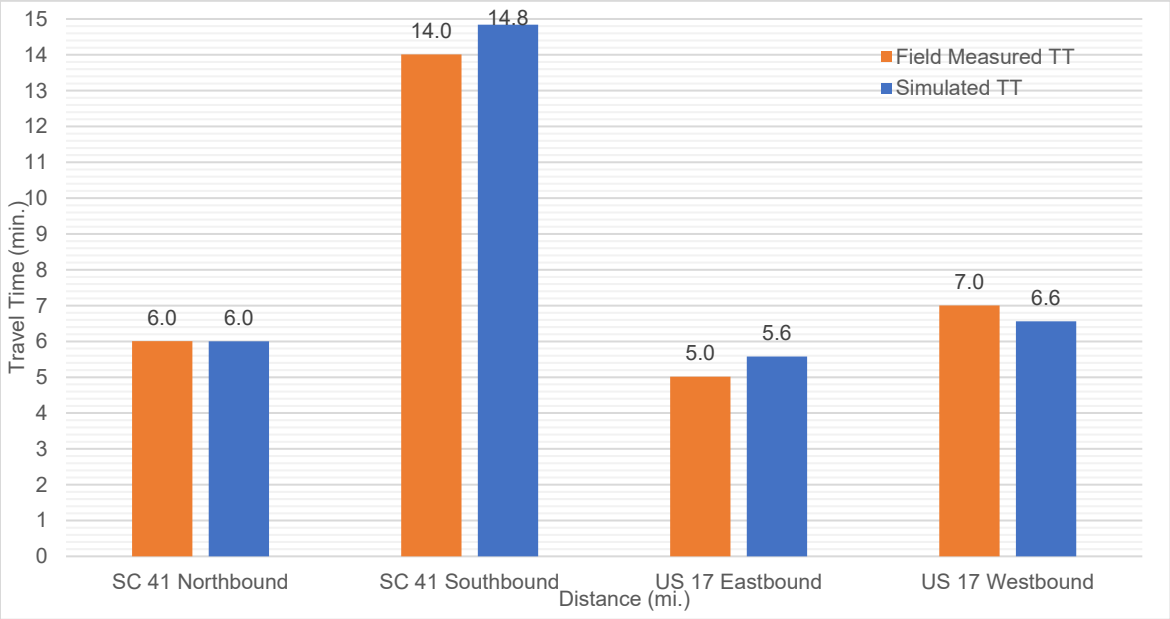
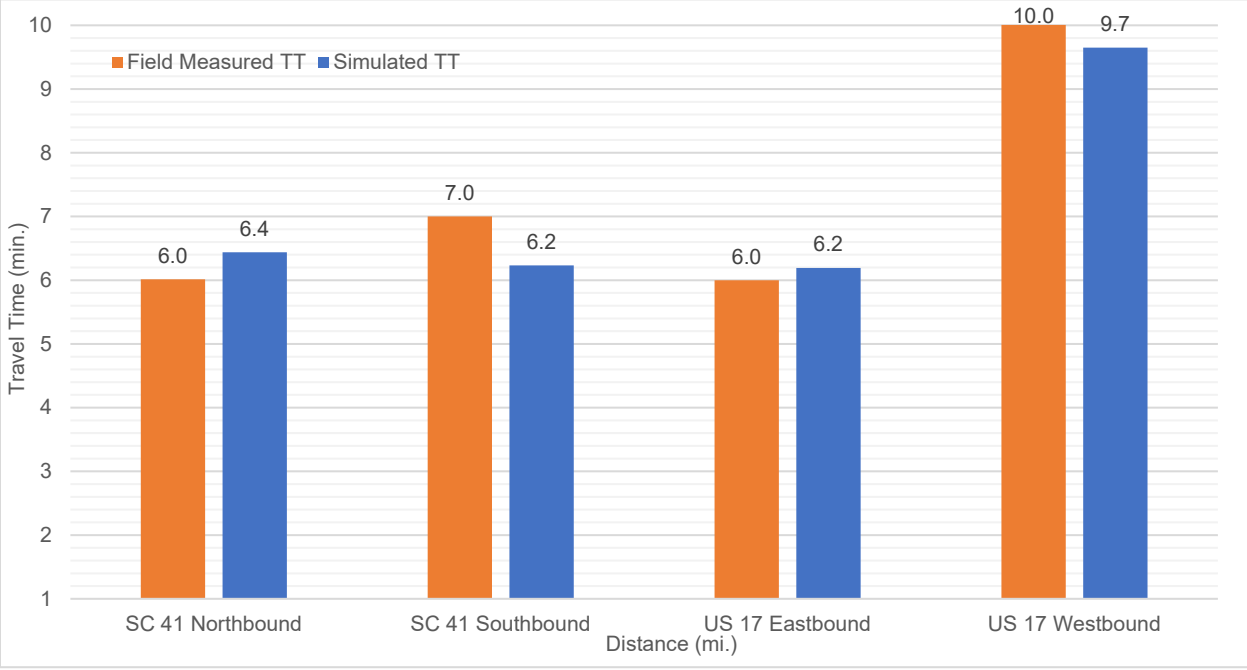


Figure 4 – Existing (2018) PM Peak Hour Travel Time Comparison



2.3.3 Model and Network Parameter Adjustments

2.3.3.1 Driver Behaviors

Each link within the network was assigned a driver behavior type that most nearly replicated the observed vehicle patterns. The majority of the network was coded with a typical urban, arterial behavior.

One new driver behavior was created to model traffic along US 17: “Urban Merge US 17 WB”. This driver behavior was coded along US 17 westbound to accurately model the impact of merging SC 41 traffic. Use of this custom driver behavior was necessary in order to more closely match target volumes and reflect observed traffic operations.

2.3.3.2 Desired Speed Distributions

The speed limit on US 17 through the study area is 45 miles per hour (mph), but field observations and measured travel times suggest higher speeds in the AM and PM peak hour in the eastbound direction. Both peak hours use an adjusted desired speed distribution of 45 mph in order to decrease the average simulated travel time and increase speed. In the eastbound direction, the desired speed distribution was adjusted by changing the upper bound of the 45 mph speed distribution from 55 mph to 60 mph.

2.3.3.3 Lane Change Distances

The lane change distance parameter defines how far in advance of a diverge point a vehicle sees that they need to change lanes. The default distance is 656.2 feet. Typically for an arterial, especially a congested one, this is too short because vehicles turning onto a side street need to start making lane changes further back in order to simulate smooth diverging. The lane change distances along US 17 were increased to be at least 1,500 ft per lane. This means that if a vehicle needs to make one lane change to exit, they would start attempting to change lanes 1,500 ft in advance; if they needed to make two lane changes, they would start attempting to change lanes 3,000 ft in advance, etc.

Lane change distances for arterial intersections were adjusted on a case-by-case basis. Sometimes the default distance was adequate, but in some cases, it needed to be increased or decreased in order to replicate field conditions.

2.4 MEASURES OF EFFECTIVENESS

As a part of this project, several Measures of Effectiveness (MOE's) were identified and evaluated. The final MOE's selected for evaluation are listed in **Table 5** below:

Table 5 – Measures of Effectiveness

Multilane Highway MOE's	Intersection MOE's	Network-Wide MOE's
• Average Segment Travel Time	• Intersection Delay	• Average Delay
• Density / LOS	• Level of Service (LOS)	• Average Travel Speed

3.0 BASE YEAR (2018) TRAFFIC CONDITIONS

The following sections include the VISSIM simulation results for the existing (2018) AM and PM peak hours. Any results not directly generated by VISSIM were calculated using conventional Highway Capacity Manual[1] (HCM) methodology.

3.1 AM PEAK HOUR

3.1.1 Network Performance

Table 6 shows a summary of the network-wide MOE's for the base year (2018) conditions. These are to be used primarily as a comparison tool for future scenarios.

Table 6 – Existing (2018) AM Peak Hour Network Performance Summary

Average Speed (mph)	27.7
Average Delay Time per Vehicle (sec)	138.1

3.1.2 Multilane Highway Operations

This section summarizes the operations along the SC 41 and US 17 mainlines using density, LOS, and travel times.

Tables 7 through 10, on the following pages, show the existing (2018) mainline density, LOS, and average speed for SC 41 and US 17, respectively, during the AM peak hour.

Table 7 – Existing (2018) SC 41 Northbound AM Peak Hour Multilane Highway Density

Segment Description	Density [veh/mi/ln]	LOS	Avg. Speed
End of network to Harpers Ferry Way	10.6	A	54.8
Harpers Ferry Way to Planters Point Boulevard/Wood Park Drive	8.8	A	51.4
Planters Point Boulevard/ Wood Park Drive to Rivertowne Parkway/Dunes West Boulevard	9.9	A	46.0
Rivertowne Parkway/Dunes West Boulevard to Parkers Island Road/Canyon Lane	11.9	B	36.1
Parkers Island Road/Canyon Lane to Bennett Charles Road/Sunchaser Lane	8.3	A	46.1
Bennett Charles Road/Sunchaser Lane to Joe Rouse Road	8.4	A	45.8
Joe Rouse Road to Tradewind Drive	13.5	B	38.9
Tradewind Dr to Colonnade Drive	10.9	A	41.6
US 17 Access Rd to Colonnade Drive	11.4	B	37.3
US 17 to US 17 Access Road	12.1	B	26.8

Table 8 – Existing (2018) SC 41 Southbound AM Peak Hour Multilane Highway Density

Segment Description	Density [veh/mi/ln]	LOS	Avg. Speed
US 17 to US 17 Access Road	111.7	F	4.8
US 17 Access Rd to Colonnade Drive	96.3	F	12.3
Colonnade Dr to Tradewind Drive	98.6	F	12.6
Tradewind Dr to Joe Rouse Road	99.5	F	11.9
Joe Rouse Road to Bennett Charles Road/Sunchaser Lane	99.9	F	14.1
Bennett Charles Road/Sunchaser Lane to Parkers Islto Road/Canyon Lane	59.7	F	28.0
Parkers Island Road/Canyon Lane to Rivertowne Parkway/Dunes West Boulevard	28.6	D	40.2
Rivertowne Parkway/Dunes West Boulevard to Planters Point Boulevard/ Wood Park Drive	18.6	C	42.0
Planters Point Boulevard/Wood Park Drive to Harpers Ferry Way	11.0	A	51.1
Harpers Ferry Way to end of network	10.1	A	52.9

Table 9 – Existing (2018) US 17 Eastbound AM Peak Hour Multilane Highway Density

Segment Description	Density [veh/mi/ln]	LOS	Avg. Speed
End of network to Park West Boulevard/South Morgan's Point Road	10.7	A	55.7
Park West Boulevard/South Morgan's Point Road to Lexington Drive/Oakland Market	18.7	C	45.1
Lexington Drive/Oakland Market to Winnowing Way/Porchers Bluff	18.5	C	38.6
Winnowing Way/Porchers Bluff to SC 41/Dingle Road	19.2	C	39.3
SC 41/Dingle Road to Brickyard Parkway/Hamlin Road	25.5	C	38.7
Brickyard Parkway/Hamlin Road to Long Point Road	18.0	B	46.9
Long Point Road to Six Mile Road	21.7	C	35.7
Six Mile Road to end of network	10.3	A	51.7

Table 10 – Existing (2018) US 17 Westbound AM Peak Hour Multilane Highway Density

Segment Description	Density [veh/mi/ln]	LOS	Avg. Speed
End of network to Six Mile Road	17.8	B	46.8
Six Mile Road to Long Point Road	22.4	C	37.5
Long Point Road to Brickyard Parkway/Hamlin Road	30.1	D	40.5
Brickyard Parkway/Hamlin Road to SC 41/Dingle Road	33.6	D	30.6
SC 41 to SC 41/Dingle Road to Winnowing Way/Porchers Bluff	30.1	D	30.4
Winnowing Way/Porchers Bluff to Lexington Drive/Oakland Market	21.1	C	35.7
Lexington Drive/Oakland Market toPark West Boulevard/South Morgan's Point Road	22.6	C	39.3
Park West Boulevard/South Morgan's Point Road to end of network	17.3	B	41.0

The figures in the Appendix show graphically the density per-lane in 250 ft. segments along the entire corridor for SC 41 and US 17.

Table 11 shows the travel times from beginning to end of the SC 41 and US 17 corridors, during the AM peak hour. Graphical representations of these results, along with the measured field data were shown in Section 2.3 of this report.

Table 11 – Existing (2018) SC 41 and US 17 AM Peak Hour Travel Times

Segment Description	Travel Time (min)
SC 41 Northbound	6.0
SC 41 Southbound	14.8
US 17 Eastbound	5.6
US 17 Westbound	6.6

3.1.3 Intersection Operations

While corridor operations are one focus of this study, validation of the individual intersection operations is another focus. **Table 12**, on the following page, summarizes the intersection operations throughout the study area.

Table 12 – Existing (2018) AM Peak Hour Intersection Delay and LOS

Intersection	Control	Avg. Delay (sec)	LOS
US 17 & Six Mile Road	Sig	4.8	A
6 Mile Road & Sweetgrass Basket Parkway	Unsig	9.7	A
US 17 & Long Point Road	Sig	17.1	B
US 17 & Hamlin Road/Brickyard Parkway	Sig	15.3	B
US 17 & SC 41	Sig	30.1	C
US 17 & Porchers Bluff Road	Sig	11.5	B
Hamlin Road & Billy Swails Boulevard	Unsig	8.3	A
Porchers Bluff Road & Billy Swails Boulevard	Unsig	8.0	A
US 17 & Lexington Drive	Sig	13.3	B
US 17 & Park West Boulevard/South Morgan's Point Road	Sig	27.3	C
SC 41 & SC 41 Access Road	Unsig	63.8	F
SC 41 & Colonnade Drive	Unsig	147.3	F
SC 41 & Tradewind Drive	Unsig	29.0	D
SC 41 & Joe Rouse Road	Sig	55.2	E
SC 41 & Bennett Charles Road	Unsig	157.3	F
SC 41 & Sunchaser Lane	Unsig	18.1	C
SC 41 & Parkers Island Road	Unsig	11.6	B
SC 41 & Canyon Lane	Unsig	8.2	A
SC 41 & Dunes West Boulevard	Sig	21.1	C
SC 41 & Planters Point Boulevard/Wood Park Drive	Unsig	11.2	B
SC 41 & Harpers Ferry Way	Unsig	9.8	A

Legend: Unsig = Unsignalized Intersection, Sig = Signalized Intersection
Note: LOS/Delay is shown for the worst-case minor-street approach of the two-way stop-controlled intersections

3.1.4 AM Peak Hour Operations Summary

As the sections above show, the mainline operations during the AM peak hour are mostly free flow along SC 41 and US 17. However, travel times and densities in the southbound direction of SC 41 and westbound direction on US 17 are much higher with significant congestion building throughout the peak period. Field conditions reflect this condition as well. Congestion on SC 41 southbound extends from the US 17 intersection to Rivertowne Parkway/Dunes West Boulevard. This is mainly due to commuter traffic traveling into Charleston. On US 17 westbound, congestion occurs between Long Point Road and Hamlin Road and between Hamlin Road and SC 41/Dingle Road.

All intersections within the study area currently operate at LOS D or better, except for the intersections of SC 41 & SC 41 Access Road, SC 41 & Colonnade Drive, SC 41 & Joe Rouse Road, and SC 41 & Bennett Charles Road.

3.2 PM PEAK HOUR

3.2.1 Network Performance

Table 13 shows a summary of the network-wide MOE's for the base year (2018) conditions. These are to be used primarily as a comparison tool for future scenarios.

Table 13 – Existing (2018) PM Peak Hour Network Performance Summary

Average Speed (mph)	28.5
Average Delay Time per Vehicle (sec)	132.1

3.2.2 Multilane Highway Operations

This section summarizes the operations along the SC 41 and US 17 mainlines using density, and travel times.

Tables 14 through 17, on the following pages, show the existing (2018) mainline density, LOS, and average speed for SC 41 and US 17, respectively, during the PM peak hour.

Table 14 – Existing (2018) SC 41 Northbound PM Peak Hour Multilane Highway Density

Segment Description	Density [veh/mi/ln]	LOS	Avg. Speed
End of network to Harpers Ferry Way	10.6	A	55.4
Harpers Ferry Way to Planters Point Boulevard/Wood Park Drive	11.4	B	51.5
Planters Point Boulevard/ Wood Park Drive to Rivertowne Parkway/Dunes West Boulevard	14.8	B	47.9
Rivertowne Parkway/Dunes West Boulevard to Parkers Island Road/Canyon Lane	26.3	D	33.6
Parkers Island Road/Canyon Lane to Bennett Charles Road/Sunchaser Lane	17.6	B	45.7
Bennett Charles Road/Sunchaser Lane to Joe Rouse Road	18.0	B	45.0
Joe Rouse Road to Tradewind Drive	35.9	E	34.1
Tradewind Dr to Colonnade Drive	24.9	C	39.9
US 17 Access Rd to Colonnade Drive	26.7	D	34.2
US 17 to US 17 Access Road	19.2	C	29.6

Table 15 – Existing (2018) SC 41 Southbound PM Peak Hour Multilane Highway Density

Segment Description	Density [veh/mi/ln]	LOS	Avg. Speed
US 17 to US 17 Access Road	55.3	F	13.6
US 17 Access Rd to Colonnade Drive	24.8	C	38.7
Colonnade Dr to Tradewind Drive	23.3	C	45.9
Tradewind Dr to Joe Rouse Road	23.1	C	43.8
Joe Rouse Road to Bennett Charles Road/Sunchaser Lane	24.8	C	34.3
Bennett Charles Road/Sunchaser Lane to Parkers Island Road/Canyon Lane	17.3	B	46.6
Parkers Island Road/Canyon Lane to Rivertowne Parkway/Dunes West Boulevard	17.3	B	46.2
Rivertowne Parkway/Dunes West Boulevard to Planters Point Boulevard/ Wood Park Drive	35.8	E	36.3
Planters Point Boulevard/Wood Park Drive to Harpers Ferry Way	15.4	B	53.7
Harpers Ferry Way to end of network	15.0	B	52.3

Table 16 – Existing (2018) US 17 Eastbound PM Peak Hour Multilane Highway Density

Segment Description	Density [veh/mi/ln]	LOS
End of network to Park West Boulevard/South Morgan's Point Road	11.6	B
Park West Boulevard/South Morgan's Point Road to Lexington Drive/Oakland Market	26.1	D
Lexington Drive/Oakland Market to Winnowing Way/Porchers Bluff	21.3	C
Winnowing Way/Porchers Bluff to SC 41/Dingle Road	18.1	C
SC 41/Dingle Road to Brickyard Parkway/Hamlin Road	45.0	F
Brickyard Parkway/Hamlin Road to Long Point Road	26.9	D
Long Point Road to Six Mile Road	34.4	D
Six Mile Road to end of network	18.0	C

Table 17 – Existing (2018) US 17 Westbound PM Peak Hour Multilane Highway Density

Segment Description	Density [veh/mi/ln]	LOS
End of network to Six Mile Road	12.6	B
Six Mile Road to Long Point Road	15.0	B
Long Point Road to Brickyard Parkway/Hamlin Road	19.8	C
Brickyard Parkway/Hamlin Road to SC 41/Dingle Road	22.3	C
SC 41 to SC 41/Dingle Road to Winnowing Way/Porchers Bluff	78.9	F
Winnowing Way/Porchers Bluff to Lexington Drive/Oakland Market	35.3	E
Lexington Drive/Oakland Market toPark West Boulevard/South Morgan's Point Road	20.3	C
Park West Boulevard/South Morgan's Point Road to end of network	18.1	C

The figures in the Appendix show graphically the density per-lane in 250 ft. segments along the entire corridor for SC 41 and US 17.

Table 18 shows the travel times from beginning to end of the SC 41 and US 17 corridors, during the PM peak hour. Graphical representations of these results, along with the measured field data were shown in Section 2.3 of this report.

Table 18 – Existing (2018) SC 41 and US 17 PM Peak Hour Travel Times

Segment Description	Travel Time (min)
SC 41 Northbound	6.4
SC 41 Southbound	6.2
US 17 Eastbound	3.2
US 17 Westbound	9.7

3.2.3 Intersection Operations

Table 19 summarizes the intersection operations throughout the study area.

Table 19 – Existing (2018) PM Peak Hour Intersection Delay and LOS

Intersection	Control	Avg. Delay (sec)	LOS
US 17 & Six Mile Road	Sig	6.4	A
6 Mile Road & Sweetgrass Basket Parkway	Unsig	11.2	B
US 17 & Long Point Road	Sig	21.2	C
US 17 & Hamlin Road/Brickyard Parkway	Sig	16.5	B
US 17 & SC 41	Sig	50.9	D
US 17 & Porchers Bluff Road	Sig	17.2	B
Hamlin Road & Billy Swails Boulevard	Unsig	7.5	A
Porchers Bluff Road & Billy Swails Boulevard	Unsig	6.6	A
US 17 & Lexington Drive	Sig	18.2	B
US 17 & Park West Boulevard/South Morgan's Point Road	Sig	45.8	D
SC 41 & SC 41 Access Road	Unsig	34.2	D
SC 41 & Colonnade Drive	Unsig	30.5	D
SC 41 & Tradewind Drive	Unsig	12.5	B
SC 41 & Joe Rouse Road	Sig	18.0	A
SC 41 & Bennett Charles Road	Unsig	11.8	B
SC 41 & Sunchaser Lane	Unsig	6.8	A
SC 41 & Parkers Island Road	Unsig	8.2	A
SC 41 & Canyon Lane	Unsig	16.5	C
SC 41 & Dunes West Boulevard	Sig	27.0	C
SC 41 & Planters Point Boulevard/Wood Park Drive	Unsig	10.4	B
SC 41 & Harpers Ferry Way	Unsig	11.1	B

Legend: Unsig = Unsignalized Intersection, Sig = Signalized Intersection
Note: LOS/Delay is shown for the worst-case minor-street approach of the two-way stop-controlled intersections

3.2.4 PM Peak Hour Operations Summary

As the sections above show, the mainline operations during the PM peak hour are mostly free-flow along SC 41. However, travel times and densities in the eastbound and westbound directions on US 17 are much higher with significant congestion building throughout the peak period. Field conditions also reflect this condition as well. Congestion on US 17 eastbound extends from the SC 41/Dingle Road intersection back to the intersection of Long Point Road. Congestion on US 17 westbound extends from SC 41/Dingle Road to Lexington Drive/Oakland Market.

All intersections within the study area currently operate at LOS D or better.

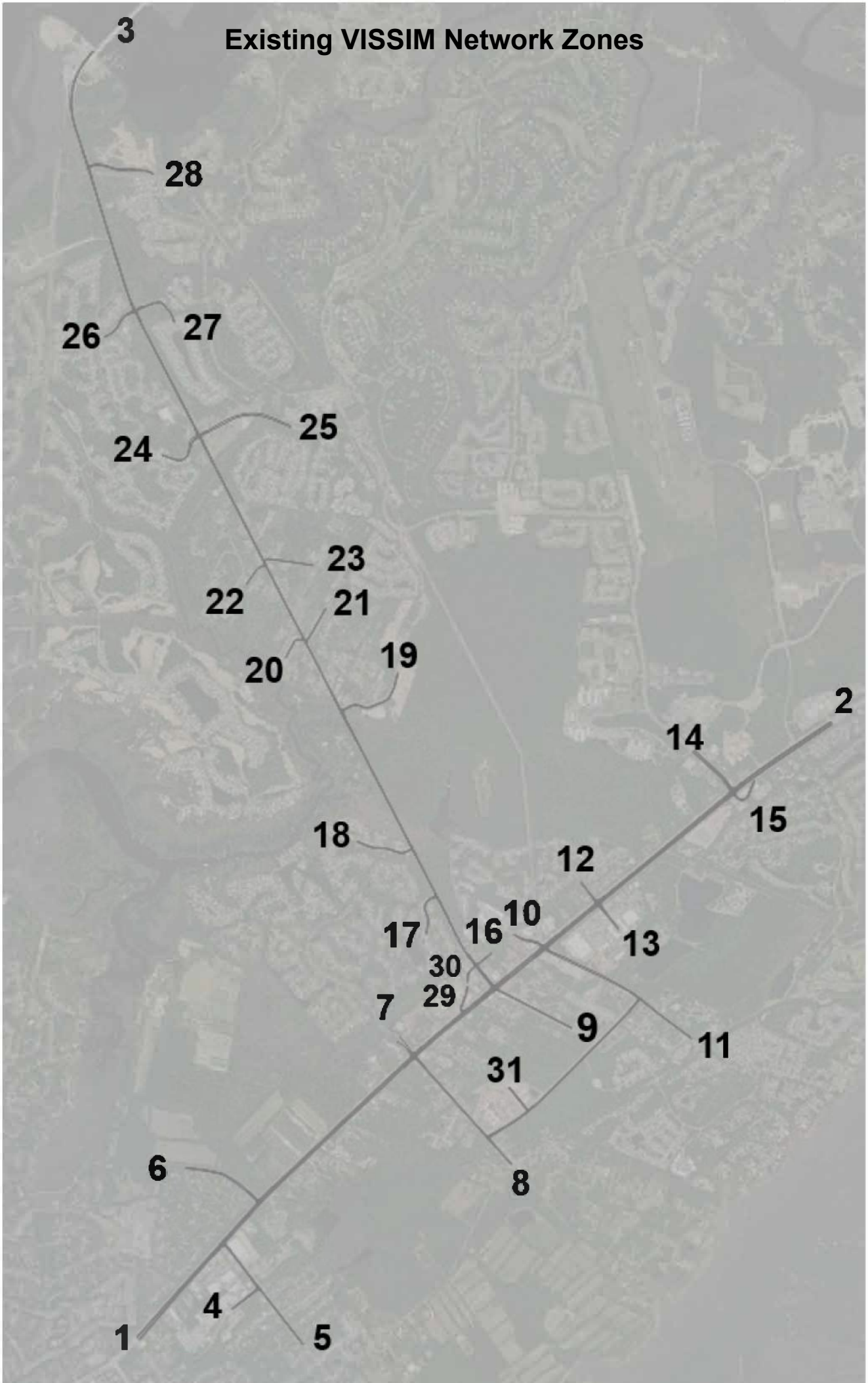
4.0 CONCLUSION

Both SC 41 and US 17 are heavily traveled corridors in the rapidly-growing Mount Pleasant area. Based on field observations, traffic conditions in this area are generally free-flow with heavy congestion in specific locations in the morning and afternoon peak hours. The results presented in this report indicate that the model is sufficiently calibrated to existing field conditions. This VISSIM model will be used as the foundation for future year models developed for this project.

5.0 REFERENCES

1 HCM 2010: Highway Capacity Manual. Washington, D.C. :Transportation Research Board, 2010. Print.

APPENDIX


Existing VISSIM Network Zones
3
28
26
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29
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6
8
4
1
5

Existing AM Peak Hour
Auto and Truck Origin-Destination Matrices

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
1	17	723	86	23	31	47	25	73	9	15	43	15	51	129	20	11	8	6	71	0	1	3	0	27	21	10	3	7	2	1	7	1485
2	734	0	3	11	16	344	10	0	7	30	95	8	110	124	48	3	2	2	2	1	3	0	0	1	1	0	0	0	0	11	58	1624
3	179	9	0	2	2	53	2	6	1	2	5	2	6	15	2	5	0	0	9	0	0	0	0	8	92	5	58	59	0	20	3	545
4	16	15	2	0	48	2	1	2	0	0	1	0	1	3	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	1	3	98
5	45	41	5	185	0	6	2	5	1	1	3	1	3	8	1	1	1	0	5	0	0	0	0	2	1	1	0	0	0	3	8	329
6	87	294	37	3	4	0	8	26	3	5	16	6	19	54	8	4	3	2	28	0	0	1	0	11	9	4	1	3	1	14	3	654
7	138	45	6	3	4	54	0	18	2	2	5	2	7	9	2	2	1	0	7	0	0	0	0	2	2	1	0	0	0	7	16	335
8	75	47	6	1	1	18	7	0	1	2	0	2	6	9	2	2	1	0	7	0	0	0	0	2	2	1	0	1	0	5	0	198
9	20	14	1	0	0	8	1	2	0	1	2	1	3	3	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0	62
10	63	21	2	1	1	24	2	0	2	0	27	2	7	5	1	1	1	0	3	0	0	0	0	1	1	0	0	0	0	3	0	168
11	15	131	9	1	1	23	7	22	5	16	0	6	21	21	4	3	2	1	11	0	0	0	0	3	3	1	0	1	0	9	43	359
12	51	30	2	1	1	20	1	0	1	10	16	0	10	7	2	1	0	0	2	0	0	0	0	1	1	0	0	0	0	2	0	159
13	62	125	2	1	1	25	2	0	1	11	19	9	0	28	8	1	0	0	3	0	0	0	0	1	1	0	0	0	0	2	0	302
14	326	101	13	5	7	143	5	0	3	15	44	4	55	0	97	2	1	0	1	0	0	0	0	0	0	2	0	1	0	5	0	830
15	53	51	2	1	1	22	1	0	1	4	9	1	15	90	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	1	0	255
16	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	1	0	0	0	0	0	2	0	7
17	10	6	1	0	0	4	0	1	0	0	1	0	1	1	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	8	0	36
18	9	6	1	0	0	4	0	1	0	0	1	0	1	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	5	0	31
19	233	12	28	3	5	88	4	13	3	4	11	4	13	2	4	14	1	1	0	0	1	1	0	12	1	4	1	2	0	62	0	527
20	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
21	12	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	19
22	4	2	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	130	9	62	2	3	56	2	7	1	2	6	2	7	2	3	6	0	0	13	0	0	1	0	0	215	11	0	6	0	26	0	572
25	66	5	126	1	1	29	1	3	1	1	3	1	3	1	0	3	0	0	1	0	0	0	0	77	0	23	0	12	0	13	0	371
26	25	2	25	0	1	11	0	1	0	0	1	0	1	3	0	1	0	0	2	0	0	0	0	2	25	0	73	3	0	4	0	180
27	1	0	13	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	18
28	20	2	125	0	0	9	0	1	0	0	1	0	1	3	0	1	0	0	1	0	0	0	0	1	13	1	8	0	0	3	0	190
29	87	4	0	2	2	32	7	11	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	12	159
30	0	12	1	0	0	4	1	1	0	0	1	0	1	1	0	1	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	26
31	76	5	6	6	7	9	30	201	7	6	50	3	9	13	2	1	1	0	6	0	0	0	0	2	2	1	0	1	0	4	0	448
Total	2556	1714	567	252	137	1041	119	394	49	127	360	69	351	534	205	67	23	12	186	1	5	6	0	157	390	67	144	97	3	215	153	10001

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
1	1	53	6	2	2	3	2	5	1	1	3	1	4	9	1	1	1	0	5	0	0	0	0	2	2	1	0	1	0	0	0	107
2	34	0	0	1	1	16	0	0	0	1	4	0	5	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	71
3	20	1	0	0	0	6	0	1	0	0	1	0	1	2	0	1	0	0	1	0	0	0	0	1	10	1	6	6	0	2	0	60
4	5	4	1	0	14	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	28
5	1	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
6	2	8	1	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	15
7	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8	5	3	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11	1	9	1	0	0	2	0	1	0	1	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	3	22
12	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	3	1	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
15	1	1	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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25	2	0	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	9
26	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	0	0	0	6
27	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
28	1	0	9	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	13
29	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	88	82	24	6	17	37	2	11	1	3	8	1	13	23	4	2	1	0	8	0	0	0	0	5	18	3	10	7	0	6	4	384

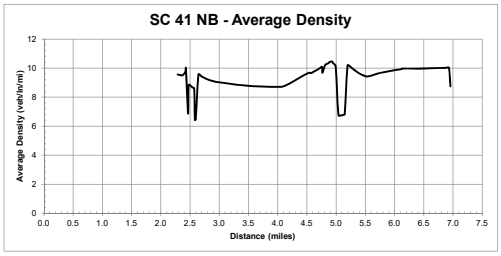
Existing PM Peak Hour
Auto and Truck Origin-Destination Matrices

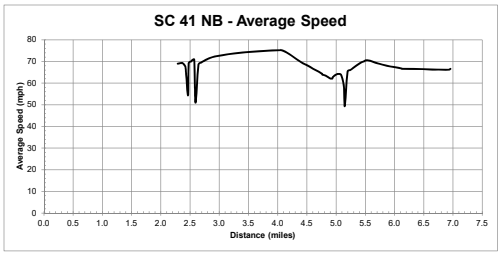
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
1	20	687	113	22	137	108	112	78	47	30	60	42	63	276	37	13	21	25	173	0	9	6	0	98	57	38	2	27	5	3	4	2313
2	560	0	6	5	29	200	16	0	8	23	49	16	117	163	40	3	3	3	5	0	0	1	0	3	2	1	0	1	2	15	0	1271
3	179	42	0	1	8	58	5	11	4	3	7	5	7	33	4	6	1	2	20	1	1	0	0	70	261	34	12	83	0	14	0	872
4	38	48	12	0	215	14	6	5	4	2	5	3	5	19	3	1	1	1	13	0	0	0	0	7	4	3	0	2	0	5	3	419
5	33	42	11	70	0	13	5	4	3	2	4	3	4	17	2	1	1	1	11	0	0	0	0	6	3	2	0	2	0	5	3	248
6	97	251	70	2	11	0	22	18	15	10	20	14	21	100	13	4	5	5	60	0	2	2	0	35	20	14	1	10	1	22	2	847
7	80	34	23	1	5	27	0	36	5	3	5	3	5	14	2	1	1	1	11	0	0	0	0	5	3	2	0	1	0	7	10	285
8	61	51	13	1	4	22	36	0	6	3	19	4	7	21	3	2	2	1	15	0	0	0	0	8	4	3	0	2	0	8	12	308
9	20	23	5	0	1	7	1	2	0	2	4	3	4	10	2	1	1	1	6	0	0	0	0	3	2	1	0	1	0	5	0	105
10	27	25	2	0	2	10	2	0	1	0	29	4	6	11	2	0	0	0	3	0	0	0	0	1	1	0	0	0	0	2	0	128
11	15	131	23	0	1	5	16	6	8	39	0	15	24	56	9	3	3	3	29	0	1	1	0	14	8	5	0	4	1	16	24	460
12	29	21	2	0	2	11	2	0	1	4	5	0	17	9	2	0	0	0	3	0	0	0	0	1	1	0	0	0	0	2	0	112
13	66	129	5	1	4	24	3	0	2	8	12	14	0	58	12	1	1	1	6	0	0	0	0	3	2	1	0	1	0	3	0	357
14	211	157	17	2	12	82	7	0	4	11	22	7	54	0	94	1	1	1	2	0	0	1	0	1	1	4	0	3	1	6	0	702
15	32	25	2	0	2	12	1	0	1	2	4	2	11	198	0	0	0	0	3	0	0	0	0	1	0	1	0	0	0	1	0	298
16	2	1	6	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	9	0	0	0	0	4	2	1	0	1	0	1	0	30
17	11	5	1	0	1	4	1	1	1	0	1	1	1	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3	0	35
18	13	3	0	0	0	2	0	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	22
19	129	9	34	1	8	48	6	11	5	4	7	5	8	3	4	8	1	3	0	0	2	2	0	24	2	8	1	6	0	17	0	356
20	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
21	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3
22	3	1	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	1	1	0	0	0	0	0	0	11
23	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
24	81	6	39	1	5	31	3	6	2	2	4	3	4	2	2	4	0	1	14	0	1	0	0	0	100	11	0	7	0	8	0	337
25	57	4	166	1	3	22	2	4	2	1	3	2	3	2	0	3	0	1	1	0	0	0	0	118	0	46	0	29	0	6	0	476
26	19	1	9	0	1	7	1	1	1	0	1	1	1	4	1	1	0	0	3	0	0	0	0	11	41	0	1	2	0	2	0	109
27	1	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	9
28	13	1	41	0	1	5	0	1	0	0	1	0	1	3	0	1	0	0	2	0	0	0	0	5	21	2	1	0	0	1	0	100
29	25	2	1	0	2	9	3	4	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	50
30	1	9	8	0	1	6	1	2	1	1	1	1	2	4	1	1	2	1	12	0	0	0	0	5	3	2	0	1	0	0	0	66
31	4	0	0	0	2	1	16	26	3	1	25	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	80
Total	1832	1708	617	108	457	732	267	217	124	151	288	148	365	1009	233	56	45	52	406	1	16	13	1	425	539	180	18	184	10	153	60	10415

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
1	0	8	1	0	2	1	2	1	1	0	1	1	1	3	0	0	0	0	2	0	0	0	0	1	1	0	0	0	0	0	0	26
2	13	0	0	0	1	5	0	0	0	1	1	0	3	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29
3	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	1	0	0	0	8
4	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
6	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7	2	1	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
14	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	3	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
25	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
29	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	24	15	4	2	5	9	2	3	1	1	2	1	4	8	1	0	0	0	2	0	0	0	0	3	5	0	0	1	0	0	0	93

SC 41 Northbound AM Peak Hour

Density	Speed	
8.3	56.5	
10.4	56.4	
10.4	56.4	
10.4	56.4	
10.4	56.4	
10.4	56.4	
10.4	56.4	
10.4	56.3	
10.5	56.0	
10.6	55.1	
11.2	52.2	
13.5	43.3	End of network to Harpers Ferry Way
9.1 2.3	49.7 14.5	
9.2 0.8	51.2 28.3	
9.1	53.8	
8.8	55.6	
8.7	56.5	
8.7	56.6	
8.7	56.7	
8.6	56.7	
8.6	56.7	
8.6	56.8	Harpers Ferry Way to Planters Point Boulevard/Wood Park Drive
8.6	56.8	
8.6	56.8	
8.6	56.7	
8.7	56.4	
8.9	55.0	
9.7	50.6	
1.6 9.2 0.2	22.2 51.4 23.2	
9.9	51.5	
9.6	53.5	
9.2	55.7	
9.0	56.8	
9.0	57.0	
9.0	57.0	Planters Point Boulevard/ Wood Park Drive to Rivertowne Parkway/Dunes West Boulevard
9.0	57.1	
9.0	57.1	
9.1	56.6	
9.4	54.7	
10.5	48.7	
10.9	46.9	
11.3	45.2	
15.1	33.8	
11.3 55.5 2.2	6.8 5.2 12.3	
1.1 22.7	28.7 17.0	
14.4	27.8	
10.0	38.5	
8.5	45.0	
8.2	46.6	
8.1	46.9	
8.1	46.9	Rivertowne Parkway/Dunes West Boulevard to Parkers Island Road/Canyon Lane
8.1	46.9	
8.1	46.9	
8.1	46.9	
8.1	46.9	
8.1	46.9	
8.1	47.0	
8.1	46.9	
8.1	46.6	
8.3	45.5	
9.4	41.9	
8.7	44.4	
8.3	46.4	
8.2	47.0	Parkers Island Road/Canyon Lane to Bennett Charles Road/Sunchaser Lane
8.2	47.0	
8.1	47.1	
8.0	47.1	
8.1	47.1	
8.2	47.0	
7.9	46.3	
8.6	45.2	
8.4	46.4	
8.3	47.1	Bennett Charles Road/Sunchaser Lane to Joe Rouse Road
8.2	47.1	
8.3	46.8	
8.4	46.4	
8.5	45.9	
9.4	40.7	
34.1 13.6	14.9 9.6	
26.5	19.5	
19.3	26.6	
12.9	38.7	
11.0	44.9	
10.7	46.3	
10.6	46.5	
10.6	46.6	
10.6	46.6	
10.6	46.6	Joe Rouse Road to Tradewind Drive
10.6	46.7	
10.6	46.7	
10.6	46.7	
10.6	46.7	
10.6	46.7	
10.6	46.4	
0.6 10.9	13.9 45.4	
11.0	45.5	
10.9	46.3	Tradewind Drive to Colonnade Drive
10.8	46.7	
10.8	46.7	
10.8	46.3	
1.6 10.1	12.5 44.5	
11.7	44.7	
11.4	46.1	
11.2	46.8	
11.0	46.9	US 17 Access Road to Colonnade Drive
11.2	46.6	
11.5	45.6	
12.1	43.1	
12.7 6.0	40.5 1.2	
11.6 2.1	41.1 24.8	
48.2 20.8 6.3	1.8 24.7 22.7	
3.4 12.6 7.1	19.2 32.3 32.9	US 17 Access Road to US 17
8.5 8.7	37.2 37.0	
9.2 10.7	30.6 29.3	





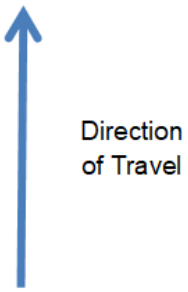
Density Legend		
Color	Low	High
	0	11
	11	18
	18	26
	26	35
	35	45
	45	

Scale
1.0

Speed Legend		
Color	Low	High
	0	6
	6	12
	12	19
	19	25
	25	31
	31	37
	27	50
	50	62
	62	75
	75	

Scale
1.0

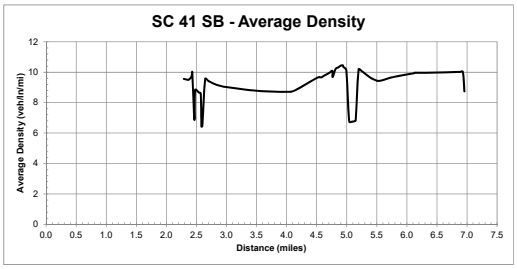
VMT
23003



Direction of Travel

SC 41 Southbound AM Peak Hour

Density	Speed	
114.5 80.2	0.9 0.9	
12.2 138.6 124.5	12.0 2.5 5.1	US 17 to US 17 Access Road
118.2 129.6	4.5 4.7	
78.5 114.0	7.1 5.1	
1.4 76.4 59.6	15.7 11.4 6.2	
103.8	12.2	
104.2	12.2	
100.9	12.6	
99.7	12.8	US 17 Access Rd to Colonnade Drive
99.1	12.8	
98.4	12.9	
97.5	13.1	
93.4	13.6	
99.2	12.5	
100.4	12.4	
100.0	12.5	Colonnade Dr to Tradewind Drive
99.0	12.6	
94.2	13.2	
75.6	16.1	
100.1	12.2	
101.8	12.0	
101.8	12.0	
101.6	12.0	
101.6	12.0	
101.5	12.1	Tradewind Drive to Joe Rouse Road
101.2	12.2	
101.0	12.2	
100.3	12.3	
100.1	12.4	
99.6	12.5	
98.5	12.7	
108.0 54.8	10.5 3.3	
114.1 13.0	9.7 15.9	
127.2 13.7	8.8 16.0	
7.8 153.7	6.9 5.1	
0.8 131.0	25.6 6.9	
114.4	9.7	
107.4	10.1	
99.8	12.4	Joe Rouse Road to Bennett Charles Road/Sunchaser Lane
93.5	14.9	
89.1	16.7	
84.5	18.6	
80.5	20.3	
58.0	23.5	
73.0	23.1	
70.4	24.3	
66.8	25.6	
63.7	26.3	
62.2	26.9	Bennett Charles Road/Sunchaser Lane to Parkers Island Road/Canyon Lane
59.0	28.2	
56.3	29.2	
53.2	30.7	
47.6	32.5	
46.3	33.7	
44.0	34.5	
41.6	35.5	
38.1	36.5	
35.2	37.4	
32.2	38.9	
29.2	40.4	Parkers Island Road/Canyon Lane to Rivertowne Parkway/Dunes West Boulevard
26.7	41.8	
24.3	43.1	
22.4	44.1	
21.1	44.7	
19.9	45.1	
19.9	44.7	
20.5	43.1	
27.1	32.5	
18.6 87.7 0.6	4.9 6.0 14.0	
39.7	16.7	
18.4	34.6	
13.0	47.5	
11.3	54.3	
10.9	56.2	
10.9	56.5	Rivertowne Parkway/Dunes West Boulevard to Planters Point Boulevard/ Wood Park Drive
10.9	56.5	
10.9	56.4	
10.9	56.2	
11.1	55.5	
11.5	53.5	
13.1	46.6	
1.9 12.0 0.2	20.5 47.6 20.8	
11.8	51.7	
11.1	55.1	
10.8	56.5	
10.7	56.7	
10.7	56.8	Planters Point Boulevard/Wood Park Drive to Harpers Ferry Way
10.7	56.8	
10.7	56.8	
10.7	56.8	
10.7	56.8	
10.7	56.8	
10.8	56.3	
11.1	54.9	
11.9	50.9	
3.2 9.7	19.5 55.4	
1.2 10.2	31.2 54.9	
10.7	56.1	
10.5	57.2	
10.4	57.5	
10.4	57.6	
10.4	57.6	Harpers Ferry Way to end of network
10.4	57.7	
10.4	57.6	
10.4	57.6	
10.4	57.9	
10.3	58.4	
8.5	58.1	



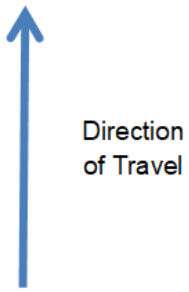
Density Legend		
Color	Low	High
	0	11
	11	18
	18	26
	26	35
	35	45
	45	

Scale
1.0

VMT
23003

Speed Legend		
Color	Low	High
	0	6
	6	12
	12	19
	19	25
	25	31
	31	37
	27	50
	50	62
	62	75
	75	

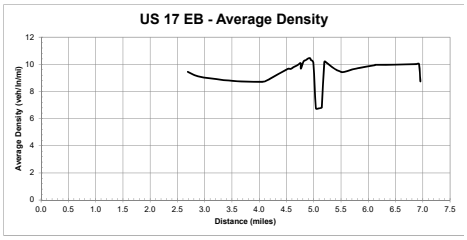
Scale
1.0

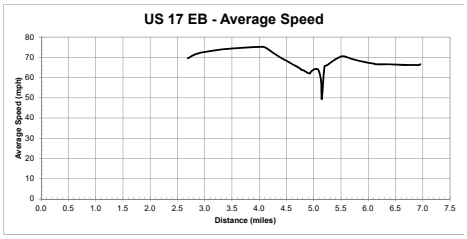


Direction of Travel

US 17 Eastbound AM Peak Hour

Density	Speed	
4.1 5.1 5.1 9.0 11.2 11.2 8.9 11.2 11.3 8.9 11.2 11.3 8.9 11.2 11.4 8.8 11.2 11.5 8.8 11.2 11.5 8.8 11.2 11.6 8.9 11.2 11.8 9.0 11.4 12.1 9.3 11.9 12.8 10.3 12.9 15.0	58.3 57.5 57.1 57.9 57.1 56.7 57.8 57.0 56.6 57.8 57.0 56.6 57.7 57.0 56.6 57.7 57.0 56.5 57.6 56.9 56.5 57.4 56.8 56.3 56.9 56.5 55.9 55.6 55.6 55.0 52.2 53.3 52.9 43.7 48.5 48.0	End of network to Park West Boulevard/South Morgan's Point Road
51.6 82.7 97.5 60.0 57.1 2.1 48.5 27.7 36.2 45.1 28.7 28.4 25.0 20.2 19.7 17.6 14.5 13.5 14.9 12.3 11.2 14.2 11.8 10.6 14.0 11.7 10.3 14.1 11.7 10.0 14.2 11.9 9.8 14.2 11.9 9.8 14.2 12.0 9.8 14.3 12.0 9.8 14.4 12.1 9.8 14.5 12.4 9.9 14.4 13.0 10.2 13.8 14.1 11.1 13.4 15.5 14.7	1.0 1.7 3.6 11.8 13.6 17.9 14.8 25.9 30.3 15.4 26.3 28.7 30.5 36.9 37.9 43.4 48.1 48.2 51.7 54.2 54.2 54.8 55.9 56.1 55.7 56.6 56.8 55.9 56.7 57.0 55.9 56.7 57.0 55.8 56.7 57.0 55.7 56.6 57.0 55.3 56.3 56.8 54.8 55.9 56.5 54.3 55.2 55.8 53.6 54.1 54.3 52.3 52.3 51.1 49.0 48.8 41.6	Park West Boulevard/South Morgan's Point Road to Lexington Drive/Oakland Market
2.7 34.8 36.6 34.4 5.8 22.2 23.2 23.3 16.8 17.6 17.8 13.9 14.5 14.5 12.5 13.3 13.3 12.3 13.7 14.0 12.0 14.9 17.0	12.3 19.1 20.7 17.0 16.9 30.8 32.8 29.7 40.0 41.3 39.3 47.4 48.2 47.6 51.9 52.0 51.3 51.6 51.2 49.0 48.8 47.4 40.6	Lexington Drive/Oakland Market to Winnowing Way/Porchers Bluff
44.4 47.7 46.5 3.1 16.6 19.2 20.3 11.2 13.6 14.5 9.6 12.8 13.8 9.4 13.1 14.2 10.6 14.4 15.7	12.1 14.1 12.1 21.7 34.3 35.1 32.6 47.4 48.1 46.9 51.1 52.0 51.5 49.5 51.5 51.3 42.4 46.7 47.3	Winnowing Way/Porchers Bluff to SC 41/Dingle Road
191.0 192.2 129.8 76.3 76.7 45.9 52.6 47.6 41.6 42.3 0.7 7.1 16.9 18.3 18.2 18.5 13.9 12.6 16.8 12.9 11.2 15.9 12.5 10.6 15.8 12.4 10.5 16.1 12.5 10.6 16.6 12.9 10.8 17.2 13.6 11.4 18.5 15.1 13.3	1.2 1.1 2.2 9.7 9.6 4.4 4.1 8.8 17.4 17.4 23.4 33.9 34.7 39.0 38.6 44.9 49.8 50.3 51.4 54.2 54.4 54.9 56.2 56.2 55.4 56.5 56.3 54.6 56.1 55.7 53.2 54.8 54.2 51.1 52.4 51.3 46.8 47.9 44.2	SC 41/Dingle Road to Brickyard Parkway/Hamlin Road
14.1 79.3 71.3 66.3 10.1 1.1 52.8 45.9 42.3 3.8 23.0 25.2 19.4 32.2 23.5 23.0 18.7 13.8 14.1 16.2 12.0 12.1 15.2 11.7 11.6 12.4 14.0 11.5 12.4 14.0 11.4 12.4 14.1 11.4 12.2 14.5 11.1 12.2 14.7 10.9 12.5 14.9 10.6 12.4 14.9 10.6 12.2 14.9 10.8 12.1 14.2 11.7 12.1 13.4 12.4 12.2 13.4 12.4 12.2 13.4 12.5 12.4 13.5 12.7 12.7 14.0 13.1 14.1 14.8 13.9 18.8 18.0 14.3	4.2 9.8 9.4 8.1 10.9 24.5 15.1 15.2 14.0 23.9 25.0 22.9 24.3 25.8 29.5 29.9 44.9 47.6 47.6 52.7 54.1 54.1 55.8 56.4 56.4 56.9 56.8 56.9 57.1 56.8 57.0 57.2 56.8 57.1 57.2 56.7 57.2 57.1 56.7 57.2 57.1 56.7 57.2 57.1 56.8 57.2 57.1 56.9 57.1 57.0 57.0 57.0 56.9 57.1 56.8 56.7 57.1 56.8 56.5 56.9 56.5 55.7 56.3 56.0 53.9 54.7 54.3 49.9 51.1 50.8 39.8 42.0 45.4	Brickyard Parkway/Hamlin to Long Point Road
13.8 63.0 63.8 60.6 0.6 23.9 24.2 22.8 12.6 12.9 11.5 11.5 11.9 10.4 10.8 11.3 9.6 10.4 11.8 11.5	3.9 8.0 8.9 8.8 33.1 22.4 23.9 23.5 43.1 44.1 44.0 48.7 49.4 49.2 52.3 52.4 51.7 52.2 50.0 44.0	Long Point Road to Six Mile Road
1.3 23.6 25.1 22.5 2.3 11.4 12.4 11.2 0.5 10.1 11.3 10.3 9.5 10.4 10.0 9.1 9.6 9.4 8.8 9.3 9.3 8.7 9.2 9.2 8.7 9.2 9.2 8.7 9.2 9.2 8.7 9.2 9.3 8.8 9.2 9.3 8.7 9.1 9.2 8.7 9.0 9.2 7.0 7.4 7.5	10.4 22.4 23.5 20.2 21.4 45.1 46.4 44.1 35.9 50.3 50.6 49.5 53.2 53.3 53.0 56.6 56.6 56.6 58.0 58.0 57.9 58.3 58.3 58.2 58.4 58.3 58.2 58.4 58.4 58.3 58.3 58.3 58.2 58.3 58.2 58.1 58.6 58.5 58.4 59.1 59.0 59.0 58.6 58.5 58.5	Six Mile Road to end of network





Density Legend		
Color	Low	High
	0	11
	11	18
	18	26
	26	35
	35	45
	45	

Scale
1.0

VMT
23003

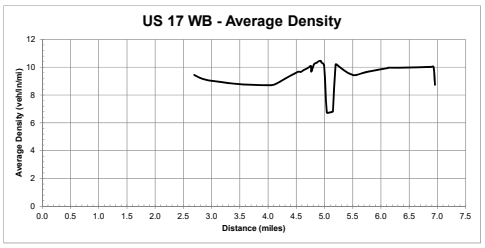
Speed Legend		
Color	Low	High
	0	6
	6	12
	12	19
	19	25
	25	31
	31	37
	27	50
	50	62
	62	75
	75	

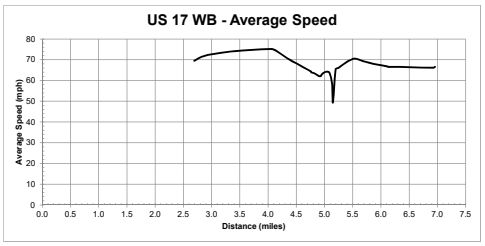
Scale
1.0

Direction of Travel

US 17 Westbound AM Peak Hour

Density	Speed	
5.9 6.0 4.8 18.9 19.2 15.5 19.0 19.3 15.5 19.0 19.3 15.5 19.0 19.3 15.4 18.9 19.3 15.4 18.9 19.3 15.4 18.9 19.3 15.3 19.0 19.4 15.3 19.1 19.4 15.4 19.2 19.6 15.3 19.1 19.7 15.2 20.1 19.9 15.1	47.5 47.5 47.7 47.0 47.0 47.1 46.8 46.8 46.9 46.8 46.8 46.9 46.9 46.9 47.0 46.9 46.9 47.1 47.0 47.0 47.1 47.0 47.0 47.2 46.8 47.0 47.1 46.5 46.8 46.8 46.5 46.6 46.6 46.7 46.6 46.8 44.8 46.1 46.5	End of network to Six Mile Road
4.5 26.9 27.6 23.0 26.9 24.6 19.8 25.2 22.2 16.9 23.6 20.2 14.5 23.1 19.8 14.7	15.0 32.9 33.1 30.9 35.9 36.5 35.2 39.4 40.2 39.7 43.2 43.9 43.6 44.8 44.6 41.1	Six Mile Road to Long Point Road
71.1 68.8 73.0 73.1 42.3 39.0 32.1 31.6 37.9 37.2 47.8 33.6 34.3 47.1 28.3 29.7 42.9 24.6 25.9 39.2 21.9 23.1 36.2 20.4 21.6 33.8 20.0 21.0 32.6 19.8 20.9 32.3 19.8 20.9 32.1 19.8 21.0 31.9 19.7 21.0 31.7 19.8 21.2 32.0 19.8 21.2 32.2 19.8 21.2 32.1 19.9 21.6 31.2 20.1 26.8 25.4 20.0 27.5 24.6 20.1 27.5 24.7 20.3 27.9 25.0 22.6 29.2 27.3	15.0 13.4 7.6 12.5 25.3 25.8 23.1 21.1 27.0 28.5 26.8 30.3 31.8 28.7 35.1 36.0 32.4 39.8 40.2 36.2 44.0 44.0 40.0 46.3 46.3 43.3 47.0 47.2 45.2 47.2 47.4 45.8 47.3 47.5 45.9 47.3 47.5 45.9 47.3 47.4 45.8 47.4 47.4 45.6 47.4 47.3 45.2 47.4 47.3 45.4 47.5 47.3 46.1 47.5 47.1 46.8 47.5 47.0 47.1 47.4 46.9 46.9 47.0 46.4 46.2 43.4 44.1 41.6	Long Point Road to Brickyard Parkway/Hamlin Road
4.5 49.3 59.7 58.2 1.3 0.9 38.0 46.8 45.9 39.0 46.3 45.2 39.5 44.0 42.7 38.5 40.2 36.6 35.2 38.4 37.6 30.4 34.1 36.1 44.3 24.2 25.2 28.2 28.8 18.1 20.5 22.5 16.6 16.2 16.4 20.1 18.2 15.7 15.9 15.2 16.1 15.9 15.1	14.9 18.0 19.1 17.7 19.7 40.1 24.4 23.7 23.4 24.9 23.8 23.7 25.8 24.3 24.6 27.9 26.9 27.0 29.1 28.1 26.7 31.6 29.2 20.2 12.4 36.1 33.8 28.9 21.5 40.8 39.8 38.8 36.0 43.2 43.1 42.6 40.8 44.1 44.3 44.0 43.4 44.0 44.0	Brickyard Parkway/Hamlin Road to SC 41/Dingle Road
17.7 84.1 84.7 83.1 10.8 0.3 37.1 36.6 35.0 3.1 24.9 24.9 26.1 20.1 20.6 22.0 16.6 17.4 18.6 15.3 16.2 17.4 15.9 17.4 17.5	1.0 8.2 8.3 8.1 13.3 36.9 19.6 20.6 21.3 30.9 29.3 30.3 31.2 35.5 36.3 36.5 42.2 42.4 42.4 45.2 45.3 44.8 43.5 43.6 42.1	SC 41 to SC 41/Dingle Road to Winnowing Way/Porchers Bluff
37.4 39.7 40.0 3.1 21.7 22.8 23.6 1.3 16.2 17.4 19.1 15.7 16.3 18.6 21.4 22.5 21.0 18.3 17.8 18.3 15.6 17.5 18.1 16.1 19.1 19.4	17.7 17.5 17.2 19.6 30.3 31.0 30.5 33.3 37.6 38.1 36.9 40.8 41.0 40.6 40.1 30.9 37.0 43.4 41.9 42.5 45.2 45.0 44.9 41.9 43.0 41.1	Winnowing Way/Porchers Bluff to Lexington Drive/Oakland Market
17.7 66.0 64.5 60.7 0.4 52.3 52.2 49.3 41.6 39.3 37.0 24.7 23.8 21.8 18.6 18.2 16.4 17.3 16.9 14.9 17.0 16.6 14.5 17.0 16.5 14.4 16.9 16.5 14.4 16.9 16.5 14.4 16.9 16.5 14.3 16.9 16.5 14.3 16.9 16.4 14.3 17.0 16.4 14.3 17.0 16.4 14.3 17.2 16.5 14.5 17.6 17.1 15.0 18.9 21.6 20.5	5.3 10.5 11.9 12.6 18.7 15.5 15.4 16.1 19.8 20.6 20.8 32.5 33.3 34.1 42.5 42.8 43.1 46.0 46.2 46.3 47.0 47.1 47.2 47.2 47.3 47.3 47.2 47.3 47.4 47.3 47.4 47.4 47.3 47.4 47.4 47.3 47.4 47.5 47.4 47.4 47.5 47.4 47.4 47.5 47.3 47.4 47.4 47.0 47.0 47.0 45.9 45.5 45.2 40.7 36.8 34.1	Lexington Drive/Oakland Market toPark West Boulevard/South Morgan's Point Road
67.4 68.4 65.9 4.2 22.5 22.7 23.5 14.9 15.0 14.7 12.7 12.8 12.4 11.8 12.0 12.1 11.7 11.9 12.0 11.7 11.9 11.9 11.7 11.9 11.9 11.8 11.9 12.0 11.7 11.9 12.0 11.5 11.7 11.8 7.8 7.9 7.9	8.1 8.3 7.1 17.9 25.3 25.5 24.8 38.5 38.4 38.2 44.9 44.8 45.0 47.4 47.4 47.5 47.9 47.9 47.9 48.0 48.0 48.0 47.9 48.0 48.0 47.8 47.8 47.8 47.9 47.9 47.9 48.6 48.7 48.7 48.2 48.2 48.2	Park West Boulevard/South Morgan's Point Road to end of network





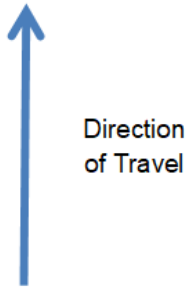
Density Legend		
Color	Low	High
	0	11
	11	18
	18	26
	26	35
	35	45
	45	

Scale
1.0

VMT
23003

Speed Legend		
Color	Low	High
	0	6
	6	12
	12	19
	19	25
	25	31
	31	37
	27	50
	50	62
	62	75
	75	

Scale
1.0



SC 41 Northbound PM Peak Hour

Density	Speed	
8.5	55.9	
10.7	55.8	
10.7	55.8	
10.7	55.9	
10.6	55.9	
10.6	56.0	
10.6	56.1	
10.6	56.1	
10.6	56.1	
10.7	55.8	
10.9	54.8	
11.7	50.7	
10.6 5.9	52.1 13.8	
11.4 2.0	51.7 27.8	
12.1	53.4	
11.7	55.1	
11.6	55.8	
11.5	56.0	
11.5	56.1	
11.5	56.2	
11.5	56.2	
11.4	56.3	
11.4	56.4	
11.4	56.5	
11.4	56.6	
11.4	56.5	
11.5	55.9	
11.9	53.9	
2.4 13.5 0.1	31.2 50.7 52.0	
15.4	49.7	
14.7	52.1	
14.0	54.9	
13.6	56.4	
13.5	56.7	
13.5	56.8	
13.5	57.0	
13.4	57.1	
13.6	56.6	
14.0	54.8	
15.8	48.7	
16.4	46.9	
16.8	45.7	
22.0	35.0	
31.5 94.0 5.3	6.8 5.6 12.6	
4.8 59.1	23.2 12.5	
44.3	19.7	
32.8	27.0	
23.4	36.8	
19.2	42.8	
17.6	45.4	
17.1	46.4	
17.0	46.6	
17.0	46.6	
17.0	46.7	
17.0	46.7	
17.0	46.7	
17.0	46.7	
17.1	46.4	
17.6	45.1	
19.6	41.4	
18.5	43.7	
17.5	45.9	
17.2	46.6	
17.1	46.8	
16.9	46.9	
16.8	47.0	
17.1	46.9	
17.3	46.5	
16.9	45.2	
19.6	41.8	
18.5	44.3	
17.6	46.3	
17.4	46.9	
17.5	46.7	
17.6	46.5	
17.8	46.1	
19.0	41.5	
76.3 35.3	11.4 5.7	
76.1	14.4	
63.8	17.2	
51.6	21.4	
42.2	26.4	
34.4	32.7	
28.2	38.8	
24.8	43.2	
23.5	45.3	
23.0	46.0	
22.8	46.3	
22.8	46.4	
22.8	46.4	
22.9	46.3	
23.1	46.0	
23.4	45.2	
1.7 25.4	14.1 42.5	
26.1	42.2	
25.2	43.9	
24.6	45.2	
24.3	45.7	
24.4	45.3	
1.8 22.7	15.0 43.7	
26.1	44.0	
25.1	45.7	
24.6	46.6	
24.2	46.7	
24.8	46.3	
25.9	44.5	
29.4	39.0	
33.8 39.8	33.4 0.5	
31.4 23.2	32.6 6.4	
6.5 26.3 11.2	12.6 32.4 24.0	
1.7 21.8 14.2	29.0 34.7 31.2	
17.0 16.5	37.0 36.1	
19.6 20.2	30.3 29.6	

Between end of network to Harpers Ferry Way

Between Harpers Ferry Way to Planters Point Boulevard/Wood Park Drive

Between Planters Point Boulevard/ Wood Park Drive to Rivertowne Parkway/Dunes West Boulevard

Between Rivertowne Parkway/Dunes West Boulevard to Parkers Island Road/Canyon Lane

Between Parkers Island Road/Canyon Lane to Bennett Charles Road/Sunchaser Lane

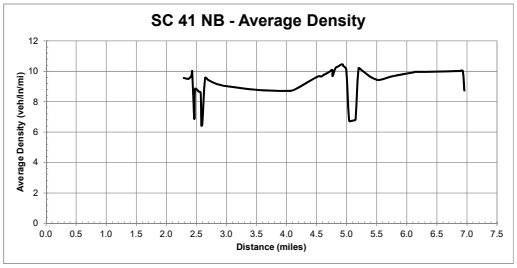
Between Bennett Charles Road/Sunchaser Lane to Joe Rouse Road

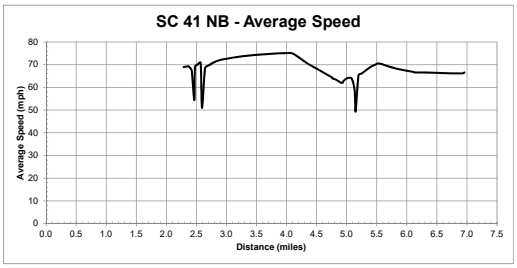
Between Joe Rouse Road to Tradewind Drive

Between Tradewind Drive to Colonnade Drive

Between US 17 Access Road to Colonnade Drive

Between US 17 to US 17 Access Road





Density Legend		
Color	Low	High
	0	11
	11	18
	18	26
	26	35
	35	45
	45	

Scale
1.0

VMT
23003

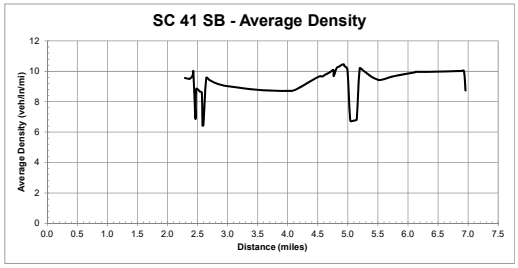
Speed Legend		
Color	Low	High
	0	6
	6	12
	12	19
	19	25
	25	31
	31	37
	27	50
	50	62
	62	75
	75	

Scale
1.0

Direction of Travel

SC 41 Southbound PM Peak Hour

Density	Speed	
158.8 168.5 24.0 49.6 79.8 17.8 57.2 11.5 35.1 1.7 26.6 2.8	0.8 0.7 7.0 6.6 9.3 26.9 13.7 34.0 23.1 12.2 38.8 18.6	US 17 to US 17 Access Road
28.6 26.0 24.2 23.7 23.6 23.6 23.7 24.4 23.4 23.2 23.0 23.1 23.7	38.4 42.3 45.2 46.2 46.4 46.4 46.3 45.1 45.6 46.1 46.4 46.4 45.2	US 17 Access Rd to Colonnade Drive
24.2 24.3 23.4 22.9 22.8 22.7 22.7 22.6 22.6 22.6 22.6 22.7 22.9 22.9 0.3 23.0 0.3 25.2 0.9	43.5 43.6 45.2 46.0 46.4 46.5 46.6 46.7 46.7 46.8 46.9 46.6 46.1 45.9 31.3 45.4 44.4 40.0 28.0	Colonnade Dr to Tradewind Drive
10.7 63.6 1.7 36.0 25.0 21.7 18.7 17.6 17.4 17.3 17.4 17.9 17.8 17.5 17.3 17.1 17.3 17.3 17.2 17.2 17.4 17.2 17.0 17.0 16.9 16.9 16.9 16.9 16.9 16.9 16.8 16.8 16.9 17.0 17.4 22.6	5.6 11.8 26.1 22.1 32.9 37.7 43.5 46.0 46.6 46.7 46.6 45.4 45.6 46.2 46.7 46.8 46.9 46.9 46.9 46.4 46.5 46.9 47.0 47.1 47.1 47.2 47.2 47.3 47.3 47.4 47.4 47.3 46.9 45.7 35.2	Tradewind Drive to Joe Rouse Road
55.7 117.9 3.9 93.8 66.8 47.7 33.9 24.5 19.5 17.4 16.7 16.3 16.2 16.3 16.7 18.1	3.7 5.6 14.5 10.7 17.0 25.5 34.3 42.3 49.2 53.1 54.8 55.5 55.8 55.5 54.1 49.8	Joe Rouse Road to Bennett Charles Road/Sunchaser Lane
0.2 15.8 0.4 15.9 15.4 15.3 15.3 15.2 15.2 15.2 15.2 15.2 15.1 15.1 15.2 15.4 16.3	36.8 52.6 43.6 53.8 55.4 55.9 56.0 56.1 56.2 56.2 56.3 56.4 56.5 56.5 56.3 55.3 52.4	Bennett Charles Road/Sunchaser Lane to Parkers Island Road/Canyon Lane
5.0 14.5 1.7 15.2 15.7 15.5 15.4 15.4 15.4 15.3 15.4 15.4 15.3 15.2 12.6	17.1 54.9 30.7 54.4 55.5 56.6 56.9 57.0 57.1 57.2 57.1 57.1 57.3 57.9 57.6	Parkers Island Road/Canyon Lane to Rivertowne Parkway/Dunes West Boulevard
		Rivertowne Parkway/Dunes West Boulevard to Planters Point Boulevard/ Wood Park Drive
		Planters Point Boulevard/Wood Park Drive to Harpers Ferry Way
		Harpers Ferry Way to end of network



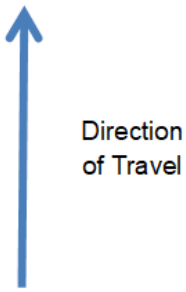
Density Legend		
Color	Low	High
	0	11
	11	18
	18	26
	26	35
	35	45
	45	

Scale
1.0

VMT
23003

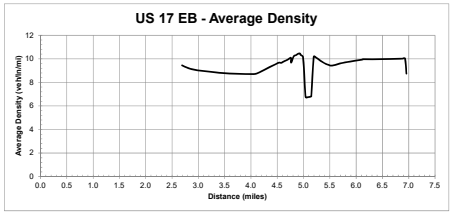
Speed Legend		
Color	Low	High
	0	6
	6	12
	12	19
	19	25
	25	31
	31	37
	27	50
	50	62
	62	75
	75	

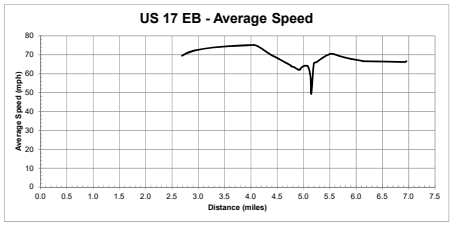
Scale
1.0



US 17 Eastbound PM Peak Hour

Density	Speed	
3.7 5.6 6.0 8.0 12.4 13.1 8.0 12.4 13.2 8.0 12.5 13.2 7.9 12.4 13.3 7.9 12.4 13.3 7.8 12.5 13.3 7.8 12.5 13.4 7.7 12.5 13.5 7.6 12.5 13.6 7.7 12.6 13.9 9.4 13.6 14.4	51.4 50.9 50.8 51.2 50.7 50.5 51.2 50.7 50.4 51.2 50.7 50.5 51.2 50.7 50.5 51.2 50.8 50.6 51.2 50.8 50.6 51.2 50.8 50.6 51.3 50.8 50.6 51.1 50.6 50.4 49.9 50.0 49.9 41.3 46.6 47.6	End of network to Park West Boulevard/South Morgan's Point Road
64.7 101.5 124.1 91.9 90.8 3.3 102.6 62.5 62.0 61.0 29.0 28.7 34.3 19.2 16.3 24.6 16.1 12.2 21.8 14.9 10.9 20.8 14.5 10.6 19.3 15.4 10.6 15.2 19.2 10.7 15.0 19.3 10.8 14.8 19.4 10.9 14.6 19.0 11.4 14.5 17.2 13.2 14.5 17.3 13.2 14.5 17.4 13.2 14.6 17.7 13.5 14.9 19.1 16.9	1.2 3.1 3.0 7.1 9.0 17.9 7.5 12.1 13.5 14.2 26.7 27.0 30.0 40.1 40.8 41.7 46.7 47.5 46.5 49.1 49.8 48.7 50.0 50.6 49.7 50.1 50.8 50.4 50.0 50.8 50.6 49.9 50.8 50.7 50.0 50.8 50.7 50.2 50.8 50.7 50.4 50.7 50.5 50.4 50.6 50.3 50.2 50.3 49.7 49.6 48.9 47.1 46.4 40.0	Park West Boulevard/South Morgan's Point Road to Lexington Drive/Oakland Market
4.6 48.8 50.4 47.1 5.4 20.6 21.8 20.9 17.0 17.8 17.2 15.5 16.9 15.1 15.5 17.1 13.7 15.4 17.6 14.0 15.3 18.2 16.6	10.1 14.8 16.6 13.8 16.7 37.2 39.0 35.8 44.8 45.5 44.0 48.7 49.0 48.6 50.0 50.0 50.0 49.7 49.6 48.9 47.8 47.4 41.7	Lexington Drive/Oakland Market to Winnowing Way/Porchers Bluff
26.3 30.5 27.2 3.9 16.1 18.9 18.1 14.3 16.9 16.5 12.7 16.6 16.0 12.3 16.7 16.5 13.7 18.4 18.9	26.4 26.9 24.5 24.6 42.7 42.3 42.2 47.0 47.5 47.0 49.3 49.4 49.1 49.3 49.3 48.8 43.0 44.5 43.4	Winnowing Way/Porchers Bluff to SC 41/Dingle Road
177.1 184.6 120.5 92.7 94.1 115.7 119.6 101.5 70.9 70.8 33.6 55.1 59.5 49.3 53.0 61.8 33.6 35.6 50.7 25.3 24.9 40.6 21.3 19.3 35.2 19.8 17.5 31.6 19.4 16.9 29.7 19.3 16.7 28.5 19.9 16.9 28.4 21.7 20.7	2.9 2.7 2.5 9.8 10.1 4.2 3.9 4.2 12.4 13.3 5.1 10.4 12.9 18.7 18.4 22.6 26.7 27.9 29.0 37.9 38.0 36.2 45.0 46.0 41.1 48.0 49.1 43.8 49.0 49.8 45.6 49.3 49.8 46.5 48.9 48.9 44.8 45.6 41.5	SC 41/Dingle Road to Brickyard Parkway/Hamlin Road
69.0 97.3 66.3 63.3 8.2 10.6 74.9 50.6 46.1 3.2 33.6 22.6 25.1 60.7 36.4 34.4 45.1 25.7 23.6 34.0 20.9 18.9 29.4 19.4 16.7 22.2 24.0 16.0 21.6 23.8 15.8 21.5 23.8 15.7 21.4 23.9 15.6 21.4 24.1 15.4 21.7 24.4 15.0 21.4 24.6 15.0 21.2 24.6 15.3 20.9 22.9 17.0 20.8 20.8 19.0 20.7 20.9 19.1 19.6 21.9 19.1 19.6 22.0 19.1 19.7 22.2 19.3 20.4 22.7 19.7 26.0 26.5 19.9	2.3 11.8 13.7 11.9 11.9 12.2 15.8 18.8 18.1 25.3 24.9 27.2 26.1 21.0 26.3 27.6 29.1 36.5 38.8 39.3 44.1 45.7 45.4 47.7 48.9 48.4 49.4 50.1 49.8 49.8 50.4 50.0 49.9 50.4 50.1 49.8 50.5 50.1 49.8 50.6 50.1 49.7 50.7 50.1 49.6 50.7 50.1 49.8 50.7 50.1 50.1 50.6 50.2 50.4 50.5 50.3 50.4 50.5 50.4 50.4 50.5 50.3 50.2 50.3 49.9 49.9 49.9 48.8 48.7 48.7 40.4 41.8 44.6	Brickyard Parkway/Hamlin to Long Point Road
43.3 87.1 88.1 83.4 2.8 45.0 45.8 40.6 24.7 23.6 19.5 22.2 20.4 16.4 19.9 18.4 14.5 18.2 19.2 18.6	3.2 8.4 9.8 8.8 29.7 17.7 19.2 18.0 35.8 36.6 35.9 41.6 42.4 42.0 46.8 46.9 46.4 47.7 45.0 38.3	Long Point Road to Six Mile Road
1.4 43.0 43.1 37.8 7.0 25.0 24.3 22.3 1.7 20.7 19.9 20.1 18.1 18.0 17.8 16.1 16.7 15.4 15.4 16.1 14.8 15.2 15.9 14.7 15.1 15.7 14.8 15.1 15.3 15.2 15.1 15.3 15.2 15.2 15.3 15.3 15.1 15.2 15.2 14.9 15.1 15.0 12.2 12.3 12.3	10.0 19.1 19.1 15.5 19.3 32.7 33.2 31.7 31.7 38.9 39.3 38.4 43.5 43.5 43.2 48.4 48.4 48.6 50.4 50.4 50.5 51.0 50.9 51.0 51.1 51.0 51.1 51.1 51.1 51.2 51.1 51.1 51.2 51.0 51.0 51.0 51.1 51.1 51.2 51.8 51.7 51.8 51.5 51.4 51.5	Six Mile Road to end of network





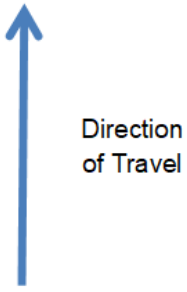
Density Legend		
Color	Low	High
	0	11
	11	18
	18	26
	26	35
	35	45
	45	

Scale
1.0

VMT
23003

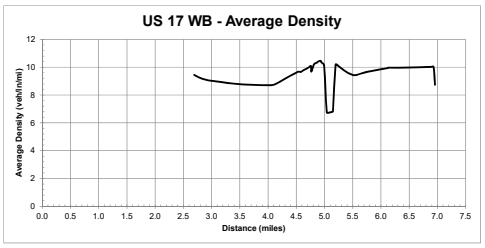
Speed Legend		
Color	Low	High
	0	6
	6	12
	12	19
	19	25
	25	31
	31	37
	27	50
	50	62
	62	75
	75	

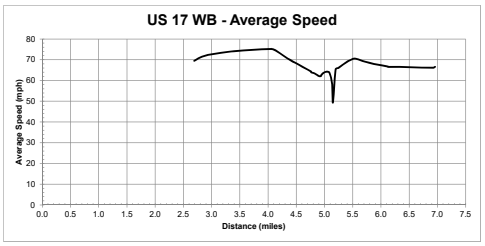
Scale
1.0



US 17 Westbound PM Peak Hour

Density					Speed					
3.9	4.4	3.7			47.6	47.6	47.4			End of network to Six Mile Road
12.3	14.0	11.8			47.3	47.3	47.1			
12.3	14.0	11.8			47.2	47.2	47.0			
12.3	14.0	11.8			47.2	47.2	47.0			
12.3	14.0	11.8			47.3	47.2	47.0			
12.3	14.0	11.8			47.3	47.3	47.0			
12.3	14.0	11.8			47.3	47.3	47.1			
12.2	14.0	11.8			47.4	47.3	47.2			
12.2	14.0	11.9			47.3	47.4	47.1			
12.4	13.9	11.9			47.1	47.2	46.9			
12.4	13.9	12.0			47.1	47.2	46.9			
12.4	13.9	11.9			47.2	47.2	47.1			
13.3	14.1	11.9			44.4	46.4	46.9			
8.6	20.0	20.1	15.7		8.0	32.6	34.4	38.3		Six Mile Road to Long Point Road
17.0	15.9	12.7			40.7	41.9	43.0			
15.2	14.6	11.6			44.2	44.8	45.2			
14.5	14.2	11.1			46.1	46.1	45.8			
14.5	14.5	12.5			45.9	44.8	40.9			
20.5	22.3	20.1	39.9		9.8	9.0	7.8	14.0		
30.9	30.6	29.2	13.5		25.7	26.0	25.5	27.9		
18.5	19.9	28.1			35.7	35.9	35.6			
15.8	17.4	26.0			40.5	40.7	39.7			
13.8	15.4	23.8			44.7	44.7	43.6			
13.0	14.7	23.0			46.5	46.5	45.2			
12.8	14.5	22.5			47.3	47.1	45.8			
12.7	14.5	22.1			47.4	47.2	46.3			
12.9	17.2	19.0			47.4	47.1	46.7			
12.9	19.1	17.0			47.5	46.9	47.0			
12.9	19.1	16.8			47.5	46.9	47.1			
13.0	19.2	16.5			47.5	47.0	47.1			
13.1	18.9	16.3			47.4	47.1	47.2			
15.3	16.9	16.4			47.4	47.2	47.2			
15.5	16.5	16.4			47.4	47.4	47.2			
15.4	16.5	16.4			47.5	47.4	47.3			
15.4	16.5	16.4			47.5	47.5	47.3			
15.4	16.5	16.4			47.6	47.5	47.4			
15.4	16.4	16.3			47.6	47.5	47.4			
15.4	16.4	16.3			47.6	47.6	47.4			
15.5	16.6	16.5			47.4	47.3	47.0			
16.5	17.4	18.0			44.5	44.9	42.8			
0.5	38.2	41.8	45.0	0.5	30.5	17.7	17.6	17.5	21.6	Brickyard Parkway/Hamlin Road to SC 41/Dingle Road
0.2	26.1	27.8	31.2		40.7	25.3	26.0	28.1		
24.1	25.6	29.9			27.0	27.8	30.2			
22.9	24.4	28.9			27.8	28.6	31.7			
21.1	22.6	27.7			29.9	30.7	33.7			
19.0	20.9	28.1			32.5	32.6	34.2			
16.6	18.9	29.0	6.5		35.5	34.6	33.5	14.5		
13.9	15.7	25.2	6.4		38.9	37.7	37.4	28.1		
11.6	12.3	18.5	10.3		42.6	41.6	41.8	41.4		
10.7	10.6	12.2	16.2		44.5	44.3	44.2	42.6		
10.5	10.5	9.4			45.1	45.0	44.9			
11.2	11.7	9.8			41.6	42.0	42.0			
105.5	132.8	127.1	134.2	94.0	1.9	3.2	3.4	3.2	2.2	SC 41 to SC 41/Dingle Road to Winnowing Way/Porchers Bluff
55.5	99.5	98.0	96.9	50.5	6.6	5.6	6.2	5.6	6.4	
82.5	82.6	77.9			10.2	9.2	10.6			
73.0	78.2	72.2			11.4	10.4	11.5			
66.4	69.9	65.2			14.1	13.4	14.3			
59.8	63.4	59.1			17.4	16.6	17.4			
57.7	61.1	59.0			18.6	18.3	18.3			
63.8	63.0	61.5	2.4		14.2	13.6	13.2	17.2		Winnowing Way/Porchers Bluff to Lexington Drive/Oakland Market
45.6	45.2	43.7	0.9		22.8	23.1	23.3	30.5		
37.0	33.1	33.5			26.9	27.3	27.6			
31.9	32.9	32.5			28.6	28.9	29.0			
30.1	30.5	29.4			29.6	29.3	30.1			
28.8	29.2	28.2			28.5	29.0	29.3			
27.0	27.9	27.3			28.6	29.6	29.5			
26.1	27.1	27.2			29.7	31.6	30.6			
26.6	73.7	68.4	66.3	0.8	3.9	6.7	8.0	9.5	17.4	Lexington Drive/Oakland Market to Park West Boulevard/South Morgan's Point Road
61.0	60.6	56.4			10.0	10.0	11.7			
49.0	47.5	45.2			12.8	13.3	14.7			
26.4	25.8	24.5			23.9	25.8	27.6			
15.6	16.2	15.8			38.8	39.6	40.1			
12.1	12.9	12.0			44.6	45.0	45.1			
11.2	12.0	11.1			46.7	46.9	46.8			
11.1	11.9	11.0			47.1	47.3	47.2			
11.1	11.9	11.0			47.2	47.4	47.2			
11.1	11.9	10.9			47.2	47.4	47.3			
11.1	11.9	10.9			47.3	47.4	47.3			
11.1	11.8	10.9			47.3	47.5	47.3			
11.1	11.8	10.9			47.3	47.5	47.4			
11.1	11.8	10.9			47.4	47.5	47.4			
11.1	11.8	10.9			47.3	47.5	47.4			
11.3	11.8	11.0			46.9	47.3	47.1			
11.5	12.1	11.4			46.1	46.1	45.7			
11.9	14.7	15.2			41.9	38.8	35.8			
97.4	98.6	97.2	6.2		4.1	4.0	3.8	16.3		Park West Boulevard/South Morgan's Point Road to end of network
31.3	31.7	35.2			14.1	14.1	13.8			
12.7	13.5	13.4			34.8	34.4	33.4			
9.8	10.2	9.7			44.0	43.9	44.1			
8.9	9.3	9.5			47.1	47.2	47.2			
8.8	9.1	9.4			47.9	48.0	47.9			
8.7	9.1	9.4			48.0	48.1	48.0			
8.7	9.1	9.4			48.0	48.0	48.0			
8.8	9.1	9.4			47.8	47.8	47.8			
8.8	9.1	9.4			47.9	48.0	47.9			
8.6	9.0	9.2			48.7	48.8	48.7			
5.8	6.0	6.2			48.3	48.3	48.3			





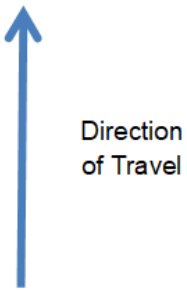
Density Legend		
Color	Low	High
	0	11
	11	18
	18	26
	26	35
	35	45
	45	

Scale
1.0

VMT
23003

Speed Legend		
Color	Low	High
	0	6
	6	12
	12	19
	19	25
	25	31
	31	37
	27	50
	50	62
	62	75
	75	

Scale
1.0



Existing AM Peak Hour
Auto and Truck Origin-Destination Matrices

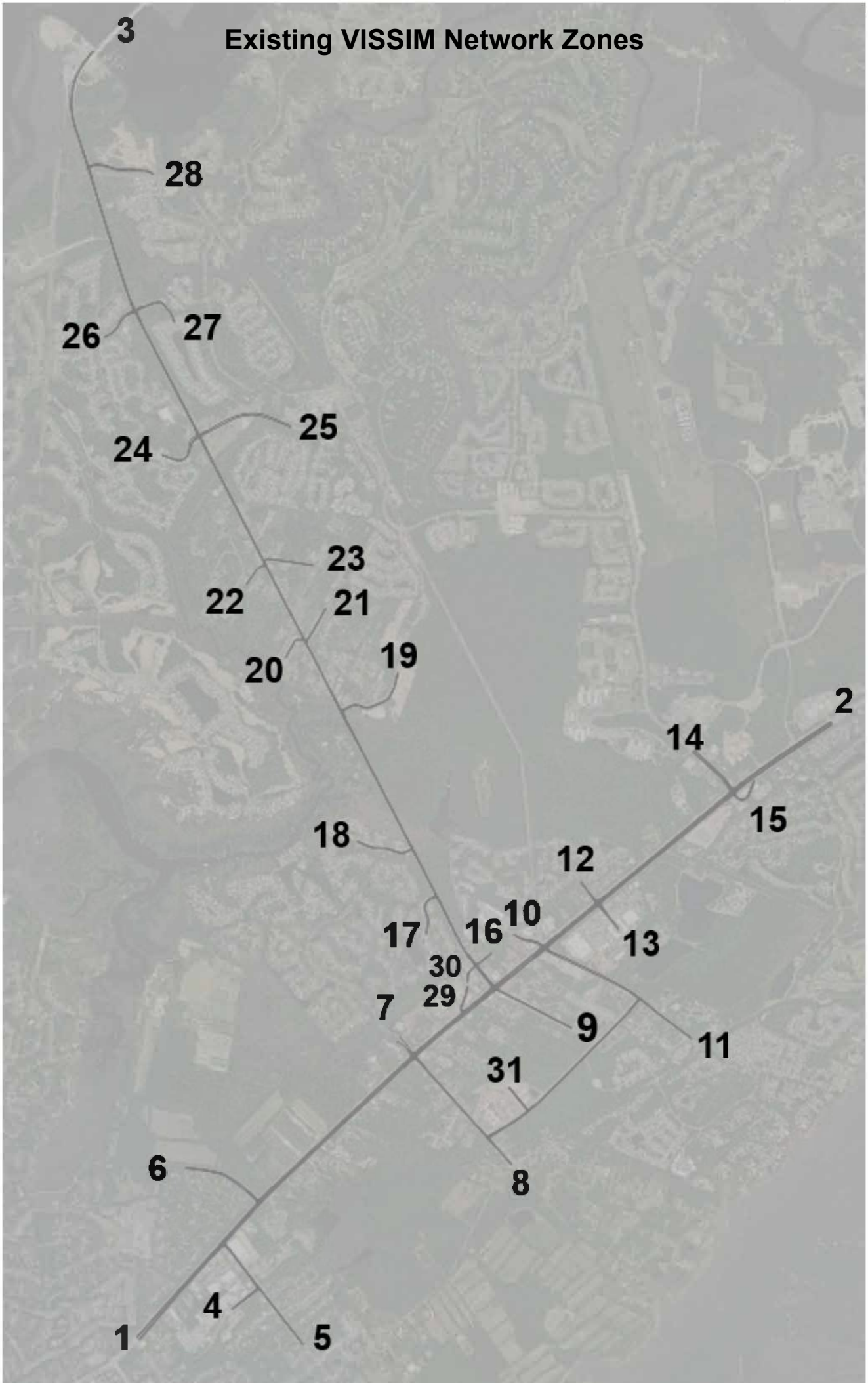
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
1	17	723	86	23	31	47	25	73	9	15	43	15	51	129	20	11	8	6	71	0	1	3	0	27	21	10	3	7	2	1	7	1485
2	734	0	3	11	16	344	10	0	7	30	95	8	110	124	48	3	2	2	2	1	3	0	0	1	1	0	0	0	0	11	58	1624
3	179	9	0	2	2	53	2	6	1	2	5	2	6	15	2	5	0	0	9	0	0	0	0	8	92	5	58	59	0	20	3	545
4	16	15	2	0	48	2	1	2	0	0	1	0	1	3	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	1	3	98
5	45	41	5	185	0	6	2	5	1	1	3	1	3	8	1	1	1	0	5	0	0	0	0	2	1	1	0	0	0	3	8	329
6	87	294	37	3	4	0	8	26	3	5	16	6	19	54	8	4	3	2	28	0	0	1	0	11	9	4	1	3	1	14	3	654
7	138	45	6	3	4	54	0	18	2	2	5	2	7	9	2	2	1	0	7	0	0	0	0	2	2	1	0	0	0	7	16	335
8	75	47	6	1	1	18	7	0	1	2	0	2	6	9	2	2	1	0	7	0	0	0	0	2	2	1	0	1	0	5	0	198
9	20	14	1	0	0	8	1	2	0	1	2	1	3	3	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0	62
10	63	21	2	1	1	24	2	0	2	0	27	2	7	5	1	1	1	0	3	0	0	0	0	1	1	0	0	0	0	3	0	168
11	15	131	9	1	1	23	7	22	5	16	0	6	21	21	4	3	2	1	11	0	0	0	0	3	3	1	0	1	0	9	43	359
12	51	30	2	1	1	20	1	0	1	10	16	0	10	7	2	1	0	0	2	0	0	0	0	1	1	0	0	0	0	2	0	159
13	62	125	2	1	1	25	2	0	1	11	19	9	0	28	8	1	0	0	3	0	0	0	0	1	1	0	0	0	0	2	0	302
14	326	101	13	5	7	143	5	0	3	15	44	4	55	0	97	2	1	0	1	0	0	0	0	0	0	2	0	1	0	5	0	830
15	53	51	2	1	1	22	1	0	1	4	9	1	15	90	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	1	0	255
16	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	1	0	0	0	0	0	2	0	7
17	10	6	1	0	0	4	0	1	0	0	1	0	1	1	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	8	0	36
18	9	6	1	0	0	4	0	1	0	0	1	0	1	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	5	0	31
19	233	12	28	3	5	88	4	13	3	4	11	4	13	2	4	14	1	1	0	0	1	1	0	12	1	4	1	2	0	62	0	527
20	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
21	12	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	19
22	4	2	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	130	9	62	2	3	56	2	7	1	2	6	2	7	2	3	6	0	0	13	0	0	1	0	0	215	11	0	6	0	26	0	572
25	66	5	126	1	1	29	1	3	1	1	3	1	3	1	0	3	0	0	1	0	0	0	0	77	0	23	0	12	0	13	0	371
26	25	2	25	0	1	11	0	1	0	0	1	0	1	3	0	1	0	0	2	0	0	0	0	2	25	0	73	3	0	4	0	180
27	1	0	13	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	18
28	20	2	125	0	0	9	0	1	0	0	1	0	1	3	0	1	0	0	1	0	0	0	0	1	13	1	8	0	0	3	0	190
29	87	4	0	2	2	32	7	11	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	12	159
30	0	12	1	0	0	4	1	1	0	0	1	0	1	1	0	1	0	0	2	0	0	0	0	1	0	0	0	0	0	0	0	26
31	76	5	6	6	7	9	30	201	7	6	50	3	9	13	2	1	1	0	6	0	0	0	0	2	2	1	0	1	0	4	0	448
Total	2556	1714	567	252	137	1041	119	394	49	127	360	69	351	534	205	67	23	12	186	1	5	6	0	157	390	67	144	97	3	215	153	10001

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
1	1	53	6	2	2	3	2	5	1	1	3	1	4	9	1	1	1	0	5	0	0	0	0	2	2	1	0	1	0	0	0	107
2	34	0	0	1	1	16	0	0	0	1	4	0	5	6	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	71
3	20	1	0	0	0	6	0	1	0	0	1	0	1	2	0	1	0	0	1	0	0	0	0	1	10	1	6	6	0	2	0	60
4	5	4	1	0	14	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	28
5	1	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
6	2	8	1	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	15
7	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8	5	3	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11	1	9	1	0	0	2	0	1	0	1	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	3	22
12	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	3	1	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
15	1	1	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	3	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	1	0	10
25	2	0	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	9
26	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0	0	0	0	6
27	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
28	1	0	9	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	13
29	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	88	82	24	6	17	37	2	11	1	3	8	1	13	23	4	2	1	0	8	0	0	0	0	5	18	3	10	7	0	6	4	384

Existing PM Peak Hour
Auto and Truck Origin-Destination Matrices

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
1	20	687	113	22	137	108	112	78	47	30	60	42	63	276	37	13	21	25	173	0	9	6	0	98	57	38	2	27	5	3	4	2313
2	560	0	6	5	29	200	16	0	8	23	49	16	117	163	40	3	3	3	5	0	0	1	0	3	2	1	0	1	2	15	0	1271
3	179	42	0	1	8	58	5	11	4	3	7	5	7	33	4	6	1	2	20	1	1	0	0	70	261	34	12	83	0	14	0	872
4	38	48	12	0	215	14	6	5	4	2	5	3	5	19	3	1	1	1	13	0	0	0	0	7	4	3	0	2	0	5	3	419
5	33	42	11	70	0	13	5	4	3	2	4	3	4	17	2	1	1	1	11	0	0	0	0	6	3	2	0	2	0	5	3	248
6	97	251	70	2	11	0	22	18	15	10	20	14	21	100	13	4	5	5	60	0	2	2	0	35	20	14	1	10	1	22	2	847
7	80	34	23	1	5	27	0	36	5	3	5	3	5	14	2	1	1	1	11	0	0	0	0	5	3	2	0	1	0	7	10	285
8	61	51	13	1	4	22	36	0	6	3	19	4	7	21	3	2	2	1	15	0	0	0	0	8	4	3	0	2	0	8	12	308
9	20	23	5	0	1	7	1	2	0	2	4	3	4	10	2	1	1	1	6	0	0	0	0	3	2	1	0	1	0	5	0	105
10	27	25	2	0	2	10	2	0	1	0	29	4	6	11	2	0	0	0	3	0	0	0	0	1	1	0	0	0	0	2	0	128
11	15	131	23	0	1	5	16	6	8	39	0	15	24	56	9	3	3	3	29	0	1	1	0	14	8	5	0	4	1	16	24	460
12	29	21	2	0	2	11	2	0	1	4	5	0	17	9	2	0	0	0	3	0	0	0	0	1	1	0	0	0	0	2	0	112
13	66	129	5	1	4	24	3	0	2	8	12	14	0	58	12	1	1	1	6	0	0	0	0	3	2	1	0	1	0	3	0	357
14	211	157	17	2	12	82	7	0	4	11	22	7	54	0	94	1	1	1	2	0	0	1	0	1	1	4	0	3	1	6	0	702
15	32	25	2	0	2	12	1	0	1	2	4	2	11	198	0	0	0	0	3	0	0	0	0	1	0	1	0	0	0	1	0	298
16	2	1	6	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	9	0	0	0	0	4	2	1	0	1	0	1	0	30
17	11	5	1	0	1	4	1	1	1	0	1	1	1	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3	0	35
18	13	3	0	0	0	2	0	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	22
19	129	9	34	1	8	48	6	11	5	4	7	5	8	3	4	8	1	3	0	0	2	2	0	24	2	8	1	6	0	17	0	356
20	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
21	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3
22	3	1	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	1	1	0	0	0	0	0	0	11
23	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
24	81	6	39	1	5	31	3	6	2	2	4	3	4	2	2	4	0	1	14	0	1	0	0	0	100	11	0	7	0	8	0	337
25	57	4	166	1	3	22	2	4	2	1	3	2	3	2	0	3	0	1	1	0	0	0	0	118	0	46	0	29	0	6	0	476
26	19	1	9	0	1	7	1	1	1	0	1	1	1	4	1	1	0	0	3	0	0	0	0	11	41	0	1	2	0	2	0	109
27	1	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	9
28	13	1	41	0	1	5	0	1	0	0	1	0	1	3	0	1	0	0	2	0	0	0	0	5	21	2	1	0	0	1	0	100
29	25	2	1	0	2	9	3	4	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	50
30	1	9	8	0	1	6	1	2	1	1	1	1	2	4	1	1	2	1	12	0	0	0	0	5	3	2	0	1	0	0	0	66
31	4	0	0	0	2	1	16	26	3	1	25	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	80
Total	1832	1708	617	108	457	732	267	217	124	151	288	148	365	1009	233	56	45	52	406	1	16	13	1	425	539	180	18	184	10	153	60	10415

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total
1	0	8	1	0	2	1	2	1	1	0	1	1	1	3	0	0	0	0	2	0	0	0	0	1	1	0	0	0	0	0	0	26
2	13	0	0	0	1	5	0	0	0	1	1	0	3	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29
3	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	1	0	0	0	8
4	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
5	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
6	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7	2	1	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
14	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	3	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
25	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
29	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	24	15	4	2	5	9	2	3	1	1	2	1	4	8	1	0	0	0	2	0	0	0	0	3	5	0	0	1	0	0	0	93


Existing VISSIM Network Zones
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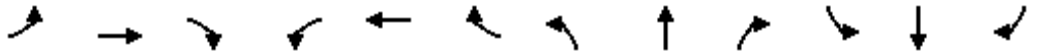
Appendix E

Synchro Reports

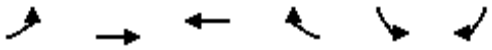


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	1949	155	79	3082	50	224	36	96	101	44	211
Future Volume (veh/h)	39	1949	155	79	3082	50	224	36	96	101	44	211
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	40	1989	158	83	3244	53	255	41	109	117	51	245
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.98	0.98	0.98	0.95	0.95	0.95	0.88	0.88	0.88	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	79	3369	1049	170	3408	1165	231	147	167	228	157	134
Arrive On Green	0.02	0.66	0.66	0.03	0.67	0.67	0.07	0.08	0.08	0.07	0.08	0.08
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	40	1989	158	83	3244	53	255	41	109	117	51	245
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	1.3	39.0	6.7	2.7	104.6	1.6	13.0	3.7	11.9	10.9	4.6	15.2
Cycle Q Clear(g_c), s	1.3	39.0	6.7	2.7	104.6	1.6	13.0	3.7	11.9	10.9	4.6	15.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	79	3369	1049	170	3408	1165	231	147	167	228	157	134
V/C Ratio(X)	0.50	0.59	0.15	0.49	0.95	0.05	1.10	0.28	0.65	0.51	0.32	1.83
Avail Cap(c_a), veh/h	130	3369	1049	236	3408	1165	231	147	167	228	157	134
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.82	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.8	16.8	11.4	16.8	27.0	6.5	77.1	78.1	77.4	70.6	77.6	82.4
Incr Delay (d2), s/veh	4.0	0.6	0.2	2.2	7.7	0.1	89.1	1.0	8.8	2.0	1.2	402.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	18.4	3.0	1.7	51.1	0.7	5.7	2.0	5.6	5.4	2.4	21.6
LnGrp Delay(d),s/veh	51.8	17.5	11.6	19.0	34.7	6.6	166.2	79.1	86.2	72.5	78.7	484.6
LnGrp LOS	D	B	B	B	C	A	F	E	F	E	E	F
Approach Vol, veh/h		2187			3380			405			413	
Approach Delay, s/veh		17.7			33.9			135.9			317.7	
Approach LOS		B			C			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	127.1	20.0	23.0	11.3	125.7	19.0	24.0
Change Period (Y+Rc), s	6.4	* 6.5	* 8.2	8.8	* 6.5	* 6.5	6.0	8.8
Max Green Setting (Gmax), s	8.6	* 1.2E2	* 12	14.2	* 12	* 1.1E2	13.0	15.2
Max Q Clear Time (g_c+I1), s	3.3	106.6	12.9	13.9	4.7	41.0	15.0	17.2
Green Ext Time (p_c), s	0.0	8.9	0.0	0.0	0.1	67.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	53.2
HCM 2010 LOS	D

Notes



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	2154	3047	4	0	164
Future Volume (vph)	0	2154	3047	4	0	164
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	0	5085	6408	0	0	1494
Flt Permitted						
Satd. Flow (perm)	0	5085	6408	0	0	1494
Link Speed (mph)		45	45		30	
Link Distance (ft)		294	988		681	
Travel Time (s)		4.5	15.0		15.5	
Peak Hour Factor	0.96	0.96	0.91	0.91	0.73	0.73
Heavy Vehicles (%)	2%	2%	2%	2%	10%	10%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2244	3352	0	0	225
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	471	1661	22	28	2041	182	32	8	25	194	7	975
Future Volume (veh/h)	471	1661	22	28	2041	182	32	8	25	194	7	975
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1900	1863	1900	1845	1845	1845
Adj Flow Rate, veh/h	486	1712	23	30	2195	196	40	10	31	207	0	0
Adj No. of Lanes	2	3	0	1	3	1	0	1	0	2	0	1
Peak Hour Factor	0.97	0.97	0.97	0.93	0.93	0.93	0.80	0.80	0.80	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	3	3
Cap, veh/h	520	3097	42	38	2393	745	33	8	26	586	0	261
Arrive On Green	0.15	0.60	0.60	0.04	0.94	0.94	0.04	0.04	0.04	0.17	0.00	0.00
Sat Flow, veh/h	3442	5171	69	1774	5085	1583	842	211	653	3514	0	1568
Grp Volume(v), veh/h	486	1122	613	30	2195	196	81	0	0	207	0	0
Grp Sat Flow(s),veh/h/ln	1721	1695	1850	1774	1695	1583	1705	0	0	1757	0	1568
Q Serve(g_s), s	25.1	35.7	35.7	3.0	33.5	1.7	7.1	0.0	0.0	9.4	0.0	0.0
Cycle Q Clear(g_c), s	25.1	35.7	35.7	3.0	33.5	1.7	7.1	0.0	0.0	9.4	0.0	0.0
Prop In Lane	1.00		0.04	1.00		1.00	0.49		0.38	1.00		1.00
Lane Grp Cap(c), veh/h	520	2030	1108	38	2393	745	67	0	0	586	0	261
V/C Ratio(X)	0.93	0.55	0.55	0.78	0.92	0.26	1.20	0.00	0.00	0.35	0.00	0.00
Avail Cap(c_a), veh/h	526	2030	1108	82	2393	745	67	0	0	586	0	261
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.68	0.68	0.68	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	75.5	21.6	21.6	85.7	3.8	2.9	86.5	0.0	0.0	66.4	0.0	0.0
Incr Delay (d2), s/veh	23.9	1.1	2.0	20.3	5.0	0.6	174.8	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.7	17.0	18.8	1.7	14.1	0.8	6.6	0.0	0.0	4.6	0.0	0.0
LnGrp Delay(d),s/veh	99.4	22.7	23.6	106.0	8.8	3.5	261.2	0.0	0.0	66.8	0.0	0.0
LnGrp LOS	F	C	C	F	A	A	F			E		
Approach Vol, veh/h		2221			2421			81			207	
Approach Delay, s/veh		39.8			9.6			261.2			66.8	
Approach LOS		D			A			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	33.7	91.4		16.0	10.6	114.5		38.9
Change Period (Y+Rc), s	* 6.5	6.7		* 8.9	6.7	6.7		8.9
Max Green Setting (Gmax), s	* 28	84.4		* 7.1	8.3	103.4		30.0
Max Q Clear Time (g_c+I1), s	27.1	35.5		9.1	5.0	37.7		11.4
Green Ext Time (p_c), s	0.1	47.8		0.0	0.0	58.1		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	29.7
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	1718	125	229	2032	67	107	29	261	35	32	105
Future Volume (veh/h)	42	1718	125	229	2032	67	107	29	261	35	32	105
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	45	1847	134	297	2639	87	123	33	0	43	39	0
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.77	0.77	0.77	0.87	0.87	0.87	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	149	3600	1121	319	3857	1201	180	227	193	185	227	193
Arrive On Green	0.04	1.00	1.00	0.09	1.00	1.00	0.12	0.12	0.00	0.12	0.12	0.00
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583	1363	1863	1583	1370	1863	1583
Grp Volume(v), veh/h	45	1847	134	297	2639	87	123	33	0	43	39	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583	1363	1863	1583	1370	1863	1583
Q Serve(g_s), s	1.3	0.0	0.0	9.7	0.0	0.0	16.0	2.9	0.0	5.2	3.4	0.0
Cycle Q Clear(g_c), s	1.3	0.0	0.0	9.7	0.0	0.0	19.4	2.9	0.0	8.1	3.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	149	3600	1121	319	3857	1201	180	227	193	185	227	193
V/C Ratio(X)	0.30	0.51	0.12	0.93	0.68	0.07	0.68	0.15	0.00	0.23	0.17	0.00
Avail Cap(c_a), veh/h	202	3600	1121	599	3857	1201	257	331	281	262	331	281
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.80	0.80	0.80	0.61	0.61	0.61	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	6.7	0.0	0.0	19.0	0.0	0.0	79.6	70.7	0.0	74.3	70.9	0.0
Incr Delay (d2), s/veh	0.9	0.4	0.2	7.9	0.6	0.1	4.5	0.3	0.0	0.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.1	0.1	15.1	0.2	0.0	6.3	1.5	0.0	2.0	1.8	0.0
LnGrp Delay(d),s/veh	7.6	0.4	0.2	26.9	0.6	0.1	84.1	71.0	0.0	74.9	71.3	0.0
LnGrp LOS	A	A	A	C	A	A	F	E		E	E	
Approach Vol, veh/h		2026			3023			156			82	
Approach Delay, s/veh		0.6			3.2			81.3			73.2	
Approach LOS		A			A			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.6	142.5		27.9	18.7	133.4		27.9
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	9.6	121.0		32.0	41.0	89.0		32.0
Max Q Clear Time (g_c+I1), s	3.3	2.0		21.4	11.7	2.0		10.1
Green Ext Time (p_c), s	0.0	117.6		0.5	0.9	78.2		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	5.6
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	1781	176	181	2069	13	136	9	158	38	10	115
Future Volume (veh/h)	58	1781	176	181	2069	13	136	9	158	38	10	115
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	60	1836	181	238	2722	17	148	10	172	47	12	142
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.76	0.76	0.76	0.92	0.92	0.92	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	112	3132	975	260	3444	1123	280	251	347	203	166	177
Arrive On Green	0.02	0.41	0.41	0.08	0.68	0.68	0.08	0.13	0.13	0.03	0.09	0.09
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	60	1836	181	238	2722	17	148	10	172	47	12	142
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	2.3	50.4	13.1	12.5	66.9	0.6	13.5	0.8	17.1	4.3	1.1	15.8
Cycle Q Clear(g_c), s	2.3	50.4	13.1	12.5	66.9	0.6	13.5	0.8	17.1	4.3	1.1	15.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	112	3132	975	260	3444	1123	280	251	347	203	166	177
V/C Ratio(X)	0.54	0.59	0.19	0.91	0.79	0.02	0.53	0.04	0.50	0.23	0.07	0.80
Avail Cap(c_a), veh/h	170	3132	975	397	3444	1123	280	251	347	235	166	177
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.78	0.44	0.44	0.44	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.3	35.1	24.1	45.1	20.2	7.7	66.4	67.7	61.6	71.5	75.2	78.0
Incr Delay (d2), s/veh	3.1	0.6	0.3	9.8	0.9	0.0	1.9	0.1	1.1	0.6	0.2	22.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	23.8	5.8	12.4	31.3	0.3	6.7	0.4	7.6	2.1	0.6	8.0
LnGrp Delay(d),s/veh	35.4	35.7	24.5	54.9	21.0	7.7	68.3	67.8	62.7	72.1	75.4	100.9
LnGrp LOS	D	D	C	D	C	A	E	E	E	E	E	F
Approach Vol, veh/h		2077			2977			330			201	
Approach Delay, s/veh		34.7			23.7			65.3			92.6	
Approach LOS		C			C			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	127.9	11.7	30.3	21.1	116.9	20.0	22.0
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	10.0	116.0	9.0	21.0	29.0	97.0	14.0	16.0
Max Q Clear Time (g_c+I1), s	4.3	68.9	6.3	19.1	14.5	52.4	15.5	17.8
Green Ext Time (p_c), s	0.0	46.9	0.0	0.1	0.6	42.1	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	32.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	340	1570	67	49	1500	126	120	91	51	98	97	643
Future Volume (veh/h)	340	1570	67	49	1500	126	120	91	51	98	97	643
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	351	1619	69	66	2027	170	129	98	55	111	0	804
Adj No. of Lanes	2	3	1	1	3	1	1	1	0	1	0	2
Peak Hour Factor	0.97	0.97	0.97	0.74	0.74	0.74	0.93	0.93	0.93	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	390	2821	878	82	2480	772	184	240	134	298	0	1293
Arrive On Green	0.11	0.55	0.55	0.05	0.49	0.49	0.22	0.22	0.22	0.05	0.00	0.30
Sat Flow, veh/h	3442	5085	1583	1774	5085	1583	668	1111	624	1757	0	3136
Grp Volume(v), veh/h	351	1619	69	66	2027	170	129	0	153	111	0	804
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1774	1695	1583	668	0	1735	1757	0	1568
Q Serve(g_s), s	18.1	37.4	3.7	6.6	61.1	11.1	33.8	0.0	13.7	8.8	0.0	36.5
Cycle Q Clear(g_c), s	18.1	37.4	3.7	6.6	61.1	11.1	33.8	0.0	13.7	8.8	0.0	36.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	390	2821	878	82	2480	772	184	0	374	298	0	1293
V/C Ratio(X)	0.90	0.57	0.08	0.80	0.82	0.22	0.70	0.00	0.41	0.37	0.00	0.62
Avail Cap(c_a), veh/h	421	2821	878	118	2480	772	222	0	472	298	0	1470
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	78.8	26.2	18.7	85.0	39.3	26.5	68.6	0.0	60.7	51.0	0.0	41.8
Incr Delay (d2), s/veh	18.3	0.7	0.1	21.9	3.1	0.7	7.5	0.0	0.7	0.8	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	17.7	1.6	3.8	29.2	5.0	6.6	0.0	6.6	4.3	0.0	16.0
LnGrp Delay(d),s/veh	97.1	26.9	18.8	106.9	42.4	27.1	76.1	0.0	61.4	51.8	0.0	42.5
LnGrp LOS	F	C	B	F	D	C	E		E	D		D
Approach Vol, veh/h		2039			2263			282			915	
Approach Delay, s/veh		38.7			43.1			68.1			43.6	
Approach LOS		D			D			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	26.4	93.8	15.0	44.8	14.3	105.8		59.8
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	22.6	76.0	9.0	49.0	12.0	86.0		64.0
Max Q Clear Time (g_c+I1), s	20.1	63.1	10.8	35.8	8.6	39.4		38.5
Green Ext Time (p_c), s	0.3	12.7	0.0	3.0	0.0	41.5		4.0

Intersection Summary	
HCM 2010 Ctrl Delay	42.9
HCM 2010 LOS	D

Notes

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	0	18	1	0	6	77	544	37	34	1157	147
Future Vol, veh/h	6	0	18	1	0	6	77	544	37	34	1157	147
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	250	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	4	4	4	4	4	4
Mvmt Flow	6	0	19	1	0	6	81	573	39	36	1218	155

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1817	2142	687	1436	2200	306	1373	0	0	612	0	0
Stage 1	1368	1368	-	755	755	-	-	-	-	-	-	-
Stage 2	449	774	-	681	1445	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	7.56	6.56	6.96	4.18	-	-	4.18	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.53	4.03	3.33	2.24	-	-	2.24	-	-
Pot Cap-1 Maneuver	48	48	387	93	44	687	485	-	-	950	-	-
Stage 1	153	211	-	365	412	-	-	-	-	-	-	-
Stage 2	556	404	-	404	193	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	40	38	387	75	35	687	485	-	-	950	-	-
Mov Cap-2 Maneuver	40	38	-	75	35	-	-	-	-	-	-	-
Stage 1	127	203	-	304	343	-	-	-	-	-	-	-
Stage 2	459	337	-	370	186	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	42.1	16.6	1.6	0.2
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	485	-	-	122	317	950	-	-
HCM Lane V/C Ratio	0.167	-	-	0.207	0.023	0.038	-	-
HCM Control Delay (s)	13.9	-	-	42.1	16.6	8.9	-	-
HCM Lane LOS	B	-	-	E	C	A	-	-
HCM 95th %tile Q(veh)	0.6	-	-	0.7	0.1	0.1	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	38	23	533	1300	2
Future Vol, veh/h	1	38	23	533	1300	2
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	100	135	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	98	98	96	96
Heavy Vehicles, %	2	2	3	3	3	3
Mvmt Flow	1	44	23	544	1354	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1945	1355	1356	0	-	0
Stage 1	1355	-	-	-	-	-
Stage 2	590	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.13	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.227	-	-	-
Pot Cap-1 Maneuver	71	183	504	-	-	-
Stage 1	240	-	-	-	-	-
Stage 2	554	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	68	183	504	-	-	-
Mov Cap-2 Maneuver	68	-	-	-	-	-
Stage 1	229	-	-	-	-	-
Stage 2	554	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	31.5	0.5	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	504	-	68	183	-	-
HCM Lane V/C Ratio	0.047	-	0.017	0.241	-	-
HCM Control Delay (s)	12.5	-	58.9	30.8	-	-
HCM Lane LOS	B	-	F	D	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	0.9	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	30	10	523	1272	2
Future Vol, veh/h	3	30	10	523	1272	2
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	-	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	72	72	95	95	96	96
Heavy Vehicles, %	5	5	3	3	3	3
Mvmt Flow	4	42	11	551	1325	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1899	1326	1327	0	-	0
Stage 1	1326	-	-	-	-	-
Stage 2	573	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.13	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.227	-	-	-
Pot Cap-1 Maneuver	75	187	517	-	-	-
Stage 1	244	-	-	-	-	-
Stage 2	558	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	73	187	517	-	-	-
Mov Cap-2 Maneuver	73	-	-	-	-	-
Stage 1	239	-	-	-	-	-
Stage 2	558	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	35.3	0.2	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	517	-	164	-	-
HCM Lane V/C Ratio	0.02	-	0.279	-	-
HCM Control Delay (s)	12.1	-	35.3	-	-
HCM Lane LOS	B	-	E	-	-
HCM 95th %tile Q(veh)	0.1	-	1.1	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	462	51	361	165	28	812
Future Volume (vph)	462	51	361	165	28	812
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200	0		150	250	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				75	
Satd. Flow (prot)	1770	1583	1845	1568	1752	1845
Flt Permitted	0.950				0.535	
Satd. Flow (perm)	1770	1583	1845	1568	987	1845
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		45		170		
Link Speed (mph)	25		45			45
Link Distance (ft)	569		422			651
Travel Time (s)	15.5		6.4			9.9
Peak Hour Factor	0.89	0.89	0.97	0.97	0.96	0.96
Heavy Vehicles (%)	2%	2%	3%	3%	3%	3%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	519	57	372	170	29	846
Turn Type	Perm	Perm	NA	Perm	Perm	NA
Protected Phases			6			2
Permitted Phases	4	4		6	2	
Total Split (s)	20.0	20.0	90.0	90.0	90.0	90.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Act Effct Green (s)	14.0	14.0	84.0	84.0	84.0	84.0
Actuated g/C Ratio	0.13	0.13	0.76	0.76	0.76	0.76
v/c Ratio	2.31	0.24	0.26	0.14	0.04	0.60
Control Delay	625.5	19.6	4.4	0.8	3.3	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	625.5	19.6	4.4	0.8	3.3	7.8
LOS	F	B	A	A	A	A
Approach Delay	565.6		3.2			7.7
Approach LOS	F		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 2.31			
Intersection Signal Delay: 167.7		Intersection LOS: F	
Intersection Capacity Utilization 78.3%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 10: SC 41 & Joe Rouse Road

Intersection	
Int Delay, s/veh	0.6

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	409	2	0	822	17	1
Future Vol, veh/h	409	2	0	822	17	1
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	98	98	96	96	65	65
Heavy Vehicles, %	3	3	2	2	2	2
Mvmt Flow	417	2	0	856	26	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	419	0	1274	418
Stage 1	-	-	-	-	418	-
Stage 2	-	-	-	-	856	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1140	-	184	635
Stage 1	-	-	-	-	664	-
Stage 2	-	-	-	-	416	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1140	-	184	635
Mov Cap-2 Maneuver	-	-	-	-	184	-
Stage 1	-	-	-	-	664	-
Stage 2	-	-	-	-	416	-

Approach	NB	SB	SW
HCM Control Delay, s	0	0	26.9
HCM LOS			D

Minor Lane/Major Mvmt	NBT	NBR	SBL	SBT	SWLn1
Capacity (veh/h)	-	-	1140	-	192
HCM Lane V/C Ratio	-	-	-	-	0.144
HCM Control Delay (s)	-	-	0	-	26.9
HCM Lane LOS	-	-	A	-	D
HCM 95th %tile Q(veh)	-	-	0	-	0.5

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	4	1	409	818	1
Future Vol, veh/h	0	4	1	409	818	1
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	50	50	98	98	96	96
Heavy Vehicles, %	2	2	2	2	3	3
Mvmt Flow	0	8	1	417	852	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1272	853	853	0	-	0
Stage 1	853	-	-	-	-	-
Stage 2	419	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	185	359	786	-	-	-
Stage 1	418	-	-	-	-	-
Stage 2	664	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	185	359	786	-	-	-
Mov Cap-2 Maneuver	185	-	-	-	-	-
Stage 1	417	-	-	-	-	-
Stage 2	664	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.3	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	786	-	359	-	-
HCM Lane V/C Ratio	0.001	-	0.022	-	-
HCM Control Delay (s)	9.6	-	15.3	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	6	4	406	814	3
Future Vol, veh/h	2	6	4	406	814	3
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	69	69	99	99	94	94
Heavy Vehicles, %	2	2	3	3	2	2
Mvmt Flow	3	9	4	410	866	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1286	868	869	0	-	0
Stage 1	868	-	-	-	-	-
Stage 2	418	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.13	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.227	-	-	-
Pot Cap-1 Maneuver	181	352	771	-	-	-
Stage 1	411	-	-	-	-	-
Stage 2	664	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	180	352	771	-	-	-
Mov Cap-2 Maneuver	180	-	-	-	-	-
Stage 1	408	-	-	-	-	-
Stage 2	664	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.2	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	771	-	284	-	-
HCM Lane V/C Ratio	0.005	-	0.041	-	-
HCM Control Delay (s)	9.7	0	18.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

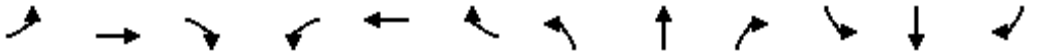
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	0	408	0	0	816
Future Vol, veh/h	1	0	408	0	0	816
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	50	50	94	94	94	94
Heavy Vehicles, %	2	2	2	2	3	3
Mvmt Flow	2	0	434	0	0	868

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1302	434	0	0	434	0
Stage 1	434	-	-	-	-	-
Stage 2	868	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.13	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.227	-
Pot Cap-1 Maneuver	177	622	-	-	1120	-
Stage 1	653	-	-	-	-	-
Stage 2	411	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	177	622	-	-	1120	-
Mov Cap-2 Maneuver	177	-	-	-	-	-
Stage 1	653	-	-	-	-	-
Stage 2	411	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.6	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	177	1120	-
HCM Lane V/C Ratio	-	-	0.011	-	-
HCM Control Delay (s)	-	-	25.6	0	-
HCM Lane LOS	-	-	D	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	217	285	140	78	163	74	287	47	141	395	12
Future Volume (veh/h)	81	217	285	140	78	163	74	287	47	141	395	12
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	87	233	306	161	90	187	80	309	51	152	425	13
Adj No. of Lanes	1	1	1	1	1	1	1	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.87	0.87	0.87	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	356	418	355	371	759	645	244	421	358	342	495	420
Arrive On Green	0.22	0.22	0.22	0.09	0.41	0.41	0.05	0.23	0.23	0.09	0.27	0.27
Sat Flow, veh/h	1098	1863	1583	1774	1863	1583	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	87	233	306	161	90	187	80	309	51	152	425	13
Grp Sat Flow(s),veh/h/ln	1098	1863	1583	1774	1863	1583	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	4.4	7.3	12.2	4.3	2.0	5.2	2.3	10.2	1.7	4.2	14.4	0.4
Cycle Q Clear(g_c), s	4.4	7.3	12.2	4.3	2.0	5.2	2.3	10.2	1.7	4.2	14.4	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	356	418	355	371	759	645	244	421	358	342	495	420
V/C Ratio(X)	0.24	0.56	0.86	0.43	0.12	0.29	0.33	0.73	0.14	0.44	0.86	0.03
Avail Cap(c_a), veh/h	377	453	385	450	878	747	396	477	405	423	495	420
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	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	21.5	22.6	24.5	16.2	12.1	13.1	19.1	23.5	20.2	17.6	22.9	17.8
Incr Delay (d2), s/veh	0.4	1.3	16.9	0.8	0.1	0.2	0.8	5.1	0.2	0.9	14.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	3.9	6.9	2.1	1.0	2.3	1.1	5.7	0.8	2.1	9.3	0.2
LnGrp Delay(d),s/veh	21.8	23.9	41.4	17.0	12.2	13.3	19.8	28.6	20.4	18.5	37.0	17.8
LnGrp LOS	C	C	D	B	B	B	B	C	C	B	D	B
Approach Vol, veh/h		626			438			440			590	
Approach Delay, s/veh		32.2			14.5			26.1			31.8	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.3	23.6		32.8	11.9	21.0	12.1	20.7
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	17.0		31.0	9.0	17.0	9.0	16.0
Max Q Clear Time (g_c+I1), s	4.3	16.4		7.2	6.2	12.2	6.3	14.2
Green Ext Time (p_c), s	0.1	0.3		0.9	0.1	1.8	0.1	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	27.1
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	10.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	76	85	3	2	15	63	459	9	72	460	6
Future Vol, veh/h	28	76	85	3	2	15	63	459	9	72	460	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	75	-	-	75	-	-	170	-	250	170	-	170
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	46	46	46	92	92	92	95	95	95
Heavy Vehicles, %	2	2	2	25	25	25	3	3	3	3	3	3
Mvmt Flow	33	88	99	7	4	33	68	499	10	76	484	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1295	1281	484	1368	1277	499	490	0	0	509	0	0
Stage 1	636	636	-	635	635	-	-	-	-	-	-	-
Stage 2	659	645	-	733	642	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.35	6.75	6.45	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.35	5.75	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.35	5.75	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.725	4.225	3.525	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	139	166	583	111	150	528	1068	-	-	1051	-	-
Stage 1	466	472	-	430	438	-	-	-	-	-	-	-
Stage 2	453	467	-	378	435	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	114	144	583	43	130	528	1068	-	-	1051	-	-
Mov Cap-2 Maneuver	114	144	-	43	130	-	-	-	-	-	-	-
Stage 1	436	438	-	402	410	-	-	-	-	-	-	-
Stage 2	394	437	-	232	404	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	57.5	28.5	1	1.2
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1068	-	-	114	239	43	388	1051	-	-
HCM Lane V/C Ratio	0.064	-	-	0.286	0.783	0.152	0.095	0.072	-	-
HCM Control Delay (s)	8.6	-	-	48.7	59	103.1	15.3	8.7	-	-
HCM Lane LOS	A	-	-	E	F	F	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.1	5.7	0.5	0.3	0.2	-	-

Intersection	
Int Delay, s/veh	4.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	71	133	460	42	65	467
Future Vol, veh/h	71	133	460	42	65	467
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	200	0	-	250	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	91	91	88	88
Heavy Vehicles, %	2	2	3	3	3	3
Mvmt Flow	83	155	505	46	74	531

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1184	505	0	0	551	0
Stage 1	505	-	-	-	-	-
Stage 2	679	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.13	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.227	-
Pot Cap-1 Maneuver	209	567	-	-	1014	-
Stage 1	606	-	-	-	-	-
Stage 2	504	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	194	567	-	-	1014	-
Mov Cap-2 Maneuver	194	-	-	-	-	-
Stage 1	562	-	-	-	-	-
Stage 2	504	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.7	0	1.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	194	567	1014	-
HCM Lane V/C Ratio	-	-	0.426	0.273	0.073	-
HCM Control Delay (s)	-	-	36.6	13.7	8.8	-
HCM Lane LOS	-	-	E	B	A	-
HCM 95th %tile Q(veh)	-	-	1.9	1.1	0.2	-

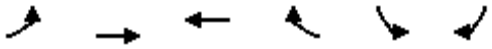
Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	103	340	477	3	2	200
Future Vol, veh/h	103	340	477	3	2	200
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	94	94	84	84	68	68
Heavy Vehicles, %	6	6	6	6	10	10
Mvmt Flow	110	362	568	4	3	294

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	572	0	-	0	1152	570
Stage 1	-	-	-	-	570	-
Stage 2	-	-	-	-	582	-
Critical Hdwy	4.16	-	-	-	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	2.254	-	-	-	3.59	3.39
Pot Cap-1 Maneuver	981	-	-	-	211	506
Stage 1	-	-	-	-	550	-
Stage 2	-	-	-	-	543	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	981	-	-	-	181	506
Mov Cap-2 Maneuver	-	-	-	-	181	-
Stage 1	-	-	-	-	473	-
Stage 2	-	-	-	-	543	-

Approach	EB	WB	SW
HCM Control Delay, s	2.1	0	22.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SWLn1
Capacity (veh/h)	981	-	-	-	497
HCM Lane V/C Ratio	0.112	-	-	-	0.598
HCM Control Delay (s)	9.1	0	-	-	22.4
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.4	-	-	-	3.9



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	104	365	566	111	78	169
Future Volume (veh/h)	104	365	566	111	78	169
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1900	1696	1696
Adj Flow Rate, veh/h	108	380	682	134	94	0
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.96	0.96	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	6	6	6	6	12	12
Cap, veh/h	302	1122	588	116	114	102
Arrive On Green	0.07	0.63	0.40	0.40	0.07	0.00
Sat Flow, veh/h	1707	1792	1456	286	1616	1442
Grp Volume(v), veh/h	108	380	0	816	94	0
Grp Sat Flow(s),veh/h/ln	1707	1792	0	1742	1616	1442
Q Serve(g_s), s	1.3	4.0	0.0	16.0	2.3	0.0
Cycle Q Clear(g_c), s	1.3	4.0	0.0	16.0	2.3	0.0
Prop In Lane	1.00			0.16	1.00	1.00
Lane Grp Cap(c), veh/h	302	1122	0	704	114	102
V/C Ratio(X)	0.36	0.34	0.00	1.16	0.82	0.00
Avail Cap(c_a), veh/h	570	1122	0	704	367	328
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	8.9	3.5	0.0	11.8	18.1	0.0
Incr Delay (d2), s/veh	0.7	0.8	0.0	86.9	13.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.2	0.0	24.4	1.4	0.0
LnGrp Delay(d),s/veh	9.6	4.3	0.0	98.7	31.5	0.0
LnGrp LOS	A	A		F	C	
Approach Vol, veh/h		488	816		94	
Approach Delay, s/veh		5.5	98.7		31.5	
Approach LOS		A	F		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		30.8		8.8	8.8	22.0		
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0		
Max Green Setting (Gmax), s		16.0		9.0	9.0	16.0		
Max Q Clear Time (g_c+I1), s		6.0		4.3	3.3	18.0		
Green Ext Time (p_c), s		4.4		0.1	0.1	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	61.6
HCM 2010 LOS	E

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0
Number	3	18	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	0	0	0	0	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	9999	9999	9999	9999	9999	9999
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	1583	1774	1863	111765	1583
Grp Volume(v), veh/h	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1863	1863	1583
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS						
Approach Vol, veh/h	0			0	0	
Approach Delay, s/veh	0.0			0.0	0.0	
Approach LOS						

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		0.0				0.0		0.0
Change Period (Y+Rc), s		6.0				6.0		6.0
Max Green Setting (Gmax), s		16.0				16.0		16.0
Max Q Clear Time (g_c+I1), s		0.0				0.0		0.0
Green Ext Time (p_c), s		0.0				0.0		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		0.0
HCM 2010 LOS		A

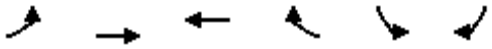
Intersection	
Int Delay, s/veh	7.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	215	198	194	26	55	134
Future Vol, veh/h	215	198	194	26	55	134
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	275	0	-	100	175	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	3	3	3	3
Mvmt Flow	239	220	216	29	61	149

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	487	216	0	0	245	0
Stage 1	216	-	-	-	-	-
Stage 2	271	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.13	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.227	-
Pot Cap-1 Maneuver	540	824	-	-	1315	-
Stage 1	820	-	-	-	-	-
Stage 2	775	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	515	824	-	-	1315	-
Mov Cap-2 Maneuver	515	-	-	-	-	-
Stage 1	782	-	-	-	-	-
Stage 2	775	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.6	0	2.3
HCM LOS	B		

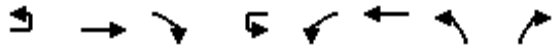
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	515	824	1315	-
HCM Lane V/C Ratio	-	-	0.464	0.267	0.046	-
HCM Control Delay (s)	-	-	17.9	11	7.9	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	2.4	1.1	0.1	-



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	60	1577	2580	1046	574	95
Future Volume (veh/h)	60	1577	2580	1046	574	95
Number	1	6	2	12	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1863	1863
Adj Flow Rate, veh/h	63	1660	2716	1101	604	100
Adj No. of Lanes	1	3	3	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	2	2
Cap, veh/h	88	3711	3436	1378	676	345
Arrive On Green	0.02	0.74	0.68	0.68	0.20	0.20
Sat Flow, veh/h	1757	5202	5202	1568	3442	1583
Grp Volume(v), veh/h	63	1660	2716	1101	604	100
Grp Sat Flow(s),veh/h/ln	1757	1679	1679	1568	1721	1583
Q Serve(g_s), s	1.9	23.3	66.9	51.5	30.8	9.5
Cycle Q Clear(g_c), s	1.9	23.3	66.9	51.5	30.8	9.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	88	3711	3436	1378	676	345
V/C Ratio(X)	0.72	0.45	0.79	0.80	0.89	0.29
Avail Cap(c_a), veh/h	138	3711	3436	1378	918	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.14	0.14	1.00	1.00
Uniform Delay (d), s/veh	46.2	9.3	19.7	4.4	70.5	58.8
Incr Delay (d2), s/veh	9.5	0.4	0.3	0.7	8.8	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	10.9	30.8	55.0	15.5	4.2
LnGrp Delay(d),s/veh	55.8	9.6	20.0	5.2	79.3	59.3
LnGrp LOS	E	A	B	A	E	E
Approach Vol, veh/h		1723	3817		704	
Approach Delay, s/veh		11.3	15.7		76.4	
Approach LOS		B	B		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	9.8	128.8				138.7		41.3
Change Period (Y+Rc), s	6.0	6.0				6.0		6.0
Max Green Setting (Gmax), s	9.0	105.0				120.0		48.0
Max Q Clear Time (g_c+I1), s	3.9	68.9				25.3		32.8
Green Ext Time (p_c), s	0.0	36.0				77.5		2.6

Intersection Summary	
HCM 2010 Ctrl Delay	21.3
HCM 2010 LOS	C



Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations								
Traffic Volume (veh/h)	18	1523	58	3	115	2558	65	111
Future Volume (veh/h)	18	1523	58	3	115	2558	65	111
Number		6	16		5	2	7	14
Initial Q (Qb), veh		0	0		0	0	0	0
Ped-Bike Adj(A_pbT)			1.00		1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1845	1845		1845	1845	1845	1845
Adj Flow Rate, veh/h		1620	62		122	2721	69	118
Adj No. of Lanes		3	1		1	3	1	1
Peak Hour Factor		0.94	0.94		0.94	0.94	0.94	0.94
Percent Heavy Veh, %		3	3		3	3	3	3
Cap, veh/h		3972	1371		284	4269	151	134
Arrive On Green		0.79	0.79		0.05	1.00	0.09	0.09
Sat Flow, veh/h		5202	1568		1757	5202	1757	1568
Grp Volume(v), veh/h		1620	62		122	2721	69	118
Grp Sat Flow(s),veh/h/ln		1679	1568		1757	1679	1757	1568
Q Serve(g_s), s		18.0	0.9		2.5	0.0	6.7	13.4
Cycle Q Clear(g_c), s		18.0	0.9		2.5	0.0	6.7	13.4
Prop In Lane			1.00		1.00		1.00	1.00
Lane Grp Cap(c), veh/h		3972	1371		284	4269	151	134
V/C Ratio(X)		0.41	0.05		0.43	0.64	0.46	0.88
Avail Cap(c_a), veh/h		3972	1371		347	4269	156	139
HCM Platoon Ratio		1.00	1.00		2.00	2.00	1.00	1.00
Upstream Filter(I)		1.00	1.00		0.44	0.44	1.00	1.00
Uniform Delay (d), s/veh		5.9	1.5		4.7	0.0	78.3	81.4
Incr Delay (d2), s/veh		0.1	0.0		0.4	0.3	2.2	41.6
Initial Q Delay(d3),s/veh		0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		8.3	0.7		1.1	0.1	3.4	12.8
LnGrp Delay(d),s/veh		6.0	1.5		5.2	0.3	80.5	123.0
LnGrp LOS		A	A		A	A	F	F
Approach Vol, veh/h		1682				2843	187	
Approach Delay, s/veh		5.8				0.5	107.3	
Approach LOS		A				A	F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		158.6		21.4	10.6	148.0		
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0		
Max Green Setting (Gmax), s		152.0		16.0	11.0	135.0		
Max Q Clear Time (g_c+I1), s		2.0		15.4	4.5	20.0		
Green Ext Time (p_c), s		148.2		0.0	0.1	88.8		

Intersection Summary	
HCM 2010 Ctrl Delay	6.7
HCM 2010 LOS	A

Notes

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	56	61	187	120	99	74
Future Vol, veh/h	56	61	187	120	99	74
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	6	6
Mvmt Flow	61	66	203	130	108	80
Number of Lanes	1	1	1	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	2
HCM Control Delay	9.1	10.2	8.5
HCM LOS	A	B	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	187	120	56	61	99	74
LT Vol	187	0	56	0	0	0
Through Vol	0	120	0	0	99	0
RT Vol	0	0	0	61	0	74
Lane Flow Rate	203	130	61	66	108	80
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.315	0.184	0.106	0.094	0.158	0.102
Departure Headway (Hd)	5.575	5.072	6.296	5.089	5.292	4.587
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	644	706	569	702	676	779
Service Time	3.315	2.812	4.045	2.837	3.037	2.332
HCM Lane V/C Ratio	0.315	0.184	0.107	0.094	0.16	0.103
HCM Control Delay	10.9	9	9.8	8.4	9	7.9
HCM Lane LOS	B	A	A	A	A	A
HCM 95th-tile Q	1.3	0.7	0.4	0.3	0.6	0.3

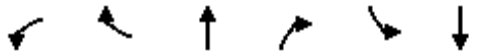
Intersection	
Int Delay, s/veh	4.7

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	21	88	10	1	172	128	49	41	15	9	52	1
Future Vol, veh/h	21	88	10	1	172	128	49	41	15	9	52	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	82	82	82	83	83	83	78	78	78
Heavy Vehicles, %	3	3	3	3	3	3	8	8	8	8	8	8
Mvmt Flow	23	97	11	1	210	156	59	49	18	12	67	1

Major/Minor	Major1			Major2			Minor2			Minor1		
Conflicting Flow All	366	0	0	108	0	0	473	444	288	473	517	103
Stage 1	-	-	-	-	-	-	290	290	-	149	149	-
Stage 2	-	-	-	-	-	-	183	154	-	324	368	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.18	6.58	6.28	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	1187	-	-	1476	-	-	492	500	737	492	454	936
Stage 1	-	-	-	-	-	-	705	662	-	839	763	-
Stage 2	-	-	-	-	-	-	805	759	-	676	611	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1187	-	-	1476	-	-	428	489	737	435	444	936
Mov Cap-2 Maneuver	-	-	-	-	-	-	428	489	-	435	444	-
Stage 1	-	-	-	-	-	-	690	661	-	821	747	-
Stage 2	-	-	-	-	-	-	717	743	-	610	610	-

Approach	NB	SB	NE	SW
HCM Control Delay, s	1.4	0	15.2	14.8
HCM LOS			C	B

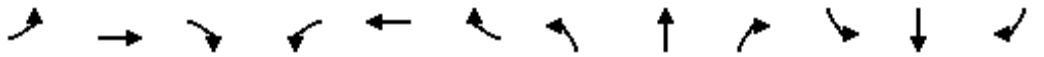
Minor Lane/Major Mvmt	NELn1	NBL	NBT	NBR	SBL	SBT	SBR	SWLn1
Capacity (veh/h)	480	1187	-	-	1476	-	-	446
HCM Lane V/C Ratio	0.264	0.019	-	-	0.001	-	-	0.178
HCM Control Delay (s)	15.2	8.1	0	-	7.4	0	-	14.8
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1	0.1	-	-	0	-	-	0.6



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	192	4	476	117	2	340
Future Volume (veh/h)	192	4	476	117	2	340
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1676	1676	1660	1660	1660	1660
Adj Flow Rate, veh/h	226	0	553	0	2	354
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.85	0.85	0.86	0.86	0.96	0.96
Percent Heavy Veh, %	2	2	3	3	3	3
Cap, veh/h	257	230	546	464	475	499
Arrive On Green	0.16	0.00	0.33	0.00	0.30	0.30
Sat Flow, veh/h	1597	1425	1660	1411	1581	1660
Grp Volume(v), veh/h	226	0	553	0	2	354
Grp Sat Flow(s),veh/h/ln	1597	1425	1660	1411	1581	1660
Q Serve(g_s), s	12.4	0.0	29.6	0.0	0.1	17.0
Cycle Q Clear(g_c), s	12.4	0.0	29.6	0.0	0.1	17.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	257	230	546	464	475	499
V/C Ratio(X)	0.88	0.00	1.01	0.00	0.00	0.71
Avail Cap(c_a), veh/h	284	254	546	464	802	842
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	36.9	0.0	30.2	0.0	22.0	28.0
Incr Delay (d2), s/veh	23.8	0.0	41.5	0.0	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	0.0	19.8	0.0	0.0	8.0
LnGrp Delay(d),s/veh	60.7	0.0	71.7	0.0	22.0	29.8
LnGrp LOS	E		F		C	C
Approach Vol, veh/h	226		553			356
Approach Delay, s/veh	60.7		71.7			29.8
Approach LOS	E		E			C

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		33.4		20.5		36.0		
Change Period (Y+Rc), s		6.4		6.0		6.4		
Max Green Setting (Gmax), s		45.6		16.0		29.6		
Max Q Clear Time (g_c+I1), s		19.0		14.4		31.6		
Green Ext Time (p_c), s		8.0		0.1		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	56.4
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	2850	99	56	2068	71	121	53	154	115	31	115
Future Volume (veh/h)	110	2850	99	56	2068	71	121	53	154	115	31	115
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	112	2908	101	59	2177	75	138	60	175	134	36	134
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.98	0.98	0.98	0.95	0.95	0.95	0.88	0.88	0.88	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	169	3509	1093	99	3460	1181	215	106	123	185	137	116
Arrive On Green	0.03	0.69	0.69	0.02	0.68	0.68	0.06	0.06	0.06	0.07	0.07	0.07
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	112	2908	101	59	2177	75	138	60	175	134	36	134
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	3.5	74.5	3.8	1.8	43.1	2.3	11.0	5.7	10.2	11.8	3.3	13.2
Cycle Q Clear(g_c), s	3.5	74.5	3.8	1.8	43.1	2.3	11.0	5.7	10.2	11.8	3.3	13.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	169	3509	1093	99	3460	1181	215	106	123	185	137	116
V/C Ratio(X)	0.66	0.83	0.09	0.60	0.63	0.06	0.64	0.57	1.42	0.72	0.26	1.15
Avail Cap(c_a), veh/h	258	3509	1093	175	3460	1181	215	106	123	185	137	116
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.63	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.5	20.2	9.2	40.9	16.1	6.1	76.1	82.8	83.0	75.6	78.8	83.4
Incr Delay (d2), s/veh	2.8	1.5	0.1	5.6	0.9	0.1	6.3	7.0	230.5	13.1	1.0	130.9
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(50%),veh/ln	3.9	35.0	1.7	2.2	20.2	1.0	1.6	3.1	14.0	1.5	1.7	10.0
LnGrp Delay(d),s/veh	26.3	21.7	9.3	46.5	17.0	6.2	82.4	89.8	313.5	88.7	79.8	214.3
LnGrp LOS	C	C	A	D	B	A	F	F	F	F	E	F
Approach Vol, veh/h		3121			2311			373			304	
Approach Delay, s/veh		21.5			17.4			192.0			143.0	
Approach LOS		C			B			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	129.0	20.0	19.0	10.3	130.7	17.0	22.0
Change Period (Y+Rc), s	6.4	* 6.5	* 8.2	8.8	* 6.5	* 6.5	6.0	8.8
Max Green Setting (Gmax), s	14.6	* 1.1E2	* 12	10.2	* 12	* 1.2E2	11.0	13.2
Max Q Clear Time (g_c+I1), s	5.5	45.1	13.8	12.2	3.8	76.5	13.0	15.2
Green Ext Time (p_c), s	0.2	66.2	0.0	0.0	0.1	39.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	36.4
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1074	1970	83	34	1348	257	33	26	49	213	16	770
Future Volume (veh/h)	1074	1970	83	34	1348	257	33	26	49	213	16	770
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1900	1863	1900	1845	1845	1845
Adj Flow Rate, veh/h	1107	2031	86	37	1449	276	41	32	61	234	0	0
Adj No. of Lanes	2	3	0	1	3	1	0	1	0	2	0	1
Peak Hour Factor	0.97	0.97	0.97	0.93	0.93	0.93	0.80	0.80	0.80	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	3	3
Cap, veh/h	1061	2860	121	48	1480	461	32	25	48	586	0	261
Arrive On Green	0.31	0.57	0.57	0.05	0.58	0.58	0.06	0.06	0.06	0.17	0.00	0.00
Sat Flow, veh/h	3442	5004	211	1774	5085	1583	520	406	774	3514	0	1568
Grp Volume(v), veh/h	1107	1374	743	37	1449	276	134	0	0	234	0	0
Grp Sat Flow(s),veh/h/ln	1721	1695	1825	1774	1695	1583	1700	0	0	1757	0	1568
Q Serve(g_s), s	55.5	52.6	52.9	3.7	49.8	20.1	11.1	0.0	0.0	10.7	0.0	0.0
Cycle Q Clear(g_c), s	55.5	52.6	52.9	3.7	49.8	20.1	11.1	0.0	0.0	10.7	0.0	0.0
Prop In Lane	1.00		0.12	1.00		1.00	0.31		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	1061	1938	1043	48	1480	461	105	0	0	586	0	261
V/C Ratio(X)	1.04	0.71	0.71	0.78	0.98	0.60	1.28	0.00	0.00	0.40	0.00	0.00
Avail Cap(c_a), veh/h	1061	1938	1043	92	1480	461	105	0	0	586	0	261
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.83	0.83	0.83	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	62.3	27.8	27.9	84.7	37.1	30.9	84.5	0.0	0.0	67.0	0.0	0.0
Incr Delay (d2), s/veh	39.6	2.2	4.1	19.9	16.8	4.7	180.0	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	32.2	25.2	27.8	2.1	25.4	9.3	10.5	0.0	0.0	5.2	0.0	0.0
LnGrp Delay(d),s/veh	101.8	30.0	32.0	104.6	53.9	35.6	264.5	0.0	0.0	67.4	0.0	0.0
LnGrp LOS	F	C	C	F	D	D	F			E		
Approach Vol, veh/h		3224			1762			134			234	
Approach Delay, s/veh		55.1			52.1			264.5			67.4	
Approach LOS		E			D			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	62.0	59.1		20.0	11.5	109.6		38.9
Change Period (Y+Rc), s	* 6.5	6.7		* 8.9	6.7	6.7		8.9
Max Green Setting (Gmax), s	* 56	52.4		* 11	9.3	98.4		30.0
Max Q Clear Time (g_c+I1), s	57.5	51.8		13.1	5.7	54.9		12.7
Green Ext Time (p_c), s	0.0	0.6		0.0	0.0	42.3		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	59.9
HCM 2010 LOS	E

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	2024	147	119	1430	47	154	43	267	46	33	49
Future Volume (veh/h)	70	2024	147	119	1430	47	154	43	267	46	33	49
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	75	2176	158	155	1857	61	177	49	0	56	40	0
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.77	0.77	0.77	0.87	0.87	0.87	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	244	3548	1105	218	3631	1131	236	303	257	229	303	257
Arrive On Green	0.05	1.00	1.00	0.08	1.00	1.00	0.16	0.16	0.00	0.16	0.16	0.00
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583	1362	1863	1583	1351	1863	1583
Grp Volume(v), veh/h	75	2176	158	155	1857	61	177	49	0	56	40	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583	1362	1863	1583	1351	1863	1583
Q Serve(g_s), s	2.3	0.0	0.0	4.8	0.0	0.0	23.0	4.1	0.0	6.7	3.3	0.0
Cycle Q Clear(g_c), s	2.3	0.0	0.0	4.8	0.0	0.0	26.3	4.1	0.0	10.8	3.3	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	244	3548	1105	218	3631	1131	236	303	257	229	303	257
V/C Ratio(X)	0.31	0.61	0.14	0.71	0.51	0.05	0.75	0.16	0.00	0.24	0.13	0.00
Avail Cap(c_a), veh/h	291	3548	1105	364	3631	1131	325	424	361	317	424	361
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.62	0.62	0.62	0.84	0.84	0.84	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	7.1	0.0	0.0	6.6	0.0	0.0	75.8	64.8	0.0	69.5	64.5	0.0
Incr Delay (d2), s/veh	0.4	0.5	0.2	3.6	0.4	0.1	6.2	0.2	0.0	0.5	0.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.2	0.1	2.5	0.1	0.0	9.1	2.1	0.0	2.5	1.7	0.0
LnGrp Delay(d),s/veh	7.6	0.5	0.2	10.2	0.4	0.1	81.9	65.1	0.0	70.0	64.7	0.0
LnGrp LOS	A	A	A	B	A	A	F	E		E	E	
Approach Vol, veh/h		2409			2073			226			96	
Approach Delay, s/veh		0.7			1.2			78.3			67.8	
Approach LOS		A			A			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.2	134.5		35.3	13.1	131.6		35.3
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	9.6	112.0		41.0	22.0	99.0		41.0
Max Q Clear Time (g_c+I1), s	4.3	2.0		28.3	6.8	2.0		12.8
Green Ext Time (p_c), s	0.1	96.3		0.9	0.4	92.8		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	5.9
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	2042	170	184	1367	25	146	14	198	32	17	65
Future Volume (veh/h)	130	2042	170	184	1367	25	146	14	198	32	17	65
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	134	2105	175	242	1799	33	159	15	215	40	21	80
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.76	0.76	0.76	0.92	0.92	0.92	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	232	3241	1009	265	3386	1098	279	248	319	168	127	171
Arrive On Green	0.08	1.00	1.00	0.07	0.67	0.67	0.09	0.13	0.13	0.03	0.07	0.07
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	134	2105	175	242	1799	33	159	15	215	40	21	80
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	5.0	0.0	0.0	9.6	32.9	1.2	14.7	1.3	22.6	3.8	1.9	8.5
Cycle Q Clear(g_c), s	5.0	0.0	0.0	9.6	32.9	1.2	14.7	1.3	22.6	3.8	1.9	8.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	232	3241	1009	265	3386	1098	279	248	319	168	127	171
V/C Ratio(X)	0.58	0.65	0.17	0.91	0.53	0.03	0.57	0.06	0.67	0.24	0.16	0.47
Avail Cap(c_a), veh/h	310	3241	1009	459	3386	1098	282	248	319	207	166	204
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.70	0.70	0.70	0.73	0.73	0.73	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.9	0.0	0.0	24.4	15.5	8.6	67.8	68.1	66.4	75.2	79.0	75.4
Incr Delay (d2), s/veh	1.6	0.7	0.3	10.7	0.4	0.0	2.7	0.1	5.5	0.7	0.6	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.2	0.1	12.7	15.5	0.5	7.4	0.7	10.4	1.9	1.0	3.8
LnGrp Delay(d),s/veh	15.5	0.7	0.3	35.1	16.0	8.7	70.5	68.2	71.9	76.0	79.6	77.4
LnGrp LOS	B	A	A	D	B	A	E	E	E	E	E	E
Approach Vol, veh/h		2414			2074			389			141	
Approach Delay, s/veh		1.5			18.1			71.2			77.3	
Approach LOS		A			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.1	125.9	11.0	30.0	18.3	120.7	22.7	18.3
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	15.0	108.0	9.0	24.0	32.0	91.0	17.0	16.0
Max Q Clear Time (g_c+I1), s	7.6	34.9	5.8	24.6	11.6	2.0	16.7	10.5
Green Ext Time (p_c), s	0.2	65.5	0.0	0.0	0.7	84.6	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	15.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	658	1513	102	40	1043	164	78	198	25	155	94	455
Future Volume (veh/h)	658	1513	102	40	1043	164	78	198	25	155	94	455
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1845	1845	1900	1845	1845	1845
Adj Flow Rate, veh/h	678	1560	105	54	1409	222	84	213	27	176	0	588
Adj No. of Lanes	2	3	1	1	3	1	1	1	0	1	0	2
Peak Hour Factor	0.97	0.97	0.97	0.74	0.74	0.74	0.93	0.93	0.93	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	735	2952	919	69	2063	642	165	246	31	232	0	1550
Arrive On Green	0.21	0.58	0.58	0.04	0.41	0.41	0.15	0.15	0.15	0.09	0.00	0.28
Sat Flow, veh/h	3442	5085	1583	1774	5085	1583	817	1605	203	1757	0	3136
Grp Volume(v), veh/h	678	1560	105	54	1409	222	84	0	240	176	0	588
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1774	1695	1583	817	0	1809	1757	0	1568
Q Serve(g_s), s	34.7	33.4	5.4	5.4	41.0	17.4	17.5	0.0	23.3	14.9	0.0	21.0
Cycle Q Clear(g_c), s	34.7	33.4	5.4	5.4	41.0	17.4	17.5	0.0	23.3	14.9	0.0	21.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	735	2952	919	69	2063	642	165	0	277	232	0	1550
V/C Ratio(X)	0.92	0.53	0.11	0.79	0.68	0.35	0.51	0.00	0.87	0.76	0.00	0.38
Avail Cap(c_a), veh/h	841	2952	919	118	2063	642	185	0	322	252	0	1663
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.73	0.73	0.73	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	69.3	22.8	17.0	85.8	44.0	37.0	71.9	0.0	74.4	57.1	0.0	28.3
Incr Delay (d2), s/veh	11.2	0.5	0.2	17.7	1.9	1.5	2.4	0.0	19.2	11.6	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.7	15.7	2.4	3.0	19.5	7.9	4.1	0.0	13.1	7.9	0.0	9.1
LnGrp Delay(d),s/veh	80.5	23.3	17.1	103.5	45.8	38.4	74.3	0.0	93.5	68.6	0.0	28.5
LnGrp LOS	F	C	B	F	D	D	E		F	E		C
Approach Vol, veh/h		2343			1685			324			764	
Approach Delay, s/veh		39.6			46.7			88.6			37.7	
Approach LOS		D			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	44.4	79.0	23.0	33.6	13.0	110.5		56.5
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	44.6	61.0	19.0	32.0	12.0	93.0		57.0
Max Q Clear Time (g_c+I1), s	36.7	43.0	16.9	25.3	7.4	35.4		23.0
Green Ext Time (p_c), s	1.7	16.5	0.1	2.3	0.0	49.1		2.8

Intersection Summary	
HCM 2010 Ctrl Delay	44.8
HCM 2010 LOS	D

Notes

Intersection	
Int Delay, s/veh	16.1

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	25	960	53	103	1221	34	35	0	32	6	1	26
Future Vol, veh/h	25	960	53	103	1221	34	35	0	32	6	1	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	100	250	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	98	98	98	83	83	83	57	57	57
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	2	2	2
Mvmt Flow	26	1000	55	105	1246	35	42	0	39	11	2	46

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1281	0	0	1055	0	0	1914	2571	528	2026	2581	641
Stage 1	-	-	-	-	-	-	1080	1080	-	1474	1474	-
Stage 2	-	-	-	-	-	-	834	1491	-	552	1107	-
Critical Hdwy	4.16	-	-	4.16	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.23	-	-	2.23	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	532	-	-	650	-	-	~ 41	26	495	34	25	417
Stage 1	-	-	-	-	-	-	233	293	-	133	189	-
Stage 2	-	-	-	-	-	-	329	185	-	486	284	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	532	-	-	650	-	-	~ 29	21	495	26	20	417
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 29	21	-	26	20	-
Stage 1	-	-	-	-	-	-	222	279	-	126	158	-
Stage 2	-	-	-	-	-	-	243	155	-	426	270	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0.3	0.9	$ 436.4	87.9
HCM LOS			F	F

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	53	650	-	-	532	-	- 96
HCM Lane V/C Ratio	1.523	0.162	-	-	0.049	-	- 0.603
HCM Control Delay (s)	$ 436.4	11.6	-	-	12.1	-	- 87.9
HCM Lane LOS	F	B	-	-	B	-	- F
HCM 95th %tile Q(veh)	7.5	0.6	-	-	0.2	-	- 2.9

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

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	32	38	1244	1004	2
Future Vol, veh/h	3	32	38	1244	1004	2
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	100	135	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	98	98	96	96
Heavy Vehicles, %	2	2	3	3	3	3
Mvmt Flow	3	37	39	1269	1046	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2394	1047	1048	0	-	0
Stage 1	1047	-	-	-	-	-
Stage 2	1347	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.13	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.227	-	-	-
Pot Cap-1 Maneuver	37	277	660	-	-	-
Stage 1	338	-	-	-	-	-
Stage 2	242	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	35	277	660	-	-	-
Mov Cap-2 Maneuver	35	-	-	-	-	-
Stage 1	318	-	-	-	-	-
Stage 2	242	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	28.5	0.3	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	660	-	35	277	-	-
HCM Lane V/C Ratio	0.059	-	0.1	0.134	-	-
HCM Control Delay (s)	10.8	-	118.9	20	-	-
HCM Lane LOS	B	-	F	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.3	0.5	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	16	35	1212	990	7
Future Vol, veh/h	2	16	35	1212	990	7
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	-	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	72	72	95	95	96	96
Heavy Vehicles, %	5	5	3	3	3	3
Mvmt Flow	3	22	37	1276	1031	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2385	1035	1038	0	-	0
Stage 1	1035	-	-	-	-	-
Stage 2	1350	-	-	-	-	-
Critical Hdwy	6.45	6.25	4.13	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.345	2.227	-	-	-
Pot Cap-1 Maneuver	37	278	666	-	-	-
Stage 1	338	-	-	-	-	-
Stage 2	238	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	35	278	666	-	-	-
Mov Cap-2 Maneuver	35	-	-	-	-	-
Stage 1	319	-	-	-	-	-
Stage 2	238	-	-	-	-	-

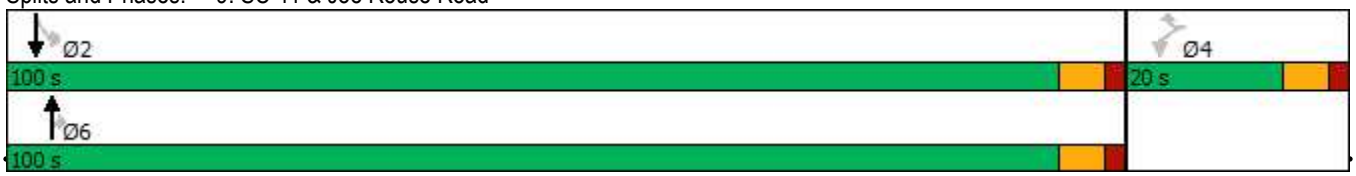
Approach	EB	NB	SB
HCM Control Delay, s	32.2	0.3	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	666	-	157	-	-
HCM Lane V/C Ratio	0.055	-	0.159	-	-
HCM Control Delay (s)	10.7	-	32.2	-	-
HCM Lane LOS	B	-	D	-	-
HCM 95th %tile Q(veh)	0.2	-	0.6	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	284	80	848	366	41	714
Future Volume (vph)	284	80	848	366	41	714
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200	0		150	250	
Storage Lanes	1	1		1	1	
Taper Length (ft)	25				75	
Satd. Flow (prot)	1770	1583	1845	1568	1752	1845
Flt Permitted	0.950				0.272	
Satd. Flow (perm)	1770	1583	1845	1568	502	1845
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		90		377		
Link Speed (mph)	25		45			45
Link Distance (ft)	569		422			651
Travel Time (s)	15.5		6.4			9.9
Peak Hour Factor	0.89	0.89	0.97	0.97	0.96	0.96
Heavy Vehicles (%)	2%	2%	3%	3%	3%	3%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	319	90	874	377	43	744
Turn Type	Perm	Perm	NA	Perm	Perm	NA
Protected Phases			6			2
Permitted Phases	4	4		6	2	
Total Split (s)	20.0	20.0	100.0	100.0	100.0	100.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Act Effct Green (s)	14.0	14.0	94.0	94.0	94.0	94.0
Actuated g/C Ratio	0.12	0.12	0.78	0.78	0.78	0.78
v/c Ratio	1.55	0.34	0.60	0.29	0.11	0.51
Control Delay	305.3	13.6	7.5	0.9	3.8	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	305.3	13.6	7.5	0.9	3.8	6.2
LOS	F	B	A	A	A	A
Approach Delay	241.1		5.5			6.1
Approach LOS	F		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.55			
Intersection Signal Delay: 45.1		Intersection LOS: D	
Intersection Capacity Utilization 70.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 9: SC 41 & Joe Rouse Road



Intersection	
Int Delay, s/veh	0.1

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	916	12	2	751	2	2
Future Vol, veh/h	916	12	2	751	2	2
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	98	98	96	96	65	65
Heavy Vehicles, %	3	3	2	2	2	2
Mvmt Flow	935	12	2	782	3	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	947	0	1727	941
Stage 1	-	-	-	-	941	-
Stage 2	-	-	-	-	786	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	725	-	97	319
Stage 1	-	-	-	-	380	-
Stage 2	-	-	-	-	449	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	725	-	97	319
Mov Cap-2 Maneuver	-	-	-	-	97	-
Stage 1	-	-	-	-	378	-
Stage 2	-	-	-	-	449	-

Approach	NB	SB	SW
HCM Control Delay, s	0	0	30.2
HCM LOS			D

Minor Lane/Major Mvmt	NBT	NBR	SBL	SBT	SWLn1
Capacity (veh/h)	-	-	725	-	149
HCM Lane V/C Ratio	-	-	0.003	-	0.041
HCM Control Delay (s)	-	-	10	0	30.2
HCM Lane LOS	-	-	A	A	D
HCM 95th %tile Q(veh)	-	-	0	-	0.1

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	5	900	753	1
Future Vol, veh/h	0	3	5	900	753	1
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	50	50	98	98	96	96
Heavy Vehicles, %	2	2	2	2	3	3
Mvmt Flow	0	6	5	918	784	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1713	785	785	0	-	0
Stage 1	785	-	-	-	-	-
Stage 2	928	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	99	393	834	-	-	-
Stage 1	449	-	-	-	-	-
Stage 2	385	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	98	393	834	-	-	-
Mov Cap-2 Maneuver	98	-	-	-	-	-
Stage 1	444	-	-	-	-	-
Stage 2	385	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.3	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	834	-	393	-	-
HCM Lane V/C Ratio	0.006	-	0.015	-	-
HCM Control Delay (s)	9.3	-	14.3	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	8	16	902	741	1
Future Vol, veh/h	4	8	16	902	741	1
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	69	69	99	99	94	94
Heavy Vehicles, %	2	2	3	3	2	2
Mvmt Flow	6	12	16	911	788	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1732	789	789	0	-	0
Stage 1	789	-	-	-	-	-
Stage 2	943	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.13	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.227	-	-	-
Pot Cap-1 Maneuver	97	391	826	-	-	-
Stage 1	448	-	-	-	-	-
Stage 2	379	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	93	391	826	-	-	-
Mov Cap-2 Maneuver	93	-	-	-	-	-
Stage 1	431	-	-	-	-	-
Stage 2	379	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	26	0.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	826	-	189	-	-
HCM Lane V/C Ratio	0.02	-	0.092	-	-
HCM Control Delay (s)	9.4	0	26	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

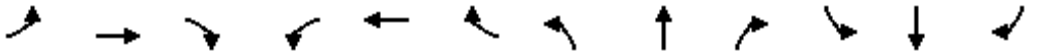
Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	0	905	1	1	742
Future Vol, veh/h	4	0	905	1	1	742
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	50	50	94	94	94	94
Heavy Vehicles, %	2	2	2	2	3	3
Mvmt Flow	8	0	963	1	1	789

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1755	964	0	0	964	0
Stage 1	964	-	-	-	-	-
Stage 2	791	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.13	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.227	-
Pot Cap-1 Maneuver	94	310	-	-	710	-
Stage 1	370	-	-	-	-	-
Stage 2	447	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	94	310	-	-	710	-
Mov Cap-2 Maneuver	94	-	-	-	-	-
Stage 1	369	-	-	-	-	-
Stage 2	447	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	46.8	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	94	710	-
HCM Lane V/C Ratio	-	-	0.085	0.001	-
HCM Control Delay (s)	-	-	46.8	10.1	0
HCM Lane LOS	-	-	E	B	A
HCM 95th %tile Q(veh)	-	-	0.3	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	100	185	121	118	241	227	560	118	324	439	87
Future Volume (veh/h)	57	100	185	121	118	241	227	560	118	324	439	87
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	61	108	199	139	136	277	244	602	127	348	472	94
Adj No. of Lanes	1	1	1	1	1	1	1	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.87	0.87	0.87	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	3	3	3	3	3	3
Cap, veh/h	232	282	240	340	570	485	406	629	535	348	694	590
Arrive On Green	0.15	0.15	0.15	0.08	0.31	0.31	0.11	0.34	0.34	0.14	0.38	0.38
Sat Flow, veh/h	969	1863	1583	1774	1863	1583	1757	1845	1568	1757	1845	1568
Grp Volume(v), veh/h	61	108	199	139	136	277	244	602	127	348	472	94
Grp Sat Flow(s),veh/h/ln	969	1863	1583	1774	1863	1583	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	4.8	4.4	10.4	5.4	4.6	12.5	7.6	27.1	4.9	12.0	18.2	3.4
Cycle Q Clear(g_c), s	4.8	4.4	10.4	5.4	4.6	12.5	7.6	27.1	4.9	12.0	18.2	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	232	282	240	340	570	485	406	629	535	348	694	590
V/C Ratio(X)	0.26	0.38	0.83	0.41	0.24	0.57	0.60	0.96	0.24	1.00	0.68	0.16
Avail Cap(c_a), veh/h	267	351	298	379	679	577	406	629	535	348	694	590
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	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	32.7	32.5	35.0	25.6	22.1	24.8	17.0	27.4	20.1	22.0	22.2	17.6
Incr Delay (d2), s/veh	0.6	0.9	14.7	0.8	0.2	1.1	2.5	26.7	1.0	48.0	5.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	2.3	5.5	2.7	2.4	5.6	3.9	18.4	2.3	12.8	10.3	1.6
LnGrp Delay(d),s/veh	33.3	33.3	49.7	26.4	22.3	25.9	19.5	54.1	21.1	70.0	27.5	18.2
LnGrp LOS	C	C	D	C	C	C	B	D	C	E	C	B
Approach Vol, veh/h		368			552			973			914	
Approach Delay, s/veh		42.1			25.1			41.1			42.7	
Approach LOS		D			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	38.0		32.0	18.0	35.0	13.1	18.9
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	32.0		31.0	12.0	29.0	9.0	16.0
Max Q Clear Time (g_c+I1), s	9.6	20.2		14.5	14.0	29.1	7.4	12.4
Green Ext Time (p_c), s	0.0	5.9		1.3	0.0	0.0	0.1	0.5

Intersection Summary	
HCM 2010 Ctrl Delay	38.6
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	1	98	2	1	7	146	706	6	13	750	37
Future Vol, veh/h	11	1	98	2	1	7	146	706	6	13	750	37
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	75	-	-	75	-	-	170	-	250	170	-	170
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	46	46	46	92	92	92	95	95	95
Heavy Vehicles, %	2	2	2	25	25	25	3	3	3	3	3	3
Mvmt Flow	13	1	114	4	2	15	159	767	7	14	789	39

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1914	1909	789	1979	1941	767	828	0	0	774	0	0
Stage 1	817	817	-	1085	1085	-	-	-	-	-	-	-
Stage 2	1097	1092	-	894	856	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.35	6.75	6.45	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.35	5.75	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.35	5.75	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.725	4.225	3.525	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	51	68	391	40	57	367	799	-	-	837	-	-
Stage 1	370	390	-	237	266	-	-	-	-	-	-	-
Stage 2	258	291	-	306	344	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	39	54	391	23	45	367	799	-	-	837	-	-
Mov Cap-2 Maneuver	39	54	-	23	45	-	-	-	-	-	-	-
Stage 1	296	383	-	190	213	-	-	-	-	-	-	-
Stage 2	196	233	-	213	338	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	31	59.3	1.8	0.2
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	799	-	-	39	368	23	194	837	-	-
HCM Lane V/C Ratio	0.199	-	-	0.328	0.313	0.189	0.09	0.016	-	-
HCM Control Delay (s)	10.6	-	-	137.1	19.2	194.9	25.4	9.4	-	-
HCM Lane LOS	B	-	-	F	C	F	D	A	-	-
HCM 95th %tile Q(veh)	0.7	-	-	1.1	1.3	0.6	0.3	0.1	-	-

Intersection	
Int Delay, s/veh	6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	62	42	622	102	83	738
Future Vol, veh/h	62	42	622	102	83	738
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	200	0	-	250	250	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	91	91	88	88
Heavy Vehicles, %	2	2	3	3	3	3
Mvmt Flow	72	49	684	112	94	839

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1711	684	0	0	796	0
Stage 1	684	-	-	-	-	-
Stage 2	1027	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.13	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.227	-
Pot Cap-1 Maneuver	100	449	-	-	821	-
Stage 1	501	-	-	-	-	-
Stage 2	345	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	89	449	-	-	821	-
Mov Cap-2 Maneuver	89	-	-	-	-	-
Stage 1	444	-	-	-	-	-
Stage 2	345	-	-	-	-	-

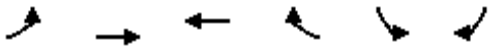
Approach	WB	NB	SB
HCM Control Delay, s	84	0	1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	89	449	821	-
HCM Lane V/C Ratio	-	-	0.81	0.109	0.115	-
HCM Control Delay (s)	-	-	131.4	14	10	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	4.2	0.4	0.4	-

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱	↰	↑	↑	↱
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0
Number	3	18	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	0	0	0	0	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	9999	9999	9999	9999	9999	9999
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	1583	1774	1863	-111765	1583
Grp Volume(v), veh/h	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1863	1863	1583
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS						
Approach Vol, veh/h	0			0	0	
Approach Delay, s/veh	0.0			0.0	0.0	
Approach LOS						

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		0.0				0.0		0.0
Change Period (Y+Rc), s		6.0				6.0		6.0
Max Green Setting (Gmax), s		16.0				16.0		16.0
Max Q Clear Time (g_c+I1), s		0.0				0.0		0.0
Green Ext Time (p_c), s		0.0				0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.0
HCM 2010 LOS	A



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	3127	2141	10	0	54
Future Volume (vph)	0	3127	2141	10	0	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Satd. Flow (prot)	0	5085	6401	0	0	1494
Flt Permitted						
Satd. Flow (perm)	0	5085	6401	0	0	1494
Link Speed (mph)		45	45		30	
Link Distance (ft)		294	988		681	
Travel Time (s)		4.5	15.0		15.5	
Peak Hour Factor	0.96	0.96	0.91	0.91	0.73	0.73
Heavy Vehicles (%)	2%	2%	2%	2%	10%	10%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	3257	2364	0	0	74
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 63.8%		ICU Level of Service B	
Analysis Period (min) 15			

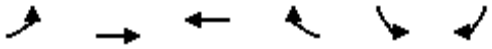
Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	33	45	252	33	32	164
Future Vol, veh/h	33	45	252	33	32	164
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	275	0	-	100	175	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	3	3	3	3
Mvmt Flow	35	47	265	35	34	173

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	506	265	0	0	300	0
Stage 1	265	-	-	-	-	-
Stage 2	241	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.13	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.227	-
Pot Cap-1 Maneuver	526	774	-	-	1255	-
Stage 1	779	-	-	-	-	-
Stage 2	799	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	512	774	-	-	1255	-
Mov Cap-2 Maneuver	512	-	-	-	-	-
Stage 1	758	-	-	-	-	-
Stage 2	799	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	1.3
HCM LOS	B		

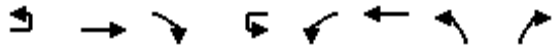
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	512	774	1255	-
HCM Lane V/C Ratio	-	-	0.068	0.061	0.027	-
HCM Control Delay (s)	-	-	12.5	10	7.9	-
HCM Lane LOS	-	-	B	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0.2	0.1	-



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	147	2143	1780	653	735	110
Future Volume (veh/h)	147	2143	1780	653	735	110
Number	1	6	2	12	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1863	1863
Adj Flow Rate, veh/h	155	2256	1874	687	774	116
Adj No. of Lanes	1	3	3	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	2	2
Cap, veh/h	176	3456	3027	1330	850	473
Arrive On Green	0.05	0.69	0.60	0.60	0.25	0.25
Sat Flow, veh/h	1757	5202	5202	1568	3442	1583
Grp Volume(v), veh/h	155	2256	1874	687	774	116
Grp Sat Flow(s),veh/h/ln	1757	1679	1679	1568	1721	1583
Q Serve(g_s), s	7.0	45.8	42.5	21.3	39.3	10.0
Cycle Q Clear(g_c), s	7.0	45.8	42.5	21.3	39.3	10.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	176	3456	3027	1330	850	473
V/C Ratio(X)	0.88	0.65	0.62	0.52	0.91	0.25
Avail Cap(c_a), veh/h	289	3456	3027	1330	1032	557
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.66	0.66	0.71	0.71	1.00	1.00
Uniform Delay (d), s/veh	40.0	16.0	22.8	3.7	65.8	47.7
Incr Delay (d2), s/veh	11.4	0.6	0.7	1.0	10.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	21.3	19.8	24.6	19.9	4.4
LnGrp Delay(d),s/veh	51.3	16.7	23.5	4.7	76.2	48.0
LnGrp LOS	D	B	C	A	E	D
Approach Vol, veh/h		2411	2561		890	
Approach Delay, s/veh		18.9	18.5		72.6	
Approach LOS		B	B		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	15.3	114.2				129.5		50.5
Change Period (Y+Rc), s	6.0	6.0				6.0		6.0
Max Green Setting (Gmax), s	21.0	87.0				114.0		54.0
Max Q Clear Time (g_c+I1), s	9.0	44.5				47.8		41.3
Green Ext Time (p_c), s	0.3	41.0				64.5		3.1

Intersection Summary	
HCM 2010 Ctrl Delay	26.9
HCM 2010 LOS	C



Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBL	NBR
Lane Configurations								
Traffic Volume (veh/h)	10	2300	162	7	136	1757	73	253
Future Volume (veh/h)	10	2300	162	7	136	1757	73	253
Number		6	16		5	2	7	14
Initial Q (Qb), veh		0	0		0	0	0	0
Ped-Bike Adj(A_pbT)			1.00		1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00		1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1845	1845		1845	1845	1845	1845
Adj Flow Rate, veh/h		2421	171		143	1849	77	266
Adj No. of Lanes		3	1		1	3	1	1
Peak Hour Factor		0.95	0.95		0.95	0.95	0.95	0.95
Percent Heavy Veh, %		3	3		3	3	3	3
Cap, veh/h		3404	1342		162	3794	316	282
Arrive On Green		0.68	0.68		0.09	1.00	0.18	0.18
Sat Flow, veh/h		5202	1568		1757	5202	1757	1568
Grp Volume(v), veh/h		2421	171		143	1849	77	266
Grp Sat Flow(s),veh/h/ln		1679	1568		1757	1679	1757	1568
Q Serve(g_s), s		54.0	3.2		5.6	0.0	6.8	30.2
Cycle Q Clear(g_c), s		54.0	3.2		5.6	0.0	6.8	30.2
Prop In Lane			1.00		1.00		1.00	1.00
Lane Grp Cap(c), veh/h		3404	1342		162	3794	316	282
V/C Ratio(X)		0.71	0.13		0.88	0.49	0.24	0.94
Avail Cap(c_a), veh/h		3404	1342		280	3794	332	296
HCM Platoon Ratio		1.00	1.00		2.00	2.00	1.00	1.00
Upstream Filter(I)		1.00	1.00		0.71	0.71	1.00	1.00
Uniform Delay (d), s/veh		18.2	2.1		40.3	0.0	63.3	72.9
Incr Delay (d2), s/veh		0.7	0.0		11.6	0.3	0.4	36.4
Initial Q Delay(d3),s/veh		0.0	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		25.1	3.1		7.4	0.1	3.3	27.0
LnGrp Delay(d),s/veh		18.9	2.1		51.9	0.3	63.7	109.3
LnGrp LOS		B	A		D	A	E	F
Approach Vol, veh/h		2592				1992	343	
Approach Delay, s/veh		17.8				4.0	99.0	
Approach LOS		B				A	F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		141.6		38.4	13.9	127.7		
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0		
Max Green Setting (Gmax), s		134.0		34.0	20.0	108.0		
Max Q Clear Time (g_c+I1), s		2.0		32.2	7.6	56.0		
Green Ext Time (p_c), s		111.8		0.3	0.3	51.4		

Intersection Summary	
HCM 2010 Ctrl Delay	17.9
HCM 2010 LOS	B

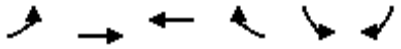
Notes

Intersection	
Intersection Delay, s/veh	12.6
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	173	216	71	153	256	42
Future Vol, veh/h	173	216	71	153	256	42
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	3	3	6	6	3	3
Mvmt Flow	192	240	79	170	284	47
Number of Lanes	1	1	1	1	1	1

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	2	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	2
HCM Control Delay	12.2	11.5	13.8
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	71	153	173	216	256	42
LT Vol	71	0	173	0	0	0
Through Vol	0	153	0	0	256	0
RT Vol	0	0	0	216	0	42
Lane Flow Rate	79	170	192	240	284	47
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.15	0.299	0.358	0.366	0.489	0.071
Departure Headway (Hd)	6.845	6.336	6.708	5.496	6.186	5.475
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	524	568	536	655	583	654
Service Time	4.586	4.077	4.447	3.235	3.923	3.212
HCM Lane V/C Ratio	0.151	0.299	0.358	0.366	0.487	0.072
HCM Control Delay	10.8	11.8	13.2	11.4	14.7	8.6
HCM Lane LOS	B	B	B	B	B	A
HCM 95th-tile Q	0.5	1.2	1.6	1.7	2.7	0.2



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	109	729	400	73	150	123
Future Volume (veh/h)	109	729	400	73	150	123
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1900	1696	1696
Adj Flow Rate, veh/h	114	759	482	88	181	0
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.96	0.96	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	6	6	6	6	12	12
Cap, veh/h	340	1042	549	100	226	201
Arrive On Green	0.07	0.58	0.37	0.37	0.14	0.00
Sat Flow, veh/h	1707	1792	1476	269	1616	1442
Grp Volume(v), veh/h	114	759	0	570	181	0
Grp Sat Flow(s),veh/h/ln	1707	1792	0	1745	1616	1442
Q Serve(g_s), s	1.6	13.2	0.0	13.1	4.7	0.0
Cycle Q Clear(g_c), s	1.6	13.2	0.0	13.1	4.7	0.0
Prop In Lane	1.00			0.15	1.00	1.00
Lane Grp Cap(c), veh/h	340	1042	0	650	226	201
V/C Ratio(X)	0.33	0.73	0.00	0.88	0.80	0.00
Avail Cap(c_a), veh/h	580	1042	0	650	338	302
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	9.1	6.5	0.0	12.6	17.9	0.0
Incr Delay (d2), s/veh	0.6	4.5	0.0	15.5	8.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	7.6	0.0	9.0	2.6	0.0
LnGrp Delay(d),s/veh	9.7	11.0	0.0	28.1	26.0	0.0
LnGrp LOS	A	B		C	C	
Approach Vol, veh/h		873	570		181	
Approach Delay, s/veh		10.8	28.1		26.0	
Approach LOS		B	C		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		31.0		12.0	9.0	22.0		
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0		
Max Green Setting (Gmax), s		16.0		9.0	9.0	16.0		
Max Q Clear Time (g_c+I1), s		15.2		6.7	3.6	15.1		
Green Ext Time (p_c), s		0.7		0.1	0.1	0.7		

Intersection Summary	
HCM 2010 Ctrl Delay	18.6
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	202	677	397	6	1	76
Future Vol, veh/h	202	677	397	6	1	76
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	94	94	84	84	68	68
Heavy Vehicles, %	6	6	6	6	10	10
Mvmt Flow	215	720	473	7	1	112

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	480	0	-	0	1627	477
Stage 1	-	-	-	-	477	-
Stage 2	-	-	-	-	1150	-
Critical Hdwy	4.16	-	-	-	6.5	6.3
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	2.254	-	-	-	3.59	3.39
Pot Cap-1 Maneuver	1062	-	-	-	107	572
Stage 1	-	-	-	-	608	-
Stage 2	-	-	-	-	291	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1062	-	-	-	71	572
Mov Cap-2 Maneuver	-	-	-	-	71	-
Stage 1	-	-	-	-	403	-
Stage 2	-	-	-	-	291	-

Approach	EB	WB	SW
HCM Control Delay, s	2.1	0	13.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SWLn1
Capacity (veh/h)	1062	-	-	-	524
HCM Lane V/C Ratio	0.202	-	-	-	0.216
HCM Control Delay (s)	9.2	0	-	-	13.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.8	-	-	-	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	148	4	399	265	5	673
Future Volume (veh/h)	148	4	399	265	5	673
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1676	1676	1660	1660	1660	1660
Adj Flow Rate, veh/h	174	0	464	0	5	701
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.85	0.85	0.86	0.86	0.96	0.96
Percent Heavy Veh, %	2	2	3	3	3	3
Cap, veh/h	201	179	457	388	670	704
Arrive On Green	0.13	0.00	0.28	0.00	0.42	0.42
Sat Flow, veh/h	1597	1425	1660	1411	1581	1660
Grp Volume(v), veh/h	174	0	464	0	5	701
Grp Sat Flow(s),veh/h/ln	1597	1425	1660	1411	1581	1660
Q Serve(g_s), s	11.5	0.0	29.6	0.0	0.2	45.3
Cycle Q Clear(g_c), s	11.5	0.0	29.6	0.0	0.2	45.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	201	179	457	388	670	704
V/C Ratio(X)	0.87	0.00	1.02	0.00	0.01	1.00
Avail Cap(c_a), veh/h	238	212	457	388	670	704
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	46.1	0.0	39.0	0.0	17.9	30.9
Incr Delay (d2), s/veh	24.0	0.0	46.0	0.0	0.0	32.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	0.0	19.3	0.0	0.1	27.1
LnGrp Delay(d),s/veh	70.1	0.0	85.0	0.0	17.9	63.7
LnGrp LOS	E		F		B	E
Approach Vol, veh/h	174		464			706
Approach Delay, s/veh	70.1		85.0			63.3
Approach LOS	E		F			E

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		52.0		19.5		36.0		
Change Period (Y+Rc), s		6.4		6.0		6.4		
Max Green Setting (Gmax), s		45.6		16.0		29.6		
Max Q Clear Time (g_c+I1), s		47.3		13.5		31.6		
Green Ext Time (p_c), s		0.0		0.1		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	71.7
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	8.1

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	14	214	42	1	116	33	118	78	12	24	30	6
Future Vol, veh/h	14	214	42	1	116	33	118	78	12	24	30	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	82	82	82	83	83	83	78	78	78
Heavy Vehicles, %	3	3	3	3	3	3	8	8	8	8	8	8
Mvmt Flow	15	235	46	1	141	40	142	94	14	31	38	8

Major/Minor	Major1			Major2			Minor2			Minor1		
Conflicting Flow All	181	0	0	281	0	0	474	474	161	505	471	258
Stage 1	-	-	-	-	-	-	163	163	-	288	288	-
Stage 2	-	-	-	-	-	-	311	311	-	217	183	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.18	6.58	6.28	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.18	5.58	-	6.18	5.58	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.572	4.072	3.372	3.572	4.072	3.372
Pot Cap-1 Maneuver	1388	-	-	1276	-	-	491	480	869	468	482	766
Stage 1	-	-	-	-	-	-	825	752	-	707	663	-
Stage 2	-	-	-	-	-	-	687	648	-	772	737	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1388	-	-	1276	-	-	451	473	869	386	475	766
Mov Cap-2 Maneuver	-	-	-	-	-	-	451	473	-	386	475	-
Stage 1	-	-	-	-	-	-	814	751	-	698	654	-
Stage 2	-	-	-	-	-	-	632	640	-	663	736	-

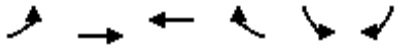
Approach	NB	SB	NE	SW
HCM Control Delay, s	0.4	0.1	20.9	14.6
HCM LOS			C	B

Minor Lane/Major Mvmt	NELn1	NBL	NBT	NBR	SBL	SBT	SBR	SWLn1
Capacity (veh/h)	472	1388	-	-	1276	-	-	451
HCM Lane V/C Ratio	0.531	0.011	-	-	0.001	-	-	0.171
HCM Control Delay (s)	20.9	7.6	0	-	7.8	0	-	14.6
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	3.1	0	-	-	0	-	-	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	117	43	51	315	6	29	170	14	2	231	212
Future Volume (veh/h)	140	117	43	51	315	6	29	170	14	2	231	212
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	156	130	48	57	350	7	32	189	16	2	257	236
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	225	173	57	106	536	10	133	752	61	41	478	437
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.53	0.53	0.53	0.53	0.53	0.53
Sat Flow, veh/h	468	485	160	169	1506	29	164	1411	114	1	897	819
Grp Volume(v), veh/h	334	0	0	414	0	0	237	0	0	495	0	0
Grp Sat Flow(s),veh/h/ln	1113	0	0	1704	0	0	1688	0	0	1717	0	0
Q Serve(g_s), s	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	26.4	0.0	0.0	18.2	0.0	0.0	6.2	0.0	0.0	17.0	0.0	0.0
Prop In Lane	0.47		0.14	0.14		0.02	0.14		0.07	0.00		0.48
Lane Grp Cap(c), veh/h	454	0	0	652	0	0	945	0	0	956	0	0
V/C Ratio(X)	0.73	0.00	0.00	0.64	0.00	0.00	0.25	0.00	0.00	0.52	0.00	0.00
Avail Cap(c_a), veh/h	601	0	0	843	0	0	945	0	0	956	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	27.6	0.0	0.0	24.3	0.0	0.0	11.3	0.0	0.0	13.8	0.0	0.0
Incr Delay (d2), s/veh	3.2	0.0	0.0	1.0	0.0	0.0	0.6	0.0	0.0	2.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	0.0	0.0	8.8	0.0	0.0	3.3	0.0	0.0	8.5	0.0	0.0
LnGrp Delay(d),s/veh	30.8	0.0	0.0	25.3	0.0	0.0	11.9	0.0	0.0	15.8	0.0	0.0
LnGrp LOS	C			C			B			B		
Approach Vol, veh/h		334			414			237			495	
Approach Delay, s/veh		30.8			25.3			11.9			15.8	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		53.0		37.0		53.0		37.0
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0
Max Green Setting (Gmax), s		36.0		40.0		36.0		40.0
Max Q Clear Time (g_c+I1), s		19.0		20.2		8.2		28.4
Green Ext Time (p_c), s		7.4		2.1		4.7		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	21.2
HCM 2010 LOS	C



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	320	950	1159	317	94	204
Future Volume (veh/h)	320	950	1159	317	94	204
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	356	1056	1288	352	104	0
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	286	1666	995	272	89	334
Arrive On Green	0.16	0.89	0.71	0.71	0.05	0.00
Sat Flow, veh/h	1774	1863	1410	385	1774	1583
Grp Volume(v), veh/h	356	1056	0	1640	104	0
Grp Sat Flow(s),veh/h/ln	1774	1863	0	1795	1774	1583
Q Serve(g_s), s	29.0	24.9	0.0	127.0	9.0	0.0
Cycle Q Clear(g_c), s	29.0	24.9	0.0	127.0	9.0	0.0
Prop In Lane	1.00			0.21	1.00	1.00
Lane Grp Cap(c), veh/h	286	1666	0	1266	89	334
V/C Ratio(X)	1.25	0.63	0.00	1.30	1.17	0.00
Avail Cap(c_a), veh/h	286	1666	0	1266	89	334
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	75.5	2.3	0.0	26.5	85.5	0.0
Incr Delay (d2), s/veh	136.4	1.8	0.0	138.8	149.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	25.0	13.2	0.0	111.1	8.1	0.0
LnGrp Delay(d),s/veh	211.9	4.2	0.0	165.3	234.8	0.0
LnGrp LOS	F	A		F	F	
Approach Vol, veh/h		1412	1640		104	
Approach Delay, s/veh		56.5	165.3		234.8	
Approach LOS		E	F		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		166.0		14.0	34.0	132.0		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		159.0		7.0	27.0	125.0		
Max Q Clear Time (g_c+I1), s		26.9		11.0	31.0	129.0		
Green Ext Time (p_c), s		11.3		0.0	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	118.9
HCM 2010 LOS	F

Intersection	
Int Delay, s/veh	349.5

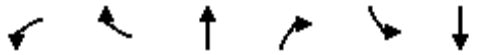
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	292	752	926	8	6	550
Future Vol, veh/h	292	752	926	8	6	550
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	324	836	1029	9	7	611

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1038	0	-	0	2518	1034
Stage 1	-	-	-	-	1034	-
Stage 2	-	-	-	-	1484	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	670	-	-	-	31	~ 282
Stage 1	-	-	-	-	343	-
Stage 2	-	-	-	-	208	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	670	-	-	-	~ 3	~ 282
Mov Cap-2 Maneuver	-	-	-	-	~ 3	-
Stage 1	-	-	-	-	33	-
Stage 2	-	-	-	-	208	-

Approach	EB	WB	SB
HCM Control Delay, s	4.3	0	$ 1584.6
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	670	-	-	-	141
HCM Lane V/C Ratio	0.484	-	-	-	4.381
HCM Control Delay (s)	15.3	0	-	-	$ 1584.6
HCM Lane LOS	C	A	-	-	F
HCM 95th %tile Q(veh)	2.7	-	-	-	63.3

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



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	318	7	927	209	4	754
Future Volume (veh/h)	318	7	927	209	4	754
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	353	0	1030	0	4	838
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	389	426	1206	1372	89	1351
Arrive On Green	0.22	0.00	0.65	0.00	0.05	0.73
Sat Flow, veh/h	1774	1583	1863	1583	1774	1863
Grp Volume(v), veh/h	353	0	1030	0	4	838
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	1583	1774	1863
Q Serve(g_s), s	34.9	0.0	78.4	0.0	0.4	40.4
Cycle Q Clear(g_c), s	34.9	0.0	78.4	0.0	0.4	40.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	389	426	1206	1372	89	1351
V/C Ratio(X)	0.91	0.00	0.85	0.00	0.05	0.62
Avail Cap(c_a), veh/h	434	466	1206	1372	89	1351
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	68.5	0.0	25.0	0.0	81.4	12.3
Incr Delay (d2), s/veh	21.4	0.0	7.8	0.0	0.2	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.5	0.0	42.7	0.0	0.2	21.5
LnGrp Delay(d),s/veh	90.0	0.0	32.8	0.0	81.6	14.5
LnGrp LOS	F		C		F	B
Approach Vol, veh/h	353		1030			842
Approach Delay, s/veh	90.0		32.8			14.8
Approach LOS	F		C			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		135.6		44.4	14.0	121.6		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		124.0		42.0	7.0	110.0		
Max Q Clear Time (g_c+I1), s		42.4		36.9	2.4	80.4		
Green Ext Time (p_c), s		7.7		0.5	0.0	10.0		

Intersection Summary	
HCM 2010 Ctrl Delay	35.0
HCM 2010 LOS	D

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	163	171	965	76	100	972
Future Volume (veh/h)	163	171	965	76	100	972
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1845	1845	1727	1727
Adj Flow Rate, veh/h	179	188	1060	84	110	1068
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	7	7	3	3	10	10
Cap, veh/h	227	335	1282	1300	144	1399
Arrive On Green	0.13	0.13	0.69	0.69	0.09	0.81
Sat Flow, veh/h	1691	1509	1845	1568	1645	1727
Grp Volume(v), veh/h	179	188	1060	84	110	1068
Grp Sat Flow(s),veh/h/ln	1691	1509	1845	1568	1645	1727
Q Serve(g_s), s	18.4	19.9	74.2	1.7	11.8	55.4
Cycle Q Clear(g_c), s	18.4	19.9	74.2	1.7	11.8	55.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	227	335	1282	1300	144	1399
V/C Ratio(X)	0.79	0.56	0.83	0.06	0.76	0.76
Avail Cap(c_a), veh/h	244	350	1282	1300	155	1399
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.24	0.24	1.00	1.00
Uniform Delay (d), s/veh	75.4	62.2	19.7	2.8	80.3	8.5
Incr Delay (d2), s/veh	14.7	1.9	1.6	0.0	18.7	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	16.8	38.0	1.4	6.1	27.7
LnGrp Delay(d),s/veh	90.1	64.1	21.3	2.8	99.0	12.5
LnGrp LOS	F	E	C	A	F	B
Approach Vol, veh/h	367		1144			1178
Approach Delay, s/veh	76.8		20.0			20.6
Approach LOS	E		B			C

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		150.8		29.2	20.7	130.1		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		142.0		24.0	15.0	120.0		
Max Q Clear Time (g_c+I1), s		57.4		21.9	13.8	76.2		
Green Ext Time (p_c), s		11.7		0.3	0.0	11.1		

Intersection Summary	
HCM 2010 Ctrl Delay	28.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	175	168	279	5	129	94	860	110	178	946	11
Future Volume (veh/h)	52	175	168	279	5	129	94	860	110	178	946	11
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1810	1810	1810	1845	1845	1845	1792	1792	1792
Adj Flow Rate, veh/h	55	186	179	297	5	137	100	915	117	189	1006	12
Adj No. of Lanes	1	1	0	1	1	1	1	1	1	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	5	5	5	3	3	3	6	6	6
Cap, veh/h	270	162	156	259	663	709	88	840	949	161	896	762
Arrive On Green	0.19	0.19	0.19	0.15	0.37	0.37	0.05	0.46	0.46	0.09	0.50	0.50
Sat Flow, veh/h	1218	857	825	1723	1810	1538	1757	1845	1568	1707	1792	1524
Grp Volume(v), veh/h	55	0	365	297	5	137	100	915	117	189	1006	12
Grp Sat Flow(s),veh/h/ln	1218	0	1681	1723	1810	1538	1757	1845	1568	1707	1792	1524
Q Serve(g_s), s	6.9	0.0	34.0	27.0	0.3	0.0	9.0	82.0	3.0	17.0	90.0	0.7
Cycle Q Clear(g_c), s	6.9	0.0	34.0	27.0	0.3	0.0	9.0	82.0	3.0	17.0	90.0	0.7
Prop In Lane	1.00		0.49	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	270	0	318	259	663	709	88	840	949	161	896	762
V/C Ratio(X)	0.20	0.00	1.15	1.15	0.01	0.19	1.14	1.09	0.12	1.17	1.12	0.02
Avail Cap(c_a), veh/h	270	0	318	259	663	709	88	840	949	161	896	762
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.29	0.29	0.29	0.55	0.55	0.55
Uniform Delay (d), s/veh	62.0	0.0	73.0	76.5	36.2	28.7	85.5	49.0	5.3	81.5	45.0	22.7
Incr Delay (d2), s/veh	0.4	0.0	97.3	102.2	0.0	0.1	94.9	46.6	0.1	107.7	63.9	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	24.4	20.2	0.2	4.1	6.7	52.7	1.6	12.8	60.2	0.3
LnGrp Delay(d),s/veh	62.4	0.0	170.3	178.7	36.2	28.8	180.4	95.6	5.4	189.2	108.9	22.7
LnGrp LOS	E		F	F	D	C	F	F	A	F	F	C
Approach Vol, veh/h		420			439			1132			1207	
Approach Delay, s/veh		156.2			130.3			93.8			120.6	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	95.0		71.0	22.0	87.0	32.0	39.0
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	7.0	88.0		64.0	15.0	80.0	25.0	32.0
Max Q Clear Time (g_c+I1), s	11.0	92.0		2.3	19.0	84.0	29.0	36.0
Green Ext Time (p_c), s	0.0	0.0		0.5	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	117.1
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	310	317	252	126	294	122	680	150	489	884	20
Future Volume (veh/h)	90	310	317	252	126	294	122	680	150	489	884	20
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1845	1845	1845	1827	1827	1827	1810	1810	1810
Adj Flow Rate, veh/h	99	341	348	277	138	323	134	747	165	537	971	22
Adj No. of Lanes	1	1	1	1	1	1	1	1	1	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	3	3	3	4	4	4	5	5	5
Cap, veh/h	136	269	353	234	371	716	136	650	759	440	964	937
Arrive On Green	0.08	0.14	0.14	0.13	0.20	0.20	0.08	0.36	0.36	0.26	0.53	0.53
Sat Flow, veh/h	1774	1863	1583	1757	1845	1568	1740	1827	1553	1723	1810	1538
Grp Volume(v), veh/h	99	341	348	277	138	323	134	747	165	537	971	22
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1757	1845	1568	1740	1827	1553	1723	1810	1538
Q Serve(g_s), s	9.8	26.0	26.0	24.0	11.6	25.4	13.8	64.0	10.9	46.0	95.9	1.0
Cycle Q Clear(g_c), s	9.8	26.0	26.0	24.0	11.6	25.4	13.8	64.0	10.9	46.0	95.9	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	136	269	353	234	371	716	136	650	759	440	964	937
V/C Ratio(X)	0.73	1.27	0.99	1.18	0.37	0.45	0.98	1.15	0.22	1.22	1.01	0.02
Avail Cap(c_a), veh/h	177	269	353	234	371	716	136	650	759	440	964	937
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	81.3	77.0	69.7	78.0	62.1	33.5	82.8	58.0	26.3	67.0	42.0	13.9
Incr Delay (d2), s/veh	10.0	146.4	44.2	117.1	0.6	0.4	71.7	84.5	0.7	100.7	10.5	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	24.3	21.6	19.3	6.0	11.1	9.4	47.5	4.8	34.2	50.5	0.4
LnGrp Delay(d),s/veh	91.3	223.4	113.9	195.1	62.7	33.9	154.6	142.5	27.0	167.7	52.5	13.9
LnGrp LOS	F	F	F	F	E	C	F	F	C	F	F	B
Approach Vol, veh/h		788			738			1046			1530	
Approach Delay, s/veh		158.4			99.8			125.8			92.4	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.1	100.9	18.8	41.2	51.0	69.0	29.0	31.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	12.1	93.9	16.0	30.0	44.0	62.0	22.0	24.0
Max Q Clear Time (g_c+I1), s	15.8	97.9	11.8	27.4	48.0	66.0	26.0	28.0
Green Ext Time (p_c), s	0.0	0.0	0.1	0.5	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	114.9
HCM 2010 LOS	F

Notes

Intersection	
Int Delay, s/veh	28.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	936	628	17	114	44
Future Vol, veh/h	13	936	628	17	114	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	5	5	5	5	3	3
Mvmt Flow	14	1029	690	19	125	48

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	709	0	-	0	1757	700
Stage 1	-	-	-	-	700	-
Stage 2	-	-	-	-	1057	-
Critical Hdwy	4.15	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.245	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	876	-	-	-	~ 93	438
Stage 1	-	-	-	-	491	-
Stage 2	-	-	-	-	333	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	876	-	-	-	~ 92	438
Mov Cap-2 Maneuver	-	-	-	-	~ 92	-
Stage 1	-	-	-	-	483	-
Stage 2	-	-	-	-	333	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	$ 318.9
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	876	-	-	-	118
HCM Lane V/C Ratio	0.016	-	-	-	1.471
HCM Control Delay (s)	9.2	-	-	-	$ 318.9
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	0.1	-	-	-	12.3

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

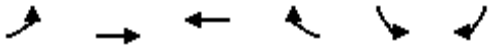
Intersection	
Int Delay, s/veh	11.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	1035	5	29	616	16	29	0	84	10	0	0
Future Vol, veh/h	10	1035	5	29	616	16	29	0	84	10	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	7	7	7	2	2	2	13	13	13
Mvmt Flow	11	1125	5	32	670	17	32	0	91	11	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	687	0	0	1130	0	0	1893	1901	1128	1938	1895	679
Stage 1	-	-	-	-	-	-	1150	1150	-	743	743	-
Stage 2	-	-	-	-	-	-	743	751	-	1195	1152	-
Critical Hdwy	4.14	-	-	4.17	-	-	7.12	6.52	6.22	7.23	6.63	6.33
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.23	5.63	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.23	5.63	-
Follow-up Hdwy	2.236	-	-	2.263	-	-	3.518	4.018	3.318	3.617	4.117	3.417
Pot Cap-1 Maneuver	898	-	-	600	-	-	53	69	249	46	65	433
Stage 1	-	-	-	-	-	-	241	273	-	390	406	-
Stage 2	-	-	-	-	-	-	407	418	-	216	260	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	898	-	-	600	-	-	48	61	249	26	57	433
Mov Cap-2 Maneuver	-	-	-	-	-	-	48	61	-	26	57	-
Stage 1	-	-	-	-	-	-	233	264	-	377	371	-
Stage 2	-	-	-	-	-	-	372	382	-	132	251	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.5	158	220.4
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	120	898	-	-	600	-	-	26
HCM Lane V/C Ratio	1.024	0.012	-	-	0.053	-	-	0.418
HCM Control Delay (s)	158	9.1	0	-	11.3	0	-	220.4
HCM Lane LOS	F	A	A	-	B	A	-	F
HCM 95th %tile Q(veh)	7	0	-	-	0.2	-	-	1.3



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	55	1074	593	139	468	68
Future Volume (veh/h)	55	1074	593	139	468	68
Number	5	2	6	16	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1810	1900	1863	1863
Adj Flow Rate, veh/h	59	1155	638	149	503	0
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	5	5	2	2
Cap, veh/h	171	1188	744	174	522	622
Arrive On Green	0.10	0.65	0.52	0.52	0.29	0.00
Sat Flow, veh/h	1740	1827	1420	332	1774	1583
Grp Volume(v), veh/h	59	1155	0	787	503	0
Grp Sat Flow(s),veh/h/ln	1740	1827	0	1751	1774	1583
Q Serve(g_s), s	5.7	108.3	0.0	70.0	50.3	0.0
Cycle Q Clear(g_c), s	5.7	108.3	0.0	70.0	50.3	0.0
Prop In Lane	1.00			0.19	1.00	1.00
Lane Grp Cap(c), veh/h	171	1188	0	917	522	622
V/C Ratio(X)	0.34	0.97	0.00	0.86	0.96	0.00
Avail Cap(c_a), veh/h	171	1188	0	1002	522	622
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	75.7	30.0	0.0	37.1	62.5	0.0
Incr Delay (d2), s/veh	1.2	20.3	0.0	10.2	30.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	60.9	0.0	36.5	29.0	0.0
LnGrp Delay(d),s/veh	76.9	50.3	0.0	47.3	92.6	0.0
LnGrp LOS	E	D		D	F	
Approach Vol, veh/h		1214	787		503	
Approach Delay, s/veh		51.6	47.3		92.6	
Approach LOS		D	D		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		122.0			22.7	99.3		58.0
Change Period (Y+Rc), s		7.0			7.0	7.0		7.0
Max Green Setting (Gmax), s		115.0			7.0	101.0		51.0
Max Q Clear Time (g_c+I1), s		110.3			7.7	72.0		52.3
Green Ext Time (p_c), s		4.6			0.0	20.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	58.5
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	39	8	226	933	5
Future Vol, veh/h	8	39	8	226	933	5
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	3	3	2	2
Mvmt Flow	8	41	8	238	982	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1239	985	987	0	-	0
Stage 1	985	-	-	-	-	-
Stage 2	254	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.13	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.227	-	-	-
Pot Cap-1 Maneuver	194	301	696	-	-	-
Stage 1	362	-	-	-	-	-
Stage 2	788	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	191	301	696	-	-	-
Mov Cap-2 Maneuver	191	-	-	-	-	-
Stage 1	357	-	-	-	-	-
Stage 2	788	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	696	-	274	-	-
HCM Lane V/C Ratio	0.012	-	0.181	-	-
HCM Control Delay (s)	10.2	0	21	-	-
HCM Lane LOS	B	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.6	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	8	944	1	1	1452
Future Vol, veh/h	7	8	944	1	1	1452
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	6	6	3	3
Mvmt Flow	8	9	1026	1	1	1578

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2607	1027	0	0	1027	0
Stage 1	1027	-	-	-	-	-
Stage 2	1580	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.13	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.227	-
Pot Cap-1 Maneuver	27	285	-	-	672	-
Stage 1	345	-	-	-	-	-
Stage 2	186	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	27	285	-	-	672	-
Mov Cap-2 Maneuver	27	-	-	-	-	-
Stage 1	345	-	-	-	-	-
Stage 2	184	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	103.1	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	52	672	-
HCM Lane V/C Ratio	-	-	0.314	0.002	-
HCM Control Delay (s)	-	-	103.1	10.4	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	1.1	0	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	31	13	936	1453	6
Future Vol, veh/h	9	31	13	936	1453	6
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	92	92	92	92	92	92
Heavy Vehicles, %	13	13	6	6	3	3
Mvmt Flow	10	34	14	1017	1579	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2628	1583	1586	0	-	0
Stage 1	1583	-	-	-	-	-
Stage 2	1045	-	-	-	-	-
Critical Hdwy	6.53	6.33	4.16	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.417	2.254	-	-	-
Pot Cap-1 Maneuver	24	126	403	-	-	-
Stage 1	175	-	-	-	-	-
Stage 2	323	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	22	126	403	-	-	-
Mov Cap-2 Maneuver	22	-	-	-	-	-
Stage 1	161	-	-	-	-	-
Stage 2	323	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	151.4	0.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	403	-	61	-	-
HCM Lane V/C Ratio	0.035	-	0.713	-	-
HCM Control Delay (s)	14.3	0	151.4	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	0.1	-	3.1	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	29	10	942	1481	3
Future Vol, veh/h	7	29	10	942	1481	3
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	5	5	4	4
Mvmt Flow	7	31	11	992	1559	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2575	1561	1562	0	-	0
Stage 1	1561	-	-	-	-	-
Stage 2	1014	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.15	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.245	-	-	-
Pot Cap-1 Maneuver	28	138	415	-	-	-
Stage 1	190	-	-	-	-	-
Stage 2	350	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	26	138	415	-	-	-
Mov Cap-2 Maneuver	26	-	-	-	-	-
Stage 1	179	-	-	-	-	-
Stage 2	350	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	94.3	0.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	415	-	75	-	-
HCM Lane V/C Ratio	0.025	-	0.505	-	-
HCM Control Delay (s)	13.9	0	94.3	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	0.1	-	2.1	-	-

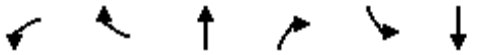
Intersection	
Int Delay, s/veh	3.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	22	9	943	3	1	1509
Future Vol, veh/h	22	9	943	3	1	1509
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	5	5	4	4
Mvmt Flow	23	9	993	3	1	1588

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2585	995	0	0	996	0
Stage 1	995	-	-	-	-	-
Stage 2	1590	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	28	297	-	-	687	-
Stage 1	358	-	-	-	-	-
Stage 2	184	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	28	297	-	-	687	-
Mov Cap-2 Maneuver	28	-	-	-	-	-
Stage 1	358	-	-	-	-	-
Stage 2	182	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	261.9	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	38	687	-
HCM Lane V/C Ratio	-	-	0.859	0.002	-
HCM Control Delay (s)	-	-	261.9	10.2	0
HCM Lane LOS	-	-	F	B	A
HCM 95th %tile Q(veh)	-	-	3.2	0	-



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	876	96	850	200	34	1497
Future Volume (veh/h)	876	96	850	200	34	1497
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1900	1810	1810	1827	1827
Adj Flow Rate, veh/h	1016	0	895	211	36	1576
Adj No. of Lanes	2	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	5	5	4	4
Cap, veh/h	848	386	1148	1343	76	1289
Arrive On Green	0.24	0.00	0.63	0.63	0.04	0.71
Sat Flow, veh/h	3548	1615	1810	1538	1740	1827
Grp Volume(v), veh/h	1016	0	895	211	36	1576
Grp Sat Flow(s),veh/h/ln	1774	1615	1810	1538	1740	1827
Q Serve(g_s), s	43.0	0.0	64.4	3.6	3.6	127.0
Cycle Q Clear(g_c), s	43.0	0.0	64.4	3.6	3.6	127.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	848	386	1148	1343	76	1289
V/C Ratio(X)	1.20	0.00	0.78	0.16	0.47	1.22
Avail Cap(c_a), veh/h	848	386	1148	1343	87	1289
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.5	0.0	23.8	1.7	84.1	26.5
Incr Delay (d2), s/veh	100.8	0.0	5.3	0.2	4.6	107.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	32.9	0.0	33.8	4.5	1.8	101.8
LnGrp Delay(d),s/veh	169.3	0.0	29.1	1.9	88.6	133.9
LnGrp LOS	F		C	A	F	F
Approach Vol, veh/h	1016		1106			1612
Approach Delay, s/veh	169.3		23.9			132.8
Approach LOS	F		C			F

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		132.0		48.0	12.8	119.2		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		125.0		41.0	7.0	111.0		
Max Q Clear Time (g_c+I1), s		129.0		45.0	5.6	66.4		
Green Ext Time (p_c), s		0.0		0.0	0.0	8.6		

Intersection Summary	
HCM 2010 Ctrl Delay	110.5
HCM 2010 LOS	F

Notes

Intersection	
Int Delay, s/veh	17.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	51	19	1046	2370	3
Future Vol, veh/h	4	51	19	1046	2370	3
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	-	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	4	4	5	5	3	3
Mvmt Flow	4	54	20	1113	2521	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3676	2523	2524	0	-	0
Stage 1	2523	-	-	-	-	-
Stage 2	1153	-	-	-	-	-
Critical Hdwy	6.44	6.24	4.15	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.336	2.245	-	-	-
Pot Cap-1 Maneuver	5	~ 35	174	-	-	-
Stage 1	61	-	-	-	-	-
Stage 2	298	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 4	~ 35	174	-	-	-
Mov Cap-2 Maneuver	~ 4	-	-	-	-	-
Stage 1	54	-	-	-	-	-
Stage 2	298	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, $	1121.1	0.5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	174	-	22	-	-
HCM Lane V/C Ratio	0.116	-	2.66	-	-
HCM Control Delay (s)	28.4	-	$ 1121.1	-	-
HCM Lane LOS	D	-	F	-	-
HCM 95th %tile Q(veh)	0.4	-	7.5	-	-

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

Intersection	
Int Delay, s/veh	18.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	59	32	1064	2418	3
Future Vol, veh/h	1	59	32	1064	2418	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	3	4	4	2	2
Mvmt Flow	1	65	35	1169	2657	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3898	2659	2660	0	-	0
Stage 1	2659	-	-	-	-	-
Stage 2	1239	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.14	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.236	-	-	-
Pot Cap-1 Maneuver	4	~ 29	154	-	-	-
Stage 1	52	-	-	-	-	-
Stage 2	272	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	3	~ 29	154	-	-	-
Mov Cap-2 Maneuver	3	-	-	-	-	-
Stage 1	40	-	-	-	-	-
Stage 2	272	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, $	1071.1	1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	154	-	25	-	-
HCM Lane V/C Ratio	0.228	-	2.637	-	-
HCM Control Delay (s)	35.2	-	$ 1071.1	-	-
HCM Lane LOS	E	-	F	-	-
HCM 95th %tile Q(veh)	0.8	-	8.2	-	-

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)	13	0	39	3	0	17	118	1066	57	52	2200	225
Future Volume (veh/h)	13	0	39	3	0	17	118	1066	57	52	2200	225
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1810	1900	1900	1863	1900	1810	1810	1900	1845	1845	1900
Adj Flow Rate, veh/h	14	0	41	3	0	18	124	1122	60	55	2316	237
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	2	2	2	5	5	5	3	3	3
Cap, veh/h	42	5	64	31	6	80	218	2687	144	88	2359	237
Arrive On Green	0.06	0.00	0.06	0.06	0.00	0.06	0.13	0.81	0.81	0.05	0.73	0.73
Sat Flow, veh/h	299	86	1127	135	98	1402	1723	3320	177	1757	3216	324
Grp Volume(v), veh/h	55	0	0	21	0	0	124	581	601	55	1244	1309
Grp Sat Flow(s),veh/h/ln	1511	0	0	1635	0	0	1723	1719	1778	1757	1752	1788
Q Serve(g_s), s	4.1	0.0	0.0	0.0	0.0	0.0	12.2	17.5	17.5	5.5	117.4	131.4
Cycle Q Clear(g_c), s	6.3	0.0	0.0	2.2	0.0	0.0	12.2	17.5	17.5	5.5	117.4	131.4
Prop In Lane	0.25		0.75	0.14		0.86	1.00		0.10	1.00		0.18
Lane Grp Cap(c), veh/h	111	0	0	116	0	0	218	1391	1439	88	1285	1311
V/C Ratio(X)	0.49	0.00	0.00	0.18	0.00	0.00	0.57	0.42	0.42	0.62	0.97	1.00
Avail Cap(c_a), veh/h	192	0	0	200	0	0	218	1391	1439	117	1285	1311
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	83.0	0.0	0.0	81.1	0.0	0.0	74.0	4.9	4.9	83.8	22.0	23.9
Incr Delay (d2), s/veh	3.4	0.0	0.0	0.7	0.0	0.0	0.3	0.1	0.1	7.0	18.5	24.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	0.0	1.0	0.0	0.0	5.8	8.3	8.5	2.9	62.6	73.0
LnGrp Delay(d),s/veh	86.3	0.0	0.0	81.8	0.0	0.0	74.4	5.0	5.0	90.7	40.5	48.5
LnGrp LOS	F			F			E	A	A	F	D	D
Approach Vol, veh/h		55			21			1306			2608	
Approach Delay, s/veh		86.3			81.8			11.6			45.6	
Approach LOS		F			F			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	27.7	137.0		15.3	14.1	150.7		15.3
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0
Max Green Setting (Gmax), s	11.0	130.0		18.0	10.0	131.0		18.0
Max Q Clear Time (g_c+I1), s	14.2	133.4		4.2	7.5	19.5		8.3
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	9.4		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	35.2
HCM 2010 LOS	D

HCM 2010 Computation does not support turning movement with Shared and Exclusive lanes.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	2837	324	350	3476	30	153	10	178	58	21	177
Future Volume (veh/h)	81	2837	324	350	3476	30	153	10	178	58	21	177
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1827	1827	1827	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	85	2986	341	368	3659	32	161	11	187	61	22	186
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6	4	4	4	2	2	2	2	2	2
Cap, veh/h	85	2746	931	309	3436	1147	233	186	158	240	186	158
Arrive On Green	0.10	1.00	1.00	0.18	0.69	0.69	0.05	0.10	0.10	0.05	0.10	0.10
Sat Flow, veh/h	1707	4893	1524	1740	4988	1553	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	85	2986	341	368	3659	32	161	11	187	61	22	186
Grp Sat Flow(s),veh/h/ln	1707	1631	1524	1740	1663	1553	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	9.0	101.0	0.0	32.0	124.0	0.4	9.0	1.0	18.0	5.4	1.9	15.4
Cycle Q Clear(g_c), s	9.0	101.0	0.0	32.0	124.0	0.4	9.0	1.0	18.0	5.4	1.9	15.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	85	2746	931	309	3436	1147	233	186	158	240	186	158
V/C Ratio(X)	1.00	1.09	0.37	1.19	1.06	0.03	0.69	0.06	1.18	0.25	0.12	1.17
Avail Cap(c_a), veh/h	85	2746	931	309	3436	1147	233	186	158	240	186	158
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	81.0	0.0	0.0	74.0	28.0	1.7	73.0	73.3	81.0	67.3	73.8	59.6
Incr Delay (d2), s/veh	28.1	40.1	0.1	88.5	30.0	0.0	8.4	0.1	128.5	0.5	0.3	126.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	10.2	0.0	23.0	65.8	0.3	3.9	0.5	13.5	2.7	1.0	12.6
LnGrp Delay(d),s/veh	109.1	40.1	0.1	162.5	58.0	1.7	81.4	73.5	209.5	67.9	74.1	185.9
LnGrp LOS	F	F	A	F	F	A	F	E	F	E	E	F
Approach Vol, veh/h		3412			4059			359			269	
Approach Delay, s/veh		37.8			67.0			147.9			150.0	
Approach LOS		D			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	129.0	14.0	23.0	37.0	106.0	14.0	23.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	7.0	122.0	7.0	16.0	30.0	99.0	7.0	16.0
Max Q Clear Time (g_c+I1), s	11.0	126.0	7.4	20.0	34.0	103.0	11.0	17.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	61.1
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	2860	199	421	3284	101	118	32	287	95	67	226
Future Volume (veh/h)	80	2860	199	421	3284	101	118	32	287	95	67	226
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1827	1827	1827	1827	1827	1827	1863	1863	1863
Adj Flow Rate, veh/h	86	3075	214	453	3531	109	127	34	0	102	72	0
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	6	6	4	4	4	4	4	4	2	2	2
Cap, veh/h	143	2719	846	402	3563	1109	194	279	237	227	285	242
Arrive On Green	0.05	0.56	0.56	0.42	1.00	1.00	0.15	0.15	0.00	0.15	0.15	0.00
Sat Flow, veh/h	1707	4893	1524	1740	4988	1553	1297	1827	1553	1369	1863	1583
Grp Volume(v), veh/h	86	3075	214	453	3531	109	127	34	0	102	72	0
Grp Sat Flow(s),veh/h/ln	1707	1631	1524	1740	1663	1553	1297	1827	1553	1369	1863	1583
Q Serve(g_s), s	4.4	100.0	13.1	37.5	0.0	0.0	17.2	2.9	0.0	12.5	6.1	0.0
Cycle Q Clear(g_c), s	4.4	100.0	13.1	37.5	0.0	0.0	23.3	2.9	0.0	15.4	6.1	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	143	2719	846	402	3563	1109	194	279	237	227	285	242
V/C Ratio(X)	0.60	1.13	0.25	1.13	0.99	0.10	0.65	0.12	0.00	0.45	0.25	0.00
Avail Cap(c_a), veh/h	144	2719	846	402	3563	1109	219	315	267	254	321	273
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.37	0.37	0.37	0.09	0.09	0.09	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	32.3	40.0	20.7	50.6	0.0	0.0	77.5	65.8	0.0	72.5	67.2	0.0
Incr Delay (d2), s/veh	2.5	61.0	0.3	59.9	2.9	0.0	5.8	0.2	0.0	1.4	0.5	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	60.2	5.5	26.6	1.0	0.0	6.5	1.5	0.0	4.8	3.2	0.0
LnGrp Delay(d),s/veh	34.8	101.0	20.9	110.5	2.9	0.0	83.3	66.0	0.0	73.9	67.7	0.0
LnGrp LOS	C	F	C	F	A	A	F	E		E	E	
Approach Vol, veh/h		3375			4093			161			174	
Approach Delay, s/veh		94.3			14.7			79.6			71.3	
Approach LOS		F			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.9	133.6		32.5	42.5	105.0		32.5
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0
Max Green Setting (Gmax), s	7.0	123.0		29.0	32.0	98.0		29.0
Max Q Clear Time (g_c+I1), s	6.4	2.0		25.3	39.5	102.0		17.4
Green Ext Time (p_c), s	0.0	107.2		0.2	0.0	0.0		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	51.7
HCM 2010 LOS	D

HCM 2010 Computation does not support turning movement with Shared and Exclusive lanes.

Intersection	
Int Delay, s/veh	510.5

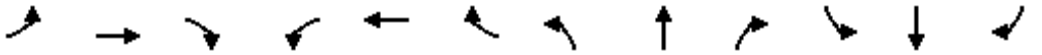
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Vol, veh/h	0	3643	5119	6	0	356
Future Vol, veh/h	0	3643	5119	6	0	356
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	0	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	5	5	4	4	3	3
Mvmt Flow	0	3835	5388	6	0	375

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	2694
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.16
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.93
Pot Cap-1 Maneuver	0	-	-	-	0	~ 13
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	~ 13
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	$ 13084.2
HCM LOS			F

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	13
HCM Lane V/C Ratio	-	-	-	28.826
HCM Control Delay (s)	-	-	-	$ 13084.2
HCM Lane LOS	-	-	-	F
HCM 95th %tile Q(veh)	-	-	-	48.1

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)	58	3336	253	133	5265	77	409	68	173	134	68	276
Future Volume (veh/h)	58	3336	253	133	5265	77	409	68	173	134	68	276
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1845	1845	1845	1792	1792	1792	1863	1863	1863
Adj Flow Rate, veh/h	61	3512	266	140	5542	81	431	72	182	141	72	291
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6	3	3	3	6	6	6	2	2	2
Cap, veh/h	122	3099	965	128	3199	996	192	252	214	157	217	185
Arrive On Green	0.05	0.63	0.63	0.07	0.84	0.84	0.09	0.14	0.14	0.07	0.12	0.12
Sat Flow, veh/h	1707	4893	1524	1757	5036	1568	1707	1792	1524	1774	1863	1583
Grp Volume(v), veh/h	61	3512	266	140	5542	81	431	72	182	141	72	291
Grp Sat Flow(s),veh/h/ln	1707	1631	1524	1757	1679	1568	1707	1792	1524	1774	1863	1583
Q Serve(g_s), s	2.6	114.0	7.6	9.0	114.3	0.9	16.0	6.5	21.0	9.9	6.4	21.0
Cycle Q Clear(g_c), s	2.6	114.0	7.6	9.0	114.3	0.9	16.0	6.5	21.0	9.9	6.4	21.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	122	3099	965	128	3199	996	192	252	214	157	217	185
V/C Ratio(X)	0.50	1.13	0.28	1.10	1.73	0.08	2.25	0.29	0.85	0.90	0.33	1.58
Avail Cap(c_a), veh/h	125	3099	965	128	3199	996	192	279	237	157	217	185
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
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	42.8	33.0	4.4	82.6	14.0	1.9	78.7	69.3	75.5	81.8	73.0	79.5
Incr Delay (d2), s/veh	3.1	64.5	0.7	107.4	331.0	0.2	577.9	0.6	22.8	43.1	0.9	283.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	69.6	5.0	10.2	149.0	0.7	32.8	3.3	10.2	8.9	3.4	23.7
LnGrp Delay(d),s/veh	45.9	97.5	5.1	190.0	345.0	2.1	656.7	69.9	98.4	124.9	73.9	362.8
LnGrp LOS	D	F	A	F	F	A	F	E	F	F	E	F
Approach Vol, veh/h		3839			5763			685			504	
Approach Delay, s/veh		90.3			336.4			446.6			255.0	
Approach LOS		F			F			F			F	

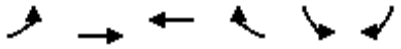
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	119.3	16.7	30.3	14.0	119.0	21.0	26.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	7.0	112.0	7.0	26.0	7.0	112.0	14.0	19.0
Max Q Clear Time (g_c+I1), s	4.6	116.3	11.9	23.0	11.0	116.0	18.0	23.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	252.0
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	337	221	34	136	158	34	19	414	58	2	117	55
Future Volume (veh/h)	337	221	34	136	158	34	19	414	58	2	117	55
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	374	246	38	151	176	38	21	460	64	2	130	61
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	461	262	41	351	395	80	55	552	75	42	426	198
Arrive On Green	0.53	0.53	0.53	0.53	0.53	0.53	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	747	491	76	552	740	150	37	1556	212	4	1201	557
Grp Volume(v), veh/h	658	0	0	365	0	0	545	0	0	193	0	0
Grp Sat Flow(s),veh/h/ln	1314	0	0	1442	0	0	1804	0	0	1762	0	0
Q Serve(g_s), s	29.2	0.0	0.0	0.0	0.0	0.0	10.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	42.6	0.0	0.0	13.4	0.0	0.0	25.0	0.0	0.0	7.1	0.0	0.0
Prop In Lane	0.57		0.06	0.41		0.10	0.04		0.12	0.01		0.32
Lane Grp Cap(c), veh/h	764	0	0	826	0	0	682	0	0	666	0	0
V/C Ratio(X)	0.86	0.00	0.00	0.44	0.00	0.00	0.80	0.00	0.00	0.29	0.00	0.00
Avail Cap(c_a), veh/h	794	0	0	857	0	0	682	0	0	666	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.5	0.0	0.0	12.7	0.0	0.0	26.7	0.0	0.0	21.0	0.0	0.0
Incr Delay (d2), s/veh	9.3	0.0	0.0	0.4	0.0	0.0	9.5	0.0	0.0	1.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.1	0.0	0.0	5.7	0.0	0.0	14.2	0.0	0.0	3.7	0.0	0.0
LnGrp Delay(d),s/veh	29.7	0.0	0.0	13.1	0.0	0.0	36.2	0.0	0.0	22.1	0.0	0.0
LnGrp LOS	C			B			D			C		
Approach Vol, veh/h		658			365			545			193	
Approach Delay, s/veh		29.7			13.1			36.2			22.1	
Approach LOS		C			B			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		37.0		53.0		37.0		53.0
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0
Max Green Setting (Gmax), s		28.0		48.0		28.0		48.0
Max Q Clear Time (g_c+I1), s		9.1		15.4		27.0		44.6
Green Ext Time (p_c), s		2.7		2.2		0.7		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	27.5
HCM 2010 LOS	C



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	335	1831	879	209	181	148
Future Volume (veh/h)	335	1831	879	209	181	148
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	372	2034	977	232	201	0
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	345	1583	914	217	168	457
Arrive On Green	0.19	0.85	0.63	0.63	0.09	0.00
Sat Flow, veh/h	1774	1863	1456	346	1774	1583
Grp Volume(v), veh/h	372	2034	0	1209	201	0
Grp Sat Flow(s),veh/h/ln	1774	1863	0	1802	1774	1583
Q Serve(g_s), s	35.0	153.0	0.0	113.0	17.0	0.0
Cycle Q Clear(g_c), s	35.0	153.0	0.0	113.0	17.0	0.0
Prop In Lane	1.00			0.19	1.00	1.00
Lane Grp Cap(c), veh/h	345	1583	0	1131	168	457
V/C Ratio(X)	1.08	1.28	0.00	1.07	1.20	0.00
Avail Cap(c_a), veh/h	345	1583	0	1131	168	457
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	72.5	13.5	0.0	33.5	81.5	0.0
Incr Delay (d2), s/veh	71.0	133.0	0.0	47.2	133.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.0	135.0	0.0	70.8	14.5	0.0
LnGrp Delay(d),s/veh	143.5	146.5	0.0	80.7	214.8	0.0
LnGrp LOS	F	F		F	F	
Approach Vol, veh/h		2406	1209		201	
Approach Delay, s/veh		146.1	80.7		214.8	
Approach LOS		F	F		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		158.0		22.0	40.0	118.0		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		151.0		15.0	33.0	111.0		
Max Q Clear Time (g_c+I1), s		155.0		19.0	37.0	115.0		
Green Ext Time (p_c), s		0.0		0.0	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	129.0
HCM 2010 LOS	F

Intersection	
Int Delay, s/veh	11.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	575	1437	859	17	3	229
Future Vol, veh/h	575	1437	859	17	3	229
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	639	1597	954	19	3	254

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	973	0	-	0	3839	964
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	2875	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	709	-	-	-	4	310
Stage 1	-	-	-	-	370	-
Stage 2	-	-	-	-	40	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	709	-	-	-	0	310
Mov Cap-2 Maneuver	-	-	-	-	0	-
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	40	-

Approach	EB	WB	SB
HCM Control Delay, s	11	0	54.8
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	709	-	-	-	310
HCM Lane V/C Ratio	0.901	-	-	-	0.832
HCM Control Delay (s)	38.4	0	-	-	54.8
HCM Lane LOS	E	A	-	-	F
HCM 95th %tile Q(veh)	11.7	-	-	-	7.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	279	8	868	481	10	1430
Future Volume (veh/h)	279	8	868	481	10	1430
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	310	0	964	0	11	1589
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	286	334	1314	1372	89	1459
Arrive On Green	0.16	0.00	0.71	0.00	0.05	0.78
Sat Flow, veh/h	1774	1583	1863	1583	1774	1863
Grp Volume(v), veh/h	310	0	964	0	11	1589
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	1583	1774	1863
Q Serve(g_s), s	29.0	0.0	56.8	0.0	1.1	141.0
Cycle Q Clear(g_c), s	29.0	0.0	56.8	0.0	1.1	141.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	286	334	1314	1372	89	1459
V/C Ratio(X)	1.08	0.00	0.73	0.00	0.12	1.09
Avail Cap(c_a), veh/h	286	334	1314	1372	89	1459
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	75.5	0.0	16.2	0.0	81.7	19.5
Incr Delay (d2), s/veh	77.7	0.0	3.7	0.0	0.6	51.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.4	0.0	30.3	0.0	0.5	92.3
LnGrp Delay(d),s/veh	153.2	0.0	19.8	0.0	82.4	71.2
LnGrp LOS	F		B		F	F
Approach Vol, veh/h	310		964			1600
Approach Delay, s/veh	153.2		19.8			71.3
Approach LOS	F		B			E

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		146.0		34.0	14.0	132.0		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		139.0		27.0	7.0	125.0		
Max Q Clear Time (g_c+I1), s		143.0		31.0	3.1	58.8		
Green Ext Time (p_c), s		0.0		0.0	0.0	10.2		

Intersection Summary	
HCM 2010 Ctrl Delay	62.9
HCM 2010 LOS	E

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	116	66	1283	176	123	1586
Future Volume (veh/h)	116	66	1283	176	123	1586
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	127	73	1410	193	135	1743
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	124	238	1428	1324	142	1629
Arrive On Green	0.07	0.07	0.77	0.77	0.08	0.87
Sat Flow, veh/h	1774	1583	1863	1583	1774	1863
Grp Volume(v), veh/h	127	73	1410	193	135	1743
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	1583	1774	1863
Q Serve(g_s), s	12.6	0.0	131.0	4.1	13.6	157.4
Cycle Q Clear(g_c), s	12.6	0.0	131.0	4.1	13.6	157.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	124	238	1428	1324	142	1629
V/C Ratio(X)	1.02	0.31	0.99	0.15	0.95	1.07
Avail Cap(c_a), veh/h	124	238	1432	1328	142	1629
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.09	0.09	1.00	1.00
Uniform Delay (d), s/veh	83.7	68.1	20.2	2.7	82.4	11.3
Incr Delay (d2), s/veh	86.9	0.7	4.9	0.0	59.6	43.7
Initial Q Delay(d3),s/veh	0.3	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	3.7	68.5	2.5	9.1	98.1
LnGrp Delay(d),s/veh	170.9	68.8	25.1	2.8	142.0	55.0
LnGrp LOS	F	E	C	A	F	F
Approach Vol, veh/h	200		1603			1878
Approach Delay, s/veh	133.7		22.4			61.3
Approach LOS	F		C			E

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		162.4		17.6	19.5	142.9		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		155.4		10.6	12.0	136.4		
Max Q Clear Time (g_c+I1), s		159.4		14.6	15.6	133.0		
Green Ext Time (p_c), s		0.0		0.0	0.0	3.0		

Intersection Summary	
HCM 2010 Ctrl Delay	48.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	2	163	165	2	79	231	1354	228	132	1502	68
Future Volume (veh/h)	26	2	163	165	2	79	231	1354	228	132	1502	68
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	27	2	172	174	2	83	243	1425	240	139	1581	72
Adj No. of Lanes	1	1	0	1	1	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	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	2	2	2	2	2	2	2
Cap, veh/h	170	2	157	138	383	422	187	1211	1152	108	1128	959
Arrive On Green	0.10	0.10	0.10	0.08	0.21	0.21	0.11	0.65	0.65	0.06	0.61	0.61
Sat Flow, veh/h	1307	18	1568	1774	1863	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	27	0	174	174	2	83	243	1425	240	139	1581	72
Grp Sat Flow(s),veh/h/ln	1307	0	1586	1774	1863	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	3.4	0.0	18.0	14.0	0.2	7.3	19.0	117.0	2.5	11.0	109.0	3.4
Cycle Q Clear(g_c), s	3.6	0.0	18.0	14.0	0.2	7.3	19.0	117.0	2.5	11.0	109.0	3.4
Prop In Lane	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	170	0	159	138	383	422	187	1211	1152	108	1128	959
V/C Ratio(X)	0.16	0.00	1.10	1.26	0.01	0.20	1.30	1.18	0.21	1.28	1.40	0.08
Avail Cap(c_a), veh/h	170	0	159	138	383	422	187	1211	1152	108	1128	959
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09	0.09	0.09	0.09
Uniform Delay (d), s/veh	74.6	0.0	81.0	83.0	56.9	51.1	80.5	31.5	2.1	84.5	35.5	14.7
Incr Delay (d2), s/veh	0.4	0.0	99.8	162.9	0.0	0.2	137.6	80.5	0.0	133.4	181.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	12.3	13.1	0.1	3.2	16.5	86.9	1.8	9.4	112.6	1.5
LnGrp Delay(d),s/veh	75.0	0.0	180.8	245.9	56.9	51.3	218.1	112.0	2.1	217.9	216.7	14.7
LnGrp LOS	E		F	F	E	D	F	F	A	F	F	B
Approach Vol, veh/h		201			259			1908			1792	
Approach Delay, s/veh		166.6			182.1			111.7			208.7	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.0	114.0		42.0	16.0	122.0	19.0	23.0
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	17.0	107.0		35.0	9.0	115.0	12.0	16.0
Max Q Clear Time (g_c+I1), s	21.0	111.0		9.3	13.0	119.0	16.0	20.0
Green Ext Time (p_c), s	0.0	0.0		0.2	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		160.5
HCM 2010 LOS		F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	149	262	285	172	569	296	1163	229	688	1028	114
Future Volume (veh/h)	81	149	262	285	172	569	296	1163	229	688	1028	114
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	85	157	276	300	181	599	312	1224	241	724	1082	120
Adj No. of Lanes	1	1	1	1	1	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	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	2	2	2	2	2	2	2
Cap, veh/h	118	124	308	217	228	616	227	807	880	473	1066	1012
Arrive On Green	0.07	0.07	0.07	0.12	0.12	0.12	0.13	0.43	0.43	0.27	0.57	0.57
Sat Flow, veh/h	1774	1863	1583	1774	1863	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	85	157	276	300	181	599	312	1224	241	724	1082	120
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	8.5	12.0	12.0	22.0	17.0	22.0	23.0	78.0	14.4	48.0	103.0	5.3
Cycle Q Clear(g_c), s	8.5	12.0	12.0	22.0	17.0	22.0	23.0	78.0	14.4	48.0	103.0	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	118	124	308	217	228	616	227	807	880	473	1066	1012
V/C Ratio(X)	0.72	1.26	0.90	1.38	0.80	0.97	1.38	1.52	0.27	1.53	1.02	0.12
Avail Cap(c_a), veh/h	118	124	308	217	228	616	227	807	880	473	1066	1012
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	82.3	84.0	70.7	79.0	76.8	54.1	78.5	51.0	21.0	66.0	38.5	12.7
Incr Delay (d2), s/veh	18.9	168.0	26.9	198.6	17.5	29.4	194.6	238.7	0.8	239.7	12.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	12.0	15.7	22.7	9.9	34.3	23.5	93.7	6.5	55.0	56.4	2.3
LnGrp Delay(d),s/veh	101.3	252.0	97.6	277.6	94.3	83.5	273.1	289.7	21.7	305.7	50.9	12.7
LnGrp LOS	F	F	F	F	F	F	F	F	C	F	F	B
Approach Vol, veh/h		518			1080			1777			1926	
Approach Delay, s/veh		145.0			139.2			250.5			144.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.0	108.0	17.0	27.0	53.0	83.0	27.0	17.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	21.0	101.0	10.0	20.0	46.0	76.0	20.0	10.0
Max Q Clear Time (g_c+I1), s	25.0	105.0	10.5	24.0	50.0	80.0	24.0	14.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay	178.9	
HCM 2010 LOS	F	

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	43	1023	996	38	31	30
Future Vol, veh/h	43	1023	996	38	31	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	175	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	3	3	7	7
Mvmt Flow	45	1077	1048	40	33	32

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1088	0	-	0	2235	1068
Stage 1	-	-	-	-	1068	-
Stage 2	-	-	-	-	1167	-
Critical Hdwy	4.12	-	-	-	6.47	6.27
Critical Hdwy Stg 1	-	-	-	-	5.47	-
Critical Hdwy Stg 2	-	-	-	-	5.47	-
Follow-up Hdwy	2.218	-	-	-	3.563	3.363
Pot Cap-1 Maneuver	641	-	-	-	45	263
Stage 1	-	-	-	-	323	-
Stage 2	-	-	-	-	289	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	641	-	-	-	42	263
Mov Cap-2 Maneuver	-	-	-	-	42	-
Stage 1	-	-	-	-	300	-
Stage 2	-	-	-	-	289	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	174.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	641	-	-	-	72
HCM Lane V/C Ratio	0.071	-	-	-	0.892
HCM Control Delay (s)	11	-	-	-	174.4
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.2	-	-	-	4.4

Intersection	
Int Delay, s/veh	25.6

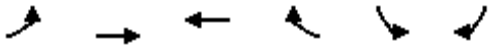
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	990	58	39	989	22	35	0	30	34	0	10
Future Vol, veh/h	6	990	58	39	989	22	35	0	30	34	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	2	2	2
Mvmt Flow	6	1042	61	41	1041	23	37	0	32	36	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1064	0	0	1103	0	0	2225	2231	1073	2236	2250	1053
Stage 1	-	-	-	-	-	-	1085	1085	-	1135	1135	-
Stage 2	-	-	-	-	-	-	1140	1146	-	1101	1115	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	651	-	-	629	-	-	~ 31	43	268	~ 30	42	275
Stage 1	-	-	-	-	-	-	262	293	-	246	277	-
Stage 2	-	-	-	-	-	-	244	274	-	257	283	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	651	-	-	629	-	-	~ 26	35	268	~ 23	34	275
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 26	35	-	~ 23	34	-
Stage 1	-	-	-	-	-	-	256	286	-	240	233	-
Stage 2	-	-	-	-	-	-	197	230	-	221	276	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.4	$ 463.7	$ 591
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	45	651	-	-	629	-	-	29
HCM Lane V/C Ratio	1.52	0.01	-	-	0.065	-	-	1.597
HCM Control Delay (s)	$ 463.7	10.6	0	-	11.1	0	-	$ 591
HCM Lane LOS	F	B	A	-	B	A	-	F
HCM 95th %tile Q(veh)	6.7	0	-	-	0.2	-	-	5.4

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



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	115	939	964	320	260	86
Future Volume (veh/h)	115	939	964	320	260	86
Number	5	2	6	16	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	121	988	1015	337	274	0
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	118	1490	945	314	256	334
Arrive On Green	0.07	0.80	0.71	0.71	0.14	0.00
Sat Flow, veh/h	1774	1863	1340	445	1774	1583
Grp Volume(v), veh/h	121	988	0	1352	274	0
Grp Sat Flow(s),veh/h/ln	1774	1863	0	1784	1774	1583
Q Serve(g_s), s	12.0	40.7	0.0	127.0	26.0	0.0
Cycle Q Clear(g_c), s	12.0	40.7	0.0	127.0	26.0	0.0
Prop In Lane	1.00			0.25	1.00	1.00
Lane Grp Cap(c), veh/h	118	1490	0	1259	256	334
V/C Ratio(X)	1.02	0.66	0.00	1.07	1.07	0.00
Avail Cap(c_a), veh/h	118	1490	0	1259	256	334
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	84.0	7.7	0.0	26.5	77.0	0.0
Incr Delay (d2), s/veh	89.1	2.3	0.0	47.8	75.8	0.0
Initial Q Delay(d3),s/veh	0.3	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	21.6	0.0	78.6	18.1	0.0
LnGrp Delay(d),s/veh	173.3	10.0	0.0	74.3	152.8	0.0
LnGrp LOS	F	B		F	F	
Approach Vol, veh/h		1109	1352		274	
Approach Delay, s/veh		27.8	74.3		152.8	
Approach LOS		C	E		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		149.0			17.0	132.0		31.0
Change Period (Y+Rc), s		7.0			7.0	7.0		7.0
Max Green Setting (Gmax), s		142.0			10.0	125.0		24.0
Max Q Clear Time (g_c+I1), s		42.7			14.0	129.0		28.0
Green Ext Time (p_c), s		37.6			0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	63.3
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	16	42	600	606	13
Future Vol, veh/h	11	16	42	600	606	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	17	46	652	659	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1410	666	673	0	-	0
Stage 1	666	-	-	-	-	-
Stage 2	744	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	153	459	918	-	-	-
Stage 1	511	-	-	-	-	-
Stage 2	470	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	141	459	918	-	-	-
Mov Cap-2 Maneuver	141	-	-	-	-	-
Stage 1	471	-	-	-	-	-
Stage 2	470	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.2	0.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	918	-	239	-	-
HCM Lane V/C Ratio	0.05	-	0.123	-	-
HCM Control Delay (s)	9.1	0	22.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.4	-	-

Intersection	
Int Delay, s/veh	8.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	6	1682	5	16	1559
Future Vol, veh/h	9	6	1682	5	16	1559
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	6	1771	5	17	1641

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	3449	1774	0	0	1776	0
Stage 1	1774	-	-	-	-	-
Stage 2	1675	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	~ 8	103	-	-	350	-
Stage 1	149	-	-	-	-	-
Stage 2	167	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 4	103	-	-	350	-
Mov Cap-2 Maneuver	~ 4	-	-	-	-	-
Stage 1	149	-	-	-	-	-
Stage 2	75	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, $	1891.5	0	0.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	6	350	-
HCM Lane V/C Ratio	-	-	2.632	0.048	-
HCM Control Delay (s)	-	-	$ 1891.5	15.8	0
HCM Lane LOS	-	-	F	C	A
HCM 95th %tile Q(veh)	-	-	3.1	0.2	-

Notes

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

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	27	42	1677	1558	10
Future Vol, veh/h	10	27	42	1677	1558	10
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	28	44	1765	1640	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3499	1646	1651	0	-	0
Stage 1	1646	-	-	-	-	-
Stage 2	1853	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	~ 7	123	391	-	-	-
Stage 1	173	-	-	-	-	-
Stage 2	136	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	0	123	391	-	-	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	136	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	47.3	0.4	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	391	-	123	-	-
HCM Lane V/C Ratio	0.113	-	0.317	-	-
HCM Control Delay (s)	15.4	0	47.3	-	-
HCM Lane LOS	C	A	E	-	-
HCM 95th %tile Q(veh)	0.4	-	1.2	-	-

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

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	22	26	1714	1575	10
Future Vol, veh/h	5	22	26	1714	1575	10
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	23	27	1804	1658	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	3522	1664	1669	0	-	0
Stage 1	1664	-	-	-	-	-
Stage 2	1858	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	7	120	385	-	-	-
Stage 1	169	-	-	-	-	-
Stage 2	135	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	7	120	385	-	-	-
Mov Cap-2 Maneuver	7	-	-	-	-	-
Stage 1	169	-	-	-	-	-
Stage 2	135	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 339.6	0.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	385	-	30	-	-
HCM Lane V/C Ratio	0.071	-	0.947	-	-
HCM Control Delay (s)	15.1	0	$ 339.6	-	-
HCM Lane LOS	C	A	F	-	-
HCM 95th %tile Q(veh)	0.2	-	3.2	-	-

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

Intersection	
Int Delay, s/veh	13.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	8	1732	15	17	1580
Future Vol, veh/h	7	8	1732	15	17	1580
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	8	1823	16	18	1663

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	3530	1831	0	0	1839	0
Stage 1	1831	-	-	-	-	-
Stage 2	1699	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	~ 7	95	-	-	331	-
Stage 1	140	-	-	-	-	-
Stage 2	163	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 2	95	-	-	331	-
Mov Cap-2 Maneuver	~ 2	-	-	-	-	-
Stage 1	140	-	-	-	-	-
Stage 2	46	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, $	2995.9	0	0.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	4	331	-
HCM Lane V/C Ratio	-	-	3.947	0.054	-
HCM Control Delay (s)	-	-	$ 2995.9	16.5	0
HCM Lane LOS	-	-	F	C	A
HCM 95th %tile Q(veh)	-	-	3.3	0.2	-

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

HCM 2010 Computation does not support turning movement with Shared and Exclusive lanes.

Intersection	
Int Delay, s/veh	21

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	31	55	2182	1996	10
Future Vol, veh/h	4	31	55	2182	1996	10
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	-	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	33	58	2297	2101	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	4520	2107	2112	0	-	0
Stage 1	2107	-	-	-	-	-
Stage 2	2413	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	~ 1	65	259	-	-	-
Stage 1	101	-	-	-	-	-
Stage 2	70	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 1	65	259	-	-	-
Mov Cap-2 Maneuver	~ 1	-	-	-	-	-
Stage 1	78	-	-	-	-	-
Stage 2	70	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, $	2527.4	0.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	259	-	8	-	-
HCM Lane V/C Ratio	0.224	-	4.605	-	-
HCM Control Delay (s)	22.9	-	$ 2527.4	-	-
HCM Lane LOS	C	-	F	-	-
HCM 95th %tile Q(veh)	0.8	-	5.9	-	-

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

Intersection	
Int Delay, s/veh	37.2

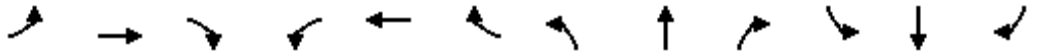
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	47	57	2232	2022	5
Future Vol, veh/h	5	47	57	2232	2022	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	49	60	2349	2128	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	4600	2131	2133	0	-	0
Stage 1	2131	-	-	-	-	-
Stage 2	2469	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	~ 1	62	254	-	-	-
Stage 1	98	-	-	-	-	-
Stage 2	66	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 1	62	254	-	-	-
Mov Cap-2 Maneuver	~ 1	-	-	-	-	-
Stage 1	75	-	-	-	-	-
Stage 2	66	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 3098.3	0.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	254	-	9	-	-
HCM Lane V/C Ratio	0.236	-	6.082	-	-
HCM Control Delay (s)	23.5	-	$ 3098.3	-	-
HCM Lane LOS	C	-	F	-	-
HCM 95th %tile Q(veh)	0.9	-	8.2	-	-

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)	76	0	70	17	3	73	156	2140	52	38	1950	81
Future Volume (veh/h)	76	0	70	17	3	73	156	2140	52	38	1950	81
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	80	0	74	18	3	77	164	2253	55	40	2053	85
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	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	2	2	2	2	2	2	2
Cap, veh/h	122	4	88	51	20	174	259	2241	54	257	2195	90
Arrive On Green	0.14	0.00	0.14	0.14	0.14	0.14	0.29	1.00	1.00	0.15	0.63	0.63
Sat Flow, veh/h	665	33	645	198	149	1270	1774	3531	86	1774	3465	142
Grp Volume(v), veh/h	154	0	0	98	0	0	164	1124	1184	40	1042	1096
Grp Sat Flow(s),veh/h/ln	1342	0	0	1617	0	0	1774	1770	1848	1774	1770	1838
Q Serve(g_s), s	10.5	0.0	0.0	0.0	0.0	0.0	14.4	0.0	102.6	3.6	94.4	97.6
Cycle Q Clear(g_c), s	20.4	0.0	0.0	9.9	0.0	0.0	14.4	0.0	102.6	3.6	94.4	97.6
Prop In Lane	0.52		0.48	0.18		0.79	1.00		0.05	1.00		0.08
Lane Grp Cap(c), veh/h	214	0	0	245	0	0	259	1123	1172	257	1121	1164
V/C Ratio(X)	0.72	0.00	0.00	0.40	0.00	0.00	0.63	1.00	1.01	0.16	0.93	0.94
Avail Cap(c_a), veh/h	241	0	0	274	0	0	259	1258	1314	257	1150	1194
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	76.2	0.0	0.0	71.3	0.0	0.0	59.5	0.0	0.0	67.3	29.4	30.0
Incr Delay (d2), s/veh	8.7	0.0	0.0	1.0	0.0	0.0	0.5	8.4	10.4	0.3	14.5	15.7
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(50%),veh/ln	8.0	0.0	0.0	4.6	0.0	0.0	7.1	2.6	3.4	1.8	50.2	54.4
LnGrp Delay(d),s/veh	84.9	0.0	0.0	72.3	0.0	0.0	60.0	8.4	10.4	67.6	43.9	45.7
LnGrp LOS	F			E			E	F	F	E	D	D
Approach Vol, veh/h		154			98			2472			2178	
Approach Delay, s/veh		84.9			72.3			12.8			45.2	
Approach LOS		F			E			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	31.3	119.0		29.7	26.1	124.2		29.7
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0
Max Green Setting (Gmax), s	18.0	115.0		26.0	7.0	126.0		26.0
Max Q Clear Time (g_c+I1), s	16.4	99.6		11.9	5.6	104.6		22.4
Green Ext Time (p_c), s	0.1	12.4		0.4	0.0	17.6		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	30.6
HCM 2010 LOS	C

HCM 2010 Computation does not support turning movement with Shared and Exclusive lanes.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	178	3260	313	356	2355	41	164	16	223	54	36	79
Future Volume (veh/h)	178	3260	313	356	2355	41	164	16	223	54	36	79
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1845	1845	1845	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	187	3432	329	375	2479	43	173	17	235	57	38	83
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	3	3	3	1	1	1	2	2	2
Cap, veh/h	347	2762	974	375	2824	957	221	156	133	195	112	95
Arrive On Green	0.39	1.00	1.00	0.21	0.56	0.56	0.07	0.08	0.08	0.05	0.06	0.06
Sat Flow, veh/h	1774	5085	1583	1757	5036	1568	1792	1881	1599	1774	1863	1583
Grp Volume(v), veh/h	187	3432	329	375	2479	43	173	17	235	57	38	83
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1757	1679	1568	1792	1881	1599	1774	1863	1583
Q Serve(g_s), s	14.6	97.8	0.0	38.4	76.6	0.5	13.0	1.5	10.2	5.3	3.5	6.6
Cycle Q Clear(g_c), s	14.6	97.8	0.0	38.4	76.6	0.5	13.0	1.5	10.2	5.3	3.5	6.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	347	2762	974	375	2824	957	221	156	133	195	112	95
V/C Ratio(X)	0.54	1.24	0.34	1.00	0.88	0.04	0.78	0.11	1.77	0.29	0.34	0.87
Avail Cap(c_a), veh/h	347	2769	976	375	2966	1001	221	230	195	196	186	158
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.5	0.0	0.0	70.8	34.2	5.1	75.1	76.4	38.4	73.7	81.1	42.2
Incr Delay (d2), s/veh	0.2	109.5	0.1	14.1	0.4	0.0	16.4	0.3	375.1	0.8	1.8	23.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	28.0	0.0	20.1	35.5	0.5	3.1	0.8	19.9	2.7	1.9	4.5
LnGrp Delay(d),s/veh	48.7	109.5	0.1	84.9	34.6	5.1	91.5	76.7	413.5	74.5	82.9	65.2
LnGrp LOS	D	F	A	F	C	A	F	E	F	E	F	E
Approach Vol, veh/h		3948			2897			425			178	
Approach Delay, s/veh		97.5			40.7			269.0			72.0	
Approach LOS		F			D			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	40.2	106.0	13.9	19.9	43.3	102.9	18.0	15.8
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	21.6	104.0	7.0	20.0	29.0	96.0	11.0	16.0
Max Q Clear Time (g_c+I1), s	16.6	78.6	7.3	12.2	40.4	99.8	15.0	8.6
Green Ext Time (p_c), s	0.2	20.3	0.0	0.5	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	84.6
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	3349	234	219	2301	78	169	47	291	111	69	76
Future Volume (veh/h)	140	3349	234	219	2301	78	169	47	291	111	69	76
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	147	3525	246	231	2422	82	178	49	0	117	73	0
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	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	2	2	2	2	2	2	2
Cap, veh/h	215	3113	969	276	3454	1075	231	331	281	250	331	281
Arrive On Green	0.12	1.00	1.00	0.25	1.00	1.00	0.18	0.18	0.00	0.18	0.18	0.00
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583	1322	1863	1583	1351	1863	1583
Grp Volume(v), veh/h	147	3525	246	231	2422	82	178	49	0	117	73	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583	1322	1863	1583	1351	1863	1583
Q Serve(g_s), s	6.8	110.2	0.0	16.7	0.0	0.0	24.0	4.0	0.0	14.4	6.0	0.0
Cycle Q Clear(g_c), s	6.8	110.2	0.0	16.7	0.0	0.0	30.0	4.0	0.0	18.4	6.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	215	3113	969	276	3454	1075	231	331	281	250	331	281
V/C Ratio(X)	0.68	1.13	0.25	0.84	0.70	0.08	0.77	0.15	0.00	0.47	0.22	0.00
Avail Cap(c_a), veh/h	306	3305	1029	276	3454	1075	231	331	281	250	331	281
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.46	0.46	0.46	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	16.7	0.0	0.0	61.8	0.0	0.0	76.2	62.5	0.0	70.3	63.3	0.0
Incr Delay (d2), s/veh	0.4	60.0	0.1	10.3	0.6	0.1	14.8	0.2	0.0	1.4	0.3	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	17.3	0.0	11.4	0.2	0.0	9.7	2.1	0.0	5.5	3.1	0.0
LnGrp Delay(d),s/veh	17.1	60.0	0.1	72.1	0.6	0.1	91.0	62.7	0.0	71.6	63.7	0.0
LnGrp LOS	B	F	A	E	A	A	F	E		E	E	
Approach Vol, veh/h		3918			2735			227			190	
Approach Delay, s/veh		54.6			6.6			84.9			68.6	
Approach LOS		D			A			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.9	127.1		37.0	24.4	118.6		37.0
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0
Max Green Setting (Gmax), s	18.0	111.0		30.0	14.0	115.0		30.0
Max Q Clear Time (g_c+I1), s	8.8	2.0		32.0	18.7	112.2		20.4
Green Ext Time (p_c), s	0.2	48.9		0.0	0.0	2.8		0.5

Intersection Summary		
HCM 2010 Ctrl Delay	37.4	
HCM 2010 LOS	D	

HCM 2010 Computation does not support turning movement with Shared and Exclusive lanes.

Intersection	
Int Delay, s/veh	11.3

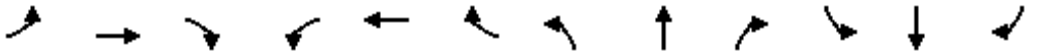
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Vol, veh/h	0	5198	3622	15	0	117
Future Vol, veh/h	0	5198	3622	15	0	117
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	0	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	3	3	4	4
Mvmt Flow	0	5472	3813	16	0	123

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	1907
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.18
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.94
Pot Cap-1 Maneuver	0	-	-	-	0	~ 49
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	~ 49
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	$ 865.1
HCM LOS			F

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	49
HCM Lane V/C Ratio	-	-	-	2.513
HCM Control Delay (s)	-	-	-	$ 865.1
HCM Lane LOS	-	-	-	F
HCM 95th %tile Q(veh)	-	-	-	12.9

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)	164	4866	163	96	3530	113	150	64	179	153	47	156
Future Volume (veh/h)	164	4866	163	96	3530	113	150	64	179	153	47	156
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1810	1810	1810	1863	1863	1863	1845	1845	1845
Adj Flow Rate, veh/h	173	5122	172	101	3716	119	158	67	188	161	49	164
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	5	5	5	2	2	2	3	3	3
Cap, veh/h	128	3525	1098	126	3458	1077	129	166	141	128	164	139
Arrive On Green	0.05	0.70	0.70	0.07	0.93	0.93	0.05	0.09	0.09	0.05	0.09	0.09
Sat Flow, veh/h	1757	5036	1568	1723	4940	1538	1774	1863	1583	1757	1845	1568
Grp Volume(v), veh/h	173	5122	172	101	3716	119	158	67	188	161	49	164
Grp Sat Flow(s),veh/h/ln	1757	1679	1568	1723	1647	1538	1774	1863	1583	1757	1845	1568
Q Serve(g_s), s	9.0	126.0	6.7	6.1	126.0	1.1	9.0	6.1	13.8	9.0	4.5	13.8
Cycle Q Clear(g_c), s	9.0	126.0	6.7	6.1	126.0	1.1	9.0	6.1	13.8	9.0	4.5	13.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	128	3525	1098	126	3458	1077	129	166	141	128	164	139
V/C Ratio(X)	1.35	1.45	0.16	0.80	1.07	0.11	1.23	0.40	1.34	1.26	0.30	1.18
Avail Cap(c_a), veh/h	128	3525	1098	126	3458	1077	129	166	141	128	164	139
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
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	66.3	27.0	9.1	81.5	6.2	1.9	84.1	77.5	60.6	84.2	76.7	60.6
Incr Delay (d2), s/veh	201.5	205.5	0.3	29.6	39.9	0.2	153.0	1.6	191.3	165.1	1.0	131.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.5	124.8	3.0	6.0	64.4	0.5	11.9	3.2	13.9	7.9	2.3	11.4
LnGrp Delay(d),s/veh	267.8	232.5	9.4	111.1	46.1	2.1	237.1	79.1	251.9	249.2	77.8	192.1
LnGrp LOS	F	F	A	F	F	A	F	E	F	F	E	F
Approach Vol, veh/h		5467			3936			413			374	
Approach Delay, s/veh		226.6			46.4			218.2			201.7	
Approach LOS		F			D			F			F	

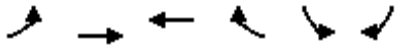
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	131.0	14.0	21.0	14.0	131.0	14.0	21.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	7.0	124.0	7.0	14.0	7.0	124.0	7.0	14.0
Max Q Clear Time (g_c+I1), s	11.0	128.0	11.0	15.8	8.1	128.0	11.0	15.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	155.7
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	53	18	13	67	1	27	117	13	1	217	157
Future Volume (veh/h)	59	53	18	13	67	1	27	117	13	1	217	157
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	66	59	20	14	74	1	30	130	14	1	241	174
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	147	97	30	70	214	3	225	951	99	41	763	549
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.76	0.76	0.76	0.76	0.76	0.76
Sat Flow, veh/h	669	736	225	178	1614	20	235	1256	131	1	1008	725
Grp Volume(v), veh/h	145	0	0	89	0	0	174	0	0	416	0	0
Grp Sat Flow(s),veh/h/ln	1631	0	0	1812	0	0	1622	0	0	1734	0	0
Q Serve(g_s), s	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	7.3	0.0	0.0	3.9	0.0	0.0	2.3	0.0	0.0	6.9	0.0	0.0
Prop In Lane	0.46		0.14	0.16		0.01	0.17		0.08	0.00		0.42
Lane Grp Cap(c), veh/h	274	0	0	286	0	0	1274	0	0	1352	0	0
V/C Ratio(X)	0.53	0.00	0.00	0.31	0.00	0.00	0.14	0.00	0.00	0.31	0.00	0.00
Avail Cap(c_a), veh/h	549	0	0	598	0	0	1274	0	0	1352	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	36.9	0.0	0.0	35.6	0.0	0.0	2.9	0.0	0.0	3.5	0.0	0.0
Incr Delay (d2), s/veh	1.6	0.0	0.0	0.6	0.0	0.0	0.2	0.0	0.0	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	0.0	2.1	0.0	0.0	1.2	0.0	0.0	3.5	0.0	0.0
LnGrp Delay(d),s/veh	38.5	0.0	0.0	36.2	0.0	0.0	3.2	0.0	0.0	4.1	0.0	0.0
LnGrp LOS	D			D			A			A		
Approach Vol, veh/h		145			89			174			416	
Approach Delay, s/veh		38.5			36.2			3.2			4.1	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		73.1		16.9		73.1		16.9
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0
Max Green Setting (Gmax), s		50.0		26.0		50.0		26.0
Max Q Clear Time (g_c+I1), s		8.9		5.9		4.3		9.3
Green Ext Time (p_c), s		9.4		0.3		4.0		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	140	518	681	149	84	182
Future Volume (veh/h)	140	518	681	149	84	182
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	156	576	757	166	93	0
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	194	1623	1087	238	130	289
Arrive On Green	0.11	0.87	0.73	0.73	0.07	0.00
Sat Flow, veh/h	1774	1863	1481	325	1774	1583
Grp Volume(v), veh/h	156	576	0	923	93	0
Grp Sat Flow(s),veh/h/ln	1774	1863	0	1805	1774	1583
Q Serve(g_s), s	15.5	10.4	0.0	50.0	9.2	0.0
Cycle Q Clear(g_c), s	15.5	10.4	0.0	50.0	9.2	0.0
Prop In Lane	1.00			0.18	1.00	1.00
Lane Grp Cap(c), veh/h	194	1623	0	1326	130	289
V/C Ratio(X)	0.81	0.35	0.00	0.70	0.72	0.00
Avail Cap(c_a), veh/h	256	1623	0	1326	168	322
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	78.3	2.2	0.0	13.0	81.6	0.0
Incr Delay (d2), s/veh	13.0	0.6	0.0	3.0	9.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	5.6	0.0	25.7	4.9	0.0
LnGrp Delay(d),s/veh	91.3	2.8	0.0	16.0	91.4	0.0
LnGrp LOS	F	A		B	F	
Approach Vol, veh/h		732	923		93	
Approach Delay, s/veh		21.6	16.0		91.4	
Approach LOS		C	B		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		161.8		18.2	24.6	137.2		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		151.0		15.0	24.0	120.0		
Max Q Clear Time (g_c+I1), s		12.4		11.2	17.5	52.0		
Green Ext Time (p_c), s		3.8		0.1	0.2	9.6		

Intersection Summary	
HCM 2010 Ctrl Delay	22.4
HCM 2010 LOS	C

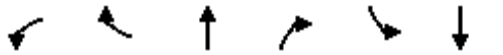
Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	126	476	581	4	2	249
Future Vol, veh/h	126	476	581	4	2	249
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	140	529	646	4	2	277

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	650	0	-	0	1457	648
Stage 1	-	-	-	-	648	-
Stage 2	-	-	-	-	809	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	936	-	-	-	143	470
Stage 1	-	-	-	-	521	-
Stage 2	-	-	-	-	438	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	936	-	-	-	113	470
Mov Cap-2 Maneuver	-	-	-	-	113	-
Stage 1	-	-	-	-	411	-
Stage 2	-	-	-	-	438	-

Approach	EB	WB	SB
HCM Control Delay, s	2	0	24.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	936	-	-	-	458
HCM Lane V/C Ratio	0.15	-	-	-	0.609
HCM Control Delay (s)	9.5	0	-	-	24.3
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.5	-	-	-	4



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	243	5	580	154	3	475
Future Volume (veh/h)	243	5	580	154	3	475
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	270	0	644	0	3	528
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	309	355	1290	1372	89	1434
Arrive On Green	0.17	0.00	0.69	0.00	0.05	0.77
Sat Flow, veh/h	1774	1583	1863	1583	1774	1863
Grp Volume(v), veh/h	270	0	644	0	3	528
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	1583	1774	1863
Q Serve(g_s), s	26.7	0.0	29.3	0.0	0.3	16.4
Cycle Q Clear(g_c), s	26.7	0.0	29.3	0.0	0.3	16.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	309	355	1290	1372	89	1434
V/C Ratio(X)	0.87	0.00	0.50	0.00	0.03	0.37
Avail Cap(c_a), veh/h	503	528	1290	1372	89	1434
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	72.4	0.0	13.0	0.0	81.4	6.6
Incr Delay (d2), s/veh	9.4	0.0	1.4	0.0	0.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.9	0.0	15.5	0.0	0.1	8.7
LnGrp Delay(d),s/veh	81.8	0.0	14.4	0.0	81.5	7.4
LnGrp LOS	F		B		F	A
Approach Vol, veh/h	270		644			531
Approach Delay, s/veh	81.8		14.4			7.8
Approach LOS	F		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		143.6		36.4	14.0	129.6		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		117.0		49.0	7.0	103.0		
Max Q Clear Time (g_c+I1), s		18.4		28.7	2.3	31.3		
Green Ext Time (p_c), s		3.8		0.7	0.0	5.0		

Intersection Summary	
HCM 2010 Ctrl Delay	24.6
HCM 2010 LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	87	140	594	48	73	645
Future Volume (veh/h)	87	140	594	48	73	645
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1845	1845	1727	1727
Adj Flow Rate, veh/h	96	154	653	53	80	709
Adj No. of Lanes	1	1	2	1	1	2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	7	7	3	3	10	10
Cap, veh/h	249	223	905	405	704	2433
Arrive On Green	0.15	0.15	0.26	0.26	0.43	0.74
Sat Flow, veh/h	1691	1509	3597	1568	1645	3368
Grp Volume(v), veh/h	96	154	653	53	80	709
Grp Sat Flow(s),veh/h/ln	1691	1509	1752	1568	1645	1641
Q Serve(g_s), s	4.6	8.7	15.3	1.4	2.6	6.4
Cycle Q Clear(g_c), s	4.6	8.7	15.3	1.4	2.6	6.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	249	223	905	405	704	2433
V/C Ratio(X)	0.38	0.69	0.72	0.13	0.11	0.29
Avail Cap(c_a), veh/h	451	402	1441	645	704	2433
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.97	0.97	1.00	1.00
Uniform Delay (d), s/veh	34.7	36.4	30.4	9.9	15.5	3.8
Incr Delay (d2), s/veh	1.0	3.8	4.8	0.6	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	7.3	7.9	2.0	1.2	3.0
LnGrp Delay(d),s/veh	35.6	40.2	35.2	10.5	15.6	4.1
LnGrp LOS	D	D	D	B	B	A
Approach Vol, veh/h	250		706			789
Approach Delay, s/veh	38.5		33.4			5.3
Approach LOS	D		C			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		71.7		18.3	43.5	28.2		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		54.0		22.0	12.0	35.0		
Max Q Clear Time (g_c+I1), s		8.4		10.7	4.6	17.3		
Green Ext Time (p_c), s		5.1		0.6	0.1	3.9		

Intersection Summary	
HCM 2010 Ctrl Delay	21.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	97	103	51	3	37	72	572	27	96	629	7
Future Volume (veh/h)	33	97	103	51	3	37	72	572	27	96	629	7
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1810	1810	1900	1845	1845	1845	1792	1792	1900
Adj Flow Rate, veh/h	35	103	110	54	3	39	77	609	29	102	669	7
Adj No. of Lanes	1	1	1	2	1	0	1	2	1	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	5	5	5	3	3	3	6	6	6
Cap, veh/h	119	151	229	158	18	228	115	761	415	925	2396	25
Arrive On Green	0.08	0.08	0.08	0.05	0.16	0.16	0.02	0.07	0.07	0.54	0.69	0.69
Sat Flow, veh/h	1333	1827	1553	3343	111	1444	1757	3505	1568	1707	3453	36
Grp Volume(v), veh/h	35	103	110	54	0	42	77	609	29	102	330	346
Grp Sat Flow(s),veh/h/ln	1333	1827	1553	1672	0	1555	1757	1752	1568	1707	1703	1786
Q Serve(g_s), s	4.6	9.9	9.7	2.8	0.0	4.2	7.8	30.8	0.0	5.2	13.2	13.2
Cycle Q Clear(g_c), s	8.8	9.9	9.7	2.8	0.0	4.2	7.8	30.8	0.0	5.2	13.2	13.2
Prop In Lane	1.00		1.00	1.00		0.93	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	119	151	229	158	0	245	115	761	415	925	1181	1239
V/C Ratio(X)	0.29	0.68	0.48	0.34	0.00	0.17	0.67	0.80	0.07	0.11	0.28	0.28
Avail Cap(c_a), veh/h	253	335	386	279	0	458	273	1499	745	925	1181	1239
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.96	0.96	0.96	0.96	0.96	0.96
Uniform Delay (d), s/veh	81.8	80.3	49.3	83.0	0.0	65.6	86.1	79.7	59.0	20.1	10.5	10.5
Incr Delay (d2), s/veh	1.4	5.4	1.6	1.3	0.0	0.3	6.4	8.4	0.3	0.1	0.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	5.2	4.4	1.3	0.0	1.8	4.0	15.9	1.3	2.5	6.4	6.7
LnGrp Delay(d),s/veh	83.2	85.7	50.8	84.3	0.0	66.0	92.5	88.1	59.4	20.1	11.0	11.0
LnGrp LOS	F	F	D	F		E	F	F	E	C	B	B
Approach Vol, veh/h		248			96			715			778	
Approach Delay, s/veh		69.9			76.3			87.4			12.2	
Approach LOS		E			E			F			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.7	129.9		33.4	102.6	44.1	13.5	19.8
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	26.0	82.0		51.0	33.0	75.0	13.0	31.0
Max Q Clear Time (g_c+I1), s	11.8	15.2		6.2	7.2	32.8	4.8	11.9
Green Ext Time (p_c), s	0.1	4.1		0.2	0.2	4.3	0.1	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	52.6
HCM 2010 LOS	D

HCM 2010 methodology does not support more than 4 approaches.

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	17	518	323	19	104	41
Future Vol, veh/h	17	518	323	19	104	41
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	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	5	5	5	5	3	3
Mvmt Flow	19	569	355	21	114	45

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	376	0	-	0	973	366
Stage 1	-	-	-	-	366	-
Stage 2	-	-	-	-	607	-
Critical Hdwy	4.15	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.245	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	1166	-	-	-	278	677
Stage 1	-	-	-	-	699	-
Stage 2	-	-	-	-	542	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1166	-	-	-	274	677
Mov Cap-2 Maneuver	-	-	-	-	274	-
Stage 1	-	-	-	-	688	-
Stage 2	-	-	-	-	542	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	25.8
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1166	-	-	-	329
HCM Lane V/C Ratio	0.016	-	-	-	0.484
HCM Control Delay (s)	8.1	-	-	-	25.8
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	2.5

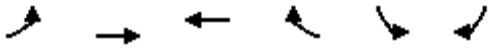
Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	15	601	5	26	309	18	25	0	74	24	0	7
Future Vol, veh/h	15	601	5	26	309	18	25	0	74	24	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	7	7	7	2	2	2	13	13	13
Mvmt Flow	16	653	5	28	336	20	27	0	80	26	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	356	0	0	658	0	0	1094	1100	656	1130	1092	346
Stage 1	-	-	-	-	-	-	688	688	-	402	402	-
Stage 2	-	-	-	-	-	-	406	412	-	728	690	-
Critical Hdwy	4.14	-	-	4.17	-	-	7.12	6.52	6.22	7.23	6.63	6.33
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.23	5.63	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.23	5.63	-
Follow-up Hdwy	2.236	-	-	2.263	-	-	3.518	4.018	3.318	3.617	4.117	3.417
Pot Cap-1 Maneuver	1192	-	-	906	-	-	191	212	465	172	205	673
Stage 1	-	-	-	-	-	-	436	447	-	603	582	-
Stage 2	-	-	-	-	-	-	622	594	-	398	430	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1192	-	-	906	-	-	180	199	465	136	193	673
Mov Cap-2 Maneuver	-	-	-	-	-	-	180	199	-	136	193	-
Stage 1	-	-	-	-	-	-	427	438	-	590	559	-
Stage 2	-	-	-	-	-	-	591	571	-	322	421	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.7	21	32.1
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	332	1192	-	-	906	-	-	166
HCM Lane V/C Ratio	0.324	0.014	-	-	0.031	-	-	0.203
HCM Control Delay (s)	21	8.1	0	-	9.1	0	-	32.1
HCM Lane LOS	C	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	1.4	0	-	-	0.1	-	-	0.7



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	28	671	316	111	392	37
Future Volume (veh/h)	28	671	316	111	392	37
Number	5	2	6	16	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1810	1900	1863	1863
Adj Flow Rate, veh/h	30	722	340	119	422	0
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	5	5	2	2
Cap, veh/h	378	1112	430	151	497	788
Arrive On Green	0.22	0.61	0.34	0.34	0.28	0.00
Sat Flow, veh/h	1740	1827	1282	449	1774	1583
Grp Volume(v), veh/h	30	722	0	459	422	0
Grp Sat Flow(s),veh/h/ln	1740	1827	0	1730	1774	1583
Q Serve(g_s), s	1.2	23.0	0.0	21.6	20.2	0.0
Cycle Q Clear(g_c), s	1.2	23.0	0.0	21.6	20.2	0.0
Prop In Lane	1.00			0.26	1.00	1.00
Lane Grp Cap(c), veh/h	378	1112	0	581	497	788
V/C Ratio(X)	0.08	0.65	0.00	0.79	0.85	0.00
Avail Cap(c_a), veh/h	378	1112	0	654	631	907
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	28.0	11.4	0.0	27.0	30.6	0.0
Incr Delay (d2), s/veh	0.1	2.9	0.0	10.5	8.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	12.3	0.0	12.0	11.1	0.0
LnGrp Delay(d),s/veh	28.1	14.3	0.0	37.5	39.3	0.0
LnGrp LOS	C	B		D	D	
Approach Vol, veh/h		752	459		422	
Approach Delay, s/veh		14.9	37.5		39.3	
Approach LOS		B	D		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		59.8			24.6	35.2		30.2
Change Period (Y+Rc), s		7.0			7.0	7.0		7.0
Max Green Setting (Gmax), s		46.0			7.0	32.0		30.0
Max Q Clear Time (g_c+I1), s		25.0			3.2	23.6		22.2
Green Ext Time (p_c), s		14.5			0.0	4.6		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	27.6
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	33	7	170	594	5
Future Vol, veh/h	5	33	7	170	594	5
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	3	3	2	2
Mvmt Flow	5	35	7	179	625	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	821	628	630	0	-	0
Stage 1	628	-	-	-	-	-
Stage 2	193	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.13	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.227	-	-	-
Pot Cap-1 Maneuver	344	483	947	-	-	-
Stage 1	532	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	341	483	947	-	-	-
Mov Cap-2 Maneuver	341	-	-	-	-	-
Stage 1	528	-	-	-	-	-
Stage 2	840	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.6	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	947	-	458	-	-
HCM Lane V/C Ratio	0.008	-	0.087	-	-
HCM Control Delay (s)	8.8	0	13.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	0	24	2	1	2	13	577	1	0	1044	3
Future Vol, veh/h	7	0	24	2	1	2	13	577	1	0	1044	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	13	13	13	2	2	2	6	6	6	3	3	3
Mvmt Flow	8	0	26	2	1	2	14	627	1	0	1135	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1479	1793	569	1224	1794	314	1138	0	0	628	0	0
Stage 1	1137	1137	-	656	656	-	-	-	-	-	-	-
Stage 2	342	656	-	568	1138	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.76	7.16	7.54	6.54	6.94	4.22	-	-	4.16	-	-
Critical Hdwy Stg 1	6.76	5.76	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.76	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.13	3.43	3.52	4.02	3.32	2.26	-	-	2.23	-	-
Pot Cap-1 Maneuver	79	71	438	135	80	682	587	-	-	943	-	-
Stage 1	197	253	-	421	460	-	-	-	-	-	-	-
Stage 2	617	434	-	475	275	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	77	69	438	125	78	682	587	-	-	943	-	-
Mov Cap-2 Maneuver	156	174	-	249	183	-	-	-	-	-	-	-
Stage 1	192	253	-	411	449	-	-	-	-	-	-	-
Stage 2	599	424	-	447	275	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18	17.1	0.2	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	587	-	-	311	304	943	-	-
HCM Lane V/C Ratio	0.024	-	-	0.108	0.018	-	-	-
HCM Control Delay (s)	11.3	-	-	18	17.1	0	-	-
HCM Lane LOS	B	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.1	0	-	-

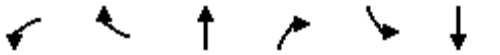
Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	22	19	0	3	10	583	3	0	1068	2
Future Vol, veh/h	5	0	22	19	0	3	10	583	3	0	1068	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	4	4	4
Mvmt Flow	5	0	23	20	0	3	11	614	3	0	1124	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1454	1764	563	1200	1764	309	1126	0	0	617	0	0
Stage 1	1125	1125	-	638	638	-	-	-	-	-	-	-
Stage 2	329	639	-	562	1126	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.2	-	-	4.18	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.25	-	-	2.24	-	-
Pot Cap-1 Maneuver	91	83	470	141	83	687	599	-	-	945	-	-
Stage 1	218	278	-	431	469	-	-	-	-	-	-	-
Stage 2	658	469	-	479	278	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	89	82	470	132	82	687	599	-	-	945	-	-
Mov Cap-2 Maneuver	174	193	-	258	188	-	-	-	-	-	-	-
Stage 1	214	278	-	423	461	-	-	-	-	-	-	-
Stage 2	643	461	-	455	278	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16	18.9	0.2	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	599	-	-	357	282	945	-	-
HCM Lane V/C Ratio	0.018	-	-	0.08	0.082	-	-	-
HCM Control Delay (s)	11.1	-	-	16	18.9	0	-	-
HCM Lane LOS	B	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.3	0	-	-



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	565	62	530	151	26	1083
Future Volume (veh/h)	565	62	530	151	26	1083
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1810	1810	1827	1827
Adj Flow Rate, veh/h	595	65	558	159	27	1140
Adj No. of Lanes	2	1	2	1	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	5	5	4	4
Cap, veh/h	784	456	1874	1189	105	2295
Arrive On Green	0.23	0.23	0.55	0.55	0.06	0.66
Sat Flow, veh/h	3442	1583	3529	1538	1740	3563
Grp Volume(v), veh/h	595	65	558	159	27	1140
Grp Sat Flow(s),veh/h/ln	1721	1583	1719	1538	1740	1736
Q Serve(g_s), s	14.5	2.7	7.9	2.4	1.3	14.9
Cycle Q Clear(g_c), s	14.5	2.7	7.9	2.4	1.3	14.9
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	784	456	1874	1189	105	2295
V/C Ratio(X)	0.76	0.14	0.30	0.13	0.26	0.50
Avail Cap(c_a), veh/h	1109	606	1874	1189	213	2295
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.4	23.8	11.1	2.6	40.4	7.7
Incr Delay (d2), s/veh	1.9	0.1	0.4	0.2	1.3	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	2.8	3.8	2.1	0.7	7.2
LnGrp Delay(d),s/veh	34.4	23.9	11.5	2.8	41.6	8.5
LnGrp LOS	C	C	B	A	D	A
Approach Vol, veh/h	660		717			1167
Approach Delay, s/veh	33.4		9.6			9.2
Approach LOS	C		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		64.5		25.5	10.4	54.1		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		49.0		27.0	9.0	33.0		
Max Q Clear Time (g_c+I1), s		16.9		16.5	3.3	9.9		
Green Ext Time (p_c), s		9.1		2.0	0.0	4.0		

Intersection Summary	
HCM 2010 Ctrl Delay	15.6
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	37	27	681	1645	3
Future Vol, veh/h	0	37	27	681	1645	3
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	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	4	4	5	5	3	3
Mvmt Flow	0	39	29	724	1750	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	877	1753	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.98	4.2	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.34	2.25	-	-	-
Pot Cap-1 Maneuver	0	288	341	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	288	341	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.5	0.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	341	-	288	-	-
HCM Lane V/C Ratio	0.084	-	0.137	-	-
HCM Control Delay (s)	16.5	-	19.5	-	-
HCM Lane LOS	C	-	C	-	-
HCM 95th %tile Q(veh)	0.3	-	0.5	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	0	45	25	0	12	28	695	0	10	1679	3
Future Volume (veh/h)	1	0	45	25	0	12	28	695	0	10	1679	3
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1863	1900	1827	1827	1900	1863	1863	1900
Adj Flow Rate, veh/h	1	0	49	27	0	13	31	764	0	11	1845	3
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	2	2	2	4	4	4	2	2	2
Cap, veh/h	42	1	141	150	13	46	401	961	0	824	1853	3
Arrive On Green	0.09	0.00	0.09	0.09	0.00	0.09	0.46	0.55	0.00	0.46	0.51	0.51
Sat Flow, veh/h	17	14	1536	901	137	500	1740	3563	0	1774	3625	6
Grp Volume(v), veh/h	50	0	0	40	0	0	31	764	0	11	900	948
Grp Sat Flow(s),veh/h/ln	1568	0	0	1538	0	0	1740	1736	0	1774	1770	1862
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.9	15.8	0.0	0.3	45.6	45.6
Cycle Q Clear(g_c), s	2.7	0.0	0.0	1.9	0.0	0.0	0.9	15.8	0.0	0.3	45.6	45.6
Prop In Lane	0.02		0.98	0.67		0.32	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	185	0	0	208	0	0	401	961	0	824	904	952
V/C Ratio(X)	0.27	0.00	0.00	0.19	0.00	0.00	0.08	0.79	0.00	0.01	1.00	1.00
Avail Cap(c_a), veh/h	389	0	0	393	0	0	401	1774	0	824	904	952
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.96	0.96	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	0.0	0.0	38.0	0.0	0.0	18.9	18.0	0.0	13.0	21.9	21.9
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.4	0.0	0.0	0.1	6.5	0.0	0.0	28.9	28.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.0	0.9	0.0	0.0	0.4	8.3	0.0	0.1	29.3	30.6
LnGrp Delay(d),s/veh	39.1	0.0	0.0	38.4	0.0	0.0	19.0	24.5	0.0	13.0	50.7	50.1
LnGrp LOS	D			D			B	C		B	D	D
Approach Vol, veh/h		50			40			795			1859	
Approach Delay, s/veh		39.1			38.4			24.3			50.2	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	25.7	51.0		13.3	46.8	29.9		13.3
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0
Max Green Setting (Gmax), s	7.0	44.0		18.0	7.0	44.0		18.0
Max Q Clear Time (g_c+I1), s	2.9	47.6		3.9	2.3	17.8		4.7
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	5.1		0.1

Intersection Summary			
HCM 2010 Ctrl Delay		42.3	
HCM 2010 LOS		D	

HCM 2010 Computation does not support turning movement with Shared and Exclusive lanes.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	2048	212	222	2395	17	140	9	163	42	12	128
Future Volume (veh/h)	64	2048	212	222	2395	17	140	9	163	42	12	128
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1827	1827	1827	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	67	2156	223	234	2521	18	147	9	172	44	13	135
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6	4	4	4	2	2	2	2	2	2
Cap, veh/h	171	2175	830	232	2383	857	373	234	410	331	186	317
Arrive On Green	0.20	0.89	0.89	0.13	0.48	0.48	0.10	0.13	0.13	0.07	0.10	0.10
Sat Flow, veh/h	1707	4893	1524	1740	4988	1553	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	67	2156	223	234	2521	18	147	9	172	44	13	135
Grp Sat Flow(s),veh/h/ln	1707	1631	1524	1740	1663	1553	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	3.1	37.1	1.7	12.0	43.0	0.2	6.5	0.4	8.1	1.9	0.6	1.1
Cycle Q Clear(g_c), s	3.1	37.1	1.7	12.0	43.0	0.2	6.5	0.4	8.1	1.9	0.6	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	171	2175	830	232	2383	857	373	234	410	331	186	317
V/C Ratio(X)	0.39	0.99	0.27	1.01	1.06	0.02	0.39	0.04	0.42	0.13	0.07	0.43
Avail Cap(c_a), veh/h	171	2175	830	232	2383	857	373	234	410	377	186	317
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.56	0.56	0.56	0.26	0.26	0.26	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.6	4.8	1.9	39.0	23.5	2.0	31.4	34.6	27.7	31.5	36.7	13.7
Incr Delay (d2), s/veh	0.8	12.6	0.4	32.1	29.2	0.0	0.7	0.1	0.7	0.2	0.2	0.9
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(50%),veh/ln	1.5	16.1	0.7	7.8	26.1	0.1	3.2	0.2	3.6	0.9	0.3	2.0
LnGrp Delay(d),s/veh	34.5	17.4	2.4	71.1	52.7	2.0	32.1	34.6	28.4	31.7	36.9	14.6
LnGrp LOS	C	B	A	F	F	A	C	C	C	C	D	B
Approach Vol, veh/h		2446			2773			328			192	
Approach Delay, s/veh		16.5			54.0			30.2			20.0	
Approach LOS		B			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	48.0	11.7	16.3	17.0	45.0	14.0	14.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	7.0	41.0	7.0	7.0	10.0	38.0	7.0	7.0
Max Q Clear Time (g_c+I1), s	5.1	45.0	3.9	10.1	14.0	39.1	8.5	3.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	35.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	2005	145	275	2302	86	111	30	272	47	39	129
Future Volume (veh/h)	270	2005	145	275	2302	86	111	30	272	47	39	129
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1827	1827	1827	1827	1827	1827	1863	1863	1900
Adj Flow Rate, veh/h	290	2156	156	296	2475	92	119	32	0	51	42	139
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	6	6	4	4	4	4	4	4	2	2	2
Cap, veh/h	340	2536	790	443	2806	874	124	223	489	226	216	194
Arrive On Green	0.20	0.69	0.69	0.13	0.38	0.38	0.12	0.12	0.00	0.12	0.12	0.12
Sat Flow, veh/h	1707	4893	1524	1740	4988	1553	1175	1827	1553	1372	1770	1583
Grp Volume(v), veh/h	290	2156	156	296	2475	92	119	32	0	51	42	139
Grp Sat Flow(s),veh/h/ln	1707	1631	1524	1740	1663	1553	1175	1827	1553	1372	1770	1583
Q Serve(g_s), s	10.0	29.8	3.3	8.8	41.7	3.5	3.4	1.4	0.0	3.1	1.9	7.6
Cycle Q Clear(g_c), s	10.0	29.8	3.3	8.8	41.7	3.5	11.0	1.4	0.0	4.5	1.9	7.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	340	2536	790	443	2806	874	124	223	489	226	216	194
V/C Ratio(X)	0.85	0.85	0.20	0.67	0.88	0.11	0.96	0.14	0.00	0.23	0.19	0.72
Avail Cap(c_a), veh/h	340	2719	846	443	2826	880	124	223	489	226	216	194
HCM Platoon Ratio	1.33	1.33	1.33	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.65	0.65	0.65	0.45	0.45	0.45	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.2	11.4	7.3	33.1	25.3	13.3	44.4	35.3	0.0	37.3	35.5	38.0
Incr Delay (d2), s/veh	12.9	2.5	0.4	1.8	2.1	0.1	67.2	0.3	0.0	0.5	0.4	12.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	13.5	1.4	7.1	19.6	1.5	5.3	0.7	0.0	1.2	1.0	4.0
LnGrp Delay(d),s/veh	46.1	13.9	7.6	34.9	27.3	13.5	111.5	35.6	0.0	37.8	35.9	50.1
LnGrp LOS	D	B	A	C	C	B	F	D		D	D	D
Approach Vol, veh/h		2602			2863			151			232	
Approach Delay, s/veh		17.1			27.7			95.4			44.8	
Approach LOS		B			C			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.4	55.6		16.0	22.4	51.6		16.0
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0
Max Green Setting (Gmax), s	11.0	49.0		9.0	12.0	48.0		9.0
Max Q Clear Time (g_c+I1), s	12.0	43.7		13.0	10.8	31.8		9.6
Green Ext Time (p_c), s	0.0	4.9		0.0	0.1	12.9		0.0

Intersection Summary		
HCM 2010 Ctrl Delay	25.4	
HCM 2010 LOS	C	

HCM 2010 Computation does not support turning movement with Shared and Exclusive lanes.

Intersection	
Int Delay, s/veh	31.4

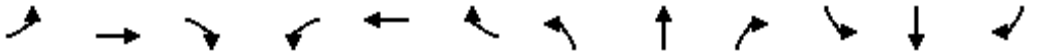
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Vol, veh/h	0	2582	3562	5	0	164
Future Vol, veh/h	0	2582	3562	5	0	164
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	0	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	5	5	4	4	3	3
Mvmt Flow	0	2718	3749	5	0	173

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	1875
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.16
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.93
Pot Cap-1 Maneuver	0	-	-	-	0	~ 52
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	~ 52
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	$ 1209.3
HCM LOS			F

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	52
HCM Lane V/C Ratio	-	-	-	3.32
HCM Control Delay (s)	-	-	-	$ 1209.3
HCM Lane LOS	-	-	-	F
HCM 95th %tile Q(veh)	-	-	-	18.6

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)	45	2289	207	97	3578	51	446	74	189	104	55	213
Future Volume (veh/h)	45	2289	207	97	3578	51	446	74	189	104	55	213
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1845	1845	1845	1792	1792	1792	1863	1863	1863
Adj Flow Rate, veh/h	47	2409	218	102	3766	54	469	78	199	109	58	224
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6	3	3	3	6	6	6	2	2	2
Cap, veh/h	149	2703	1146	205	2900	1027	402	306	392	236	93	179
Arrive On Green	0.06	0.55	0.55	0.17	1.00	1.00	0.20	0.17	0.17	0.08	0.05	0.05
Sat Flow, veh/h	1707	4893	1524	1757	5036	1568	1707	1792	1524	1774	1863	1583
Grp Volume(v), veh/h	47	2409	218	102	3766	54	469	78	199	109	58	224
Grp Sat Flow(s),veh/h/ln	1707	1631	1524	1757	1679	1568	1707	1792	1524	1774	1863	1583
Q Serve(g_s), s	0.3	78.1	2.0	3.6	103.6	0.0	36.0	6.8	2.6	10.3	5.5	7.2
Cycle Q Clear(g_c), s	0.3	78.1	2.0	3.6	103.6	0.0	36.0	6.8	2.6	10.3	5.5	7.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	149	2703	1146	205	2900	1027	402	306	392	236	93	179
V/C Ratio(X)	0.32	0.89	0.19	0.50	1.30	0.05	1.17	0.26	0.51	0.46	0.62	1.25
Avail Cap(c_a), veh/h	149	2800	1177	205	2910	1030	402	306	392	272	93	179
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
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	78.9	35.5	1.6	67.3	0.0	0.0	65.3	64.7	34.5	72.7	83.8	44.7
Incr Delay (d2), s/veh	1.2	5.0	0.4	1.9	137.1	0.1	98.9	0.4	1.1	1.4	12.2	150.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	36.3	1.6	4.5	36.8	0.0	11.0	3.4	6.6	5.1	3.2	15.9
LnGrp Delay(d),s/veh	80.1	40.5	2.0	69.1	137.1	0.1	164.2	65.2	35.6	74.1	96.0	195.2
LnGrp LOS	F	D	A	E	F	A	F	E	D	E	F	F
Approach Vol, veh/h		2674			3922			746			391	
Approach Delay, s/veh		38.0			133.4			119.5			146.7	
Approach LOS		D			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.2	108.8	19.3	35.7	20.6	104.4	41.0	14.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	9.0	102.0	16.0	25.0	10.0	101.0	34.0	7.0
Max Q Clear Time (g_c+I1), s	2.3	105.6	12.3	8.8	5.6	80.1	38.0	9.2
Green Ext Time (p_c), s	0.0	0.0	0.1	0.9	0.1	17.3	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	99.8
HCM 2010 LOS	F

HCM 2010 Research does not support Non-NEMA phasing.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	18	1	0	8	99	474	88	44	1487	198
Future Volume (veh/h)	6	0	18	1	0	8	99	474	88	44	1487	198
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1810	1900	1900	1863	1900	1810	1810	1900	1845	1845	1845
Adj Flow Rate, veh/h	6	0	19	1	0	8	104	499	93	46	1565	208
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	2	2	2	5	5	5	3	3	3
Cap, veh/h	37	4	49	27	3	60	274	2611	484	757	3160	1414
Arrive On Green	0.04	0.00	0.04	0.04	0.00	0.04	0.90	0.90	0.90	1.00	1.00	1.00
Sat Flow, veh/h	274	90	1152	105	70	1404	260	2897	537	814	3505	1568
Grp Volume(v), veh/h	25	0	0	9	0	0	104	295	297	46	1565	208
Grp Sat Flow(s),veh/h/ln	1516	0	0	1579	0	0	260	1719	1715	814	1752	1568
Q Serve(g_s), s	1.0	0.0	0.0	0.0	0.0	0.0	11.8	3.7	3.7	0.2	0.0	0.0
Cycle Q Clear(g_c), s	2.8	0.0	0.0	1.0	0.0	0.0	11.8	3.7	3.7	4.0	0.0	0.0
Prop In Lane	0.24		0.76	0.11		0.89	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	90	0	0	90	0	0	274	1550	1546	757	3160	1414
V/C Ratio(X)	0.28	0.00	0.00	0.10	0.00	0.00	0.38	0.19	0.19	0.06	0.50	0.15
Avail Cap(c_a), veh/h	192	0	0	196	0	0	274	1550	1546	757	3160	1414
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	0.00	0.00	1.00	0.00	0.00	0.77	0.77	0.77	0.56	0.56	0.56
Uniform Delay (d), s/veh	83.8	0.0	0.0	82.9	0.0	0.0	1.5	1.1	1.1	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.7	0.0	0.0	0.5	0.0	0.0	3.1	0.2	0.2	0.1	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.0	0.4	0.0	0.0	1.1	1.8	1.8	0.1	0.1	0.0
LnGrp Delay(d),s/veh	85.4	0.0	0.0	83.4	0.0	0.0	4.5	1.3	1.3	0.1	0.3	0.1
LnGrp LOS	F			F			A	A	A	A	A	A
Approach Vol, veh/h		25			9			696			1819	
Approach Delay, s/veh		85.4			83.4			1.8			0.3	
Approach LOS		F			F			A			A	

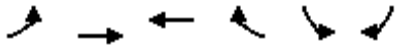
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		167.3		12.7		167.3		12.7
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0
Max Green Setting (Gmax), s		148.0		18.0		148.0		18.0
Max Q Clear Time (g_c+I1), s		6.0		3.0		13.8		4.8
Green Ext Time (p_c), s		21.9		0.0		8.0		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		1.8
HCM 2010 LOS		A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	103	14	34	39	9	18	285	54	1	145	41
Future Volume (veh/h)	142	103	14	34	39	9	18	285	54	1	145	41
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	158	114	16	38	43	10	20	317	60	1	161	46
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	256	148	20	178	188	38	71	972	178	41	919	261
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.66	0.66	0.66	0.66	0.66	0.66
Sat Flow, veh/h	846	646	88	529	818	166	45	1474	270	1	1394	396
Grp Volume(v), veh/h	288	0	0	91	0	0	397	0	0	208	0	0
Grp Sat Flow(s),veh/h/ln	1581	0	0	1514	0	0	1789	0	0	1792	0	0
Q Serve(g_s), s	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	15.2	0.0	0.0	3.9	0.0	0.0	8.6	0.0	0.0	4.0	0.0	0.0
Prop In Lane	0.55		0.06	0.42		0.11	0.05		0.15	0.00		0.22
Lane Grp Cap(c), veh/h	425	0	0	404	0	0	1221	0	0	1222	0	0
V/C Ratio(X)	0.68	0.00	0.00	0.23	0.00	0.00	0.33	0.00	0.00	0.17	0.00	0.00
Avail Cap(c_a), veh/h	702	0	0	681	0	0	1221	0	0	1222	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	32.3	0.0	0.0	28.1	0.0	0.0	6.7	0.0	0.0	5.9	0.0	0.0
Incr Delay (d2), s/veh	1.9	0.0	0.0	0.3	0.0	0.0	0.7	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	0.0	0.0	1.9	0.0	0.0	4.5	0.0	0.0	2.1	0.0	0.0
LnGrp Delay(d),s/veh	34.2	0.0	0.0	28.4	0.0	0.0	7.4	0.0	0.0	6.2	0.0	0.0
LnGrp LOS	C			C			A			A		
Approach Vol, veh/h		288			91			397			208	
Approach Delay, s/veh		34.2			28.4			7.4			6.2	
Approach LOS		C			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		64.3		25.7		64.3		25.7
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0
Max Green Setting (Gmax), s		41.0		35.0		41.0		35.0
Max Q Clear Time (g_c+I1), s		6.0		5.9		10.6		17.2
Green Ext Time (p_c), s		3.9		0.4		8.7		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	16.9
HCM 2010 LOS	B



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	146	977	487	98	161	132
Future Volume (veh/h)	146	977	487	98	161	132
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	162	1086	541	109	179	0
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	200	1531	1026	207	217	372
Arrive On Green	0.11	0.82	0.68	0.68	0.12	0.00
Sat Flow, veh/h	1774	1863	1506	303	1774	1583
Grp Volume(v), veh/h	162	1086	0	650	179	0
Grp Sat Flow(s),veh/h/ln	1774	1863	0	1809	1774	1583
Q Serve(g_s), s	16.1	44.8	0.0	32.2	17.7	0.0
Cycle Q Clear(g_c), s	16.1	44.8	0.0	32.2	17.7	0.0
Prop In Lane	1.00			0.17	1.00	1.00
Lane Grp Cap(c), veh/h	200	1531	0	1233	217	372
V/C Ratio(X)	0.81	0.71	0.00	0.53	0.82	0.00
Avail Cap(c_a), veh/h	276	1531	0	1233	306	451
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	78.0	6.8	0.0	14.3	77.1	0.0
Incr Delay (d2), s/veh	11.9	2.8	0.0	1.6	11.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	23.8	0.0	16.6	9.4	0.0
LnGrp Delay(d),s/veh	89.9	9.7	0.0	15.9	88.9	0.0
LnGrp LOS	F	A		B	F	
Approach Vol, veh/h		1248	650		179	
Approach Delay, s/veh		20.1	15.9		88.9	
Approach LOS		C	B		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		152.9		27.1	25.3	127.7		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		137.0		29.0	26.0	104.0		
Max Q Clear Time (g_c+I1), s		46.8		19.7	18.1	34.2		
Green Ext Time (p_c), s		12.1		0.3	0.2	5.2		

Intersection Summary		
HCM 2010 Ctrl Delay		24.7
HCM 2010 LOS		C

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	252	886	488	7	1	97
Future Vol, veh/h	252	886	488	7	1	97
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	280	984	542	8	1	108

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	550	0	-	0	2090	546
Stage 1	-	-	-	-	546	-
Stage 2	-	-	-	-	1544	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1020	-	-	-	58	538
Stage 1	-	-	-	-	580	-
Stage 2	-	-	-	-	194	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1020	-	-	-	23	538
Mov Cap-2 Maneuver	-	-	-	-	23	-
Stage 1	-	-	-	-	229	-
Stage 2	-	-	-	-	194	-

Approach	EB	WB	SB
HCM Control Delay, s	2.2	0	15.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1020	-	-	-	438
HCM Lane V/C Ratio	0.275	-	-	-	0.249
HCM Control Delay (s)	9.9	0	-	-	15.9
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	1.1	-	-	-	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	188	5	490	350	7	880
Future Volume (veh/h)	188	5	490	350	7	880
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	209	0	544	0	8	978
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	247	300	1355	1372	89	1500
Arrive On Green	0.14	0.00	0.73	0.00	0.05	0.81
Sat Flow, veh/h	1774	1583	1863	1583	1774	1863
Grp Volume(v), veh/h	209	0	544	0	8	978
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	1583	1774	1863
Q Serve(g_s), s	20.7	0.0	20.3	0.0	0.8	38.8
Cycle Q Clear(g_c), s	20.7	0.0	20.3	0.0	0.8	38.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	247	300	1355	1372	89	1500
V/C Ratio(X)	0.85	0.00	0.40	0.00	0.09	0.65
Avail Cap(c_a), veh/h	355	396	1355	1372	89	1500
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	75.6	0.0	9.5	0.0	81.6	7.2
Incr Delay (d2), s/veh	12.0	0.0	0.9	0.0	0.4	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.0	0.0	10.6	0.0	0.4	20.5
LnGrp Delay(d),s/veh	87.6	0.0	10.3	0.0	82.0	9.4
LnGrp LOS	F		B		F	A
Approach Vol, veh/h	209		544			986
Approach Delay, s/veh	87.6		10.3			10.0
Approach LOS	F		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		149.9		30.1	14.0	135.9		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		132.0		34.0	7.0	118.0		
Max Q Clear Time (g_c+I1), s		40.8		22.7	2.8	22.3		
Green Ext Time (p_c), s		10.6		0.4	0.0	3.9		

Intersection Summary	
HCM 2010 Ctrl Delay	19.4
HCM 2010 LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	72	46	794	115	91	977
Future Volume (veh/h)	72	46	794	115	91	977
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	79	51	873	126	100	1074
Adj No. of Lanes	1	1	2	1	1	2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	152	136	2314	1035	166	2842
Arrive On Green	0.09	0.09	0.65	0.65	0.09	0.80
Sat Flow, veh/h	1774	1583	3632	1583	1774	3632
Grp Volume(v), veh/h	79	51	873	126	100	1074
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1583	1774	1770
Q Serve(g_s), s	3.8	2.7	10.2	2.7	4.9	7.7
Cycle Q Clear(g_c), s	3.8	2.7	10.2	2.7	4.9	7.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	152	136	2314	1035	166	2842
V/C Ratio(X)	0.52	0.37	0.38	0.12	0.60	0.38
Avail Cap(c_a), veh/h	256	229	2314	1035	315	2842
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.93	0.93	1.00	1.00
Uniform Delay (d), s/veh	39.3	38.8	7.2	5.9	39.2	2.5
Incr Delay (d2), s/veh	2.7	1.7	0.4	0.2	3.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	2.5	5.1	4.3	2.5	3.9
LnGrp Delay(d),s/veh	42.1	40.5	7.6	6.1	42.7	2.9
LnGrp LOS	D	D	A	A	D	A
Approach Vol, veh/h	130		999			1174
Approach Delay, s/veh	41.5		7.4			6.3
Approach LOS	D		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		77.3		12.7	13.4	63.8		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		65.0		11.0	14.0	44.0		
Max Q Clear Time (g_c+I1), s		9.7		5.8	6.9	12.2		
Green Ext Time (p_c), s		9.0		0.1	0.1	6.8		

Intersection Summary	
HCM 2010 Ctrl Delay	8.8
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	1	113	31	1	20	171	875	45	37	968	44
Future Volume (veh/h)	14	1	113	31	1	20	171	875	45	37	968	44
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	15	1	119	33	1	21	180	921	47	39	1019	46
Adj No. of Lanes	1	1	1	2	1	0	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	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	2	2	2	2	2	2	2
Cap, veh/h	160	162	336	146	11	239	222	1127	571	783	2188	99
Arrive On Green	0.09	0.09	0.09	0.04	0.16	0.16	0.04	0.11	0.11	0.44	0.63	0.63
Sat Flow, veh/h	1384	1863	1583	3442	72	1522	1774	3539	1583	1774	3449	156
Grp Volume(v), veh/h	15	1	119	33	0	22	180	921	47	39	523	542
Grp Sat Flow(s),veh/h/ln	1384	1863	1583	1721	0	1594	1774	1770	1583	1774	1770	1835
Q Serve(g_s), s	1.8	0.1	11.5	1.7	0.0	2.1	18.1	45.9	0.7	2.3	27.6	27.6
Cycle Q Clear(g_c), s	1.8	0.1	11.5	1.7	0.0	2.1	18.1	45.9	0.7	2.3	27.6	27.6
Prop In Lane	1.00		1.00	1.00		0.95	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	160	162	336	146	0	251	222	1127	571	783	1123	1164
V/C Ratio(X)	0.09	0.01	0.35	0.23	0.00	0.09	0.81	0.82	0.08	0.05	0.47	0.47
Avail Cap(c_a), veh/h	186	197	365	210	0	310	384	2300	1097	783	1123	1164
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.89	0.89	0.89	0.93	0.93	0.93
Uniform Delay (d), s/veh	75.9	75.1	60.4	83.3	0.0	64.8	84.2	75.4	27.1	28.7	17.1	17.1
Incr Delay (d2), s/veh	0.3	0.0	0.6	0.8	0.0	0.1	6.2	5.9	0.3	0.0	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	5.1	0.8	0.0	0.9	9.3	23.5	1.5	1.1	13.9	14.4
LnGrp Delay(d),s/veh	76.1	75.1	61.1	84.1	0.0	65.0	90.4	81.3	27.3	28.8	18.4	18.3
LnGrp LOS	E	E	E	F		E	F	F	C	C	B	B
Approach Vol, veh/h		135			55			1148			1104	
Approach Delay, s/veh		62.8			76.4			80.5			18.7	
Approach LOS		E			E			F			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.5	119.2		33.3	84.4	62.3	12.7	20.6
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	37.6	89.0		33.0	11.0	115.0	9.0	17.0
Max Q Clear Time (g_c+I1), s	20.1	29.6		4.1	4.3	47.9	3.7	13.5
Green Ext Time (p_c), s	0.4	7.8		0.1	0.0	7.4	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	51.5
HCM 2010 LOS	D

HCM 2010 methodology does not support more than 4 approaches.

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	39	546	523	42	34	27
Future Vol, veh/h	39	546	523	42	34	27
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	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	3	3	7	7
Mvmt Flow	41	575	551	44	36	28

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	595	0	-	0	1230	573
Stage 1	-	-	-	-	573	-
Stage 2	-	-	-	-	657	-
Critical Hdwy	4.12	-	-	-	6.47	6.27
Critical Hdwy Stg 1	-	-	-	-	5.47	-
Critical Hdwy Stg 2	-	-	-	-	5.47	-
Follow-up Hdwy	2.218	-	-	-	3.563	3.363
Pot Cap-1 Maneuver	981	-	-	-	192	510
Stage 1	-	-	-	-	554	-
Stage 2	-	-	-	-	506	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	981	-	-	-	184	510
Mov Cap-2 Maneuver	-	-	-	-	184	-
Stage 1	-	-	-	-	531	-
Stage 2	-	-	-	-	506	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	23.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	981	-	-	-	257
HCM Lane V/C Ratio	0.042	-	-	-	0.25
HCM Control Delay (s)	8.8	-	-	-	23.6
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	1

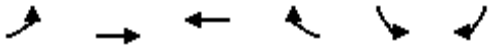
Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	514	53	36	522	30	31	0	26	36	0	12
Future Vol, veh/h	13	514	53	36	522	30	31	0	26	36	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	2	2	2
Mvmt Flow	14	541	56	38	549	32	33	0	27	38	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	581	0	0	597	0	0	1245	1254	569	1252	1266	565
Stage 1	-	-	-	-	-	-	597	597	-	641	641	-
Stage 2	-	-	-	-	-	-	648	657	-	611	625	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	988	-	-	975	-	-	151	172	522	149	169	524
Stage 1	-	-	-	-	-	-	490	491	-	463	469	-
Stage 2	-	-	-	-	-	-	459	462	-	481	477	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	988	-	-	975	-	-	139	159	522	133	156	524
Mov Cap-2 Maneuver	-	-	-	-	-	-	139	159	-	133	156	-
Stage 1	-	-	-	-	-	-	480	481	-	453	442	-
Stage 2	-	-	-	-	-	-	422	435	-	446	467	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.5	29	36.4
HCM LOS			D	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	209	988	-	-	975	-	-	164
HCM Lane V/C Ratio	0.287	0.014	-	-	0.039	-	-	0.308
HCM Control Delay (s)	29	8.7	0	-	8.8	0	-	36.4
HCM Lane LOS	D	A	A	-	A	A	-	E
HCM 95th %tile Q(veh)	1.1	0	-	-	0.1	-	-	1.2



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	83	493	522	259	216	66
Future Volume (veh/h)	83	493	522	259	216	66
Number	5	2	6	16	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	87	519	549	273	227	0
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	370	1480	656	326	266	568
Arrive On Green	0.21	0.79	0.56	0.56	0.15	0.00
Sat Flow, veh/h	1774	1863	1175	584	1774	1583
Grp Volume(v), veh/h	87	519	0	822	227	0
Grp Sat Flow(s),veh/h/ln	1774	1863	0	1760	1774	1583
Q Serve(g_s), s	7.3	14.3	0.0	69.7	22.5	0.0
Cycle Q Clear(g_c), s	7.3	14.3	0.0	69.7	22.5	0.0
Prop In Lane	1.00			0.33	1.00	1.00
Lane Grp Cap(c), veh/h	370	1480	0	982	266	568
V/C Ratio(X)	0.23	0.35	0.00	0.84	0.85	0.00
Avail Cap(c_a), veh/h	370	1480	0	1105	355	647
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	59.2	5.3	0.0	33.0	74.6	0.0
Incr Delay (d2), s/veh	0.3	0.7	0.0	8.4	14.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	7.5	0.0	36.1	12.1	0.0
LnGrp Delay(d),s/veh	59.6	5.9	0.0	41.4	88.9	0.0
LnGrp LOS	E	A		D	F	
Approach Vol, veh/h		606	822		227	
Approach Delay, s/veh		13.6	41.4		88.9	
Approach LOS		B	D		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		148.1			42.6	105.5		31.9
Change Period (Y+Rc), s		7.0			7.0	7.0		7.0
Max Green Setting (Gmax), s		132.0			14.0	111.0		34.0
Max Q Clear Time (g_c+I1), s		16.3			9.3	71.7		24.5
Green Ext Time (p_c), s		20.2			0.1	26.7		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	37.7
HCM 2010 LOS	D

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	14	38	441	388	11
Future Vol, veh/h	9	14	38	441	388	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	15	41	479	422	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	989	428	434	0	-	0
Stage 1	428	-	-	-	-	-
Stage 2	561	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	274	627	1126	-	-	-
Stage 1	657	-	-	-	-	-
Stage 2	571	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	260	627	1126	-	-	-
Mov Cap-2 Maneuver	260	-	-	-	-	-
Stage 1	624	-	-	-	-	-
Stage 2	571	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.5	0.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1126	-	404	-	-
HCM Lane V/C Ratio	0.037	-	0.062	-	-
HCM Control Delay (s)	8.3	0	14.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	1	23	7	0	4	41	1172	1	12	1001	8
Future Vol, veh/h	6	1	23	7	0	4	41	1172	1	12	1001	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	1	24	7	0	4	43	1234	1	13	1054	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1787	2405	531	1875	2409	618	1062	0	0	1235	0	0
Stage 1	1084	1084	-	1321	1321	-	-	-	-	-	-	-
Stage 2	703	1321	-	554	1088	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	51	33	493	44	32	432	652	-	-	560	-	-
Stage 1	231	291	-	165	224	-	-	-	-	-	-	-
Stage 2	394	224	-	484	290	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	47	30	493	39	29	432	652	-	-	560	-	-
Mov Cap-2 Maneuver	142	119	-	115	115	-	-	-	-	-	-	-
Stage 1	216	284	-	154	209	-	-	-	-	-	-	-
Stage 2	364	209	-	448	283	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18	29.7	0.4	0.1
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	652	-	-	308	157	560	-	-
HCM Lane V/C Ratio	0.066	-	-	0.103	0.074	0.023	-	-
HCM Control Delay (s)	10.9	-	-	18	29.7	11.6	-	-
HCM Lane LOS	B	-	-	C	D	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.3	0.2	0.1	-	-

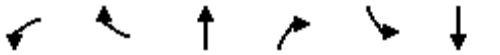
Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	0	18	5	0	6	25	1205	13	13	1010	8
Future Vol, veh/h	3	0	18	5	0	6	25	1205	13	13	1010	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	19	5	0	6	26	1268	14	14	1063	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1781	2429	536	1887	2426	641	1071	0	0	1282	0	0
Stage 1	1095	1095	-	1327	1327	-	-	-	-	-	-	-
Stage 2	686	1334	-	560	1099	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	52	32	489	43	32	417	647	-	-	537	-	-
Stage 1	228	288	-	164	223	-	-	-	-	-	-	-
Stage 2	404	221	-	480	287	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	49	30	489	39	30	417	647	-	-	537	-	-
Mov Cap-2 Maneuver	146	119	-	118	120	-	-	-	-	-	-	-
Stage 1	219	281	-	157	214	-	-	-	-	-	-	-
Stage 2	382	212	-	449	280	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.5	24.7	0.2	0.1
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	647	-	-	366	194	537	-	-
HCM Lane V/C Ratio	0.041	-	-	0.06	0.06	0.025	-	-
HCM Control Delay (s)	10.8	-	-	15.5	24.7	11.9	-	-
HCM Lane LOS	B	-	-	C	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.2	0.1	-	-



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	314	88	1152	430	49	984
Future Volume (veh/h)	314	88	1152	430	49	984
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	331	93	1213	453	52	1036
Adj No. of Lanes	2	1	2	1	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	424	271	2638	1375	86	2907
Arrive On Green	0.12	0.12	0.75	0.75	0.05	0.82
Sat Flow, veh/h	3442	1583	3632	1583	1774	3632
Grp Volume(v), veh/h	331	93	1213	453	52	1036
Grp Sat Flow(s),veh/h/ln	1721	1583	1770	1583	1774	1770
Q Serve(g_s), s	16.8	9.3	23.9	9.5	5.2	13.3
Cycle Q Clear(g_c), s	16.8	9.3	23.9	9.5	5.2	13.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	424	271	2638	1375	86	2907
V/C Ratio(X)	0.78	0.34	0.46	0.33	0.61	0.36
Avail Cap(c_a), veh/h	707	402	2638	1375	158	2907
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	76.6	65.6	8.9	2.2	84.0	4.1
Incr Delay (d2), s/veh	3.2	0.7	0.6	0.6	6.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	8.5	11.8	8.2	2.7	6.6
LnGrp Delay(d),s/veh	79.7	66.4	9.5	2.8	90.8	4.4
LnGrp LOS	E	E	A	A	F	A
Approach Vol, veh/h	424		1666			1088
Approach Delay, s/veh	76.8		7.7			8.5
Approach LOS	E		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		152.8		27.2	13.7	139.2		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		131.0		35.0	14.0	110.0		
Max Q Clear Time (g_c+I1), s		15.3		18.8	7.2	25.9		
Green Ext Time (p_c), s		8.7		1.4	0.0	14.8		

Intersection Summary	
HCM 2010 Ctrl Delay	17.2
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	21	58	1582	1289	9
Future Vol, veh/h	0	21	58	1582	1289	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	22	61	1665	1357	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	683	1366	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	0	392	499	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	392	499	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.7	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	499	-	392	-	-
HCM Lane V/C Ratio	0.122	-	0.056	-	-
HCM Control Delay (s)	13.2	-	14.7	-	-
HCM Lane LOS	B	-	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.2	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	0	37	12	0	13	47	1623	0	19	1306	4
Future Volume (veh/h)	4	0	37	12	0	13	47	1623	0	19	1306	4
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	4	0	39	13	0	14	49	1708	0	20	1375	4
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	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	2	2	2	2	2	2	2
Cap, veh/h	27	2	70	61	7	41	83	1952	0	561	2973	9
Arrive On Green	0.05	0.00	0.05	0.05	0.00	0.05	0.05	0.55	0.00	0.32	0.82	0.82
Sat Flow, veh/h	96	50	1431	647	142	850	1774	3632	0	1774	3620	11
Grp Volume(v), veh/h	43	0	0	27	0	0	49	1708	0	20	672	707
Grp Sat Flow(s),veh/h/ln	1578	0	0	1639	0	0	1774	1770	0	1774	1770	1861
Q Serve(g_s), s	1.8	0.0	0.0	0.0	0.0	0.0	4.9	75.3	0.0	1.4	19.7	19.7
Cycle Q Clear(g_c), s	4.8	0.0	0.0	2.7	0.0	0.0	4.9	75.3	0.0	1.4	19.7	19.7
Prop In Lane	0.09		0.91	0.48		0.52	1.00		0.00	1.00		0.01
Lane Grp Cap(c), veh/h	99	0	0	110	0	0	83	1952	0	561	1453	1528
V/C Ratio(X)	0.43	0.00	0.00	0.25	0.00	0.00	0.59	0.88	0.00	0.04	0.46	0.46
Avail Cap(c_a), veh/h	214	0	0	217	0	0	128	2595	0	561	1453	1528
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.60	0.60	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	83.7	0.0	0.0	82.7	0.0	0.0	84.1	35.0	0.0	42.5	4.6	4.6
Incr Delay (d2), s/veh	3.0	0.0	0.0	1.2	0.0	0.0	4.0	3.6	0.0	0.0	1.1	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.0	1.3	0.0	0.0	2.5	37.8	0.0	0.7	9.9	10.4
LnGrp Delay(d),s/veh	86.7	0.0	0.0	83.9	0.0	0.0	88.1	38.6	0.0	42.6	5.7	5.6
LnGrp LOS	F			F			F	D		D	A	A
Approach Vol, veh/h		43			27			1757			1399	
Approach Delay, s/veh		86.7			83.9			40.0			6.2	
Approach LOS		F			F			D			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.4	152.8		13.8	62.0	104.3		13.8
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0
Max Green Setting (Gmax), s	11.0	128.0		20.0	9.0	130.0		20.0
Max Q Clear Time (g_c+I1), s	6.9	21.7		4.7	3.4	77.3		6.8
Green Ext Time (p_c), s	0.0	12.3		0.1	0.0	19.9		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	26.3
HCM 2010 LOS	C

HCM 2010 Computation does not support turning movement with Shared and Exclusive lanes.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	2346	205	226	1632	29	151	14	204	36	21	58
Future Volume (veh/h)	142	2346	205	226	1632	29	151	14	204	36	21	58
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1845	1845	1845	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	149	2469	216	238	1718	31	159	15	215	38	22	61
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	3	3	3	1	1	1	2	2	2
Cap, veh/h	559	2074	804	581	2136	734	270	199	698	176	93	578
Arrive On Green	0.63	0.82	0.82	0.33	0.42	0.42	0.10	0.11	0.11	0.04	0.05	0.05
Sat Flow, veh/h	1774	5085	1583	1757	5036	1568	1792	1881	1599	1774	1863	1583
Grp Volume(v), veh/h	149	2469	216	238	1718	31	159	15	215	38	22	61
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1757	1679	1568	1792	1881	1599	1774	1863	1583
Q Serve(g_s), s	6.7	73.4	0.7	18.9	53.7	0.4	14.7	1.3	1.7	3.6	2.0	0.8
Cycle Q Clear(g_c), s	6.7	73.4	0.7	18.9	53.7	0.4	14.7	1.3	1.7	3.6	2.0	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	559	2074	804	581	2136	734	270	199	698	176	93	578
V/C Ratio(X)	0.27	1.19	0.27	0.41	0.80	0.04	0.59	0.08	0.31	0.22	0.24	0.11
Avail Cap(c_a), veh/h	559	2825	1038	581	3050	1019	270	199	698	186	93	578
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.58	0.58	0.58	0.58	0.58	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	16.6	3.7	46.6	45.3	11.5	69.6	72.5	19.1	75.5	82.2	19.5
Incr Delay (d2), s/veh	0.1	88.6	0.5	0.3	2.0	0.1	3.3	0.2	0.2	0.6	1.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	49.7	1.3	9.2	25.2	0.5	7.5	0.7	5.2	1.8	1.1	1.4
LnGrp Delay(d),s/veh	24.2	105.2	4.1	46.9	47.3	11.5	72.9	72.7	19.4	76.1	83.5	19.5
LnGrp LOS	C	F	A	D	D	B	E	E	B	E	F	B
Approach Vol, veh/h		2834			1987			389			121	
Approach Delay, s/veh		93.3			46.7			43.3			48.9	
Approach LOS		F			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	81.3	13.0	24.0	53.2	89.8	23.0	14.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	22.0	107.0	7.0	16.0	31.0	98.0	16.0	7.0
Max Q Clear Time (g_c+I1), s	8.7	55.7	5.6	3.7	20.9	75.4	16.7	4.0
Green Ext Time (p_c), s	0.3	18.7	0.0	0.6	0.5	18.8	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	71.2
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	452	2359	170	112	1654	75	160	45	275	59	40	55
Future Volume (veh/h)	452	2359	170	112	1654	75	160	45	275	59	40	55
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	476	2483	179	118	1741	79	168	47	0	62	42	58
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	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	2	2	2	2	2	2	2
Cap, veh/h	502	2082	648	629	2530	788	234	338	803	257	321	287
Arrive On Green	0.48	0.82	0.82	0.65	1.00	1.00	0.18	0.18	0.00	0.18	0.18	0.18
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583	1290	1863	1583	1353	1770	1583
Grp Volume(v), veh/h	476	2483	179	118	1741	79	168	47	0	62	42	58
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583	1290	1863	1583	1353	1770	1583
Q Serve(g_s), s	42.8	73.7	4.8	0.0	1.0	0.0	22.9	3.8	0.0	7.3	3.6	5.6
Cycle Q Clear(g_c), s	42.8	73.7	4.8	0.0	1.0	0.0	28.5	3.8	0.0	11.1	3.6	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	502	2082	648	629	2530	788	234	338	803	257	321	287
V/C Ratio(X)	0.95	1.19	0.28	0.19	0.69	0.10	0.72	0.14	0.00	0.24	0.13	0.20
Avail Cap(c_a), veh/h	641	3079	959	629	2530	788	243	352	815	267	334	299
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.35	0.35	0.35	0.73	0.73	0.73	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.4	16.3	10.1	20.3	0.2	0.2	74.7	61.9	0.0	66.5	61.8	62.6
Incr Delay (d2), s/veh	9.7	88.5	0.4	0.1	1.1	0.2	9.4	0.2	0.0	0.5	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.3	49.8	2.0	2.1	0.4	0.1	8.8	2.0	0.0	2.8	1.8	2.5
LnGrp Delay(d),s/veh	42.2	104.8	10.4	20.4	1.4	0.4	84.2	62.1	0.0	67.0	62.0	63.0
LnGrp LOS	D	F	B	C	A	A	F	E		E	E	E
Approach Vol, veh/h		3138			1938			215			162	
Approach Delay, s/veh		89.9			2.5			79.4			64.3	
Approach LOS		F			A			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	50.4	92.0		37.6	49.4	93.0		37.6
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0
Max Green Setting (Gmax), s	55.0	72.0		32.0	20.0	107.0		32.0
Max Q Clear Time (g_c+I1), s	44.8	3.0		30.5	2.0	75.7		13.1
Green Ext Time (p_c), s	1.1	20.9		0.1	0.2	24.6		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	57.7
HCM 2010 LOS	E

HCM 2010 Computation does not support turning movement with Shared and Exclusive lanes.

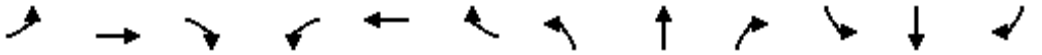
Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Vol, veh/h	0	3784	2527	11	0	54
Future Vol, veh/h	0	3784	2527	11	0	54
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	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	3	3	4	4
Mvmt Flow	0	3983	2660	12	0	57

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	1330
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.18
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.94
Pot Cap-1 Maneuver	0	-	-	-	0	122
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	122
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	58
HCM LOS			F

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	122
HCM Lane V/C Ratio	-	-	-	0.466
HCM Control Delay (s)	-	-	-	58
HCM Lane LOS	-	-	-	F
HCM 95th %tile Q(veh)	-	-	-	2.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	3471	138	67	2429	85	154	70	195	118	38	121
Future Volume (veh/h)	121	3471	138	67	2429	85	154	70	195	118	38	121
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1810	1810	1810	1863	1863	1863	1845	1845	1845
Adj Flow Rate, veh/h	127	3654	145	71	2557	89	162	74	205	124	40	127
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	5	5	5	2	2	2	3	3	3
Cap, veh/h	197	3525	1220	145	3513	1196	178	114	194	157	92	157
Arrive On Green	0.05	0.70	0.70	0.12	1.00	1.00	0.08	0.06	0.06	0.07	0.05	0.05
Sat Flow, veh/h	1757	5036	1568	1723	4940	1538	1774	1863	1583	1757	1845	1568
Grp Volume(v), veh/h	127	3654	145	71	2557	89	162	74	205	124	40	127
Grp Sat Flow(s),veh/h/ln	1757	1679	1568	1723	1647	1538	1774	1863	1583	1757	1845	1568
Q Serve(g_s), s	4.4	126.0	0.0	2.5	0.0	0.0	12.2	7.0	9.1	12.0	3.8	9.0
Cycle Q Clear(g_c), s	4.4	126.0	0.0	2.5	0.0	0.0	12.2	7.0	9.1	12.0	3.8	9.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	197	3525	1220	145	3513	1196	178	114	194	157	92	157
V/C Ratio(X)	0.64	1.04	0.12	0.49	0.73	0.07	0.91	0.65	1.06	0.79	0.43	0.81
Avail Cap(c_a), veh/h	276	3525	1220	145	3513	1196	178	114	194	157	92	157
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
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	15.1	27.0	4.9	74.6	0.0	0.0	80.7	82.6	58.1	84.2	83.0	55.7
Incr Delay (d2), s/veh	3.5	25.7	0.2	2.5	1.4	0.1	42.8	12.3	81.3	23.1	3.2	26.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	66.2	1.8	3.3	0.4	0.0	10.1	4.0	13.4	1.3	2.0	6.8
LnGrp Delay(d),s/veh	18.6	52.7	5.1	77.1	1.4	0.1	123.5	94.9	139.4	107.3	86.2	82.1
LnGrp LOS	B	F	A	E	A	A	F	F	F	F	F	F
Approach Vol, veh/h		3926			2717			441			291	
Approach Delay, s/veh		49.9			3.3			126.1			93.4	
Approach LOS		D			A			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	133.0	17.0	16.0	16.0	131.0	19.0	14.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	15.0	118.0	10.0	9.0	9.0	124.0	12.0	7.0
Max Q Clear Time (g_c+I1), s	6.4	2.0	14.0	11.1	4.5	128.0	14.2	11.0
Green Ext Time (p_c), s	0.2	57.7	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	39.0
HCM 2010 LOS	D

HCM 2010 Research does not support Non-NEMA phasing.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	0	32	8	1	36	131	1215	44	32	1243	75
Future Volume (veh/h)	35	0	32	8	1	36	131	1215	44	32	1243	75
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	37	0	34	8	1	38	138	1279	46	34	1308	79
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	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	2	2	2	2	2	2	2
Cap, veh/h	80	4	49	36	9	88	354	3063	110	402	3111	1392
Arrive On Green	0.07	0.00	0.07	0.07	0.07	0.07	1.00	1.00	1.00	0.88	0.88	0.88
Sat Flow, veh/h	764	58	755	189	130	1347	388	3485	125	412	3539	1583
Grp Volume(v), veh/h	71	0	0	47	0	0	138	649	676	34	1308	79
Grp Sat Flow(s),veh/h/ln	1576	0	0	1667	0	0	388	1770	1841	412	1770	1583
Q Serve(g_s), s	2.7	0.0	0.0	0.0	0.0	0.0	8.7	0.0	0.0	2.0	12.8	1.1
Cycle Q Clear(g_c), s	7.6	0.0	0.0	4.9	0.0	0.0	21.4	0.0	0.0	2.0	12.8	1.1
Prop In Lane	0.52		0.48	0.17		0.81	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	134	0	0	132	0	0	354	1555	1618	402	3111	1392
V/C Ratio(X)	0.53	0.00	0.00	0.35	0.00	0.00	0.39	0.42	0.42	0.08	0.42	0.06
Avail Cap(c_a), veh/h	225	0	0	229	0	0	354	1555	1618	402	3111	1392
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.44	0.44	0.44	0.43	0.43	0.43
Uniform Delay (d), s/veh	82.0	0.0	0.0	80.9	0.0	0.0	0.9	0.0	0.0	1.4	2.1	1.4
Incr Delay (d2), s/veh	3.3	0.0	0.0	1.6	0.0	0.0	1.4	0.4	0.4	0.2	0.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.0	0.0	2.3	0.0	0.0	1.0	0.2	0.2	0.2	6.1	0.5
LnGrp Delay(d),s/veh	85.3	0.0	0.0	82.5	0.0	0.0	2.3	0.4	0.4	1.6	2.3	1.4
LnGrp LOS	F			F			A	A	A	A	A	A
Approach Vol, veh/h		71			47			1463			1421	
Approach Delay, s/veh		85.3			82.5			0.5			2.2	
Approach LOS		F			F			A			A	

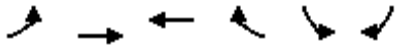
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		163.2		16.8		163.2		16.8
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0
Max Green Setting (Gmax), s		145.0		21.0		145.0		21.0
Max Q Clear Time (g_c+I1), s		14.8		6.9		23.4		9.6
Green Ext Time (p_c), s		14.7		0.1		17.2		0.2

Intersection Summary		
HCM 2010 Ctrl Delay		4.6
HCM 2010 LOS		A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	101	29	31	144	3	51	236	24	2	387	264
Future Volume (veh/h)	93	101	29	31	144	3	51	236	24	2	387	264
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	103	112	32	34	160	3	57	262	27	2	430	293
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	174	156	41	89	319	6	182	812	80	41	701	476
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.68	0.68	0.68	0.68	0.68	0.68
Sat Flow, veh/h	555	736	192	201	1506	26	200	1199	118	1	1035	702
Grp Volume(v), veh/h	247	0	0	197	0	0	346	0	0	725	0	0
Grp Sat Flow(s),veh/h/ln	1483	0	0	1733	0	0	1517	0	0	1738	0	0
Q Serve(g_s), s	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	14.2	0.0	0.0	8.8	0.0	0.0	6.7	0.0	0.0	20.8	0.0	0.0
Prop In Lane	0.42		0.13	0.17		0.02	0.16		0.08	0.00		0.40
Lane Grp Cap(c), veh/h	371	0	0	414	0	0	1074	0	0	1217	0	0
V/C Ratio(X)	0.67	0.00	0.00	0.48	0.00	0.00	0.32	0.00	0.00	0.60	0.00	0.00
Avail Cap(c_a), veh/h	503	0	0	565	0	0	1074	0	0	1217	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	33.5	0.0	0.0	31.3	0.0	0.0	5.8	0.0	0.0	8.1	0.0	0.0
Incr Delay (d2), s/veh	2.1	0.0	0.0	0.8	0.0	0.0	0.8	0.0	0.0	2.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	0.0	0.0	4.4	0.0	0.0	3.6	0.0	0.0	10.6	0.0	0.0
LnGrp Delay(d),s/veh	35.5	0.0	0.0	32.2	0.0	0.0	6.6	0.0	0.0	10.2	0.0	0.0
LnGrp LOS	D			C			A			B		
Approach Vol, veh/h		247			197			346			725	
Approach Delay, s/veh		35.5			32.2			6.6			10.2	
Approach LOS		D			C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		65.9		24.1		65.9		24.1
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0
Max Green Setting (Gmax), s		51.0		25.0		51.0		25.0
Max Q Clear Time (g_c+I1), s		22.8		10.8		8.7		16.2
Green Ext Time (p_c), s		15.6		0.7		9.0		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	16.4
HCM 2010 LOS	B



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	292	1332	1036	308	101	219
Future Volume (veh/h)	292	1332	1036	308	101	219
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	324	1480	1151	342	112	0
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	276	1666	982	292	89	325
Arrive On Green	0.16	0.89	0.71	0.71	0.05	0.00
Sat Flow, veh/h	1774	1863	1380	410	1774	1583
Grp Volume(v), veh/h	324	1480	0	1493	112	0
Grp Sat Flow(s),veh/h/ln	1774	1863	0	1790	1774	1583
Q Serve(g_s), s	28.0	73.5	0.0	128.0	9.0	0.0
Cycle Q Clear(g_c), s	28.0	73.5	0.0	128.0	9.0	0.0
Prop In Lane	1.00			0.23	1.00	1.00
Lane Grp Cap(c), veh/h	276	1666	0	1273	89	325
V/C Ratio(X)	1.17	0.89	0.00	1.17	1.26	0.00
Avail Cap(c_a), veh/h	276	1666	0	1273	89	325
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	76.0	4.9	0.0	26.0	85.5	0.0
Incr Delay (d2), s/veh	109.7	7.5	0.0	86.3	181.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.1	39.6	0.0	93.1	8.9	0.0
LnGrp Delay(d),s/veh	185.7	12.4	0.0	112.3	267.2	0.0
LnGrp LOS	F	B		F	F	
Approach Vol, veh/h		1804	1493		112	
Approach Delay, s/veh		43.5	112.3		267.2	
Approach LOS		D	F		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		166.0		14.0	33.0	133.0		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		159.0		7.0	26.0	126.0		
Max Q Clear Time (g_c+I1), s		75.5		11.0	30.0	130.0		
Green Ext Time (p_c), s		33.6		0.0	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	81.0
HCM 2010 LOS	F

Intersection	
Int Delay, s/veh	60.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	216	1217	890	7	5	454
Future Vol, veh/h	216	1217	890	7	5	454
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	240	1352	989	8	6	504

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	997	0	-	0	2825	993
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	1832	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	694	-	-	-	20	~ 298
Stage 1	-	-	-	-	359	-
Stage 2	-	-	-	-	139	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	694	-	-	-	0	~ 298
Mov Cap-2 Maneuver	-	-	-	-	0	-
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	139	-

Approach	EB	WB	SB
HCM Control Delay, s	1.9	0	$ 364
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	694	-	-	-	298
HCM Lane V/C Ratio	0.346	-	-	-	1.711
HCM Control Delay (s)	12.9	0	-	-	$ 364
HCM Lane LOS	B	A	-	-	F
HCM 95th %tile Q(veh)	1.5	-	-	-	32.4

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	438	9	888	306	5	1217
Future Volume (veh/h)	438	9	888	306	5	1217
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	487	0	987	0	6	1352
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	453	484	1138	1372	89	1283
Arrive On Green	0.26	0.00	0.61	0.00	0.05	0.69
Sat Flow, veh/h	1774	1583	1863	1583	1774	1863
Grp Volume(v), veh/h	487	0	987	0	6	1352
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	1583	1774	1863
Q Serve(g_s), s	46.0	0.0	78.9	0.0	0.6	124.0
Cycle Q Clear(g_c), s	46.0	0.0	78.9	0.0	0.6	124.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	453	484	1138	1372	89	1283
V/C Ratio(X)	1.07	0.00	0.87	0.00	0.07	1.05
Avail Cap(c_a), veh/h	453	484	1138	1372	89	1283
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	67.0	0.0	29.0	0.0	81.5	28.0
Incr Delay (d2), s/veh	63.6	0.0	9.0	0.0	0.3	40.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	30.5	0.0	43.1	0.0	0.3	77.5
LnGrp Delay(d),s/veh	130.6	0.0	37.9	0.0	81.8	68.5
LnGrp LOS	F		D		F	F
Approach Vol, veh/h	487		987			1358
Approach Delay, s/veh	130.6		37.9			68.6
Approach LOS	F		D			E

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		129.0		51.0	14.0	115.0		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		122.0		44.0	7.0	108.0		
Max Q Clear Time (g_c+I1), s		126.0		48.0	2.6	80.9		
Green Ext Time (p_c), s		0.0		0.0	0.0	9.0		

Intersection Summary	
HCM 2010 Ctrl Delay	68.6
HCM 2010 LOS	E

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	162	170	1024	76	108	1547
Future Volume (veh/h)	162	170	1024	76	108	1547
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1845	1845	1727	1727
Adj Flow Rate, veh/h	178	187	1125	84	119	1700
Adj No. of Lanes	1	1	2	1	1	2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	7	7	3	3	10	10
Cap, veh/h	285	254	1390	622	441	2364
Arrive On Green	0.17	0.17	0.40	0.40	0.27	0.72
Sat Flow, veh/h	1691	1509	3597	1568	1645	3368
Grp Volume(v), veh/h	178	187	1125	84	119	1700
Grp Sat Flow(s),veh/h/ln	1691	1509	1752	1568	1645	1641
Q Serve(g_s), s	8.8	10.6	25.7	1.4	5.1	27.1
Cycle Q Clear(g_c), s	8.8	10.6	25.7	1.4	5.1	27.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	285	254	1390	622	441	2364
V/C Ratio(X)	0.62	0.73	0.81	0.14	0.27	0.72
Avail Cap(c_a), veh/h	376	335	1636	732	441	2364
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.81	0.81	1.00	1.00
Uniform Delay (d), s/veh	34.8	35.5	24.1	4.3	26.0	7.3
Incr Delay (d2), s/veh	2.2	5.7	4.3	0.4	0.3	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	8.9	13.2	2.7	2.4	12.7
LnGrp Delay(d),s/veh	37.0	41.2	28.4	4.7	26.3	9.2
LnGrp LOS	D	D	C	A	C	A
Approach Vol, veh/h	365		1209			1819
Approach Delay, s/veh	39.2		26.7			10.3
Approach LOS	D		C			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		69.8		20.2	29.1	40.7		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		58.0		18.0	11.0	40.0		
Max Q Clear Time (g_c+I1), s		29.1		12.6	7.1	27.7		
Green Ext Time (p_c), s		15.5		0.6	0.1	6.0		

Intersection Summary	
HCM 2010 Ctrl Delay	19.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	178	171	275	5	127	113	920	111	200	1496	13
Future Volume (veh/h)	53	178	171	275	5	127	113	920	111	200	1496	13
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1810	1810	1900	1845	1845	1845	1792	1792	1900
Adj Flow Rate, veh/h	56	189	182	293	5	135	120	979	118	213	1591	14
Adj No. of Lanes	1	1	1	2	1	0	1	2	1	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	5	5	5	3	3	3	6	6	6
Cap, veh/h	194	231	434	353	14	387	270	1792	967	249	1742	15
Arrive On Green	0.13	0.13	0.13	0.11	0.26	0.26	0.05	0.17	0.17	0.15	0.50	0.50
Sat Flow, veh/h	1220	1827	1553	3343	55	1491	1757	3505	1568	1707	3459	30
Grp Volume(v), veh/h	56	189	182	293	0	140	120	979	118	213	783	822
Grp Sat Flow(s),veh/h/ln	1220	1827	1553	1672	0	1546	1757	1752	1568	1707	1703	1787
Q Serve(g_s), s	7.6	18.1	2.9	15.5	0.0	13.3	11.9	46.0	9.1	21.9	76.0	76.2
Cycle Q Clear(g_c), s	7.6	18.1	2.9	15.5	0.0	13.3	11.9	46.0	9.1	21.9	76.0	76.2
Prop In Lane	1.00		1.00	1.00		0.96	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	194	231	434	353	0	401	270	1792	967	249	858	900
V/C Ratio(X)	0.29	0.82	0.42	0.83	0.00	0.35	0.45	0.55	0.12	0.86	0.91	0.91
Avail Cap(c_a), veh/h	209	254	454	353	0	421	270	1792	967	322	937	983
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.82	0.82	0.82	0.62	0.62	0.62
Uniform Delay (d), s/veh	72.0	76.6	29.1	78.9	0.0	54.3	78.0	55.7	25.4	75.0	41.0	41.1
Incr Delay (d2), s/veh	0.8	17.5	0.6	15.3	0.0	0.5	0.9	1.0	0.2	10.6	10.6	10.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	10.3	5.4	7.9	0.0	5.7	5.9	22.6	4.0	11.1	38.2	40.0
LnGrp Delay(d),s/veh	72.8	94.1	29.8	94.2	0.0	54.8	79.0	56.7	25.6	85.6	51.6	51.4
LnGrp LOS	E	F	C	F		D	E	E	C	F	D	D
Approach Vol, veh/h		427			433			1217			1818	
Approach Delay, s/veh		63.9			81.4			55.9			55.5	
Approach LOS		E			F			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	32.6	95.7		51.7	31.3	97.0	24.0	27.7
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	15.6	97.0		47.0	32.0	80.0	17.0	23.0
Max Q Clear Time (g_c+I1), s	13.9	78.2		15.3	23.9	48.0	17.5	20.1
Green Ext Time (p_c), s	0.0	10.5		0.9	0.3	7.8	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	59.4
HCM 2010 LOS	E

HCM 2010 methodology does not support more than 4 approaches.

Intersection	
Int Delay, s/veh	30

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	995	592	17	114	44
Future Vol, veh/h	13	995	592	17	114	44
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	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	5	5	5	5	3	3
Mvmt Flow	14	1093	651	19	125	48

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	670	0	-	0	1782	661
Stage 1	-	-	-	-	661	-
Stage 2	-	-	-	-	1121	-
Critical Hdwy	4.15	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.245	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	906	-	-	-	~ 90	461
Stage 1	-	-	-	-	512	-
Stage 2	-	-	-	-	310	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	906	-	-	-	~ 89	461
Mov Cap-2 Maneuver	-	-	-	-	~ 89	-
Stage 1	-	-	-	-	504	-
Stage 2	-	-	-	-	310	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	$ 336.5
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	906	-	-	-	115
HCM Lane V/C Ratio	0.016	-	-	-	1.51
HCM Control Delay (s)	9	-	-	-	$ 336.5
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	0	-	-	-	12.5

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

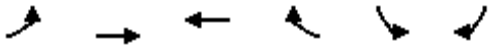
Intersection	
Int Delay, s/veh	12.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	1094	5	29	580	16	29	0	84	10	0	0
Future Vol, veh/h	10	1094	5	29	580	16	29	0	84	10	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	7	7	7	2	2	2	13	13	13
Mvmt Flow	11	1189	5	32	630	17	32	0	91	11	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	647	0	0	1194	0	0	1917	1925	1192	1962	1919	639
Stage 1	-	-	-	-	-	-	1214	1214	-	703	703	-
Stage 2	-	-	-	-	-	-	703	711	-	1259	1216	-
Critical Hdwy	4.14	-	-	4.17	-	-	7.12	6.52	6.22	7.23	6.63	6.33
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.23	5.63	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.23	5.63	-
Follow-up Hdwy	2.236	-	-	2.263	-	-	3.518	4.018	3.318	3.617	4.117	3.417
Pot Cap-1 Maneuver	929	-	-	567	-	-	51	67	228	44	63	457
Stage 1	-	-	-	-	-	-	222	254	-	411	424	-
Stage 2	-	-	-	-	-	-	428	436	-	199	242	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	929	-	-	567	-	-	46	59	228	24	55	457
Mov Cap-2 Maneuver	-	-	-	-	-	-	46	59	-	24	55	-
Stage 1	-	-	-	-	-	-	214	245	-	397	387	-
Stage 2	-	-	-	-	-	-	390	398	-	115	234	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.5	182.8	245.7
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	113	929	-	-	567	-	-	24
HCM Lane V/C Ratio	1.087	0.012	-	-	0.056	-	-	0.453
HCM Control Delay (s)	182.8	8.9	0	-	11.7	0	-	245.7
HCM Lane LOS	F	A	A	-	B	A	-	F
HCM 95th %tile Q(veh)	7.4	0	-	-	0.2	-	-	1.4



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	63	1125	558	139	466	67
Future Volume (veh/h)	63	1125	558	139	466	67
Number	5	2	6	16	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1810	1900	1863	1863
Adj Flow Rate, veh/h	68	1210	600	149	501	0
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	5	5	2	2
Cap, veh/h	231	1218	709	176	493	650
Arrive On Green	0.13	0.67	0.51	0.51	0.28	0.00
Sat Flow, veh/h	1740	1827	1400	348	1774	1583
Grp Volume(v), veh/h	68	1210	0	749	501	0
Grp Sat Flow(s),veh/h/ln	1740	1827	0	1748	1774	1583
Q Serve(g_s), s	6.4	117.7	0.0	66.6	50.0	0.0
Cycle Q Clear(g_c), s	6.4	117.7	0.0	66.6	50.0	0.0
Prop In Lane	1.00			0.20	1.00	1.00
Lane Grp Cap(c), veh/h	231	1218	0	885	493	650
V/C Ratio(X)	0.29	0.99	0.00	0.85	1.02	0.00
Avail Cap(c_a), veh/h	231	1218	0	991	493	650
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	70.5	29.6	0.0	38.4	65.0	0.0
Incr Delay (d2), s/veh	0.7	24.3	0.0	9.8	44.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	67.0	0.0	34.5	30.6	0.0
LnGrp Delay(d),s/veh	71.2	53.9	0.0	48.2	109.8	0.0
LnGrp LOS	E	D		D	F	
Approach Vol, veh/h		1278	749		501	
Approach Delay, s/veh		54.8	48.2		109.8	
Approach LOS		D	D		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		125.0			28.9	96.1		55.0
Change Period (Y+Rc), s		7.0			7.0	7.0		7.0
Max Green Setting (Gmax), s		118.0			11.0	100.0		48.0
Max Q Clear Time (g_c+I1), s		119.7			8.4	68.6		52.0
Green Ext Time (p_c), s		0.0			0.0	20.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	63.7
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	42	9	301	986	6
Future Vol, veh/h	10	42	9	301	986	6
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	95	95	95	95	95	95
Heavy Vehicles, %	2	2	3	3	2	2
Mvmt Flow	11	44	9	317	1038	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1376	1041	1044	0	-	0
Stage 1	1041	-	-	-	-	-
Stage 2	335	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.13	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.227	-	-	-
Pot Cap-1 Maneuver	160	279	662	-	-	-
Stage 1	340	-	-	-	-	-
Stage 2	725	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	157	279	662	-	-	-
Mov Cap-2 Maneuver	157	-	-	-	-	-
Stage 1	335	-	-	-	-	-
Stage 2	725	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	24.1	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	662	-	243	-	-
HCM Lane V/C Ratio	0.014	-	0.225	-	-
HCM Control Delay (s)	10.5	0	24.1	-	-
HCM Lane LOS	B	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.8	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑↑↱		↰	↑↑↱	
Traffic Vol, veh/h	10	0	32	7	2	11	19	1078	2	2	1967	4
Future Vol, veh/h	10	0	32	7	2	11	19	1078	2	2	1967	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	13	13	13	2	2	2	6	6	6	3	3	3
Mvmt Flow	11	0	35	8	2	12	21	1172	2	2	2138	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2773	3360	1071	2288	3361	587	2142	0	0	1174	0	0
Stage 1	2144	2144	-	1215	1215	-	-	-	-	-	-	-
Stage 2	629	1216	-	1073	2146	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.76	7.16	7.54	6.54	6.94	4.22	-	-	4.16	-	-
Critical Hdwy Stg 1	6.76	5.76	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.76	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.13	3.43	3.52	4.02	3.32	2.26	-	-	2.23	-	-
Pot Cap-1 Maneuver	~ 7	6	199	21	8	453	235	-	-	585	-	-
Stage 1	43	76	-	192	252	-	-	-	-	-	-	-
Stage 2	411	231	-	235	87	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 6	5	199	16	7	453	235	-	-	585	-	-
Mov Cap-2 Maneuver	33	53	-	86	49	-	-	-	-	-	-	-
Stage 1	39	76	-	175	230	-	-	-	-	-	-	-
Stage 2	361	210	-	193	87	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	79.1	36.2	0.4	0
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	235	-	-	91	137	585	-	-
HCM Lane V/C Ratio	0.088	-	-	0.502	0.159	0.004	-	-
HCM Control Delay (s)	21.8	-	-	79.1	36.2	11.2	-	-
HCM Lane LOS	C	-	-	F	E	B	-	-
HCM 95th %tile Q(veh)	0.3	-	-	2.2	0.5	0	-	-

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

Intersection	
Int Delay, s/veh	1.2

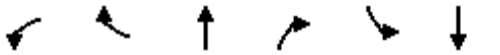
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	0	30	24	0	12	16	1079	4	2	2001	3
Future Vol, veh/h	8	0	30	24	0	12	16	1079	4	2	2001	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	4	4	4
Mvmt Flow	8	0	32	25	0	13	17	1136	4	2	2106	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2714	3286	1055	2229	3285	570	2109	0	0	1140	0	0
Stage 1	2112	2112	-	1172	1172	-	-	-	-	-	-	-
Stage 2	602	1174	-	1057	2113	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.2	-	-	4.18	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.25	-	-	2.24	-	-
Pot Cap-1 Maneuver	10	9	222	~ 24	9	465	246	-	-	597	-	-
Stage 1	52	90	-	204	264	-	-	-	-	-	-	-
Stage 2	453	264	-	240	90	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	9	8	222	~ 19	8	465	246	-	-	597	-	-
Mov Cap-2 Maneuver	41	63	-	95	54	-	-	-	-	-	-	-
Stage 1	48	90	-	190	246	-	-	-	-	-	-	-
Stage 2	410	246	-	205	90	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	52.1	44.1	0.3	0
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	246	-	-	115	129	597	-	-
HCM Lane V/C Ratio	0.068	-	-	0.348	0.294	0.004	-	-
HCM Control Delay (s)	20.7	-	-	52.1	44.1	11.1	-	-
HCM Lane LOS	C	-	-	F	E	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.4	1.1	0	-	-

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



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	926	102	997	263	47	2008
Future Volume (veh/h)	926	102	997	263	47	2008
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1810	1810	1827	1827
Adj Flow Rate, veh/h	975	107	1049	277	49	2114
Adj No. of Lanes	2	1	2	1	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	5	5	4	4
Cap, veh/h	956	562	1645	1163	134	2121
Arrive On Green	0.28	0.28	0.48	0.48	0.08	0.61
Sat Flow, veh/h	3442	1583	3529	1538	1740	3563
Grp Volume(v), veh/h	975	107	1049	277	49	2114
Grp Sat Flow(s),veh/h/ln	1721	1583	1719	1538	1740	1736
Q Serve(g_s), s	25.0	4.2	20.6	4.8	2.4	54.5
Cycle Q Clear(g_c), s	25.0	4.2	20.6	4.8	2.4	54.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	956	562	1645	1163	134	2121
V/C Ratio(X)	1.02	0.19	0.64	0.24	0.37	1.00
Avail Cap(c_a), veh/h	956	562	1645	1163	174	2121
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	20.1	17.6	3.3	39.4	17.4
Incr Delay (d2), s/veh	34.2	0.2	1.9	0.5	1.7	18.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.4	4.4	10.2	4.5	1.2	31.1
LnGrp Delay(d),s/veh	66.7	20.2	19.5	3.7	41.1	36.2
LnGrp LOS	F	C	B	A	D	D
Approach Vol, veh/h	1082		1326			2163
Approach Delay, s/veh	62.1		16.2			36.3
Approach LOS	E		B			D

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		60.0		30.0	11.9	48.1		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		53.0		23.0	7.0	39.0		
Max Q Clear Time (g_c+I1), s		56.5		27.0	4.4	22.6		
Green Ext Time (p_c), s		0.0		0.0	0.0	7.2		

Intersection Summary	
HCM 2010 Ctrl Delay	36.6
HCM 2010 LOS	D

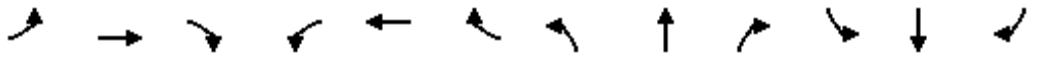
Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	64	33	1260	2929	5
Future Vol, veh/h	0	64	33	1260	2929	5
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	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	4	4	5	5	3	3
Mvmt Flow	0	68	35	1340	3116	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1561	3121	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.98	4.2	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.34	2.25	-	-	-
Pot Cap-1 Maneuver	0	99	95	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	99	95	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	98.3	1.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	95	-	99	-	-
HCM Lane V/C Ratio	0.37	-	0.688	-	-
HCM Control Delay (s)	63.6	-	98.3	-	-
HCM Lane LOS	F	-	F	-	-
HCM 95th %tile Q(veh)	1.5	-	3.5	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	0	67	39	0	16	46	1270	5	13	2970	5
Future Volume (veh/h)	2	0	67	39	0	16	46	1270	5	13	2970	5
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1863	1900	1827	1827	1900	1863	1863	1900
Adj Flow Rate, veh/h	2	0	74	43	0	18	51	1396	5	14	3264	5
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	2	2	2	4	4	4	2	2	2
Cap, veh/h	22	2	116	93	6	27	82	1384	5	803	2884	4
Arrive On Green	0.07	0.00	0.07	0.07	0.00	0.07	0.09	0.78	0.78	0.45	0.80	0.80
Sat Flow, veh/h	20	23	1568	794	76	364	1740	3548	13	1774	3626	6
Grp Volume(v), veh/h	76	0	0	61	0	0	51	683	718	14	1593	1676
Grp Sat Flow(s),veh/h/ln	1610	0	0	1235	0	0	1740	1736	1825	1774	1770	1862
Q Serve(g_s), s	0.0	0.0	0.0	0.9	0.0	0.0	5.1	70.2	70.2	0.8	143.2	143.2
Cycle Q Clear(g_c), s	8.3	0.0	0.0	9.2	0.0	0.0	5.1	70.2	70.2	0.8	143.2	143.2
Prop In Lane	0.03		0.97	0.70		0.30	1.00		0.01	1.00		0.00
Lane Grp Cap(c), veh/h	139	0	0	125	0	0	82	677	712	803	1408	1481
V/C Ratio(X)	0.55	0.00	0.00	0.49	0.00	0.00	0.62	1.01	1.01	0.02	1.13	1.13
Avail Cap(c_a), veh/h	198	0	0	177	0	0	87	1311	1379	803	1408	1481
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.86	0.86	0.86	1.00	1.00	1.00
Uniform Delay (d), s/veh	81.1	0.0	0.0	81.4	0.0	0.0	79.9	19.8	19.8	27.2	18.4	18.4
Incr Delay (d2), s/veh	3.3	0.0	0.0	2.9	0.0	0.0	10.1	34.2	33.4	0.0	68.6	68.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.0	0.0	3.1	0.0	0.0	2.7	38.8	40.6	0.4	95.6	100.6
LnGrp Delay(d),s/veh	84.4	0.0	0.0	84.3	0.0	0.0	90.0	54.0	53.2	27.2	87.0	86.8
LnGrp LOS	F			F			F	F	F	C	F	F
Approach Vol, veh/h		76			61			1452			3283	
Approach Delay, s/veh		84.4			84.3			54.9			86.6	
Approach LOS		F			F			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.5	148.2		18.3	78.2	83.5		18.3
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0
Max Green Setting (Gmax), s	7.0	134.0		18.0	7.0	134.0		18.0
Max Q Clear Time (g_c+I1), s	7.1	145.2		11.2	2.8	72.2		10.3
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	12.5		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	77.1
HCM 2010 LOS	E

HCM 2010 Computation does not support turning movement with Shared and Exclusive lanes.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	2778	339	372	3248	32	152	10	176	56	20	171
Future Volume (veh/h)	83	2778	339	372	3248	32	152	10	176	56	20	171
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1827	1827	1827	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	87	2924	357	392	3419	34	160	11	185	59	21	180
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6	4	4	4	2	2	2	2	2	2
Cap, veh/h	95	2719	973	348	3490	1216	188	93	396	188	93	167
Arrive On Green	0.11	1.00	1.00	0.20	0.70	0.70	0.08	0.05	0.05	0.08	0.05	0.05
Sat Flow, veh/h	1707	4893	1524	1740	4988	1553	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	87	2924	357	392	3419	34	160	11	185	59	21	180
Grp Sat Flow(s),veh/h/ln	1707	1631	1524	1740	1663	1553	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	9.1	100.0	0.0	36.0	117.8	0.0	15.0	1.0	0.0	1.5	1.9	7.3
Cycle Q Clear(g_c), s	9.1	100.0	0.0	36.0	117.8	0.0	15.0	1.0	0.0	1.5	1.9	7.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	95	2719	973	348	3490	1216	188	93	396	188	93	167
V/C Ratio(X)	0.91	1.08	0.37	1.13	0.98	0.03	0.85	0.12	0.47	0.31	0.23	1.07
Avail Cap(c_a), veh/h	95	2719	973	348	3491	1216	188	135	431	188	93	167
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.12	0.12	0.12	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	79.5	0.0	0.0	72.0	25.8	4.3	83.0	81.7	57.3	75.8	82.2	57.6
Incr Delay (d2), s/veh	14.8	35.1	0.1	60.8	1.9	0.0	29.4	0.6	0.9	0.9	1.2	90.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	8.8	0.0	23.2	54.1	0.4	2.1	0.5	7.9	2.8	1.0	12.1
LnGrp Delay(d),s/veh	94.3	35.1	0.1	132.8	27.7	4.3	112.3	82.3	58.2	76.7	83.4	148.4
LnGrp LOS	F	F	A	F	C	A	F	F	E	E	F	F
Approach Vol, veh/h		3368			3845			356			260	
Approach Delay, s/veh		32.9			38.2			83.3			126.9	
Approach LOS		C			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	131.0	20.0	14.0	41.0	105.0	20.0	14.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	8.0	124.0	9.0	11.0	34.0	98.0	13.0	7.0
Max Q Clear Time (g_c+I1), s	11.1	119.8	3.5	3.0	38.0	102.0	17.0	9.3
Green Ext Time (p_c), s	0.0	4.2	0.0	0.4	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	40.9
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	2810	210	441	3025	105	123	33	300	90	64	216
Future Volume (veh/h)	85	2810	210	441	3025	105	123	33	300	90	64	216
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1827	1827	1827	1827	1827	1827	1863	1863	1900
Adj Flow Rate, veh/h	91	3022	226	474	3253	113	132	35	0	97	69	232
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	6	6	4	4	4	4	4	4	2	2	2
Cap, veh/h	152	2909	906	427	3826	1191	40	183	500	153	177	158
Arrive On Green	0.05	0.59	0.59	0.44	1.00	1.00	0.10	0.10	0.00	0.10	0.10	0.10
Sat Flow, veh/h	1707	4893	1524	1740	4988	1553	1053	1827	1553	1368	1770	1583
Grp Volume(v), veh/h	91	3022	226	474	3253	113	132	35	0	97	69	232
Grp Sat Flow(s),veh/h/ln	1707	1631	1524	1740	1663	1553	1053	1827	1553	1368	1770	1583
Q Serve(g_s), s	4.3	107.0	12.7	40.0	0.0	0.0	0.0	3.2	0.0	12.6	6.6	18.0
Cycle Q Clear(g_c), s	4.3	107.0	12.7	40.0	0.0	0.0	18.0	3.2	0.0	15.8	6.6	18.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	152	2909	906	427	3826	1191	40	183	500	153	177	158
V/C Ratio(X)	0.60	1.04	0.25	1.11	0.85	0.09	3.30	0.19	0.00	0.64	0.39	1.47
Avail Cap(c_a), veh/h	190	2909	906	427	3826	1191	40	183	500	153	177	158
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.37	0.37	0.37	0.18	0.18	0.18	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.2	36.5	17.4	48.1	0.0	0.0	90.0	74.3	0.0	81.6	75.9	81.0
Incr Delay (d2), s/veh	1.4	22.3	0.2	56.6	0.5	0.0	1096.0	0.5	0.0	8.4	1.4	240.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	53.9	5.4	27.8	0.2	0.0	14.2	1.6	0.0	5.1	3.3	18.5
LnGrp Delay(d),s/veh	29.6	58.8	17.6	104.7	0.5	0.0	1186.0	74.8	0.0	89.9	77.3	321.5
LnGrp LOS	C	F	B	F	A	A	F	E		F	E	F
Approach Vol, veh/h		3339			3840			167			398	
Approach Delay, s/veh		55.2			13.3			953.1			222.7	
Approach LOS		E			B			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.9	143.1		23.0	45.0	112.0		23.0
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0
Max Green Setting (Gmax), s	10.0	132.0		16.0	38.0	105.0		16.0
Max Q Clear Time (g_c+I1), s	6.3	2.0		20.0	42.0	109.0		20.0
Green Ext Time (p_c), s	0.1	102.5		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	62.4
HCM 2010 LOS	E

HCM 2010 Computation does not support turning movement with Shared and Exclusive lanes.

Intersection	
Int Delay, s/veh	102.1

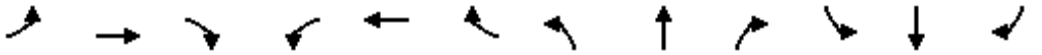
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Vol, veh/h	0	3765	5104	6	0	164
Future Vol, veh/h	0	3765	5104	6	0	164
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	0	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	5	5	4	4	3	3
Mvmt Flow	0	3963	5373	6	0	173

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	2687
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.16
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.93
Pot Cap-1 Maneuver	0	-	-	-	0	~ 14
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	~ 14
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	$ 5627
HCM LOS			F

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	14
HCM Lane V/C Ratio	-	-	-	12.331
HCM Control Delay (s)	-	-	-	$ 5627
HCM Lane LOS	-	-	-	F
HCM 95th %tile Q(veh)	-	-	-	22.7

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)	58	3427	233	117	5071	80	523	87	221	117	54	239
Future Volume (veh/h)	58	3427	233	117	5071	80	523	87	221	117	54	239
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1845	1845	1845	1792	1792	1792	1863	1863	1863
Adj Flow Rate, veh/h	61	3607	245	123	5338	84	551	92	233	123	57	252
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6	3	3	3	6	6	6	2	2	2
Cap, veh/h	122	2963	1202	128	3059	1094	353	256	294	200	93	155
Arrive On Green	0.05	0.61	0.61	0.05	0.61	0.61	0.18	0.14	0.14	0.09	0.05	0.05
Sat Flow, veh/h	1707	4893	1524	1757	5036	1568	1707	1792	1524	1774	1863	1583
Grp Volume(v), veh/h	61	3607	245	123	5338	84	551	92	233	123	57	252
Grp Sat Flow(s),veh/h/ln	1707	1631	1524	1757	1679	1568	1707	1792	1524	1774	1863	1583
Q Serve(g_s), s	2.7	109.0	0.0	8.5	109.3	3.1	33.0	8.3	14.7	12.2	5.4	9.0
Cycle Q Clear(g_c), s	2.7	109.0	0.0	8.5	109.3	3.1	33.0	8.3	14.7	12.2	5.4	9.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	122	2963	1202	128	3059	1094	353	256	294	200	93	155
V/C Ratio(X)	0.50	1.22	0.20	0.96	1.75	0.08	1.56	0.36	0.79	0.61	0.61	1.62
Avail Cap(c_a), veh/h	144	2963	1202	128	3059	1094	353	256	294	237	93	155
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	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	42.1	35.5	4.8	83.9	35.3	8.7	71.6	69.7	50.2	79.9	83.8	49.4
Incr Delay (d2), s/veh	3.1	101.1	0.4	67.7	336.7	0.1	265.9	0.8	13.7	3.4	11.2	307.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	76.6	3.2	8.5	145.8	1.4	43.6	4.2	11.0	6.1	3.1	20.4
LnGrp Delay(d),s/veh	45.2	136.6	5.2	151.6	372.0	8.8	337.6	70.5	63.9	83.4	95.0	356.6
LnGrp LOS	D	F	A	F	F	A	F	E	E	F	F	F
Approach Vol, veh/h		3913			5545			876			432	
Approach Delay, s/veh		126.9			361.6			236.7			244.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	114.3	21.3	30.7	14.0	114.0	38.0	14.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	9.0	105.0	18.0	20.0	7.0	107.0	31.0	7.0
Max Q Clear Time (g_c+I1), s	4.7	111.3	14.2	16.7	10.5	111.0	35.0	11.0
Green Ext Time (p_c), s	0.0	0.0	0.1	0.4	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	261.4
HCM 2010 LOS	F

HCM 2010 Research does not support Non-NEMA phasing.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	18	3	0	19	183	1296	88	81	2646	349
Future Volume (veh/h)	6	0	18	3	0	19	183	1296	88	81	2646	349
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1810	1900	1900	1863	1900	1810	1810	1900	1845	1845	1845
Adj Flow Rate, veh/h	6	0	19	3	0	20	193	1364	93	85	2785	367
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	2	2	2	5	5	5	3	3	3
Cap, veh/h	37	5	54	29	3	64	99	2934	199	363	3147	1408
Arrive On Green	0.05	0.00	0.05	0.05	0.00	0.05	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	263	103	1159	132	73	1370	66	3267	222	360	3505	1568
Grp Volume(v), veh/h	25	0	0	23	0	0	193	716	741	85	2785	367
Grp Sat Flow(s),veh/h/ln	1525	0	0	1576	0	0	66	1719	1770	360	1752	1568
Q Serve(g_s), s	0.2	0.0	0.0	0.0	0.0	0.0	161.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.7	0.0	0.0	2.5	0.0	0.0	161.6	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.24		0.76	0.13		0.87	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	96	0	0	96	0	0	99	1544	1590	363	3147	1408
V/C Ratio(X)	0.26	0.00	0.00	0.24	0.00	0.00	1.95	0.46	0.47	0.23	0.88	0.26
Avail Cap(c_a), veh/h	192	0	0	196	0	0	99	1544	1590	363	3147	1408
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.09	0.09	0.09	0.09	0.09	0.09
Uniform Delay (d), s/veh	83.1	0.0	0.0	83.0	0.0	0.0	32.6	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.4	0.0	0.0	1.3	0.0	0.0	430.3	0.1	0.1	0.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.0	1.1	0.0	0.0	16.7	0.0	0.0	0.0	0.2	0.0
LnGrp Delay(d),s/veh	84.6	0.0	0.0	84.3	0.0	0.0	462.9	0.1	0.1	0.1	0.4	0.0
LnGrp LOS	F			F			F	A	A	A	A	A
Approach Vol, veh/h		25			23			1650			3237	
Approach Delay, s/veh		84.6			84.3			54.2			0.3	
Approach LOS		F			F			D			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		166.6		13.4		166.6		13.4
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0
Max Green Setting (Gmax), s		148.0		18.0		148.0		18.0
Max Q Clear Time (g_c+I1), s		2.0		4.5		163.6		4.7
Green Ext Time (p_c), s		108.9		0.0		0.0		0.0

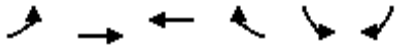
Intersection Summary		
HCM 2010 Ctrl Delay		19.2
HCM 2010 LOS		B

HCM 2010 Research does not support Non-NEMA phasing.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	225	193	23	83	74	21	34	576	103	2	253	68
Future Volume (veh/h)	225	193	23	83	74	21	34	576	103	2	253	68
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	250	214	26	92	82	23	38	640	114	2	281	76
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	337	238	29	269	229	58	69	761	133	41	732	197
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.52	0.52	0.52	0.52	0.52	0.52
Sat Flow, veh/h	747	643	78	569	618	157	53	1466	255	2	1411	379
Grp Volume(v), veh/h	490	0	0	197	0	0	792	0	0	359	0	0
Grp Sat Flow(s),veh/h/ln	1468	0	0	1344	0	0	1774	0	0	1792	0	0
Q Serve(g_s), s	19.5	0.0	0.0	0.0	0.0	0.0	17.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	28.6	0.0	0.0	9.1	0.0	0.0	34.6	0.0	0.0	10.8	0.0	0.0
Prop In Lane	0.51		0.05	0.47		0.12	0.05		0.14	0.01		0.21
Lane Grp Cap(c), veh/h	604	0	0	556	0	0	963	0	0	970	0	0
V/C Ratio(X)	0.81	0.00	0.00	0.35	0.00	0.00	0.82	0.00	0.00	0.37	0.00	0.00
Avail Cap(c_a), veh/h	632	0	0	583	0	0	963	0	0	970	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	27.1	0.0	0.0	20.5	0.0	0.0	18.6	0.0	0.0	13.0	0.0	0.0
Incr Delay (d2), s/veh	7.6	0.0	0.0	0.4	0.0	0.0	7.9	0.0	0.0	1.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.7	0.0	0.0	3.6	0.0	0.0	19.1	0.0	0.0	5.6	0.0	0.0
LnGrp Delay(d),s/veh	34.8	0.0	0.0	20.9	0.0	0.0	26.5	0.0	0.0	14.1	0.0	0.0
LnGrp LOS	C			C			C			B		
Approach Vol, veh/h		490			197			792			359	
Approach Delay, s/veh		34.8			20.9			26.5			14.1	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		51.7		38.3		51.7		38.3
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0
Max Green Setting (Gmax), s		43.0		33.0		43.0		33.0
Max Q Clear Time (g_c+I1), s		12.8		11.1		36.6		30.6
Green Ext Time (p_c), s		6.9		1.0		5.2		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	25.7
HCM 2010 LOS	C



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	306	2079	1037	203	194	159
Future Volume (veh/h)	306	2079	1037	203	194	159
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	340	2310	1152	226	216	0
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	276	1573	1001	196	177	405
Arrive On Green	0.16	0.84	0.66	0.66	0.10	0.00
Sat Flow, veh/h	1774	1863	1513	297	1774	1583
Grp Volume(v), veh/h	340	2310	0	1378	216	0
Grp Sat Flow(s),veh/h/ln	1774	1863	0	1810	1774	1583
Q Serve(g_s), s	28.0	152.0	0.0	119.0	18.0	0.0
Cycle Q Clear(g_c), s	28.0	152.0	0.0	119.0	18.0	0.0
Prop In Lane	1.00			0.16	1.00	1.00
Lane Grp Cap(c), veh/h	276	1573	0	1197	177	405
V/C Ratio(X)	1.23	1.47	0.00	1.15	1.22	0.00
Avail Cap(c_a), veh/h	276	1573	0	1197	177	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	76.0	14.0	0.0	30.5	81.0	0.0
Incr Delay (d2), s/veh	131.9	214.4	0.0	78.1	138.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.8	169.7	0.0	85.1	15.6	0.0
LnGrp Delay(d),s/veh	207.9	228.4	0.0	108.6	219.1	0.0
LnGrp LOS	F	F		F	F	
Approach Vol, veh/h		2650	1378		216	
Approach Delay, s/veh		225.7	108.6		219.1	
Approach LOS		F	F		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		157.0		23.0	33.0	124.0		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		150.0		16.0	26.0	117.0		
Max Q Clear Time (g_c+I1), s		154.0		20.0	30.0	121.0		
Green Ext Time (p_c), s		0.0		0.0	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	187.4
HCM 2010 LOS	F

Intersection	
Int Delay, s/veh	30.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	427	1846	1066	14	2	174
Future Vol, veh/h	427	1846	1066	14	2	174
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	474	2051	1184	16	2	193

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1200	0	-	0	4191	1192
Stage 1	-	-	-	-	1192	-
Stage 2	-	-	-	-	2999	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	582	-	-	-	~ 2	228
Stage 1	-	-	-	-	288	-
Stage 2	-	-	-	-	35	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	582	-	-	-	~ 2	228
Mov Cap-2 Maneuver	-	-	-	-	~ 2	-
Stage 1	-	-	-	-	288	-
Stage 2	-	-	-	-	35	-

Approach	EB	WB	SB
HCM Control Delay, s	6.2	0	$ 535.1
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	582	-	-	-	100
HCM Lane V/C Ratio	0.815	-	-	-	1.956
HCM Control Delay (s)	32.8	0	-	-	-$ 535.1
HCM Lane LOS	D	A	-	-	F
HCM 95th %tile Q(veh)	8.2	-	-	-	16.4

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	349	10	1070	699	14	1834
Future Volume (veh/h)	349	10	1070	699	14	1834
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	388	0	1189	0	16	2038
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	296	343	1304	1372	89	1449
Arrive On Green	0.17	0.00	0.70	0.00	0.05	0.78
Sat Flow, veh/h	1774	1583	1863	1583	1774	1863
Grp Volume(v), veh/h	388	0	1189	0	16	2038
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	1583	1774	1863
Q Serve(g_s), s	30.0	0.0	95.3	0.0	1.6	140.0
Cycle Q Clear(g_c), s	30.0	0.0	95.3	0.0	1.6	140.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	296	343	1304	1372	89	1449
V/C Ratio(X)	1.31	0.00	0.91	0.00	0.18	1.41
Avail Cap(c_a), veh/h	296	343	1304	1372	99	1449
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	75.0	0.0	22.4	0.0	82.0	20.0
Incr Delay (d2), s/veh	162.6	0.0	11.1	0.0	1.0	187.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	28.1	0.0	52.6	0.0	0.8	146.2
LnGrp Delay(d),s/veh	237.6	0.0	33.5	0.0	82.9	207.2
LnGrp LOS	F		C		F	F
Approach Vol, veh/h	388		1189			2054
Approach Delay, s/veh	237.6		33.5			206.2
Approach LOS	F		C			F

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		145.0		35.0	14.0	131.0		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		138.0		28.0	8.0	123.0		
Max Q Clear Time (g_c+I1), s		142.0		32.0	3.6	97.3		
Green Ext Time (p_c), s		0.0		0.0	0.0	12.4		

Intersection Summary	
HCM 2010 Ctrl Delay	153.0
HCM 2010 LOS	F

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	116	66	1703	176	126	2057
Future Volume (veh/h)	116	66	1703	176	126	2057
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	127	73	1871	193	138	2260
Adj No. of Lanes	1	1	2	1	1	2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	177	158	2111	944	243	2792
Arrive On Green	0.10	0.10	0.60	0.60	0.14	0.79
Sat Flow, veh/h	1774	1583	3632	1583	1774	3632
Grp Volume(v), veh/h	127	73	1871	193	138	2260
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1583	1774	1770
Q Serve(g_s), s	6.2	3.9	40.7	1.8	6.6	33.6
Cycle Q Clear(g_c), s	6.2	3.9	40.7	1.8	6.6	33.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	177	158	2111	944	243	2792
V/C Ratio(X)	0.72	0.46	0.89	0.20	0.57	0.81
Avail Cap(c_a), veh/h	177	158	2202	985	243	2792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.50	0.50	1.00	1.00
Uniform Delay (d), s/veh	39.3	38.2	15.5	1.4	36.4	5.5
Incr Delay (d2), s/veh	12.9	2.1	3.1	0.2	3.1	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	3.5	20.7	5.5	3.4	16.7
LnGrp Delay(d),s/veh	52.1	40.3	18.7	1.7	39.5	8.2
LnGrp LOS	D	D	B	A	D	A
Approach Vol, veh/h	200		2064			2398
Approach Delay, s/veh	47.8		17.1			10.0
Approach LOS	D		B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		76.0		14.0	17.3	58.7		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		69.0		7.0	8.0	54.0		
Max Q Clear Time (g_c+I1), s		35.6		8.2	8.6	42.7		
Green Ext Time (p_c), s		24.3		0.0	0.0	8.9		

Intersection Summary	
HCM 2010 Ctrl Delay	14.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	2	165	163	2	79	283	1773	228	142	1954	77
Future Volume (veh/h)	27	2	165	163	2	79	283	1773	228	142	1954	77
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	28	2	174	172	2	83	298	1866	240	149	2057	81
Adj No. of Lanes	1	1	1	2	1	0	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	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	2	2	2	2	2	2	2
Cap, veh/h	97	169	400	172	6	261	288	2279	1099	185	2035	80
Arrive On Green	0.09	0.09	0.09	0.05	0.17	0.17	0.05	0.21	0.21	0.10	0.59	0.59
Sat Flow, veh/h	1307	1863	1583	3442	37	1552	1774	3539	1583	1774	3473	136
Grp Volume(v), veh/h	28	2	174	172	0	85	298	1866	240	149	1042	1096
Grp Sat Flow(s),veh/h/ln	1307	1863	1583	1721	0	1589	1774	1770	1583	1774	1770	1839
Q Serve(g_s), s	3.8	0.2	0.0	9.0	0.0	8.5	29.2	90.5	8.2	14.8	105.5	105.5
Cycle Q Clear(g_c), s	12.2	0.2	0.0	9.0	0.0	8.5	29.2	90.5	8.2	14.8	105.5	105.5
Prop In Lane	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	97	169	400	172	0	268	288	2279	1099	185	1037	1078
V/C Ratio(X)	0.29	0.01	0.43	1.00	0.00	0.32	1.04	0.82	0.22	0.80	1.00	1.02
Avail Cap(c_a), veh/h	106	181	411	172	0	278	288	2279	1099	187	1037	1078
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.24	0.24	0.24	0.49	0.49	0.49
Uniform Delay (d), s/veh	84.1	74.5	56.5	85.5	0.0	65.8	85.2	60.9	7.9	78.8	37.2	37.3
Incr Delay (d2), s/veh	1.6	0.0	0.7	68.5	0.0	0.7	35.5	0.8	0.1	11.8	20.6	23.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.1	7.3	5.9	0.0	3.8	17.2	44.7	9.3	7.8	57.2	60.4
LnGrp Delay(d),s/veh	85.7	74.5	57.2	154.0	0.0	66.4	120.7	61.7	8.0	90.6	57.8	60.9
LnGrp LOS	F	E	E	F		E	F	E	A	F	F	F
Approach Vol, veh/h		204			257			2404			2287	
Approach Delay, s/veh		61.3			125.0			63.7			61.4	
Approach LOS		E			F			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	34.2	110.5		35.3	23.8	120.9	14.0	21.3
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	26.0	103.5		29.5	17.0	112.5	7.0	15.5
Max Q Clear Time (g_c+I1), s	31.2	107.5		10.5	16.8	92.5	11.0	14.2
Green Ext Time (p_c), s	0.0	0.0		0.4	0.0	14.3	0.0	0.1

Intersection Summary		
HCM 2010 Ctrl Delay		65.6
HCM 2010 LOS		E

HCM 2010 methodology does not support more than 4 approaches.

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	43	1025	950	38	31	30
Future Vol, veh/h	43	1025	950	38	31	30
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	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	3	3	7	7
Mvmt Flow	45	1079	1000	40	33	32

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1040	0	-	0	2189	1020
Stage 1	-	-	-	-	1020	-
Stage 2	-	-	-	-	1169	-
Critical Hdwy	4.12	-	-	-	6.47	6.27
Critical Hdwy Stg 1	-	-	-	-	5.47	-
Critical Hdwy Stg 2	-	-	-	-	5.47	-
Follow-up Hdwy	2.218	-	-	-	3.563	3.363
Pot Cap-1 Maneuver	669	-	-	-	48	281
Stage 1	-	-	-	-	341	-
Stage 2	-	-	-	-	289	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	669	-	-	-	45	281
Mov Cap-2 Maneuver	-	-	-	-	45	-
Stage 1	-	-	-	-	318	-
Stage 2	-	-	-	-	289	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	152
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	669	-	-	-	77
HCM Lane V/C Ratio	0.068	-	-	-	0.834
HCM Control Delay (s)	10.8	-	-	-	152
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	0.2	-	-	-	4.2

Intersection	
Int Delay, s/veh	23

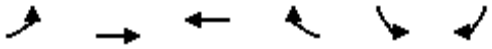
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	992	58	39	943	22	35	0	30	34	0	10
Future Vol, veh/h	6	992	58	39	943	22	35	0	30	34	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	3	3	2	2	2	2	2	2
Mvmt Flow	6	1044	61	41	993	23	37	0	32	36	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1016	0	0	1105	0	0	2179	2185	1075	2190	2204	1005
Stage 1	-	-	-	-	-	-	1087	1087	-	1087	1087	-
Stage 2	-	-	-	-	-	-	1092	1098	-	1103	1117	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	679	-	-	628	-	-	~ 33	46	267	~ 33	45	293
Stage 1	-	-	-	-	-	-	262	292	-	262	292	-
Stage 2	-	-	-	-	-	-	260	289	-	256	283	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	679	-	-	628	-	-	~ 28	38	267	~ 25	37	293
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 28	38	-	~ 25	37	-
Stage 1	-	-	-	-	-	-	256	285	-	256	248	-
Stage 2	-	-	-	-	-	-	213	245	-	221	276	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.4	$ 415	$ 507
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	48	679	-	-	628	-	-	32
HCM Lane V/C Ratio	1.425	0.009	-	-	0.065	-	-	1.447
HCM Control Delay (s)	$ 415	10.4	0	-	11.1	0	-	$ 507
HCM Lane LOS	F	B	A	-	B	A	-	F
HCM 95th %tile Q(veh)	6.5	0	-	-	0.2	-	-	5.2

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



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	118	938	918	320	260	86
Future Volume (veh/h)	118	938	918	320	260	86
Number	5	2	6	16	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	124	987	966	337	274	0
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	128	1480	917	320	266	352
Arrive On Green	0.07	0.79	0.69	0.69	0.15	0.00
Sat Flow, veh/h	1774	1863	1321	461	1774	1583
Grp Volume(v), veh/h	124	987	0	1303	274	0
Grp Sat Flow(s),veh/h/ln	1774	1863	0	1781	1774	1583
Q Serve(g_s), s	12.5	41.7	0.0	125.0	27.0	0.0
Cycle Q Clear(g_c), s	12.5	41.7	0.0	125.0	27.0	0.0
Prop In Lane	1.00			0.26	1.00	1.00
Lane Grp Cap(c), veh/h	128	1480	0	1237	266	352
V/C Ratio(X)	0.97	0.67	0.00	1.05	1.03	0.00
Avail Cap(c_a), veh/h	128	1480	0	1237	266	352
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	83.3	8.1	0.0	27.5	76.5	0.0
Incr Delay (d2), s/veh	69.3	2.4	0.0	40.8	63.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	22.1	0.0	74.9	17.9	0.0
LnGrp Delay(d),s/veh	152.6	10.5	0.0	68.3	139.6	0.0
LnGrp LOS	F	B		F	F	
Approach Vol, veh/h		1111	1303		274	
Approach Delay, s/veh		26.3	68.3		139.6	
Approach LOS		C	E		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		148.0			18.0	130.0		32.0
Change Period (Y+Rc), s		7.0			7.0	7.0		7.0
Max Green Setting (Gmax), s		141.0			11.0	123.0		25.0
Max Q Clear Time (g_c+I1), s		43.7			14.5	127.0		29.0
Green Ext Time (p_c), s		62.7			0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	58.3
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	17	46	788	650	17
Future Vol, veh/h	12	17	46	788	650	17
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	18	50	857	707	18

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1673	716	725	0	-	0
Stage 1	716	-	-	-	-	-
Stage 2	957	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	105	430	878	-	-	-
Stage 1	484	-	-	-	-	-
Stage 2	373	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	94	430	878	-	-	-
Mov Cap-2 Maneuver	94	-	-	-	-	-
Stage 1	431	-	-	-	-	-
Stage 2	373	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	30.4	0.5	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	878	-	173	-	-
HCM Lane V/C Ratio	0.057	-	0.182	-	-
HCM Control Delay (s)	9.3	0	30.4	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.2	-	0.6	-	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	2	28	10	0	7	57	2219	7	20	2017	13
Future Vol, veh/h	8	2	28	10	0	7	57	2219	7	20	2017	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	2	29	11	0	7	60	2336	7	21	2123	14

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3460	4635	1069	3565	4639	1172	2137	0	0	2343	0	0
Stage 1	2172	2172	-	2460	2460	-	-	-	-	-	-	-
Stage 2	1288	2463	-	1105	2179	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 3	~ 1	217	~ 2	1	185	250	-	-	207	-	-
Stage 1	48	84	-	31	60	-	-	-	-	-	-	-
Stage 2	173	59	-	225	84	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 2	~ 1	217	~ 1	1	185	250	-	-	207	-	-
Mov Cap-2 Maneuver	25	17	-	18	11	-	-	-	-	-	-	-
Stage 1	36	76	-	24	46	-	-	-	-	-	-	-
Stage 2	126	45	-	170	76	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	118.6	247.7	0.6	0.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	250	-	-	67	29	207	-	-
HCM Lane V/C Ratio	0.24	-	-	0.597	0.617	0.102	-	-
HCM Control Delay (s)	23.9	-	-	118.6	247.7	24.4	-	-
HCM Lane LOS	C	-	-	F	F	C	-	-
HCM 95th %tile Q(veh)	0.9	-	-	2.5	2	0.3	-	-

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

Intersection	
Int Delay, s/veh	1.4

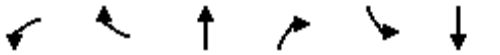
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	23	8	0	9	41	2269	19	21	2021	13
Future Vol, veh/h	5	0	23	8	0	9	41	2269	19	21	2021	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	24	8	0	9	43	2388	20	22	2127	14

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3458	4672	1071	3592	4669	1204	2141	0	0	2408	0	0
Stage 1	2178	2178	-	2484	2484	-	-	-	-	-	-	-
Stage 2	1280	2494	-	1108	2185	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 3	1	217	~ 2	1	176	249	-	-	195	-	-
Stage 1	47	84	-	30	58	-	-	-	-	-	-	-
Stage 2	175	57	-	224	83	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 2	1	217	~ 1	1	176	249	-	-	195	-	-
Mov Cap-2 Maneuver	27	17	-	19	18	-	-	-	-	-	-	-
Stage 1	39	75	-	25	48	-	-	-	-	-	-	-
Stage 2	137	47	-	177	74	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	58.3	179.4	0.4	0.3
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	249	-	-	96	36	195	-	-
HCM Lane V/C Ratio	0.173	-	-	0.307	0.497	0.113	-	-
HCM Control Delay (s)	22.5	-	-	58.3	179.4	25.8	-	-
HCM Lane LOS	C	-	-	F	F	D	-	-
HCM 95th %tile Q(veh)	0.6	-	-	1.2	1.7	0.4	-	-

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



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	520	147	2182	745	89	1963
Future Volume (veh/h)	520	147	2182	745	89	1963
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	547	155	2297	784	94	2066
Adj No. of Lanes	2	1	2	1	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	593	361	2438	1363	99	2733
Arrive On Green	0.17	0.17	0.69	0.69	0.06	0.77
Sat Flow, veh/h	3442	1583	3632	1583	1774	3632
Grp Volume(v), veh/h	547	155	2297	784	94	2066
Grp Sat Flow(s),veh/h/ln	1721	1583	1770	1583	1774	1770
Q Serve(g_s), s	28.2	15.1	103.6	24.5	9.5	57.5
Cycle Q Clear(g_c), s	28.2	15.1	103.6	24.5	9.5	57.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	593	361	2438	1363	99	2733
V/C Ratio(X)	0.92	0.43	0.94	0.58	0.95	0.76
Avail Cap(c_a), veh/h	593	361	2438	1363	99	2733
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.3	59.5	24.8	3.4	84.8	11.2
Incr Delay (d2), s/veh	20.2	0.8	8.9	1.8	75.5	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.0	13.8	53.1	24.4	6.7	28.6
LnGrp Delay(d),s/veh	93.5	60.3	33.8	5.2	160.3	13.2
LnGrp LOS	F	E	C	A	F	B
Approach Vol, veh/h	702		3081			2160
Approach Delay, s/veh	86.2		26.5			19.6
Approach LOS	F		C			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		144.0		36.0	15.0	129.0		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		137.0		29.0	8.0	122.0		
Max Q Clear Time (g_c+I1), s		59.5		30.2	11.5	105.6		
Green Ext Time (p_c), s		33.5		0.0	0.0	15.0		

Intersection Summary	
HCM 2010 Ctrl Delay	31.0
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	41	86	2927	2469	14
Future Vol, veh/h	0	41	86	2927	2469	14
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	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	43	91	3081	2599	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1307	2614	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	0	150	162	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	150	162	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	38.4	1.5	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	162	-	150	-	-
HCM Lane V/C Ratio	0.559	-	0.288	-	-
HCM Control Delay (s)	52.2	-	38.4	-	-
HCM Lane LOS	F	-	E	-	-
HCM 95th %tile Q(veh)	2.9	-	1.1	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1	52	17	1	19	88	2983	33	28	2468	9
Future Volume (veh/h)	6	1	52	17	1	19	88	2983	33	28	2468	9
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	6	1	55	18	1	20	93	3140	35	29	2598	9
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	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	2	2	2	2	2	2	2
Cap, veh/h	28	5	85	65	11	49	197	2709	30	178	2695	9
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	0.11	0.76	0.76	0.10	0.74	0.74
Sat Flow, veh/h	97	82	1405	585	184	810	1774	3585	40	1774	3618	13
Grp Volume(v), veh/h	62	0	0	39	0	0	93	1547	1628	29	1270	1337
Grp Sat Flow(s),veh/h/ln	1584	0	0	1579	0	0	1774	1770	1856	1774	1770	1861
Q Serve(g_s), s	2.8	0.0	0.0	0.0	0.0	0.0	8.9	136.0	136.0	2.7	116.7	117.2
Cycle Q Clear(g_c), s	6.8	0.0	0.0	4.1	0.0	0.0	8.9	136.0	136.0	2.7	116.7	117.2
Prop In Lane	0.10		0.89	0.46		0.51	1.00		0.02	1.00		0.01
Lane Grp Cap(c), veh/h	118	0	0	125	0	0	197	1337	1402	178	1318	1386
V/C Ratio(X)	0.53	0.00	0.00	0.31	0.00	0.00	0.47	1.16	1.16	0.16	0.96	0.96
Avail Cap(c_a), veh/h	197	0	0	199	0	0	197	1337	1402	178	1327	1395
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	82.6	0.0	0.0	81.3	0.0	0.0	75.1	22.0	22.0	74.0	20.7	20.8
Incr Delay (d2), s/veh	3.6	0.0	0.0	1.4	0.0	0.0	0.2	71.5	73.4	0.4	17.5	17.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	0.0	1.9	0.0	0.0	4.3	91.9	97.1	1.3	62.8	66.0
LnGrp Delay(d),s/veh	86.2	0.0	0.0	82.7	0.0	0.0	75.2	93.5	95.4	74.5	38.2	37.9
LnGrp LOS	F			F			E	F	F	E	D	D
Approach Vol, veh/h		62			39			3268			2636	
Approach Delay, s/veh		86.2			82.7			93.9			38.4	
Approach LOS		F			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	25.0	139.1		15.9	23.1	141.0		15.9
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0
Max Green Setting (Gmax), s	8.0	133.0		18.0	7.0	134.0		18.0
Max Q Clear Time (g_c+I1), s	10.9	119.2		6.1	4.7	138.0		8.8
Green Ext Time (p_c), s	0.0	12.9		0.1	0.0	0.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	69.4
HCM 2010 LOS	E

HCM 2010 Computation does not support turning movement with Shared and Exclusive lanes.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	3171	327	378	2408	42	163	16	221	52	34	77
Future Volume (veh/h)	184	3171	327	378	2408	42	163	16	221	52	34	77
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1845	1845	1845	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	194	3338	344	398	2535	44	172	17	233	55	36	81
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	3	3	3	1	1	1	2	2	2
Cap, veh/h	339	2910	1029	332	2870	972	179	146	426	129	93	382
Arrive On Green	0.19	0.57	0.57	0.19	0.57	0.57	0.08	0.08	0.08	0.05	0.05	0.05
Sat Flow, veh/h	1774	5085	1583	1757	5036	1568	1792	1881	1599	1774	1863	1583
Grp Volume(v), veh/h	194	3338	344	398	2535	44	172	17	233	55	36	81
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1757	1679	1568	1792	1881	1599	1774	1863	1583
Q Serve(g_s), s	17.9	103.0	3.5	34.0	78.5	0.5	13.2	1.5	2.0	5.5	3.4	0.0
Cycle Q Clear(g_c), s	17.9	103.0	3.5	34.0	78.5	0.5	13.2	1.5	2.0	5.5	3.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	339	2910	1029	332	2870	972	179	146	426	129	93	382
V/C Ratio(X)	0.57	1.15	0.33	1.20	0.88	0.05	0.96	0.12	0.55	0.43	0.39	0.21
Avail Cap(c_a), veh/h	339	2910	1029	332	2994	1010	179	146	426	148	93	382
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.16	0.16	0.16	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.1	38.5	14.1	73.0	33.5	4.8	81.1	77.2	37.0	83.7	82.8	54.6
Incr Delay (d2), s/veh	0.4	67.0	0.1	92.6	0.4	0.0	55.1	0.3	1.5	2.2	2.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	66.0	7.3	25.0	36.5	0.5	11.3	0.8	8.1	2.8	1.8	3.2
LnGrp Delay(d),s/veh	66.5	105.5	14.2	165.6	33.9	4.8	136.2	77.6	38.5	86.0	85.4	54.9
LnGrp LOS	E	F	B	F	C	A	F	E	D	F	F	D
Approach Vol, veh/h		3876			2977			422			172	
Approach Delay, s/veh		95.4			51.1			79.9			71.2	
Approach LOS		F			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	39.4	107.6	14.0	19.0	39.0	108.0	19.0	14.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	28.0	105.0	9.0	10.0	32.0	101.0	12.0	7.0
Max Q Clear Time (g_c+I1), s	19.9	80.5	7.5	4.0	36.0	105.0	15.2	5.4
Green Ext Time (p_c), s	0.3	20.1	0.0	0.4	0.0	0.0	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	76.3
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	823	3274	247	229	2297	122	177	49	303	105	66	74
Future Volume (veh/h)	823	3274	247	229	2297	122	177	49	303	105	66	74
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	866	3446	260	241	2418	128	186	52	0	111	69	78
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	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	2	2	2	2	2	2	2
Cap, veh/h	700	3140	978	340	2091	651	149	248	474	186	236	211
Arrive On Green	0.74	1.00	1.00	0.33	0.82	0.82	0.13	0.13	0.00	0.13	0.13	0.13
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583	1236	1863	1583	1347	1770	1583
Grp Volume(v), veh/h	866	3446	260	241	2418	128	186	52	0	111	69	78
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583	1236	1863	1583	1347	1770	1583
Q Serve(g_s), s	67.0	111.1	0.0	16.1	74.0	3.1	15.9	4.5	0.0	14.4	6.3	8.1
Cycle Q Clear(g_c), s	67.0	111.1	0.0	16.1	74.0	3.1	24.0	4.5	0.0	18.9	6.3	8.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	700	3140	978	340	2091	651	149	248	474	186	236	211
V/C Ratio(X)	1.24	1.10	0.27	0.71	1.16	0.20	1.25	0.21	0.00	0.60	0.29	0.37
Avail Cap(c_a), veh/h	700	3447	1073	340	2091	651	149	248	474	186	236	211
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.42	0.42	0.42	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.0	0.0	0.0	53.7	16.0	9.7	84.2	69.5	0.0	78.0	70.3	71.1
Incr Delay (d2), s/veh	107.6	44.5	0.1	2.9	73.1	0.3	154.5	0.4	0.0	5.1	0.7	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	54.4	12.9	0.0	10.3	47.0	1.3	13.8	2.3	0.0	5.6	3.1	3.6
LnGrp Delay(d),s/veh	124.6	44.5	0.1	56.5	89.1	10.0	238.7	70.0	0.0	83.1	71.0	72.2
LnGrp LOS	F	F	A	E	F	A	F	E		F	E	E
Approach Vol, veh/h		4572			2787			238			258	
Approach Delay, s/veh		57.1			82.6			201.8			76.6	
Approach LOS		E			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	32.0	79.0		29.0	29.5	121.5		29.0
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0
Max Green Setting (Gmax), s	25.0	72.0		22.0	17.0	120.0		22.0
Max Q Clear Time (g_c+I1), s	69.0	76.0		26.0	18.1	113.1		20.9
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	6.8		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	71.2
HCM 2010 LOS	E

HCM 2010 Computation does not support turning movement with Shared and Exclusive lanes.

Intersection	
Int Delay, s/veh	2.1

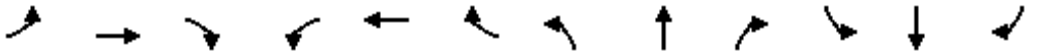
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Vol, veh/h	0	5820	3740	16	0	54
Future Vol, veh/h	0	5820	3740	16	0	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	0	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	3	3	4	4
Mvmt Flow	0	6126	3937	17	0	57

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	1969
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.18
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.94
Pot Cap-1 Maneuver	0	-	-	-	0	~ 44
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	~ 44
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	$ 380.3
HCM LOS			F

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	44
HCM Lane V/C Ratio	-	-	-	1.292
HCM Control Delay (s)	-	-	-	$ 380.3
HCM Lane LOS	-	-	-	F
HCM 95th %tile Q(veh)	-	-	-	5.5

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)	168	5452	166	99	3578	117	186	85	235	133	43	136
Future Volume (veh/h)	168	5452	166	99	3578	117	186	85	235	133	43	136
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1810	1810	1810	1863	1863	1863	1845	1845	1845
Adj Flow Rate, veh/h	177	5739	175	104	3766	123	196	89	247	140	45	143
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	5	5	5	2	2	2	3	3	3
Cap, veh/h	128	3525	1220	145	3513	1213	178	93	176	177	92	157
Arrive On Green	0.05	0.70	0.70	0.04	0.48	0.48	0.08	0.05	0.05	0.08	0.05	0.05
Sat Flow, veh/h	1757	5036	1568	1723	4940	1538	1774	1863	1583	1757	1845	1568
Grp Volume(v), veh/h	177	5739	175	104	3766	123	196	89	247	140	45	143
Grp Sat Flow(s),veh/h/ln	1757	1679	1568	1723	1647	1538	1774	1863	1583	1757	1845	1568
Q Serve(g_s), s	9.0	126.0	0.0	6.5	128.0	5.8	14.0	8.6	7.2	14.0	4.3	9.0
Cycle Q Clear(g_c), s	9.0	126.0	0.0	6.5	128.0	5.8	14.0	8.6	7.2	14.0	4.3	9.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	128	3525	1220	145	3513	1213	178	93	176	177	92	157
V/C Ratio(X)	1.38	1.63	0.14	0.72	1.07	0.10	1.10	0.96	1.40	0.79	0.49	0.91
Avail Cap(c_a), veh/h	128	3525	1220	145	3513	1213	178	93	176	177	92	157
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
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	66.3	27.0	5.0	82.9	47.1	8.4	81.4	85.3	57.3	83.1	83.3	57.6
Incr Delay (d2), s/veh	214.0	283.9	0.2	15.4	38.8	0.2	97.1	78.5	212.3	21.4	3.9	46.9
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(50%),veh/ln	14.0	150.4	2.2	5.7	70.9	2.5	13.7	6.5	18.7	1.2	2.3	8.5
LnGrp Delay(d),s/veh	280.3	310.9	5.2	98.3	85.9	8.5	178.6	163.8	269.5	104.4	87.2	104.6
LnGrp LOS	F	F	A	F	F	A	F	F	F	F	F	F
Approach Vol, veh/h		6091			3993			532			328	
Approach Delay, s/veh		301.3			83.9			218.3			102.1	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	133.0	19.0	14.0	16.0	131.0	19.0	14.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	7.0	126.0	12.0	7.0	9.0	124.0	12.0	7.0
Max Q Clear Time (g_c+I1), s	11.0	130.0	16.0	10.6	8.5	128.0	16.0	11.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	211.9
HCM 2010 LOS	F

HCM 2010 Research does not support Non-NEMA phasing.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	0	32	19	3	80	242	2274	81	59	2352	126
Future Volume (veh/h)	35	0	32	19	3	80	242	2274	81	59	2352	126
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	37	0	34	20	3	84	255	2394	85	62	2476	133
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	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	2	2	2	2	2	2	2
Cap, veh/h	79	9	52	44	10	110	102	2996	106	155	3041	1360
Arrive On Green	0.09	0.00	0.09	0.09	0.09	0.09	1.00	1.00	1.00	0.86	0.86	0.86
Sat Flow, veh/h	564	103	613	235	119	1291	117	3488	123	133	3539	1583
Grp Volume(v), veh/h	71	0	0	107	0	0	255	1208	1271	62	2476	133
Grp Sat Flow(s),veh/h/ln	1280	0	0	1645	0	0	117	1770	1841	133	1770	1583
Q Serve(g_s), s	0.0	0.0	0.0	1.1	0.0	0.0	95.6	0.0	0.0	22.0	59.1	2.3
Cycle Q Clear(g_c), s	10.0	0.0	0.0	11.2	0.0	0.0	154.6	0.0	0.0	22.0	59.1	2.3
Prop In Lane	0.52		0.48	0.19		0.79	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	140	0	0	164	0	0	102	1520	1582	155	3041	1360
V/C Ratio(X)	0.51	0.00	0.00	0.65	0.00	0.00	2.49	0.79	0.80	0.40	0.81	0.10
Avail Cap(c_a), veh/h	176	0	0	204	0	0	102	1520	1582	155	3041	1360
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.09	0.09	0.09	0.09	0.09	0.09
Uniform Delay (d), s/veh	79.5	0.0	0.0	80.4	0.0	0.0	48.2	0.0	0.0	3.3	5.9	2.0
Incr Delay (d2), s/veh	2.8	0.0	0.0	5.1	0.0	0.0	675.0	0.4	0.4	0.7	0.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	0.0	5.4	0.0	0.0	24.2	0.2	0.2	0.8	28.3	1.0
LnGrp Delay(d),s/veh	82.4	0.0	0.0	85.5	0.0	0.0	723.3	0.4	0.4	4.0	6.2	2.0
LnGrp LOS	F			F			F	A	A	A	A	A
Approach Vol, veh/h		71			107			2734			2671	
Approach Delay, s/veh		82.4			85.5			67.8			5.9	
Approach LOS		F			F			E			A	

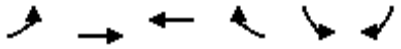
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		159.6		20.4		159.6		20.4
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0
Max Green Setting (Gmax), s		148.0		18.0		148.0		18.0
Max Q Clear Time (g_c+I1), s		61.1		13.2		156.6		12.0
Green Ext Time (p_c), s		64.1		0.2		0.0		0.1

Intersection Summary		
HCM 2010 Ctrl Delay		38.7
HCM 2010 LOS		D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	101	28	29	136	3	48	228	23	2	364	254
Future Volume (veh/h)	93	101	28	29	136	3	48	228	23	2	364	254
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	103	112	31	32	151	3	53	253	26	2	404	282
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	175	156	40	88	316	6	181	841	83	41	697	484
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.68	0.68	0.68	0.68	0.68	0.68
Sat Flow, veh/h	568	747	190	198	1514	28	198	1236	122	1	1024	712
Grp Volume(v), veh/h	246	0	0	186	0	0	332	0	0	688	0	0
Grp Sat Flow(s),veh/h/ln	1505	0	0	1740	0	0	1557	0	0	1736	0	0
Q Serve(g_s), s	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	13.9	0.0	0.0	8.2	0.0	0.0	6.3	0.0	0.0	18.9	0.0	0.0
Prop In Lane	0.42		0.13	0.17		0.02	0.16		0.08	0.00		0.41
Lane Grp Cap(c), veh/h	371	0	0	410	0	0	1105	0	0	1222	0	0
V/C Ratio(X)	0.66	0.00	0.00	0.45	0.00	0.00	0.30	0.00	0.00	0.56	0.00	0.00
Avail Cap(c_a), veh/h	508	0	0	566	0	0	1105	0	0	1222	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	33.6	0.0	0.0	31.3	0.0	0.0	5.6	0.0	0.0	7.6	0.0	0.0
Incr Delay (d2), s/veh	2.0	0.0	0.0	0.8	0.0	0.0	0.7	0.0	0.0	1.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	0.0	0.0	4.2	0.0	0.0	3.3	0.0	0.0	9.6	0.0	0.0
LnGrp Delay(d),s/veh	35.6	0.0	0.0	32.1	0.0	0.0	6.3	0.0	0.0	9.5	0.0	0.0
LnGrp LOS	D			C			A			A		
Approach Vol, veh/h		246			186			332			688	
Approach Delay, s/veh		35.6			32.1			6.3			9.5	
Approach LOS		D			C			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		66.2		23.8		66.2		23.8
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0
Max Green Setting (Gmax), s		51.0		25.0		51.0		25.0
Max Q Clear Time (g_c+I1), s		20.9		10.2		8.3		15.9
Green Ext Time (p_c), s		15.3		0.7		8.5		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	16.1
HCM 2010 LOS	B



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	288	1010	991	298	99	215
Future Volume (veh/h)	288	1010	991	298	99	215
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	320	1122	1101	331	110	0
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	276	1666	979	294	89	325
Arrive On Green	0.16	0.89	0.71	0.71	0.05	0.00
Sat Flow, veh/h	1774	1863	1376	414	1774	1583
Grp Volume(v), veh/h	320	1122	0	1432	110	0
Grp Sat Flow(s),veh/h/ln	1774	1863	0	1790	1774	1583
Q Serve(g_s), s	28.0	28.8	0.0	128.0	9.0	0.0
Cycle Q Clear(g_c), s	28.0	28.8	0.0	128.0	9.0	0.0
Prop In Lane	1.00			0.23	1.00	1.00
Lane Grp Cap(c), veh/h	276	1666	0	1273	89	325
V/C Ratio(X)	1.16	0.67	0.00	1.13	1.24	0.00
Avail Cap(c_a), veh/h	276	1666	0	1273	89	325
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	76.0	2.5	0.0	26.0	85.5	0.0
Incr Delay (d2), s/veh	104.4	2.2	0.0	67.0	173.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.7	15.4	0.0	86.3	8.7	0.0
LnGrp Delay(d),s/veh	180.4	4.7	0.0	93.0	258.9	0.0
LnGrp LOS	F	A		F	F	
Approach Vol, veh/h		1442	1432		110	
Approach Delay, s/veh		43.7	93.0		258.9	
Approach LOS		D	F		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		166.0		14.0	33.0	133.0		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		159.0		7.0	26.0	126.0		
Max Q Clear Time (g_c+I1), s		30.8		11.0	30.0	130.0		
Green Ext Time (p_c), s		13.2		0.0	0.0	0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	75.3
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	104.4

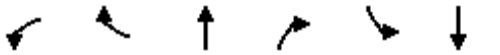
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	215	894	856	7	5	433
Future Vol, veh/h	215	894	856	7	5	433
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	239	993	951	8	6	481

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	959	0	-	0	2426	955
Stage 1	-	-	-	-	955	-
Stage 2	-	-	-	-	1471	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	717	-	-	-	35	~ 313
Stage 1	-	-	-	-	374	-
Stage 2	-	-	-	-	211	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	717	-	-	-	9	~ 313
Mov Cap-2 Maneuver	-	-	-	-	9	-
Stage 1	-	-	-	-	96	-
Stage 2	-	-	-	-	211	-

Approach	EB	WB	SB
HCM Control Delay, s	2.4	0	$ 568.2
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	717	-	-	-	226
HCM Lane V/C Ratio	0.333	-	-	-	2.153
HCM Control Delay (s)	12.5	0	-	-	$ 568.2
HCM Lane LOS	B	A	-	-	F
HCM 95th %tile Q(veh)	1.5	-	-	-	37.5

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



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	412	9	854	294	5	894
Future Volume (veh/h)	412	9	854	294	5	894
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	458	0	949	0	6	993
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	491	518	1098	1372	89	1243
Arrive On Green	0.28	0.00	0.59	0.00	0.05	0.67
Sat Flow, veh/h	1774	1583	1863	1583	1774	1863
Grp Volume(v), veh/h	458	0	949	0	6	993
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	1583	1774	1863
Q Serve(g_s), s	45.3	0.0	76.7	0.0	0.6	68.3
Cycle Q Clear(g_c), s	45.3	0.0	76.7	0.0	0.6	68.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	491	518	1098	1372	89	1243
V/C Ratio(X)	0.93	0.00	0.86	0.00	0.07	0.80
Avail Cap(c_a), veh/h	522	545	1098	1372	89	1243
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	63.4	0.0	30.9	0.0	81.5	21.3
Incr Delay (d2), s/veh	23.1	0.0	9.1	0.0	0.3	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	25.4	0.0	42.0	0.0	0.3	36.9
LnGrp Delay(d),s/veh	86.5	0.0	40.0	0.0	81.8	26.7
LnGrp LOS	F		D		F	C
Approach Vol, veh/h	458		949			999
Approach Delay, s/veh	86.5		40.0			27.1
Approach LOS	F		D			C

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		125.1		54.9	14.0	111.1		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		115.0		51.0	7.0	101.0		
Max Q Clear Time (g_c+I1), s		70.3		47.3	2.6	78.7		
Green Ext Time (p_c), s		10.4		0.6	0.0	7.8		

Intersection Summary	
HCM 2010 Ctrl Delay	43.5
HCM 2010 LOS	D

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	166	172	976	77	105	1201
Future Volume (veh/h)	166	172	976	77	105	1201
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1845	1845	1727	1727
Adj Flow Rate, veh/h	182	189	1073	85	115	1320
Adj No. of Lanes	1	1	2	1	1	2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	7	7	3	3	10	10
Cap, veh/h	290	258	1352	605	454	2355
Arrive On Green	0.17	0.17	0.39	0.39	0.28	0.72
Sat Flow, veh/h	1691	1509	3597	1568	1645	3368
Grp Volume(v), veh/h	182	189	1073	85	115	1320
Grp Sat Flow(s),veh/h/ln	1691	1509	1752	1568	1645	1641
Q Serve(g_s), s	9.0	10.7	24.4	3.2	4.9	17.1
Cycle Q Clear(g_c), s	9.0	10.7	24.4	3.2	4.9	17.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	290	258	1352	605	454	2355
V/C Ratio(X)	0.63	0.73	0.79	0.14	0.25	0.56
Avail Cap(c_a), veh/h	413	369	1675	749	454	2355
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.53	0.53	1.00	1.00
Uniform Delay (d), s/veh	34.6	35.3	24.5	17.9	25.3	6.0
Incr Delay (d2), s/veh	2.2	4.3	2.6	0.3	0.3	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	8.9	12.3	1.4	2.3	7.8
LnGrp Delay(d),s/veh	36.9	39.6	27.1	18.2	25.6	7.0
LnGrp LOS	D	D	C	B	C	A
Approach Vol, veh/h	371		1158			1435
Approach Delay, s/veh	38.3		26.4			8.5
Approach LOS	D		C			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		69.6		20.4	29.9	39.7		
Change Period (Y+Rc), s		7.0		7.0	7.0	* 7		
Max Green Setting (Gmax), s		56.0		20.0	10.5	* 41		
Max Q Clear Time (g_c+I1), s		19.1		12.7	6.9	26.4		
Green Ext Time (p_c), s		11.8		0.7	0.1	6.3		

Intersection Summary	
HCM 2010 Ctrl Delay	19.2
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	177	170	287	5	132	93	868	113	193	1162	12
Future Volume (veh/h)	53	177	170	287	5	132	93	868	113	193	1162	12
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1810	1810	1900	1845	1845	1845	1792	1792	1900
Adj Flow Rate, veh/h	56	188	181	305	5	140	99	923	120	205	1236	13
Adj No. of Lanes	1	1	0	2	1	0	1	2	1	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	5	5	5	3	3	3	6	6	6
Cap, veh/h	336	181	174	427	20	547	164	1100	693	347	1559	16
Arrive On Green	0.21	0.21	0.21	0.13	0.37	0.37	0.09	0.31	0.31	0.20	0.45	0.45
Sat Flow, veh/h	1214	857	825	3343	53	1493	1757	3505	1568	1707	3453	36
Grp Volume(v), veh/h	56	0	369	305	0	145	99	923	120	205	610	639
Grp Sat Flow(s),veh/h/ln	1214	0	1681	1672	0	1546	1757	1752	1568	1707	1703	1786
Q Serve(g_s), s	3.4	0.0	19.0	7.9	0.0	5.9	4.9	22.1	1.8	9.8	27.5	27.5
Cycle Q Clear(g_c), s	3.4	0.0	19.0	7.9	0.0	5.9	4.9	22.1	1.8	9.8	27.5	27.5
Prop In Lane	1.00		0.49	1.00		0.97	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	336	0	355	427	0	567	164	1100	693	347	769	807
V/C Ratio(X)	0.17	0.00	1.04	0.71	0.00	0.26	0.60	0.84	0.17	0.59	0.79	0.79
Avail Cap(c_a), veh/h	336	0	355	427	0	567	224	1168	723	347	769	807
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.90	0.90	0.90	0.79	0.79	0.79
Uniform Delay (d), s/veh	29.4	0.0	35.5	37.7	0.0	19.9	39.2	28.8	5.6	32.4	21.1	21.1
Incr Delay (d2), s/veh	0.2	0.0	58.4	5.6	0.0	0.2	3.2	7.0	0.5	2.1	6.6	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	14.5	4.0	0.0	2.5	2.5	11.7	1.0	4.8	14.3	14.9
LnGrp Delay(d),s/veh	29.6	0.0	93.9	43.2	0.0	20.2	42.4	35.8	6.1	34.5	27.7	27.4
LnGrp LOS	C		F	D		C	D	D	A	C	C	C
Approach Vol, veh/h		425			450			1142			1454	
Approach Delay, s/veh		85.4			35.8			33.2			28.5	
Approach LOS		F			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	45.7		38.0	23.3	33.3	14.0	24.0
Change Period (Y+Rc), s	4.5	7.0		7.0	7.0	* 7	4.5	7.0
Max Green Setting (Gmax), s	6.5	31.0		31.0	12.5	* 28	9.5	17.0
Max Q Clear Time (g_c+I1), s	11.9	29.5		7.9	11.8	24.1	9.9	21.0
Green Ext Time (p_c), s	0.0	1.0		0.9	0.0	2.2	0.0	0.0

Intersection Summary			
HCM 2010 Ctrl Delay		38.0	
HCM 2010 LOS		D	

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	331	317	299	149	122	216
Future Volume (veh/h)	331	317	299	149	122	216
Number	2	12	1	6	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1845	1845	1827	1827
Adj Flow Rate, veh/h	364	348	329	164	134	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	3	3	4	4
Cap, veh/h	899	947	413	1426	202	180
Arrive On Green	0.48	0.48	0.08	0.26	0.12	0.00
Sat Flow, veh/h	1863	1583	1757	1845	1740	1553
Grp Volume(v), veh/h	364	348	329	164	134	0
Grp Sat Flow(s),veh/h/ln	1863	1583	1757	1845	1740	1553
Q Serve(g_s), s	11.3	10.2	16.6	6.1	6.6	0.0
Cycle Q Clear(g_c), s	11.3	10.2	16.6	6.1	6.6	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	899	947	413	1426	202	180
V/C Ratio(X)	0.41	0.37	0.80	0.12	0.66	0.00
Avail Cap(c_a), veh/h	899	947	547	1426	271	242
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.65	0.65	1.00	0.00
Uniform Delay (d), s/veh	15.0	9.3	39.4	9.9	38.1	0.0
Incr Delay (d2), s/veh	1.4	1.1	4.0	0.1	3.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	6.0	8.5	3.2	3.4	0.0
LnGrp Delay(d),s/veh	16.3	10.4	43.4	10.0	41.9	0.0
LnGrp LOS	B	B	D	A	D	
Approach Vol, veh/h	712			493	134	
Approach Delay, s/veh	13.4			32.3	41.9	
Approach LOS	B			C	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	26.2	48.4		15.4		74.6		
Change Period (Y+Rc), s	7.0	7.0		7.0		7.0		
Max Green Setting (Gmax), s	26.0	31.0		12.0		64.0		
Max Q Clear Time (g_c+I1), s	18.6	13.3		8.6		8.1		
Green Ext Time (p_c), s	0.6	2.3		0.1		0.4		

Intersection Summary	
HCM 2010 Ctrl Delay	23.2
HCM 2010 LOS	C

Notes

HCM 2010 cannot analyze U-Turning movements.

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	1996	1224	16	0	10
Future Vol, veh/h	10	1996	1224	16	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	4	4	7	7	13	13
Mvmt Flow	11	2170	1330	17	0	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1347	0	-	0	-	674
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.18	-	-	-	-	7.16
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.24	-	-	-	-	3.43
Pot Cap-1 Maneuver	497	-	-	-	0	372
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	497	-	-	-	-	372
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	15
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	497	-	-	-	372
HCM Lane V/C Ratio	0.022	-	-	-	0.029
HCM Control Delay (s)	12.4	-	-	-	15
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	1891	45	26	1095	140	76	13	165	470	11	69
Future Volume (veh/h)	60	1891	45	26	1095	140	76	13	165	470	11	69
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1810	1810	1810	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	65	2033	48	28	1177	151	82	14	177	505	12	74
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	4	5	5	5	2	2	2	2	2	2
Cap, veh/h	99	2036	48	70	1962	1100	192	14	173	497	65	402
Arrive On Green	0.06	0.59	0.59	0.04	0.57	0.57	0.12	0.12	0.12	0.14	0.29	0.29
Sat Flow, veh/h	1740	3467	82	1723	3438	1538	1306	117	1484	3442	226	1392
Grp Volume(v), veh/h	65	1014	1067	28	1177	151	82	0	191	505	0	86
Grp Sat Flow(s),veh/h/ln	1740	1736	1813	1723	1719	1538	1306	0	1601	1721	0	1617
Q Serve(g_s), s	6.6	104.3	105.7	2.9	40.2	5.6	10.7	0.0	21.0	26.0	0.0	7.2
Cycle Q Clear(g_c), s	6.6	104.3	105.7	2.9	40.2	5.6	10.7	0.0	21.0	26.0	0.0	7.2
Prop In Lane	1.00		0.04	1.00		1.00	1.00		0.93	1.00		0.86
Lane Grp Cap(c), veh/h	99	1019	1065	70	1962	1100	192	0	187	497	0	467
V/C Ratio(X)	0.65	0.99	1.00	0.40	0.60	0.14	0.43	0.00	1.02	1.02	0.00	0.18
Avail Cap(c_a), veh/h	126	1019	1065	86	1962	1100	192	0	187	497	0	467
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	83.1	36.8	37.1	84.2	25.2	8.1	74.9	0.0	79.5	77.0	0.0	48.1
Incr Delay (d2), s/veh	7.9	26.9	28.2	3.7	1.4	0.3	1.5	0.0	71.9	44.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	57.5	61.0	1.4	19.5	2.4	3.9	0.0	13.0	15.4	0.0	3.2
LnGrp Delay(d),s/veh	91.1	63.8	65.3	87.9	26.6	8.4	76.4	0.0	151.6	121.4	0.0	48.3
LnGrp LOS	F	E	F	F	C	A	E		F	F		D
Approach Vol, veh/h		2146			1356			273			591	
Approach Delay, s/veh		65.3			25.8			129.0			110.8	
Approach LOS		E			C			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	12.3	110.7	31.0	26.0	15.3	107.7		57.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0		7.0
Max Green Setting (Gmax), s	7.0	102.0	24.0	19.0	11.0	98.0		50.0
Max Q Clear Time (g_c+I1), s	4.9	107.7	28.0	23.0	8.6	42.2		9.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	11.4		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	63.2
HCM 2010 LOS	E

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1116	101	724	5	39	4
Future Volume (veh/h)	1116	101	724	5	39	4
Number	2	12	1	6	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1810	1900
Adj Flow Rate, veh/h	1213	110	787	5	42	4
Adj No. of Lanes	2	1	2	1	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	0	0
Cap, veh/h	1426	757	1194	1500	116	11
Arrive On Green	0.41	0.41	0.59	1.00	0.08	0.08
Sat Flow, veh/h	3597	1568	3408	1845	1526	145
Grp Volume(v), veh/h	1213	110	787	5	47	0
Grp Sat Flow(s),veh/h/ln	1752	1568	1704	1845	1708	0
Q Serve(g_s), s	28.2	3.5	14.0	0.0	2.4	0.0
Cycle Q Clear(g_c), s	28.2	3.5	14.0	0.0	2.4	0.0
Prop In Lane		1.00	1.00		0.89	0.09
Lane Grp Cap(c), veh/h	1426	757	1194	1500	130	0
V/C Ratio(X)	0.85	0.15	0.66	0.00	0.36	0.00
Avail Cap(c_a), veh/h	1519	799	1194	1500	171	0
HCM Platoon Ratio	1.00	1.00	1.67	1.67	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.76	0.76	1.00	0.00
Uniform Delay (d), s/veh	24.2	12.9	15.0	0.0	39.5	0.0
Incr Delay (d2), s/veh	6.5	0.4	1.0	0.0	1.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.9	1.8	6.5	0.0	1.2	0.0
LnGrp Delay(d),s/veh	30.7	13.3	16.1	0.0	41.2	0.0
LnGrp LOS	C	B	B	A	D	
Approach Vol, veh/h	1323			792	47	
Approach Delay, s/veh	29.3			16.0	41.2	
Approach LOS	C			B	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	36.5	41.6		11.8		78.2		
Change Period (Y+Rc), s	7.0	7.0		7.0		7.0		
Max Green Setting (Gmax), s	25.0	37.0		7.0		69.0		
Max Q Clear Time (g_c+I1), s	16.0	30.2		4.4		2.0		
Green Ext Time (p_c), s	2.2	4.4		0.0		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	24.7
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	737	88	21	5	38	24
Future Vol, veh/h	737	88	21	5	38	24
Conflicting Peds, #/hr	0	0	4	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	3	3
Mvmt Flow	776	93	22	5	40	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	873	0	829	780
Stage 1	-	-	-	-	780	-
Stage 2	-	-	-	-	49	-
Critical Hdwy	-	-	4.12	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.218	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	773	-	339	394
Stage 1	-	-	-	-	450	-
Stage 2	-	-	-	-	971	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	770	-	328	392
Mov Cap-2 Maneuver	-	-	-	-	328	-
Stage 1	-	-	-	-	448	-
Stage 2	-	-	-	-	943	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.9	17.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	350	-	-	770	-
HCM Lane V/C Ratio	0.186	-	-	0.029	-
HCM Control Delay (s)	17.6	-	-	9.8	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.7	-	-	0.1	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	0	32	7	2	10	13	319	4	6	606	4
Future Vol, veh/h	9	0	32	7	2	10	13	319	4	6	606	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	13	13	13	2	2	2	6	6	6	3	3	3
Mvmt Flow	10	0	35	8	2	11	14	347	4	7	659	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1059	1054	661	1070	1054	349	663	0	0	351	0	0
Stage 1	675	675	-	377	377	-	-	-	-	-	-	-
Stage 2	384	379	-	693	677	-	-	-	-	-	-	-
Critical Hdwy	7.23	6.63	6.33	7.12	6.52	6.22	4.16	-	-	4.13	-	-
Critical Hdwy Stg 1	6.23	5.63	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.23	5.63	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.617	4.117	3.417	3.518	4.018	3.318	2.254	-	-	2.227	-	-
Pot Cap-1 Maneuver	193	216	444	199	226	694	907	-	-	1202	-	-
Stage 1	426	437	-	644	616	-	-	-	-	-	-	-
Stage 2	617	596	-	434	452	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	186	211	444	180	221	694	907	-	-	1202	-	-
Mov Cap-2 Maneuver	305	319	-	293	327	-	-	-	-	-	-	-
Stage 1	420	434	-	634	607	-	-	-	-	-	-	-
Stage 2	596	587	-	398	449	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15	13.8	0.3	0.1
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	907	-	-	404	428	1202	-	-
HCM Lane V/C Ratio	0.016	-	-	0.11	0.048	0.005	-	-
HCM Control Delay (s)	9	-	-	15	13.8	8	-	-
HCM Lane LOS	A	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.2	0	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	0	30	24	0	11	10	318	6	6	636	3
Future Vol, veh/h	7	0	30	24	0	11	10	318	6	6	636	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	92	95	92	92	92	95	95	92	92	95	95
Heavy Vehicles, %	2	2	2	2	2	2	5	5	2	2	4	4
Mvmt Flow	7	0	32	26	0	12	11	335	7	7	669	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1052	1049	671	1062	1047	339	672	0	0	342	0	0
Stage 1	685	685	-	361	361	-	-	-	-	-	-	-
Stage 2	367	364	-	701	686	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.15	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.245	-	-	2.218	-	-
Pot Cap-1 Maneuver	204	227	456	201	228	703	905	-	-	1217	-	-
Stage 1	438	448	-	657	626	-	-	-	-	-	-	-
Stage 2	653	624	-	429	448	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	198	223	456	185	224	703	905	-	-	1217	-	-
Mov Cap-2 Maneuver	319	332	-	297	330	-	-	-	-	-	-	-
Stage 1	433	445	-	649	618	-	-	-	-	-	-	-
Stage 2	634	617	-	397	445	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.4	16.1	0.3	0.1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	905	-	-	422	363	1217	-	-
HCM Lane V/C Ratio	0.012	-	-	0.092	0.105	0.005	-	-
HCM Control Delay (s)	9	-	-	14.4	16.1	8	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.3	0	-	-

Intersection	
Int Delay, s/veh	2.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	89	30	304	14	28	662
Future Vol, veh/h	89	30	304	14	28	662
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	5	5	4	4
Mvmt Flow	94	32	320	15	29	697

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1083	328	0	0	335	0
Stage 1	328	-	-	-	-	-
Stage 2	755	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	240	713	-	-	1213	-
Stage 1	730	-	-	-	-	-
Stage 2	464	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	234	713	-	-	1213	-
Mov Cap-2 Maneuver	352	-	-	-	-	-
Stage 1	730	-	-	-	-	-
Stage 2	453	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.9	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	404	1213	-
HCM Lane V/C Ratio	-	-	0.31	0.024	-
HCM Control Delay (s)	-	-	17.9	8	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	1.3	0.1	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	64	27	1047	2793	4
Future Vol, veh/h	0	64	27	1047	2793	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	4	4	5	5	3	3
Mvmt Flow	0	68	29	1114	2971	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1488	2975	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.98	4.2	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.34	2.25	-	-	-
Pot Cap-1 Maneuver	0	111	110	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	111	110	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	79	1.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	110	-	111	-	-
HCM Lane V/C Ratio	0.261	-	0.613	-	-
HCM Control Delay (s)	48.9	-	79	-	-
HCM Lane LOS	E	-	F	-	-
HCM 95th %tile Q(veh)	1	-	3	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	0	67	39	0	16	40	1051	5	18	2835	4
Future Volume (veh/h)	2	0	67	39	0	16	40	1051	5	18	2835	4
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1845	1900	1900	1863	1900	1827	1827	1900	1863	1863	1900
Adj Flow Rate, veh/h	2	0	74	43	0	18	44	1155	5	20	3115	4
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	3	2	2	2	4	4	4	2	2	2
Cap, veh/h	22	1	107	86	3	23	49	3111	13	463	3184	4
Arrive On Green	0.07	0.00	0.07	0.07	0.00	0.07	1.00	1.00	1.00	0.88	0.88	0.88
Sat Flow, veh/h	22	21	1604	786	51	350	69	3544	15	482	3627	5
Grp Volume(v), veh/h	76	0	0	61	0	0	44	566	594	20	1520	1599
Grp Sat Flow(s),veh/h/ln	1647	0	0	1186	0	0	69	1736	1824	482	1770	1862
Q Serve(g_s), s	0.0	0.0	0.0	1.4	0.0	0.0	23.9	0.0	0.0	1.0	133.7	134.1
Cycle Q Clear(g_c), s	8.2	0.0	0.0	9.5	0.0	0.0	158.0	0.0	0.0	1.0	133.7	134.1
Prop In Lane	0.03		0.97	0.70		0.30	1.00		0.01	1.00		0.00
Lane Grp Cap(c), veh/h	130	0	0	113	0	0	49	1523	1601	463	1553	1634
V/C Ratio(X)	0.58	0.00	0.00	0.54	0.00	0.00	0.90	0.37	0.37	0.04	0.98	0.98
Avail Cap(c_a), veh/h	130	0	0	113	0	0	49	1523	1601	463	1553	1634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.91	0.91	0.91	1.00	1.00	1.00
Uniform Delay (d), s/veh	82.3	0.0	0.0	82.9	0.0	0.0	76.5	0.0	0.0	1.4	9.5	9.5
Incr Delay (d2), s/veh	6.5	0.0	0.0	5.0	0.0	0.0	94.6	0.6	0.6	0.2	18.2	17.7
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(50%),veh/ln	3.9	0.0	0.0	3.2	0.0	0.0	3.5	0.3	0.3	0.2	70.8	74.3
LnGrp Delay(d),s/veh	88.8	0.0	0.0	87.9	0.0	0.0	171.1	0.6	0.6	1.6	27.7	27.3
LnGrp LOS	F			F			F	A	A	A	C	C
Approach Vol, veh/h		76			61			1204			3139	
Approach Delay, s/veh		88.8			87.9			6.8			27.3	
Approach LOS		F			F			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		163.0		17.0		163.0		17.0
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0
Max Green Setting (Gmax), s		156.0		10.0		156.0		10.0
Max Q Clear Time (g_c+I1), s		136.1		11.5		160.0		10.2
Green Ext Time (p_c), s		19.6		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	23.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	0	18	3	0	19	155	1071	74	68	2577	296
Future Volume (veh/h)	6	0	18	3	0	19	155	1071	74	68	2577	296
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1900	1863	1863	1900	1810	1810	1900	1845	1845	1845
Adj Flow Rate, veh/h	6	0	19	3	0	20	163	1127	78	72	2713	312
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	5	5	5	2	2	2	5	5	5	3	3	3
Cap, veh/h	86	0	71	88	0	74	169	2643	183	106	2707	1211
Arrive On Green	0.05	0.00	0.05	0.05	0.00	0.05	0.10	0.81	0.81	0.12	1.00	1.00
Sat Flow, veh/h	1347	0	1538	1388	0	1583	1723	3263	226	1757	3505	1568
Grp Volume(v), veh/h	6	0	19	3	0	20	163	593	612	72	2713	312
Grp Sat Flow(s),veh/h/ln	1347	0	1538	1388	0	1583	1723	1719	1770	1757	1752	1568
Q Serve(g_s), s	0.8	0.0	2.1	0.4	0.0	2.2	17.0	18.0	18.1	7.1	139.0	0.0
Cycle Q Clear(g_c), s	3.0	0.0	2.1	2.5	0.0	2.2	17.0	18.0	18.1	7.1	139.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	86	0	71	88	0	74	169	1392	1433	106	2707	1211
V/C Ratio(X)	0.07	0.00	0.27	0.03	0.00	0.27	0.97	0.43	0.43	0.68	1.00	0.26
Avail Cap(c_a), veh/h	91	0	77	93	0	79	169	1392	1433	146	2707	1211
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	0.00	1.00	1.00	0.00	1.00	0.09	0.09	0.09	0.09	0.09	0.09
Uniform Delay (d), s/veh	84.3	0.0	82.9	84.1	0.0	82.9	80.9	5.0	5.0	77.5	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	2.0	0.2	0.0	2.0	13.5	0.1	0.1	0.7	5.8	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	1.0	0.1	0.0	1.0	8.7	8.4	8.7	3.5	2.2	0.0
LnGrp Delay(d),s/veh	84.6	0.0	84.8	84.2	0.0	84.8	94.4	5.1	5.1	78.2	5.8	0.0
LnGrp LOS	F		F	F		F	F	A	A	E	F	A
Approach Vol, veh/h		25			23			1368			3097	
Approach Delay, s/veh		84.8			84.8			15.7			6.9	
Approach LOS		F			F			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	22.6	144.0		13.4	15.9	150.8		13.4
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0
Max Green Setting (Gmax), s	15.6	137.0		7.0	13.0	139.0		7.0
Max Q Clear Time (g_c+I1), s	19.0	141.0		4.5	9.1	20.1		5.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	9.7		0.0

Intersection Summary			
HCM 2010 Ctrl Delay		10.4	
HCM 2010 LOS		B	

HCM 2010 Computation does not support turning movement with Shared and Exclusive lanes.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	2802	312	336	3457	29	152	10	176	38	10	117
Future Volume (veh/h)	79	2802	312	336	3457	29	152	10	176	38	10	117
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1827	1827	1827	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	83	2949	328	354	3639	31	160	11	185	40	11	123
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6	4	4	4	2	2	2	2	2	2
Cap, veh/h	94	2690	931	319	3380	1122	260	207	176	231	176	150
Arrive On Green	0.11	1.00	1.00	0.18	0.68	0.68	0.06	0.11	0.11	0.04	0.09	0.09
Sat Flow, veh/h	1707	4893	1524	1740	4988	1553	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	83	2949	328	354	3639	31	160	11	185	40	11	123
Grp Sat Flow(s),veh/h/ln	1707	1631	1524	1740	1663	1553	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	8.6	98.9	0.0	33.0	122.0	0.5	11.0	1.0	20.0	3.6	1.0	11.7
Cycle Q Clear(g_c), s	8.6	98.9	0.0	33.0	122.0	0.5	11.0	1.0	20.0	3.6	1.0	11.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	94	2690	931	319	3380	1122	260	207	176	231	176	150
V/C Ratio(X)	0.88	1.10	0.35	1.11	1.08	0.03	0.62	0.05	1.05	0.17	0.06	0.82
Avail Cap(c_a), veh/h	94	2690	931	319	3380	1122	260	207	176	241	186	158
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	79.5	0.0	0.0	73.5	29.0	2.0	71.0	71.5	80.0	68.2	74.2	58.2
Incr Delay (d2), s/veh	8.8	44.0	0.1	54.1	35.1	0.0	4.3	0.1	82.1	0.4	0.1	26.7
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(50%),veh/ln	4.3	11.0	0.0	20.7	66.4	0.3	2.4	0.5	12.8	1.8	0.5	6.6
LnGrp Delay(d),s/veh	88.2	44.0	0.1	127.6	64.1	2.0	75.2	71.6	162.2	68.5	74.3	84.9
LnGrp LOS	F	F	A	F	F	A	E	E	F	E	E	F
Approach Vol, veh/h		3360			4024			356			174	
Approach Delay, s/veh		40.8			69.2			120.3			80.5	
Approach LOS		D			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.9	127.0	13.1	25.0	38.0	103.9	16.0	22.1
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	7.9	120.0	7.0	18.0	31.0	96.0	9.0	16.0
Max Q Clear Time (g_c+I1), s	10.6	124.0	5.6	22.0	35.0	100.9	13.0	13.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1

Intersection Summary		
HCM 2010 Ctrl Delay	59.7	
HCM 2010 LOS	E	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	2857	195	406	3221	99	123	33	300	36	32	107
Future Volume (veh/h)	78	2857	195	406	3221	99	123	33	300	36	32	107
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1827	1827	1827	1827	1827	1827	1863	1863	1863
Adj Flow Rate, veh/h	84	3072	210	437	3463	106	132	35	0	39	34	0
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	6	6	4	4	4	4	4	4	2	2	2
Cap, veh/h	145	2719	846	432	3648	1136	201	248	211	203	253	215
Arrive On Green	0.02	0.18	0.18	0.45	1.00	1.00	0.14	0.14	0.00	0.14	0.14	0.00
Sat Flow, veh/h	1707	4893	1524	1740	4988	1553	1343	1827	1553	1368	1863	1583
Grp Volume(v), veh/h	84	3072	210	437	3463	106	132	35	0	39	34	0
Grp Sat Flow(s),veh/h/ln	1707	1631	1524	1740	1663	1553	1343	1827	1553	1368	1863	1583
Q Serve(g_s), s	4.3	100.0	21.2	40.5	0.0	0.0	17.3	3.0	0.0	4.7	2.9	0.0
Cycle Q Clear(g_c), s	4.3	100.0	21.2	40.5	0.0	0.0	20.2	3.0	0.0	7.7	2.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	145	2719	846	432	3648	1136	201	248	211	203	253	215
V/C Ratio(X)	0.58	1.13	0.25	1.01	0.95	0.09	0.66	0.14	0.00	0.19	0.13	0.00
Avail Cap(c_a), veh/h	146	2719	846	432	3648	1136	257	325	276	260	331	281
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.37	0.37	0.37	0.09	0.09	0.09	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	32.7	73.5	41.3	47.6	0.0	0.0	77.3	68.5	0.0	71.9	68.5	0.0
Incr Delay (d2), s/veh	2.1	60.5	0.3	16.0	0.8	0.0	4.0	0.3	0.0	0.5	0.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	60.5	9.0	23.3	0.3	0.0	6.6	1.6	0.0	1.8	1.5	0.0
LnGrp Delay(d),s/veh	34.8	134.0	41.6	63.6	0.8	0.0	81.3	68.8	0.0	72.4	68.7	0.0
LnGrp LOS	C	F	D	F	A	A	F	E		E	E	
Approach Vol, veh/h		3366			4006			167			73	
Approach Delay, s/veh		125.8			7.6			78.7			70.7	
Approach LOS		F			A			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.9	136.7		29.5	45.5	105.0		29.5
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0
Max Green Setting (Gmax), s	7.0	122.0		30.0	31.0	98.0		30.0
Max Q Clear Time (g_c+I1), s	6.3	2.0		22.2	42.5	102.0		9.7
Green Ext Time (p_c), s	0.0	104.2		0.3	0.0	0.0		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	62.0
HCM 2010 LOS	E

HCM 2010 Computation does not support turning movement with Shared and Exclusive lanes.

Intersection	
Int Delay, s/veh	120.4

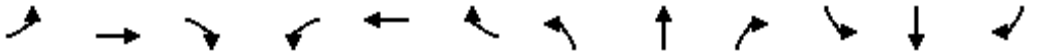
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Vol, veh/h	0	3632	5234	6	0	164
Future Vol, veh/h	0	3632	5234	6	0	164
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	0	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	5	5	4	4	3	3
Mvmt Flow	0	3823	5509	6	0	173

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	2755
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.16
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.93
Pot Cap-1 Maneuver	0	-	-	-	0	~ 12
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	~ 12
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	$ 6635.5
HCM LOS			F

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	12
HCM Lane V/C Ratio	-	-	-	14.386
HCM Control Delay (s)	-	-	-	$ 6635.5
HCM Lane LOS	-	-	-	F
HCM 95th %tile Q(veh)	-	-	-	22.9

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)	59	3364	275	150	5169	79	358	61	151	117	64	240
Future Volume (veh/h)	59	3364	275	150	5169	79	358	61	151	117	64	240
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792	1845	1845	1845	1792	1792	1792	1863	1863	1863
Adj Flow Rate, veh/h	62	3541	289	158	5441	83	377	64	159	123	67	253
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	6	3	3	3	6	6	6	2	2	2
Cap, veh/h	122	3208	999	128	3310	1031	173	224	190	144	197	167
Arrive On Green	0.05	0.66	0.66	0.07	0.87	0.87	0.08	0.12	0.12	0.06	0.11	0.11
Sat Flow, veh/h	1707	4893	1524	1757	5036	1568	1707	1792	1524	1774	1863	1583
Grp Volume(v), veh/h	62	3541	289	158	5441	83	377	64	159	123	67	253
Grp Sat Flow(s),veh/h/ln	1707	1631	1524	1757	1679	1568	1707	1792	1524	1774	1863	1583
Q Serve(g_s), s	2.4	118.0	8.0	9.0	118.3	0.8	14.0	5.8	18.4	8.2	6.0	19.0
Cycle Q Clear(g_c), s	2.4	118.0	8.0	9.0	118.3	0.8	14.0	5.8	18.4	8.2	6.0	19.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	122	3208	999	128	3310	1031	173	224	190	144	197	167
V/C Ratio(X)	0.51	1.10	0.29	1.24	1.64	0.08	2.18	0.29	0.84	0.85	0.34	1.51
Avail Cap(c_a), veh/h	125	3208	999	128	3310	1031	173	239	203	144	197	167
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
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	43.6	31.0	4.0	82.6	11.3	1.4	80.4	71.5	76.9	82.3	74.7	80.5
Incr Delay (d2), s/veh	3.2	52.1	0.7	156.3	291.1	0.2	550.5	0.7	23.9	36.0	1.0	259.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	68.3	5.1	11.9	141.5	0.6	28.4	2.9	9.0	7.5	3.1	20.4
LnGrp Delay(d),s/veh	46.8	83.1	4.7	238.9	302.4	1.6	630.9	72.2	100.9	118.3	75.7	340.0
LnGrp LOS	D	F	A	F	F	A	F	E	F	F	E	F
Approach Vol, veh/h		3892			5682			600			443	
Approach Delay, s/veh		76.7			296.2			430.8			238.5	
Approach LOS		E			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	123.3	15.5	27.5	14.0	123.0	19.0	24.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	7.0	116.0	7.0	22.0	7.0	116.0	12.0	17.0
Max Q Clear Time (g_c+I1), s	4.4	120.3	10.2	20.4	11.0	120.0	16.0	21.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	220.9
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1067	53	0	729	654	0	607	333	0	1469	0
Future Volume (veh/h)	0	1067	53	0	729	654	0	607	333	0	1469	0
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1845	1845	0	1845	1845	0	1827	1827	0	1845	0
Adj Flow Rate, veh/h	0	1135	56	0	776	696	0	646	354	0	1563	0
Adj No. of Lanes	0	2	1	0	2	2	0	2	1	0	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	3	3	0	3	3	0	4	4	0	3	0
Cap, veh/h	0	1228	549	0	1228	967	0	1870	836	0	1888	0
Arrive On Green	0.00	0.70	0.70	0.00	0.35	0.35	0.00	0.54	0.54	0.00	0.54	0.00
Sat Flow, veh/h	0	3597	1568	0	3597	2760	0	3563	1553	0	3689	0
Grp Volume(v), veh/h	0	1135	56	0	776	696	0	646	354	0	1563	0
Grp Sat Flow(s),veh/h/ln	0	1752	1568	0	1752	1380	0	1736	1553	0	1752	0
Q Serve(g_s), s	0.0	24.8	1.0	0.0	16.6	19.7	0.0	9.5	12.3	0.0	33.4	0.0
Cycle Q Clear(g_c), s	0.0	24.8	1.0	0.0	16.6	19.7	0.0	9.5	12.3	0.0	33.4	0.0
Prop In Lane	0.00		1.00	0.00		1.00	0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	1228	549	0	1228	967	0	1870	836	0	1888	0
V/C Ratio(X)	0.00	0.92	0.10	0.00	0.63	0.72	0.00	0.35	0.42	0.00	0.83	0.00
Avail Cap(c_a), veh/h	0	1285	575	0	1285	1012	0	1870	836	0	1888	0
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.62	0.62	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	12.5	8.9	0.0	24.4	25.4	0.0	11.8	12.4	0.0	17.3	0.0
Incr Delay (d2), s/veh	0.0	7.4	0.0	0.0	0.9	2.4	0.0	0.5	1.6	0.0	4.3	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	12.6	0.4	0.0	8.1	7.8	0.0	4.6	5.6	0.0	17.2	0.0
LnGrp Delay(d),s/veh	0.0	19.9	9.0	0.0	25.3	27.8	0.0	12.3	14.0	0.0	21.6	0.0
LnGrp LOS		B	A		C	C		B	B		C	
Approach Vol, veh/h		1191			1472			1000			1563	
Approach Delay, s/veh		19.4			26.5			12.9			21.6	
Approach LOS		B			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		53.5		36.5		53.5		36.5
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0
Max Green Setting (Gmax), s		45.0		31.0		45.0		31.0
Max Q Clear Time (g_c+I1), s		35.4		21.7		14.3		26.8
Green Ext Time (p_c), s		6.6		5.4		5.8		2.8

Intersection Summary	
HCM 2010 Ctrl Delay	20.8
HCM 2010 LOS	C

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1552	67	381	870	204	343
Future Volume (veh/h)	1552	67	381	870	204	343
Number	2	12	1	6	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1845	1845	1827	1827
Adj Flow Rate, veh/h	1705	74	419	956	224	377
Adj No. of Lanes	2	1	2	2	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	5	5	3	3	4	4
Cap, veh/h	2052	1191	485	2687	309	497
Arrive On Green	0.60	0.60	0.28	1.00	0.18	0.18
Sat Flow, veh/h	3529	1538	3408	3597	1740	1553
Grp Volume(v), veh/h	1705	74	419	956	224	377
Grp Sat Flow(s),veh/h/ln	1719	1538	1704	1752	1740	1553
Q Serve(g_s), s	71.4	2.1	21.0	0.0	21.9	32.0
Cycle Q Clear(g_c), s	71.4	2.1	21.0	0.0	21.9	32.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2052	1191	485	2687	309	497
V/C Ratio(X)	0.83	0.06	0.86	0.36	0.72	0.76
Avail Cap(c_a), veh/h	2052	1191	549	2687	309	497
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.35	0.35	0.85	0.85	0.95	0.95
Uniform Delay (d), s/veh	29.0	4.8	62.8	0.0	69.8	55.0
Incr Delay (d2), s/veh	1.5	0.0	10.8	0.3	7.8	6.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	34.3	1.6	10.6	0.1	11.2	32.4
LnGrp Delay(d),s/veh	30.5	4.8	73.6	0.3	77.6	61.3
LnGrp LOS	C	A	E	A	E	E
Approach Vol, veh/h	1779			1375	601	
Approach Delay, s/veh	29.5			22.6	67.4	
Approach LOS	C			C	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	30.6	112.4		37.0		143.0		
Change Period (Y+Rc), s	7.0	7.0		7.0		7.0		
Max Green Setting (Gmax), s	27.6	102.0		30.0		136.0		
Max Q Clear Time (g_c+I1), s	23.0	73.4		34.0		2.0		
Green Ext Time (p_c), s	0.6	15.7		0.0		7.7		

Intersection Summary	
HCM 2010 Ctrl Delay	33.0
HCM 2010 LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	80	671	169	878	2126	149
Future Volume (veh/h)	80	671	169	878	2126	149
Number	3	18	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1827	1845	1845
Adj Flow Rate, veh/h	85	0	180	934	2262	159
Adj No. of Lanes	1	1	1	2	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	4	3	3
Cap, veh/h	158	141	174	2771	2252	1150
Arrive On Green	0.09	0.00	0.10	0.80	0.64	0.64
Sat Flow, veh/h	1740	1553	1740	3563	3597	1568
Grp Volume(v), veh/h	85	0	180	934	2262	159
Grp Sat Flow(s),veh/h/ln	1740	1553	1740	1736	1752	1568
Q Serve(g_s), s	4.2	0.0	9.0	6.7	57.8	2.7
Cycle Q Clear(g_c), s	4.2	0.0	9.0	6.7	57.8	2.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	158	141	174	2771	2252	1150
V/C Ratio(X)	0.54	0.00	1.03	0.34	1.00	0.14
Avail Cap(c_a), veh/h	174	155	174	2771	2252	1150
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.1	0.0	40.5	2.5	16.1	3.6
Incr Delay (d2), s/veh	2.8	0.0	77.6	0.3	20.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.2	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	8.1	3.2	33.8	1.6
LnGrp Delay(d),s/veh	42.0	0.0	118.3	2.8	36.1	3.8
LnGrp LOS	D		F	A	F	A
Approach Vol, veh/h	85			1114	2421	
Approach Delay, s/veh	42.0			21.5	34.0	
Approach LOS	D			C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	14.0	62.8				76.8		13.2
Change Period (Y+Rc), s	7.0	7.0				7.0		7.0
Max Green Setting (Gmax), s	7.0	55.0				69.0		7.0
Max Q Clear Time (g_c+I1), s	11.0	59.8				8.7		6.2
Green Ext Time (p_c), s	0.0	0.0				7.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	30.3
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	24	31	4	38	88	21
Future Vol, veh/h	24	31	4	38	88	21
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	3	3	2	2
Mvmt Flow	26	34	4	41	96	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	157	108	119	0	-	0
Stage 1	108	-	-	-	-	-
Stage 2	49	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.13	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.227	-	-	-
Pot Cap-1 Maneuver	834	946	1463	-	-	-
Stage 1	916	-	-	-	-	-
Stage 2	973	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	831	946	1463	-	-	-
Mov Cap-2 Maneuver	831	-	-	-	-	-
Stage 1	913	-	-	-	-	-
Stage 2	973	-	-	-	-	-

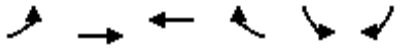
Approach	EB	NB	SB
HCM Control Delay, s	9.3	0.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1463	-	892	-	-
HCM Lane V/C Ratio	0.003	-	0.067	-	-
HCM Control Delay (s)	7.5	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	224	192	23	78	73	20	32	552	95	2	237	65
Future Volume (veh/h)	224	192	23	78	73	20	32	552	95	2	237	65
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	249	213	26	87	81	22	36	613	106	2	263	72
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	338	239	29	266	235	58	69	767	130	41	731	199
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.52	0.52	0.52	0.52	0.52	0.52
Sat Flow, veh/h	751	646	79	561	637	157	51	1477	250	2	1407	383
Grp Volume(v), veh/h	488	0	0	190	0	0	755	0	0	337	0	0
Grp Sat Flow(s),veh/h/ln	1475	0	0	1355	0	0	1778	0	0	1792	0	0
Q Serve(g_s), s	19.6	0.0	0.0	0.0	0.0	0.0	13.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	28.2	0.0	0.0	8.6	0.0	0.0	31.6	0.0	0.0	10.0	0.0	0.0
Prop In Lane	0.51		0.05	0.46		0.12	0.05		0.14	0.01		0.21
Lane Grp Cap(c), veh/h	606	0	0	559	0	0	965	0	0	971	0	0
V/C Ratio(X)	0.81	0.00	0.00	0.34	0.00	0.00	0.78	0.00	0.00	0.35	0.00	0.00
Avail Cap(c_a), veh/h	651	0	0	602	0	0	965	0	0	971	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	27.0	0.0	0.0	20.4	0.0	0.0	17.9	0.0	0.0	12.8	0.0	0.0
Incr Delay (d2), s/veh	6.9	0.0	0.0	0.4	0.0	0.0	6.3	0.0	0.0	1.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.6	0.0	0.0	3.5	0.0	0.0	17.2	0.0	0.0	5.2	0.0	0.0
LnGrp Delay(d),s/veh	33.9	0.0	0.0	20.7	0.0	0.0	24.2	0.0	0.0	13.8	0.0	0.0
LnGrp LOS	C			C			C			B		
Approach Vol, veh/h		488			190			755			337	
Approach Delay, s/veh		33.9			20.7			24.2			13.8	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		51.7		38.3		51.7		38.3
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0
Max Green Setting (Gmax), s		42.0		34.0		42.0		34.0
Max Q Clear Time (g_c+I1), s		12.0		10.6		33.6		30.2
Green Ext Time (p_c), s		6.4		0.9		6.5		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	24.5
HCM 2010 LOS	C



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	302	1772	702	196	191	156
Future Volume (veh/h)	302	1772	702	196	191	156
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	336	1969	780	218	212	0
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	415	1573	817	228	177	529
Arrive On Green	0.23	0.84	0.58	0.58	0.10	0.00
Sat Flow, veh/h	1774	1863	1402	392	1774	1583
Grp Volume(v), veh/h	336	1969	0	998	212	0
Grp Sat Flow(s),veh/h/ln	1774	1863	0	1794	1774	1583
Q Serve(g_s), s	32.2	152.0	0.0	94.2	18.0	0.0
Cycle Q Clear(g_c), s	32.2	152.0	0.0	94.2	18.0	0.0
Prop In Lane	1.00			0.22	1.00	1.00
Lane Grp Cap(c), veh/h	415	1573	0	1045	177	529
V/C Ratio(X)	0.81	1.25	0.00	0.96	1.20	0.00
Avail Cap(c_a), veh/h	415	1573	0	1116	177	529
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	65.1	14.0	0.0	35.3	81.0	0.0
Incr Delay (d2), s/veh	11.4	118.7	0.0	18.9	129.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	127.9	0.0	52.1	15.2	0.0
LnGrp Delay(d),s/veh	76.5	132.7	0.0	54.3	210.8	0.0
LnGrp LOS	E	F		D	F	
Approach Vol, veh/h		2305	998		212	
Approach Delay, s/veh		124.5	54.3		210.8	
Approach LOS		F	D		F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		157.0		23.0	47.1	109.9		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		150.0		16.0	33.0	110.0		
Max Q Clear Time (g_c+I1), s		154.0		20.0	34.2	96.2		
Green Ext Time (p_c), s		0.0		0.0	0.0	6.6		

Intersection Summary	
HCM 2010 Ctrl Delay	109.8
HCM 2010 LOS	F

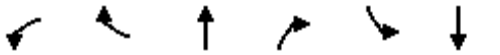
Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	426	1537	730	13	2	168
Future Vol, veh/h	426	1537	730	13	2	168
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	473	1708	811	14	2	187

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	825	0	-	0	3472	818
Stage 1	-	-	-	-	818	-
Stage 2	-	-	-	-	2654	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	805	-	-	-	7	376
Stage 1	-	-	-	-	434	-
Stage 2	-	-	-	-	53	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	805	-	-	-	0	376
Mov Cap-2 Maneuver	-	-	-	-	0	-
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	53	-

Approach	EB	WB	SB
HCM Control Delay, s	3.4	0	23.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	805	-	-	-	376
HCM Lane V/C Ratio	0.588	-	-	-	0.502
HCM Control Delay (s)	15.6	0	-	-	23.9
HCM Lane LOS	C	A	-	-	C
HCM 95th %tile Q(veh)	3.9	-	-	-	2.7



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	329	9	734	665	14	1525
Future Volume (veh/h)	329	9	734	665	14	1525
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	366	0	816	0	16	1694
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	315	702	881	1030	472	1428
Arrive On Green	0.18	0.00	0.47	0.00	0.27	0.77
Sat Flow, veh/h	1774	1583	1863	1583	1774	1863
Grp Volume(v), veh/h	366	0	816	0	16	1694
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	1583	1774	1863
Q Serve(g_s), s	32.0	0.0	74.0	0.0	1.2	138.0
Cycle Q Clear(g_c), s	32.0	0.0	74.0	0.0	1.2	138.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	315	702	881	1030	472	1428
V/C Ratio(X)	1.16	0.00	0.93	0.00	0.03	1.19
Avail Cap(c_a), veh/h	315	702	1283	1372	472	1428
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	74.0	0.0	44.5	0.0	48.9	21.0
Incr Delay (d2), s/veh	101.6	0.0	17.0	0.0	0.0	91.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.6	0.0	42.2	0.0	0.6	106.0
LnGrp Delay(d),s/veh	175.6	0.0	61.4	0.0	49.0	112.2
LnGrp LOS	F		E		D	F
Approach Vol, veh/h	366		816			1710
Approach Delay, s/veh	175.6		61.4			111.6
Approach LOS	F		E			F

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		143.0		37.0	52.9	90.1		
Change Period (Y+Rc), s		7.0		7.0	7.0	7.0		
Max Green Setting (Gmax), s		136.0		30.0	7.0	122.0		
Max Q Clear Time (g_c+I1), s		140.0		34.0	3.2	76.0		
Green Ext Time (p_c), s		0.0		0.0	0.0	7.2		

Intersection Summary	
HCM 2010 Ctrl Delay	105.5
HCM 2010 LOS	F

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	118	67	1332	178	126	1728
Future Volume (veh/h)	118	67	1332	178	126	1728
Number	7	14	6	16	5	2
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	130	74	1464	196	138	1899
Adj No. of Lanes	1	1	2	1	1	2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	205	183	1770	792	386	2737
Arrive On Green	0.12	0.12	0.50	0.50	0.22	0.77
Sat Flow, veh/h	1774	1583	3632	1583	1774	3632
Grp Volume(v), veh/h	130	74	1464	196	138	1899
Grp Sat Flow(s),veh/h/ln	1774	1583	1770	1583	1774	1770
Q Serve(g_s), s	6.3	3.9	31.7	6.4	5.9	23.6
Cycle Q Clear(g_c), s	6.3	3.9	31.7	6.4	5.9	23.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	205	183	1770	792	386	2737
V/C Ratio(X)	0.63	0.40	0.83	0.25	0.36	0.69
Avail Cap(c_a), veh/h	256	229	2006	897	386	2737
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.55	0.55	1.00	1.00
Uniform Delay (d), s/veh	38.0	36.9	19.2	12.8	29.9	5.0
Incr Delay (d2), s/veh	3.4	1.4	2.6	0.4	0.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	3.5	16.1	2.9	3.0	11.6
LnGrp Delay(d),s/veh	41.4	38.4	21.7	13.2	30.4	6.5
LnGrp LOS	D	D	C	B	C	A
Approach Vol, veh/h	204		1660			2037
Approach Delay, s/veh	40.3		20.7			8.1
Approach LOS	D		C			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		74.6		15.4	24.6	50.0		
Change Period (Y+Rc), s		7.0		7.0	7.0	* 7		
Max Green Setting (Gmax), s		65.0		11.0	11.5	* 49		
Max Q Clear Time (g_c+I1), s		25.6		8.3	7.9	33.7		
Green Ext Time (p_c), s		21.2		0.1	0.1	9.3		

Intersection Summary	
HCM 2010 Ctrl Delay	15.2
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	2	164	170	2	82	225	1401	235	142	1630	74
Future Volume (veh/h)	27	2	164	170	2	82	225	1401	235	142	1630	74
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	28	2	328	179	2	86	237	1475	247	149	1716	78
Adj No. of Lanes	1	1	0	2	1	0	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.50	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	2	2	2	2	2	2	2
Cap, veh/h	254	2	324	220	11	461	846	3190	1528	186	1778	80
Arrive On Green	0.21	0.21	0.21	0.06	0.30	0.30	0.48	0.90	0.90	0.11	0.52	0.52
Sat Flow, veh/h	1304	10	1575	3442	36	1553	1774	3539	1583	1774	3449	156
Grp Volume(v), veh/h	28	0	330	179	0	88	237	1475	247	149	876	918
Grp Sat Flow(s),veh/h/ln	1304	0	1585	1721	0	1589	1774	1770	1583	1774	1770	1835
Q Serve(g_s), s	3.3	0.0	37.0	9.2	0.0	7.4	14.5	12.7	3.6	14.8	85.5	87.3
Cycle Q Clear(g_c), s	10.7	0.0	37.0	9.2	0.0	7.4	14.5	12.7	3.6	14.8	85.5	87.3
Prop In Lane	1.00		0.99	1.00		0.98	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	254	0	326	220	0	472	846	3190	1528	186	912	946
V/C Ratio(X)	0.11	0.00	1.01	0.81	0.00	0.19	0.28	0.46	0.16	0.80	0.96	0.97
Avail Cap(c_a), veh/h	254	0	326	220	0	472	846	3190	1528	232	914	948
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.72	0.72	0.72	0.65	0.65	0.65
Uniform Delay (d), s/veh	64.2	0.0	71.5	83.2	0.0	47.1	28.4	1.5	6.5	78.7	41.9	42.3
Incr Delay (d2), s/veh	0.2	0.0	53.2	20.4	0.0	0.2	0.1	0.3	0.2	9.9	16.2	17.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	21.0	5.0	0.0	3.3	7.1	6.1	1.6	7.8	45.7	48.7
LnGrp Delay(d),s/veh	64.4	0.0	124.8	103.6	0.0	47.2	28.5	1.8	6.7	88.6	58.1	59.8
LnGrp LOS	E		F	F		D	C	A	A	F	E	E
Approach Vol, veh/h		358			267			1959			1943	
Approach Delay, s/veh		120.1			85.0			5.7			61.2	
Approach LOS		F			F			A			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	31.0	97.8		58.5	21.4	167.3	16.5	42.0
Change Period (Y+Rc), s	7.0	* 7		7.0	4.5	7.0	7.0	* 7
Max Green Setting (Gmax), s	21.5	* 91		49.0	21.5	91.0	9.5	* 35
Max Q Clear Time (g_c+I1), s	16.5	89.3		9.4	16.8	14.7	11.2	39.0
Green Ext Time (p_c), s	0.3	1.5		0.6	0.1	18.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	43.3
HCM 2010 LOS	D

Notes

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	223	262	400	268	296	309
Future Volume (veh/h)	223	262	400	268	296	309
Number	2	12	1	6	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	235	276	421	282	312	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	618	867	507	1253	384	342
Arrive On Green	0.33	0.33	0.09	0.22	0.22	0.00
Sat Flow, veh/h	1863	1583	1774	1863	1774	1583
Grp Volume(v), veh/h	235	276	421	282	312	0
Grp Sat Flow(s),veh/h/ln	1863	1583	1774	1863	1774	1583
Q Serve(g_s), s	8.7	8.6	21.0	11.2	15.1	0.0
Cycle Q Clear(g_c), s	8.7	8.6	21.0	11.2	15.1	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	618	867	507	1253	384	342
V/C Ratio(X)	0.38	0.32	0.83	0.23	0.81	0.00
Avail Cap(c_a), veh/h	618	867	611	1253	473	422
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.80	0.80	1.00	0.00
Uniform Delay (d), s/veh	23.0	11.1	38.6	15.8	33.5	0.0
Incr Delay (d2), s/veh	1.8	1.0	6.6	0.3	8.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	5.8	11.3	5.9	8.3	0.0
LnGrp Delay(d),s/veh	24.8	12.1	45.2	16.1	42.2	0.0
LnGrp LOS	C	B	D	B	D	
Approach Vol, veh/h	511			703	312	
Approach Delay, s/veh	17.9			33.6	42.2	
Approach LOS	B			C	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	30.7	34.8		24.5		65.5		
Change Period (Y+Rc), s	7.0	7.0		7.0		7.0		
Max Green Setting (Gmax), s	23.6	18.0		22.0		54.0		
Max Q Clear Time (g_c+I1), s	23.0	10.7		17.1		13.2		
Green Ext Time (p_c), s	0.7	1.1		0.4		0.8		

Intersection Summary	
HCM 2010 Ctrl Delay	30.1
HCM 2010 LOS	C

Notes

HCM 2010 cannot analyze U-Turning movements.

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	2054	2069	22	0	44
Future Vol, veh/h	6	2054	2069	22	0	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	3	3	3	3	2	2
Mvmt Flow	6	2162	2178	23	0	46

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2201	0	-	0	-	1101
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.16	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.23	-	-	-	-	3.32
Pot Cap-1 Maneuver	232	-	-	-	0	207
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	232	-	-	-	-	207
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	27.3
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	232	-	-	-	207
HCM Lane V/C Ratio	0.027	-	-	-	0.224
HCM Control Delay (s)	21	-	-	-	27.3
HCM Lane LOS	C	-	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	1821	115	136	1932	322	72	15	73	262	20	87
Future Volume (veh/h)	118	1821	115	136	1932	322	72	15	73	262	20	87
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	124	1917	121	143	2034	339	76	16	77	276	21	92
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	2	1	0
Peak Hour Factor	0.95	0.95	0.95	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	2	2	2	2	2	2	2
Cap, veh/h	174	2105	132	158	2170	1103	85	26	127	287	62	273
Arrive On Green	0.10	0.62	0.62	0.09	0.61	0.61	0.09	0.09	0.09	0.08	0.21	0.21
Sat Flow, veh/h	1774	3384	211	1774	3539	1583	1275	280	1346	3442	303	1326
Grp Volume(v), veh/h	124	993	1045	143	2034	339	76	0	93	276	0	113
Grp Sat Flow(s),veh/h/ln	1774	1770	1825	1774	1770	1583	1275	0	1625	1721	0	1629
Q Serve(g_s), s	12.2	86.9	91.1	14.4	94.1	0.0	6.3	0.0	9.9	14.4	0.0	10.7
Cycle Q Clear(g_c), s	12.2	86.9	91.1	14.4	94.1	0.0	17.0	0.0	9.9	14.4	0.0	10.7
Prop In Lane	1.00		0.12	1.00		1.00	1.00		0.83	1.00		0.81
Lane Grp Cap(c), veh/h	174	1101	1136	158	2170	1103	85	0	153	287	0	335
V/C Ratio(X)	0.71	0.90	0.92	0.91	0.94	0.31	0.90	0.00	0.61	0.96	0.00	0.34
Avail Cap(c_a), veh/h	174	1101	1136	158	2222	1126	85	0	153	287	0	335
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	78.7	29.3	30.0	81.3	31.7	10.6	88.1	0.0	78.3	82.2	0.0	61.0
Incr Delay (d2), s/veh	12.8	11.8	13.3	45.5	9.3	0.7	64.2	0.0	6.6	42.8	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	45.8	49.8	9.1	48.6	6.6	5.3	0.0	4.7	8.6	0.0	4.9
LnGrp Delay(d),s/veh	91.6	41.1	43.4	126.8	41.0	11.3	152.3	0.0	84.9	125.0	0.0	61.6
LnGrp LOS	F	D	D	F	D	B	F		F	F		E
Approach Vol, veh/h		2162			2516			169			389	
Approach Delay, s/veh		45.1			41.9			115.2			106.6	
Approach LOS		D			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	21.0	117.0	20.0	22.0	22.7	115.3		42.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0		7.0
Max Green Setting (Gmax), s	14.0	110.0	13.0	15.0	13.0	111.0		35.0
Max Q Clear Time (g_c+I1), s	16.4	93.1	16.4	19.0	14.2	96.1		12.7
Green Ext Time (p_c), s	0.0	12.8	0.0	0.0	0.0	12.2		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	50.4
HCM 2010 LOS	D

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	945	69	679	14	116	4
Future Volume (veh/h)	945	69	679	14	116	4
Number	2	12	1	6	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	995	73	715	15	122	4
Adj No. of Lanes	2	1	2	1	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	0	0
Cap, veh/h	1248	733	1276	1451	187	6
Arrive On Green	0.35	0.35	0.62	1.00	0.11	0.11
Sat Flow, veh/h	3632	1583	3442	1863	1698	56
Grp Volume(v), veh/h	995	73	715	15	127	0
Grp Sat Flow(s),veh/h/ln	1770	1583	1721	1863	1768	0
Q Serve(g_s), s	22.8	2.3	10.9	0.0	6.2	0.0
Cycle Q Clear(g_c), s	22.8	2.3	10.9	0.0	6.2	0.0
Prop In Lane		1.00	1.00		0.96	0.03
Lane Grp Cap(c), veh/h	1248	733	1276	1451	195	0
V/C Ratio(X)	0.80	0.10	0.56	0.01	0.65	0.00
Avail Cap(c_a), veh/h	1455	825	1276	1451	236	0
HCM Platoon Ratio	1.00	1.00	1.67	1.67	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.83	0.83	1.00	0.00
Uniform Delay (d), s/veh	26.2	13.6	12.9	0.0	38.4	0.0
Incr Delay (d2), s/veh	5.4	0.3	0.5	0.0	4.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.0	1.3	5.2	0.0	3.3	0.0
LnGrp Delay(d),s/veh	31.6	13.9	13.3	0.0	43.1	0.0
LnGrp LOS	C	B	B	A	D	
Approach Vol, veh/h	1068			730	127	
Approach Delay, s/veh	30.4			13.1	43.1	
Approach LOS	C			B	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	38.4	36.7		14.9		75.1		
Change Period (Y+Rc), s	7.0	7.0		7.0		7.0		
Max Green Setting (Gmax), s	24.0	35.0		10.0		66.0		
Max Q Clear Time (g_c+I1), s	12.9	24.8		8.2		2.0		
Green Ext Time (p_c), s	2.2	5.0		0.0		0.1		

Intersection Summary	
HCM 2010 Ctrl Delay	24.6
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	3.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	677	71	73	24	96	15
Future Vol, veh/h	677	71	73	24	96	15
Conflicting Peds, #/hr	0	0	4	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	736	77	79	26	104	16

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	817	0	924	740
Stage 1	-	-	-	-	740	-
Stage 2	-	-	-	-	184	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	811	-	299	417
Stage 1	-	-	-	-	472	-
Stage 2	-	-	-	-	848	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	808	-	268	415
Mov Cap-2 Maneuver	-	-	-	-	268	-
Stage 1	-	-	-	-	470	-
Stage 2	-	-	-	-	764	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7.5	27.1
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	281	-	-	808	-
HCM Lane V/C Ratio	0.429	-	-	0.098	-
HCM Control Delay (s)	27.1	-	-	9.9	0
HCM Lane LOS	D	-	-	A	A
HCM 95th %tile Q(veh)	2	-	-	0.3	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↱		↰	↱	
Traffic Vol, veh/h	8	2	28	10	0	7	40	590	3	34	616	12
Future Vol, veh/h	8	2	28	10	0	7	40	590	3	34	616	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	2	29	11	0	7	42	621	3	36	648	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1437	1435	655	1449	1440	623	661	0	0	624	0	0
Stage 1	727	727	-	707	707	-	-	-	-	-	-	-
Stage 2	710	708	-	742	733	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	111	134	466	109	133	486	927	-	-	957	-	-
Stage 1	415	429	-	426	438	-	-	-	-	-	-	-
Stage 2	424	438	-	408	426	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	103	123	466	95	122	486	927	-	-	957	-	-
Mov Cap-2 Maneuver	220	237	-	207	234	-	-	-	-	-	-	-
Stage 1	396	413	-	407	418	-	-	-	-	-	-	-
Stage 2	399	418	-	366	410	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.2	19.2	0.6	0.5
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	927	-	-	362	271	957	-	-
HCM Lane V/C Ratio	0.045	-	-	0.11	0.066	0.037	-	-
HCM Control Delay (s)	9.1	-	-	16.2	19.2	8.9	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↱		↰	↱	
Traffic Vol, veh/h	5	0	23	8	0	9	24	619	15	35	607	12
Future Vol, veh/h	5	0	23	8	0	9	24	619	15	35	607	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	24	8	0	9	25	652	16	37	639	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1435	1438	646	1442	1436	660	652	0	0	668	0	0
Stage 1	720	720	-	710	710	-	-	-	-	-	-	-
Stage 2	715	718	-	732	726	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	111	133	472	110	133	463	935	-	-	922	-	-
Stage 1	419	432	-	424	437	-	-	-	-	-	-	-
Stage 2	422	433	-	413	430	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	103	124	472	99	124	463	935	-	-	922	-	-
Mov Cap-2 Maneuver	223	239	-	218	242	-	-	-	-	-	-	-
Stage 1	408	415	-	413	425	-	-	-	-	-	-	-
Stage 2	402	421	-	376	413	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.9	17.6	0.3	0.5
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	935	-	-	394	303	922	-	-
HCM Lane V/C Ratio	0.027	-	-	0.075	0.059	0.04	-	-
HCM Control Delay (s)	9	-	-	14.9	17.6	9.1	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	2.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	80	43	615	57	43	595
Future Vol, veh/h	80	43	615	57	43	595
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	84	45	647	60	45	626

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1393	677	0	0	707	0
Stage 1	677	-	-	-	-	-
Stage 2	716	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	156	453	-	-	891	-
Stage 1	505	-	-	-	-	-
Stage 2	484	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	148	453	-	-	891	-
Mov Cap-2 Maneuver	287	-	-	-	-	-
Stage 1	505	-	-	-	-	-
Stage 2	459	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.9	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	329	891	-
HCM Lane V/C Ratio	-	-	0.394	0.051	-
HCM Control Delay (s)	-	-	22.9	9.3	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	1.8	0.2	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	41	73	2480	2246	13
Future Vol, veh/h	0	41	73	2480	2246	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	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	43	77	2611	2364	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1189	2378	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	0	180	201	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	180	201	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	31.2	1	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	201	-	180	-	-
HCM Lane V/C Ratio	0.382	-	0.24	-	-
HCM Control Delay (s)	33.6	-	31.2	-	-
HCM Lane LOS	D	-	D	-	-
HCM 95th %tile Q(veh)	1.7	-	0.9	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1	52	17	1	19	75	2523	33	33	2246	8
Future Volume (veh/h)	6	1	52	17	1	19	75	2523	33	33	2246	8
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	6	1	55	18	1	20	79	2656	35	35	2364	8
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	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	2	2	2	2	2	2	2
Cap, veh/h	28	4	72	60	7	39	143	3199	42	137	3236	11
Arrive On Green	0.05	0.05	0.05	0.05	0.05	0.05	1.00	1.00	1.00	0.89	0.89	0.89
Sat Flow, veh/h	112	73	1449	606	138	784	149	3577	47	108	3618	12
Grp Volume(v), veh/h	62	0	0	39	0	0	79	1311	1380	35	1156	1216
Grp Sat Flow(s),veh/h/ln	1633	0	0	1528	0	0	149	1770	1854	108	1770	1861
Q Serve(g_s), s	2.3	0.0	0.0	0.0	0.0	0.0	52.7	0.0	0.0	9.1	35.8	35.9
Cycle Q Clear(g_c), s	6.6	0.0	0.0	4.4	0.0	0.0	88.5	0.0	0.0	9.1	35.8	35.9
Prop In Lane	0.10		0.89	0.46		0.51	1.00		0.03	1.00		0.01
Lane Grp Cap(c), veh/h	104	0	0	106	0	0	143	1583	1659	137	1583	1664
V/C Ratio(X)	0.60	0.00	0.00	0.37	0.00	0.00	0.55	0.83	0.83	0.26	0.73	0.73
Avail Cap(c_a), veh/h	104	0	0	106	0	0	143	1583	1659	137	1583	1664
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.23	0.23	0.23	1.00	1.00	1.00
Uniform Delay (d), s/veh	84.4	0.0	0.0	83.2	0.0	0.0	9.9	0.0	0.0	1.5	2.9	2.9
Incr Delay (d2), s/veh	9.1	0.0	0.0	2.1	0.0	0.0	3.5	1.2	1.2	4.5	3.0	2.9
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(50%),veh/ln	3.3	0.0	0.0	2.0	0.0	0.0	2.3	0.5	0.6	0.4	18.0	18.9
LnGrp Delay(d),s/veh	93.5	0.0	0.0	85.4	0.0	0.0	13.4	1.2	1.2	6.0	5.9	5.8
LnGrp LOS	F			F			B	A	A	A	A	A
Approach Vol, veh/h		62			39			2770			2407	
Approach Delay, s/veh		93.5			85.4			1.6			5.8	
Approach LOS		F			F			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		166.0		14.0		166.0		14.0
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0
Max Green Setting (Gmax), s		159.0		7.0		159.0		7.0
Max Q Clear Time (g_c+I1), s		37.9		6.4		90.5		8.6
Green Ext Time (p_c), s		68.8		0.0		60.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	5.2
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	0	32	19	3	81	205	2515	68	50	2158	107
Future Volume (veh/h)	35	0	32	19	3	81	205	2515	68	50	2158	107
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	37	0	34	20	3	85	216	2647	72	53	2272	113
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.95	0.95	0.95	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	2	2	2	2	2	2	2
Cap, veh/h	48	0	97	95	3	94	251	2794	76	110	2526	1130
Arrive On Green	0.06	0.00	0.06	0.06	0.06	0.06	0.14	0.79	0.79	0.12	1.00	1.00
Sat Flow, veh/h	1304	0	1583	1369	54	1537	1774	3520	95	1774	3539	1583
Grp Volume(v), veh/h	37	0	34	20	0	88	216	1325	1394	53	2272	113
Grp Sat Flow(s),veh/h/ln	1304	0	1583	1369	0	1591	1774	1770	1846	1774	1770	1583
Q Serve(g_s), s	1.1	0.0	3.7	2.6	0.0	9.9	21.4	110.5	114.6	5.0	0.0	0.0
Cycle Q Clear(g_c), s	11.0	0.0	3.7	6.3	0.0	9.9	21.4	110.5	114.6	5.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.97	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	48	0	97	95	0	97	251	1405	1465	110	2526	1130
V/C Ratio(X)	0.77	0.00	0.35	0.21	0.00	0.90	0.86	0.94	0.95	0.48	0.90	0.10
Avail Cap(c_a), veh/h	48	0	97	95	0	97	266	1426	1487	110	2526	1130
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	0.00	1.00	1.00	0.00	1.00	0.09	0.09	0.09	0.58	0.58	0.58
Uniform Delay (d), s/veh	89.9	0.0	81.1	84.1	0.0	84.0	75.5	15.2	15.6	76.2	0.0	0.0
Incr Delay (d2), s/veh	53.1	0.0	2.2	1.1	0.0	61.5	2.7	1.8	2.0	1.9	3.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	1.7	1.0	0.0	6.0	10.7	53.7	58.1	2.5	1.2	0.0
LnGrp Delay(d),s/veh	143.0	0.0	83.2	85.2	0.0	145.4	78.1	17.0	17.6	78.1	3.4	0.1
LnGrp LOS	F		F	F		F	E	B	B	E	A	A
Approach Vol, veh/h		71			108			2935			2438	
Approach Delay, s/veh		114.4			134.3			21.8			4.9	
Approach LOS		F			F			C			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	30.5	133.5		16.0	16.1	147.9		16.0
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0
Max Green Setting (Gmax), s	25.0	125.0		9.0	7.0	143.0		9.0
Max Q Clear Time (g_c+I1), s	23.4	2.0		11.9	7.0	116.6		13.0
Green Ext Time (p_c), s	0.1	51.7		0.0	0.0	24.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.7
HCM 2010 LOS	B

HCM 2010 Computation does not support turning movement with Shared and Exclusive lanes.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	3117	301	342	2355	39	163	16	221	32	17	65
Future Volume (veh/h)	175	3117	301	342	2355	39	163	16	221	32	17	65
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1845	1845	1845	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	184	3281	317	360	2479	41	172	17	233	34	18	68
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	3	3	3	1	1	1	2	2	2
Cap, veh/h	289	2805	1023	303	2824	947	290	230	195	196	132	112
Arrive On Green	0.33	1.00	1.00	0.17	0.56	0.56	0.09	0.12	0.12	0.04	0.07	0.07
Sat Flow, veh/h	1774	5085	1583	1757	5036	1568	1792	1881	1599	1774	1863	1583
Grp Volume(v), veh/h	184	3281	317	360	2479	41	172	17	233	34	18	68
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1757	1679	1568	1792	1881	1599	1774	1863	1583
Q Serve(g_s), s	15.9	99.3	0.0	31.0	76.6	0.7	15.7	1.4	22.0	3.1	1.6	5.6
Cycle Q Clear(g_c), s	15.9	99.3	0.0	31.0	76.6	0.7	15.7	1.4	22.0	3.1	1.6	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	289	2805	1023	303	2824	947	290	230	195	196	132	112
V/C Ratio(X)	0.64	1.17	0.31	1.19	0.88	0.04	0.59	0.07	1.19	0.17	0.14	0.61
Avail Cap(c_a), veh/h	289	2805	1023	303	2966	991	290	230	195	208	145	123
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.1	0.0	0.0	74.5	34.2	4.8	67.6	70.0	79.0	72.1	78.5	44.6
Incr Delay (d2), s/veh	0.4	76.8	0.1	88.7	0.4	0.0	3.2	0.1	125.8	0.4	0.5	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	19.9	0.0	22.5	35.5	0.4	8.0	0.8	16.5	1.6	0.9	3.4
LnGrp Delay(d),s/veh	56.6	76.8	0.1	163.2	34.6	4.8	70.8	70.1	204.8	72.5	79.0	51.7
LnGrp LOS	E	F	A	F	C	A	E	E	F	E	E	D
Approach Vol, veh/h		3782			2880			422			120	
Approach Delay, s/veh		69.4			50.2			144.7			61.7	
Approach LOS		E			D			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	34.3	105.9	12.7	27.0	36.0	104.3	22.0	17.7
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	21.3	104.0	7.0	20.0	29.0	96.0	15.0	12.0
Max Q Clear Time (g_c+I1), s	17.9	78.6	5.1	24.0	33.0	101.3	17.7	7.6
Green Ext Time (p_c), s	0.1	20.3	0.0	0.0	0.0	0.0	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	66.0
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	3242	229	211	2296	76	177	49	304	47	33	50
Future Volume (veh/h)	134	3242	229	211	2296	76	177	49	304	47	33	50
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	141	3413	241	222	2417	80	186	52	0	49	35	0
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	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	2	2	2	2	2	2	2
Cap, veh/h	199	3249	1012	227	3497	1089	254	321	273	240	321	273
Arrive On Green	0.11	1.00	1.00	0.14	0.91	0.91	0.17	0.17	0.00	0.17	0.17	0.00
Sat Flow, veh/h	1774	5085	1583	1774	5085	1583	1368	1863	1583	1347	1863	1583
Grp Volume(v), veh/h	141	3413	241	222	2417	80	186	52	0	49	35	0
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1774	1695	1583	1368	1863	1583	1347	1863	1583
Q Serve(g_s), s	6.0	115.0	0.0	18.4	19.9	0.8	23.9	4.3	0.0	5.8	2.9	0.0
Cycle Q Clear(g_c), s	6.0	115.0	0.0	18.4	19.9	0.8	26.8	4.3	0.0	10.1	2.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	199	3249	1012	227	3497	1089	254	321	273	240	321	273
V/C Ratio(X)	0.71	1.05	0.24	0.98	0.69	0.07	0.73	0.16	0.00	0.20	0.11	0.00
Avail Cap(c_a), veh/h	285	3249	1012	227	3497	1089	277	352	299	262	352	299
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.46	0.46	0.46	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	23.7	0.0	0.0	75.4	3.3	2.4	74.1	63.4	0.0	67.7	62.9	0.0
Incr Delay (d2), s/veh	0.4	23.7	0.1	34.5	0.5	0.1	8.8	0.2	0.0	0.4	0.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	7.1	0.0	13.2	8.9	0.4	9.7	2.2	0.0	2.2	1.5	0.0
LnGrp Delay(d),s/veh	24.1	23.7	0.1	109.9	3.8	2.5	83.0	63.7	0.0	68.2	63.0	0.0
LnGrp LOS	C	F	A	F	A	A	F	E		E	E	
Approach Vol, veh/h		3795			2719			238			84	
Approach Delay, s/veh		22.2			12.4			78.7			66.0	
Approach LOS		C			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.2	128.8		36.0	24.0	120.0		36.0
Change Period (Y+Rc), s	7.0	7.0		7.0	7.0	7.0		7.0
Max Green Setting (Gmax), s	17.0	110.0		32.0	14.0	113.0		32.0
Max Q Clear Time (g_c+I1), s	8.0	21.9		28.8	20.4	117.0		12.1
Green Ext Time (p_c), s	0.2	44.7		0.2	0.0	0.0		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	20.8
HCM 2010 LOS	C

HCM 2010 Computation does not support turning movement with Shared and Exclusive lanes.

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑	↱		↱
Traffic Vol, veh/h	0	5416	3665	16	0	54
Future Vol, veh/h	0	5416	3665	16	0	54
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	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	3	3	4	4
Mvmt Flow	0	5701	3858	17	0	57

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	1929
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.18
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.94
Pot Cap-1 Maneuver	0	-	-	-	0	~ 47
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	~ 47
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	$ 338.3
HCM LOS			F

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	47
HCM Lane V/C Ratio	-	-	-	1.209
HCM Control Delay (s)	-	-	-	$ 338.3
HCM Lane LOS	-	-	-	F
HCM 95th %tile Q(veh)	-	-	-	5.3

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)	167	5085	201	115	3487	117	161	71	197	134	51	136
Future Volume (veh/h)	167	5085	201	115	3487	117	161	71	197	134	51	136
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1810	1810	1810	1863	1863	1863	1845	1845	1845
Adj Flow Rate, veh/h	176	5353	212	121	3671	123	169	75	207	141	54	143
Adj No. of Lanes	1	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	5	5	5	2	2	2	3	3	3
Cap, veh/h	138	3469	1080	126	3376	1051	129	186	158	128	184	157
Arrive On Green	0.06	0.69	0.69	0.07	0.91	0.91	0.05	0.10	0.10	0.05	0.10	0.10
Sat Flow, veh/h	1757	5036	1568	1723	4940	1538	1774	1863	1583	1757	1845	1568
Grp Volume(v), veh/h	176	5353	212	121	3671	123	169	75	207	141	54	143
Grp Sat Flow(s),veh/h/ln	1757	1679	1568	1723	1647	1538	1774	1863	1583	1757	1845	1568
Q Serve(g_s), s	10.0	124.0	5.2	8.4	123.0	0.9	9.0	6.8	18.0	9.0	4.9	16.3
Cycle Q Clear(g_c), s	10.0	124.0	5.2	8.4	123.0	0.9	9.0	6.8	18.0	9.0	4.9	16.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	138	3469	1080	126	3376	1051	129	186	158	128	184	157
V/C Ratio(X)	1.28	1.54	0.20	0.96	1.09	0.12	1.31	0.40	1.31	1.10	0.29	0.91
Avail Cap(c_a), veh/h	138	3469	1080	126	3376	1051	129	186	158	128	184	157
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
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	66.4	28.0	3.5	82.3	8.2	0.9	82.8	76.0	81.0	84.1	75.1	80.2
Incr Delay (d2), s/veh	169.9	245.8	0.4	67.2	45.1	0.2	185.5	1.4	176.3	108.1	0.9	46.9
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(50%),veh/ln	13.3	135.8	3.4	8.4	66.2	0.6	6.6	3.6	15.6	10.2	2.5	9.1
LnGrp Delay(d),s/veh	236.3	273.8	3.9	149.6	53.4	1.2	268.2	77.4	257.3	192.1	76.0	127.2
LnGrp LOS	F	F	A	F	F	A	F	E	F	F	E	F
Approach Vol, veh/h		5741			3915			451			338	
Approach Delay, s/veh		262.7			54.7			231.5			146.1	
Approach LOS		F			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	128.0	14.0	23.0	14.0	129.0	14.0	23.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	8.0	121.0	7.0	16.0	7.0	122.0	7.0	16.0
Max Q Clear Time (g_c+I1), s	12.0	125.0	11.0	20.0	10.4	126.0	11.0	18.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	179.6
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑	↱↑		↑↑	↱		↑↑	
Traffic Volume (veh/h)	0	911	38	0	693	891	0	1499	606	0	1248	0
Future Volume (veh/h)	0	911	38	0	693	891	0	1499	606	0	1248	0
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	0	1863	1863	0	1863	1863	0	1863	0
Adj Flow Rate, veh/h	0	959	40	0	729	938	0	1578	638	0	1314	0
Adj No. of Lanes	0	2	1	0	2	2	0	2	1	0	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	0	2	2	0	2	2	0	2	0
Cap, veh/h	0	1350	604	0	1350	1063	0	1796	804	0	1796	0
Arrive On Green	0.00	0.76	0.76	0.00	0.38	0.38	0.00	0.51	0.51	0.00	0.51	0.00
Sat Flow, veh/h	0	3632	1583	0	3632	2787	0	3632	1583	0	3725	0
Grp Volume(v), veh/h	0	959	40	0	729	938	0	1578	638	0	1314	0
Grp Sat Flow(s),veh/h/ln	0	1770	1583	0	1770	1393	0	1770	1583	0	1770	0
Q Serve(g_s), s	0.0	12.6	0.6	0.0	14.4	28.2	0.0	35.7	29.9	0.0	26.2	0.0
Cycle Q Clear(g_c), s	0.0	12.6	0.6	0.0	14.4	28.2	0.0	35.7	29.9	0.0	26.2	0.0
Prop In Lane	0.00		1.00	0.00		1.00	0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	1350	604	0	1350	1063	0	1796	804	0	1796	0
V/C Ratio(X)	0.00	0.71	0.07	0.00	0.54	0.88	0.00	0.88	0.79	0.00	0.73	0.00
Avail Cap(c_a), veh/h	0	1376	616	0	1376	1084	0	1796	804	0	1796	0
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.71	0.71	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	8.1	6.7	0.0	21.7	26.0	0.0	19.7	18.3	0.0	17.4	0.0
Incr Delay (d2), s/veh	0.0	1.2	0.0	0.0	0.4	8.6	0.0	6.5	8.0	0.0	2.7	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.1	0.2	0.0	7.1	12.1	0.0	18.9	14.7	0.0	13.4	0.0
LnGrp Delay(d),s/veh	0.0	9.3	6.7	0.0	22.1	34.6	0.0	26.2	26.2	0.0	20.0	0.0
LnGrp LOS		A	A		C	C		C	C		C	
Approach Vol, veh/h		999			1667			2216			1314	
Approach Delay, s/veh		9.2			29.1			26.2			20.0	
Approach LOS		A			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		50.7		39.3		50.7		39.3
Change Period (Y+Rc), s		7.0		7.0		7.0		7.0
Max Green Setting (Gmax), s		43.0		33.0		43.0		33.0
Max Q Clear Time (g_c+I1), s		28.2		30.2		37.7		14.6
Green Ext Time (p_c), s		7.7		2.1		4.5		6.6

Intersection Summary		
HCM 2010 Ctrl Delay		22.9
HCM 2010 LOS		C

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1714	250	418	1653	208	324
Future Volume (veh/h)	1714	250	418	1653	208	324
Number	2	12	1	6	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1804	263	440	1740	219	341
Adj No. of Lanes	2	1	2	2	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1965	1113	735	2820	262	572
Arrive On Green	0.56	0.56	0.43	1.00	0.15	0.15
Sat Flow, veh/h	3632	1583	3442	3632	1774	1583
Grp Volume(v), veh/h	1804	263	440	1740	219	341
Grp Sat Flow(s),veh/h/ln	1770	1583	1721	1770	1774	1583
Q Serve(g_s), s	83.2	10.6	17.7	0.0	21.6	0.0
Cycle Q Clear(g_c), s	83.2	10.6	17.7	0.0	21.6	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1965	1113	735	2820	262	572
V/C Ratio(X)	0.92	0.24	0.60	0.62	0.84	0.60
Avail Cap(c_a), veh/h	2065	1158	735	2820	306	611
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.15	0.15	0.53	0.53	0.96	0.96
Uniform Delay (d), s/veh	36.3	9.5	45.6	0.0	74.6	46.8
Incr Delay (d2), s/veh	1.5	0.1	0.7	0.5	15.5	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	41.0	7.0	8.4	0.2	11.7	17.2
LnGrp Delay(d),s/veh	37.8	9.6	46.3	0.5	90.0	48.1
LnGrp LOS	D	A	D	A	F	D
Approach Vol, veh/h	2067			2180	560	
Approach Delay, s/veh	34.2			9.8	64.5	
Approach LOS	C			A	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	43.5	105.0		31.6		148.4		
Change Period (Y+Rc), s	7.0	7.0		7.0		7.0		
Max Green Setting (Gmax), s	27.0	103.0		29.0		137.0		
Max Q Clear Time (g_c+I1), s	19.7	85.2		23.6		2.0		
Green Ext Time (p_c), s	1.0	12.7		1.0		23.9		

Intersection Summary	
HCM 2010 Ctrl Delay	26.7
HCM 2010 LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	144	531	435	2045	1728	237
Future Volume (veh/h)	144	531	435	2045	1728	237
Number	3	18	1	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	152	0	458	2153	1819	249
Adj No. of Lanes	1	1	1	2	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	168	150	488	3008	1936	1016
Arrive On Green	0.09	0.00	0.28	0.85	0.55	0.55
Sat Flow, veh/h	1774	1583	1774	3632	3632	1583
Grp Volume(v), veh/h	152	0	458	2153	1819	249
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1770	1770	1583
Q Serve(g_s), s	15.3	0.0	45.4	41.9	86.2	12.0
Cycle Q Clear(g_c), s	15.3	0.0	45.4	41.9	86.2	12.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	168	150	488	3008	1936	1016
V/C Ratio(X)	0.91	0.00	0.94	0.72	0.94	0.25
Avail Cap(c_a), veh/h	168	150	493	3008	1936	1016
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	80.7	0.0	63.8	5.2	38.0	13.7
Incr Delay (d2), s/veh	43.8	0.0	25.9	1.5	10.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	0.0	25.8	20.7	44.7	6.8
LnGrp Delay(d),s/veh	124.5	0.0	89.6	6.7	48.4	14.3
LnGrp LOS	F		F	A	D	B
Approach Vol, veh/h	152			2611	2068	
Approach Delay, s/veh	124.5			21.2	44.3	
Approach LOS	F			C	D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	54.5	103.5				158.0		22.0
Change Period (Y+Rc), s	7.0	7.0				7.0		7.0
Max Green Setting (Gmax), s	48.0	96.0				151.0		15.0
Max Q Clear Time (g_c+I1), s	47.4	88.2				43.9		17.3
Green Ext Time (p_c), s	0.1	6.4				41.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	34.3
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	52	4	96	71	73
Future Vol, veh/h	15	52	4	96	71	73
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	57	4	104	77	79

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	229	117	156	0	-	0
Stage 1	117	-	-	-	-	-
Stage 2	112	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	759	935	1424	-	-	-
Stage 1	908	-	-	-	-	-
Stage 2	913	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	757	935	1424	-	-	-
Mov Cap-2 Maneuver	757	-	-	-	-	-
Stage 1	905	-	-	-	-	-
Stage 2	913	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1424	-	888	-	-
HCM Lane V/C Ratio	0.003	-	0.082	-	-
HCM Control Delay (s)	7.5	0	9.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-