Appendix M Transportation Impact Assessment

Appendix

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Hub Fullerton

Final

Transportation Impact Assessment

Prepared for:
Placeworks

August 2021

OC21-0790

FEHR & PEERS

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1. Introduction

This report presents the analysis and findings of the Transportation Impact Assessment (TIA) prepared for Hub at Fullerton (Project), a proposed retail and residential mixed-use development. This TIA has been prepared in accordance with the City of Fullerton's June 2020 Transportation Assessment Policies and Procedures (TAPP) guidelines with input from the City Traffic Engineer. The project site is located in the City of Fullerton, Orange County, California. The City of Fullerton is surrounded by the cities of Brea, La Habra, La Mirada, Buena Park, Anaheim, and Placentia. The project site is located at the northeast corner of the intersection of E. Chapman Avenue at N. Commonwealth Avenue, south of California State University, Fullerton, and is bounded by E. Chapman Avenue to the south, multifamily residential uses to the north, N. Commonwealth Avenue to the west, and SR-57 southbound off ramp right of way to the east. This chapter discusses the TIA purpose, study locations and analysis scenarios, analysis methods, criteria used to identify effects on transportation, significant impacts under CEQA, and report organization.

Study Purpose and Project Description

The study's purpose is to evaluate the transportation impacts of Hub at Fullerton, a mixed-use development on approximately 3.6-acres in the City of Fullerton. The proposed site is to be developed with approximately 12.4 KSF of retail land use located on the ground floor of a 420-unit multi-family housing facility. The residential facility is anticipated to function primarily as student housing but is not limited to only student residents. The facility will include amenities for residents such as a pool, a leasing center, lobby, and garage spaces. The project has two proposed right in/out driveways. The first driveway provides access to E. Chapman Avenue, and the second driveway, which is limited for use by trucks and emergency vehicles only, provides access to N. Commonwealth Avenue. The project's site plan is shown on **Figure 1.**

Report Organization

This report is divided into nine chapters as described below:

- **Chapter 1 – Introduction** discusses the purpose and organization of the report.
- **Chapter 2 – Existing Conditions** describes the transportation system in the project vicinity, including the surrounding roadway network, morning and evening peak period intersection turning movement volumes, and existing bicycle, pedestrian, and transit facilities.
- **Chapter 3 – Project Characteristics** presents relevant project information, such as the project components and project trip generation, distribution, and assignment.
- **Chapter 4 – Level of Service (LOS) Analysis** describes the LOS results for each of the previously stated analysis scenarios.
- **Chapter 5 – Site Plan Review** describes project access and circulation for all travel modes. An assessment of significance criteria related to transit, bicycle, and pedestrians, as well as criteria B through D is also provided as the significance criteria related to the operations of intersections and freeway system was discussed in prior chapters.
- **Chapter 6 – Vehicle Miles Traveled (VMT)** presents the results of the VMT assessment conducted for the project.

The LOS and VMT analysis for the Project were conducted in accordance with the City's June 2020 Transportation Assessment Policies and Procedures (TAPP) guidelines with input from the City Traffic Engineer. As noted in the guidelines, with the adoption of Senate Bill (SB) 743, VMT replaces LOS as the metric for evaluating significant transportation impacts under CEQA. However, the City of Fullerton retains LOS as a metric for evaluating the effects of projects on the transportation system, for assessing consistency with the City's General Plan, and to ensure adequate intersection sizing to accommodate traffic flows. As such, this report addresses both LOS and VMT, as well as a review of active transportation modes, public transit, and site access.

Site Plan Source: DLR Group, 2021

Figure 1

Project Site Plan

Significance Criteria

The City of Fullerton Transportation Assessment Policies and Procedures (TAPP) guidelines include the following criteria to identify if there is a potential effect on transportation as determined by the LOS analysis and/or potential significant impact under CEQA as determined by the VMT analysis. The City's guidelines also include criteria for Active Transportation and Public Transit analysis. The relevant significance criteria are presented below.

Level of Service (LOS)

The City's TAPP defines acceptable operating conditions as LOS D[1] for signalized and unsignalized intersections; unacceptable operations is LOS E and LOS F.

An effect on transportation occurs if any of the following criteria are satisfied:

1. The project causes an intersection operating at or above an acceptable operating condition to degrade to an unacceptable condition, or
2. The project causes an intersection operating at LOS E to increase in delay by 4 or more seconds per vehicle, or
3. The project causes an intersection operating at LOS F to increase in delay by 2 or more seconds per vehicle

Vehicle Miles Traveled (VMT)

The City's TAPP requires that a VMT analysis be conducted for a proposed project that does not meet any of the following criteria:

- Located in a Transit Priority Area[2];
- Located in a Low VMT-generating area;
- Project type is presumed to have a less than significant impact.

[2] Projects located in a TPA should NOT have any of the following characteristics to be eligible for screening:

1. Has a Floor Area Ratio (FAR) of less than 0.75;
2. Includes more parking for use by residents, customers, or employees of the project than required by the City;
3. Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Southern California Association of Governments [SCAG]); or
4. Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

If a project meets any of the screening criteria, no further analysis for VMT is needed.

Projects not meeting the screening criteria as noted above, are required to have a VMT analysis to determine if they create a significant VMT transportation impact under CEQA. Land use project would result in a potentially significant project-generated VMT impact if either of the following conditions are satisfied:

1. The project-generated average total daily VMT per service population in the baseline year[3] exceeds the City of Fullerton General Plan Buildout average total daily VMT per service population calculated with Origin/Destination VMT; or

2. The project-generated average total daily VMT per service population in the horizon year[4] exceeds the City of Fullerton General Plan Buildout average total daily VMT per service population calculated with Origin/Destination VMT.

Additionally, the land use project's[5] effect on VMT would be considered potentially significant for purposes of determining a cumulative impact if either of the following conditions are satisfied:

1. The addition of the project in the baseline year causes an increase in the citywide average total daily VMT per service population calculated with Boundary Method VMT; or

2. The addition of the project in the horizon year causes an increase in the citywide average total daily VMT per service population calculated with Boundary Method VMT.

Active Transportation and Public Transit Analysis

The City's TAPP requires an analysis of a project to evaluate if it conflicts with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

The project would have a significant impact on public transit or active transportation if:

1. The Project is inconsistent with adopted policies, plans, or programs regarding active transportation or public transit facilities, or otherwise decreases the performance or safety of such facilities.

[3] "Baseline year" is the year in which the CEQA analysis for the project commenced.
[4] Horizon year" is a year in the future corresponding to the forecast used for modeling purposes.
[5] For a long-range planning land use project such as a general plan, only the cumulative impact analysis of the project's effect on VMT is required.

2. Existing Conditions

This chapter describes transportation facilities in the project study area, including the surrounding roadway network, transit, pedestrian, and bicycle facilities in the project site vicinity. Existing intersection operations are also described.

Roadway System

The project is located south of California State University, Fullerton, at the northeast corner of the intersection of N. Commonwealth Avenue at E. Chapman Avenue. Regional access to the site vicinity is provided by State Route 57, E. Chapman Avenue, and State College Boulevard.

As the proposed Project is located approximately a quarter mile from the CSU Fullerton campus, the roadway system throughout the project study area is used heavily by students and faculty accessing the university campus.

The following discusses the roadways that would provide access to the site.

State Route 57 (SR-57) is a north-south freeway. In the study area, the facility is a six-lane freeway in the northbound direction and a five-lane freeway in the southbound direction. Both directions have a single High-Occupancy Vehicle (HOV) lane. Ramp interchanges near the project site at Nutwood Avenue and Chapman Avenue are signalized and operated by the California Department of Transportation (Caltrans).

E. Chapman Avenue is an east-west roadway located south of the project site. Adjacent to the Project site, the roadway provides two travel lanes in the eastbound direction and three travel lanes in the westbound direction. The posted speed limit is 40 miles per hour (mph). No on-street parking is permitted. Sidewalk is provided only on the northern side of the roadway. No bike facilities are present along the segment of E. Chapman Avenue through the study area. Mid-block unsignalized intersections along the roadway segment have designated left turn pockets with U-turns allowed.

N. Commonwealth Avenue is an north-south roadway. The roadway provides two lanes of travel in both directions. The posted speed limit is 30 miles per hour (mph). Limited on street parking is available southbound on the roadway south of College Place. Sidewalks and class two bikeway facilities are present on both sides of the roadway. Mid-block unsignalized intersections along this segment have designated left turn pockets with U-turns allowed.

Nutwood Avenue is an east-west roadway located north of the project site. The roadway provides three travel lanes in westbound direction and two travel lanes in the eastbound direction west of SR-57. West of N. Commonwealth Avenue, the eastbound direction provides an additional travel lane. The posted speed limit is 30 miles per hour (mph). No on-street parking is permitted on either side of the roadway segment, sidewalks are located on both sides of the roadway segment, and no bikeway facilities are present. Mid-block unsignalized intersections along this segment have designated left turn pockets with U-turns allowed.

State College Boulevard is a north-south roadway located west of the project site. The roadway provides three travel lanes in each direction. The posted speed limit is 40 miles per hour (mph). No on-street parking is permitted on either side of the roadway segment, sidewalks are located on both sides of the roadway segment, and no bikeway facilities are present. There is a shared two-way left turn lane, and signalized intersections have designated left turn pockets.

Traffic Volumes

Due to traffic conditions from the current COVID-19 pandemic, which included the closure of most on-campus CSU Fullerton classes and facilities, it was not appropriate to collect traffic volumes at the study intersections. Existing (2021) peak hour turning movement volumes were developed using historic count data collected in 2011 and 2019 in the study area for other traffic studies. The growth between 2011 and 2019 was observed to be relatively flat, and 2011 counts were increased to reflect the growth of traffic from developments that have occurred in the area since 2011.

Peak hour intersection vehicle volumes are summarized on **Figure 3** along with existing lane configurations and traffic controls for the following study intersections:

1. Commonwealth at Nutwood Avenue
2. SR-57 SB Ramps at Nutwood Avenue
3. SR-57 NB Ramps at Nutwood Avenue
4. State College Boulevard at Chapman Avenue
5. Commonwealth Avenue at Chapman Avenue
6. SR-57 SB Ramps at Chapman Avenue
7. SR-57 NB Ramps at Chapman Avenue

The traffic counts for existing conditions are provided in **Appendix A**.

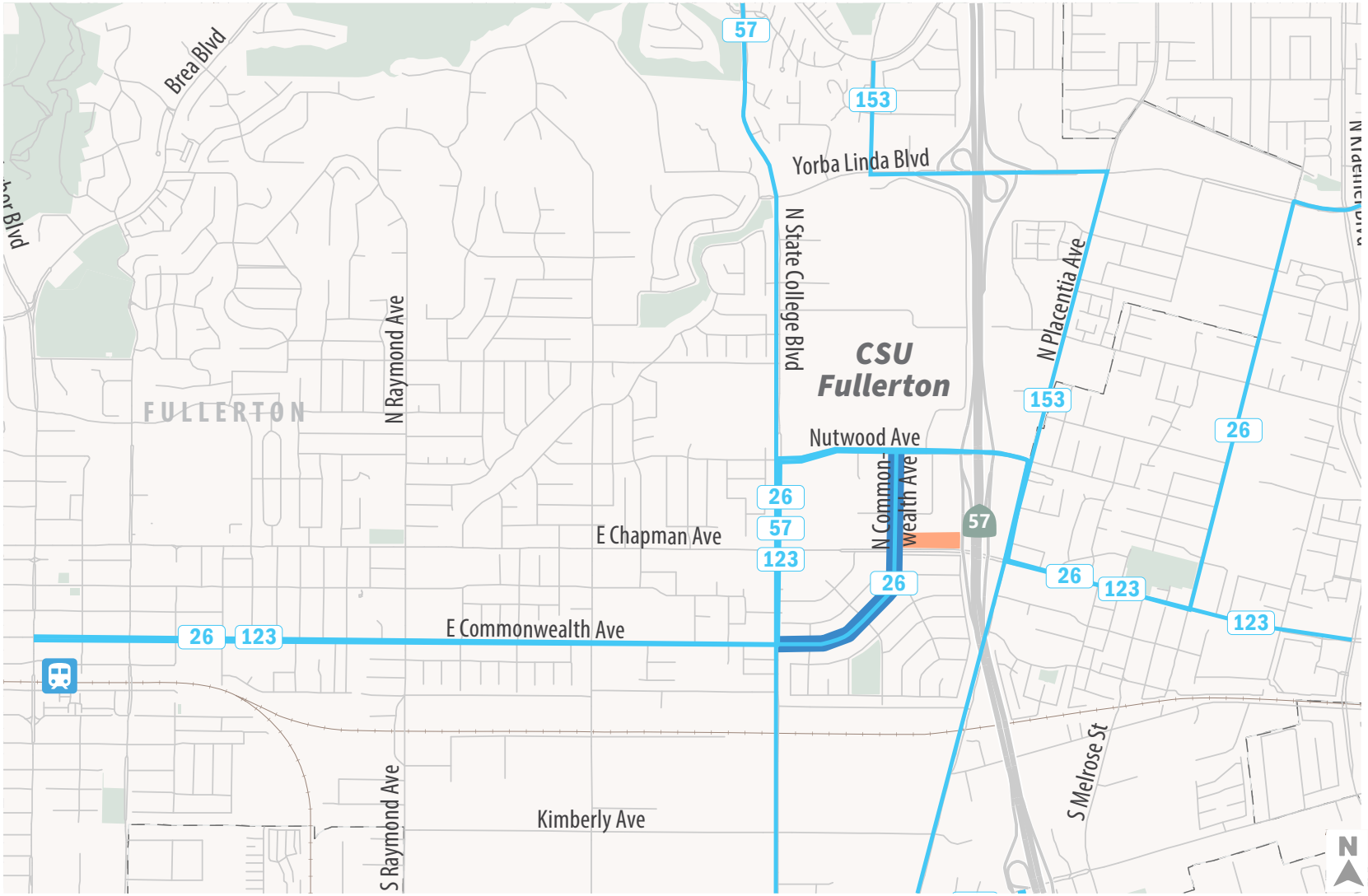
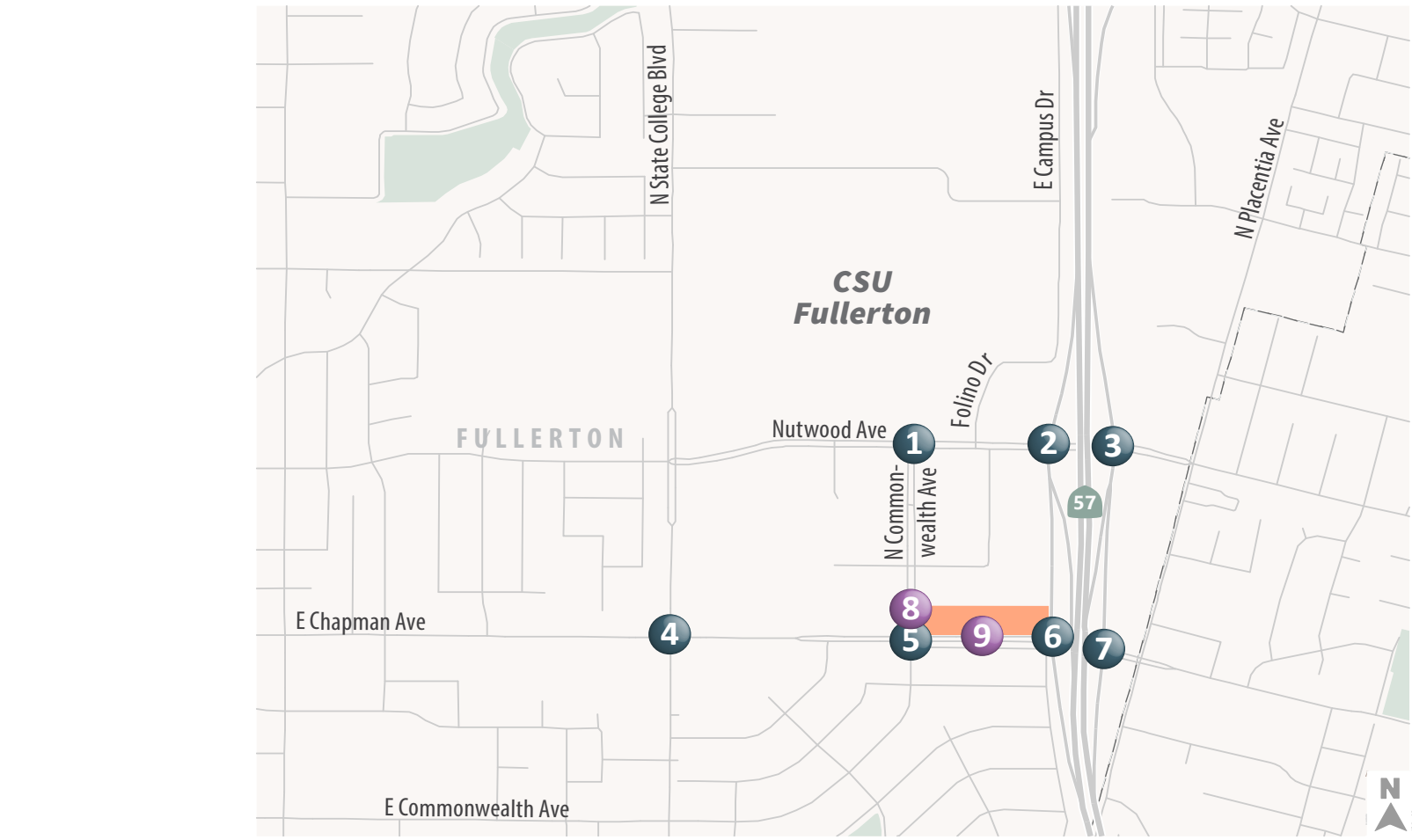


Figure 2

Project Site Vicinity



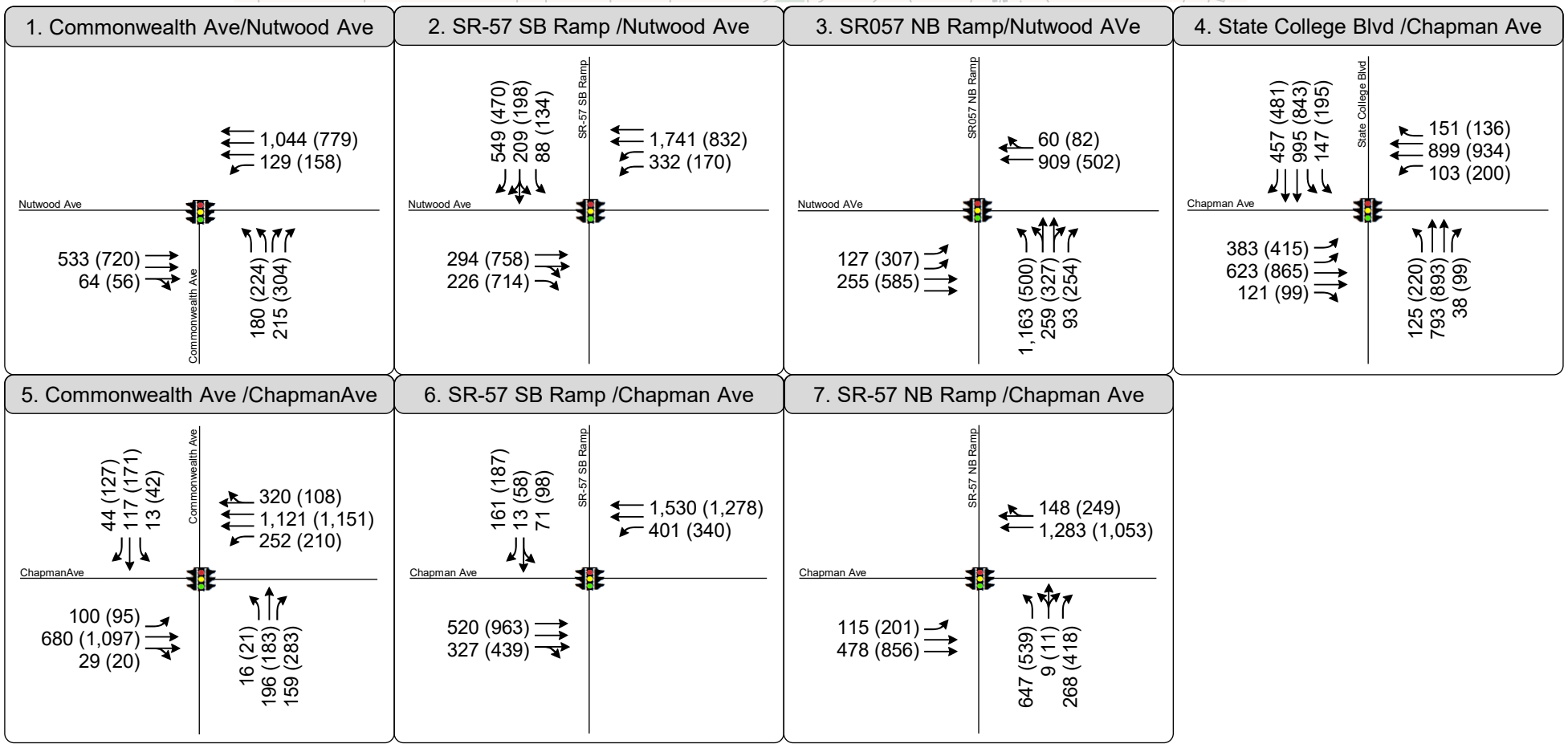


Figure 3

Peak Hour Intersection Volumes, Lane Configurations, and Traffic Control - Existing Conditions

Pedestrian and Bicycle Facilities

Pedestrian facilities include sidewalks, crosswalks, pedestrian signals and multi-use trails. Excluding E. Chapman Avenue, which does not provide sidewalks on the southern side of the segment, roadways in the study area generally provide sidewalks on both sides of the street. Sidewalks are provided on Commonwealth Avenue and Chapman Avenue along the Project site frontage. At the existing signalized intersections in the area, crosswalks and pedestrian push-button actuated signals are provided. Signalized intersections on Nutwood Avenue, within the study area, have highly visible crosswalk striping.

Bicycle facilities include the following:

- **Bike paths (Class I)** – Paved trails that are separated from roadways. These trails are also shared with pedestrians.
- **Bike lanes (Class II)** – Lanes on roadways designated for use by bicycles through striping, pavement legends, and signs.
- **Bike routes (Class III)** – Roadways designated for bicycle use by signs only; may or may not include additional pavement width for cyclists.
- **Separated Bikeway (Class IV)** – Separated bikeways, also referred to as cycle tracks or protected bikeways, are bikeways for the exclusive use of bicycles which are physically separated from vehicle traffic. Separated Bikeways were recently adopted by Caltrans in 2015. Types of separation may include, but are not limited to, grade separation, flexible posts, physical barriers, or on-street parking.

N. Commonwealth Avenue is the only roadway in the study area that currently provides bikeway facilities, providing Class II bicycle facilities in both directions.

Transit Service

Transit service in the study area is offered by Orange County Transportation Authority (OCTA), Metrolink, and Amtrak.

Orange County Transportation Authority

OCTA provides public transportation service throughout Orange County, California. OCTA bus routes within a half mile of the Project site include:

Route 26 (Fullerton to Yorba Linda) Route 26 runs daily between approximately 7:00 AM and 7:30 PM with headways of about 45 minutes. There is an existing bus stop for Route 26 on Commonwealth Avenue along the project frontage. Prior to COVID-19, Route 26 operated with 15-minute headways during peak commute hours on weekdays.

Route 57 (Brea to Newport Beach) runs Monday through Saturday between approximately 3:55 AM and 2:00 AM with variable headways of about 15 to 70 minutes. During peak commute hours, it operates with 15-minute headways. On Sundays and holidays, it runs between approximately 4:00 AM and 2:00 AM with variable headways of about 15 to 70 minutes.

Route 123 (Anaheim to Huntington Beach) runs weekdays between approximately 5:30 AM and 10:00 PM with headways of about 60 minutes. Route 123 does not operate on the weekend.

Route 153 (Brea to Anaheim) runs Monday through Saturday between approximately 6:00 AM and 8:45 PM with headways of about 60 minutes. On Sundays, it runs between approximately 7:00 AM and 7:45 PM with headways of about 60 minutes.

Metrolink and Amtrak Rail Service

Metrolink and Amtrak service the study area at the Fullerton Station, which is approximately two and a half miles from the Project site. OCTA Route 26 connects to the Fullerton Station.

Metrolink - Orange County Line

Metrolink provides regional rail service in the Greater Los Angeles region. The Orange County line runs from Oceanside to Los Angeles between approximately 4:35 AM and 11:55 PM on weekdays and between approximately 8:15 AM and 8:00 PM on weekends. On weekdays, the Orange County line stops at the Fullerton Station between approximately 4:45 AM and 10:30 PM with variable headways of about 15 to 90 minutes. On weekends, the Orange County line stops at the Fullerton Station between approximately 9:15 AM and 7:00 PM with variable headways of about 120 to 130 minutes.

Amtrak - Pacific Surfliner

Amtrak provides rail service though California and other states. The Pacific Surfliner line that overlaps the Metrolink Orange County line runs daily between approximately 4:10 AM and 12:10 AM. The Pacific Surfliner stops at the Fullerton Station on weekdays between approximately 6:10 AM and 11:10 PM with variable headways of about 45 to 125 minutes. The Pacific Surfliner stops at the Fullerton Station on weekends between approximately 6:35 AM and 11:10 PM with variable headways of about 45 to 125 minutes.

3. Project Characteristics

This chapter provides an overview of the proposed project components and addresses the proposed project trip generation, distribution, and assignment characteristics, allowing for an evaluation of project impacts on the surrounding roadway network. The amount of traffic associated with the project was estimated using a three-step process:

1. **Trip Generation** – The *amount* of vehicle traffic entering/exiting the project site was estimated.
2. **Trip Distribution** – The *direction* trips would use to approach and depart the site was projected.
3. **Trip Assignment** – Trips were then *assigned* to specific roadway segments and intersection turning movements.

Project Description

As currently contemplated, the approximately 3.6-acre site would be developed with approximately 12,400 square feet of retail land use located on the ground floor of a 420-unit multi-family housing facility. The residential facility is anticipated to function primarily as student housing but is not limited to only student residents. The project will provide 376 vehicle parking stalls and 197 bicycle parking spacing. Vehicle parking will be priced separately from the cost of renting a unit.

The project site is currently developed with four 2-story (27.6-foot high) office buildings, totaling approximately 55,332 square feet, and associated surface parking lot. No credit was taken in the traffic analysis for existing uses on-site.

The Project is proposed with one main left-in / right-in /right-out driveway on E. Chapman Avenue for residents and visitors and one right-in / right-out driveway for delivery, service, and emergency vehicles on N. Commonwealth Avenue.

Project Trip Generation

Trip generation refers to the process of estimating the amount of vehicular traffic a project would add to the surrounding roadway system. Estimates are created for the daily condition and for the peak one-hour period during the morning and evening commute when traffic volumes on the adjacent streets are typically the highest. Given the student housing nature of the project and the project's location relative to California

State University, Fullerton, (CSUF) and Hope International University (HIU), the total number of vehicle trips were reduced to account for the anticipated high percentage of residents that will forgo having a car and will walk or bike to/from CSUF and HIU.

Project trip generation was estimated using the Fehr & Peers trip generation tool, MainStreet. MainStreet uses rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (10th Edition). ITE trip generation rates for Multi-Family Residential (ITE Code 221) were used for the residential facility, and ITE trip generation rates for Shopping Center (ITE Code 820) were used for the retail uses of the project. MainStreet also incorporates information such as local land use and the built-out environment surrounding the project site to apply appropriate reductions to the project's trip generation. These reductions include internal site capture and shift to active transportation modes. A reduction was also applied to the daily traffic volumes to account for the limited parking supply offered by the Project[6]. The resulting anticipated Project vehicular trip generation is outlined in **Table 1.**

The proposed project is expected to generate approximately 1,730 weekday vehicle trips, including approximately 124 morning peak hour and 176 evening peak hour trips.

[6] A 12% reduction in daily trips was applied based on the information presented in *Quantifying Greenhouse Gas Mitigation Measures* (CAPCOA, 2010) under measure PDT-1 Limit Parking Supply. As this information was based on changes in daily travel, the reduction was applied only to the daily trip generation.

Table 1: Vehicle Trip Generation Estimates

Use	Size	Vehicle Trips						
		Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Residential								
(221) – Multi-Family Mid Rise	420 DUs	2285	39	112	151	113	72	185
MainStreet Reductions		(574)	(9)	(28)	(37)	(27)	(17)	(44)
Limited Parking Supply		(274)	-	-	-	-	-	-
Residential Subtotal		1437	30	84	114	86	55	141
Retail								
(820) – Shopping Center	12.4 KSF	467	7	5	12	23	24	47
MainStreet Reductions		(115)	(1)	(1)	(2)	(6)	(6)	(12)
Parking Supply Reduction		(56)	-	-	-	-	-	-
Retail Subtotal		293	6	4	10	17	18	35
Total		1,730	36	88	124	103	73	176

Notes:

1. ITE land use category 221 – Multi Family Mid Rise (Adj Streets):
   Saturday Daily: (T) = 4.91 (X)
   Sunday Daily: (T) = 4.09 (X)
   Weekday Daily: (T) = 5.44 (X)
   AM Peak Hour: T = 0.36 (X); Enter = 26%; Exit = 74%
   PM Peak Hour: T = 0.44 (X); Enter = 61%; Exit = 39%
2. ITE land use category 820 – Shopping Center (Adj Streets):
   Saturday Daily: (T) = 46.12 (X)
   Sunday Daily: (T) = 21.1 (X)
   Weekday Daily: (T) = 37.75 (X)
   AM Peak Hour: T = 0.94 (X); Enter = 62%; Exit = 38%
   PM Peak Hour: T = 3.81 (X); Enter = 48%; Exit = 52%

Source: Trip Generation Manual 10th Edition (Institute of Transportation Engineers, 2017)

Project Trip Distribution and Assignment

Project trip distribution refers to the directions of approach and departure that vehicles would take to access and leave the site. Estimates of regional project trip distribution were developed based on a review of travel patterns projected in the Orange County Transportation Analysis Model (OCTAM), existing travel patterns in the area, the location of complementary land uses, such as schools, employment centers, and retail/recreational opportunities, discussion with City staff, and local knowledge of the study area.

Vehicular trips are only a portion of the total Project trips. It is anticipated that based on the Project location and proximity to CSUF and HIU, most of the resident trips to and from the two universities will be walking, biking, or other non-motorized travel due to the high cost of parking at the universities. Most vehicular trips are assumed to leave the study area, the Project trip distribution assumes 2% of vehicular trips are destined to or originating from CSUF.

The vehicle trip distribution percentages are shown on **Figure 4.** The Project's vehicular trips were then assigned to the roadway network, as shown on **Figure 5.**

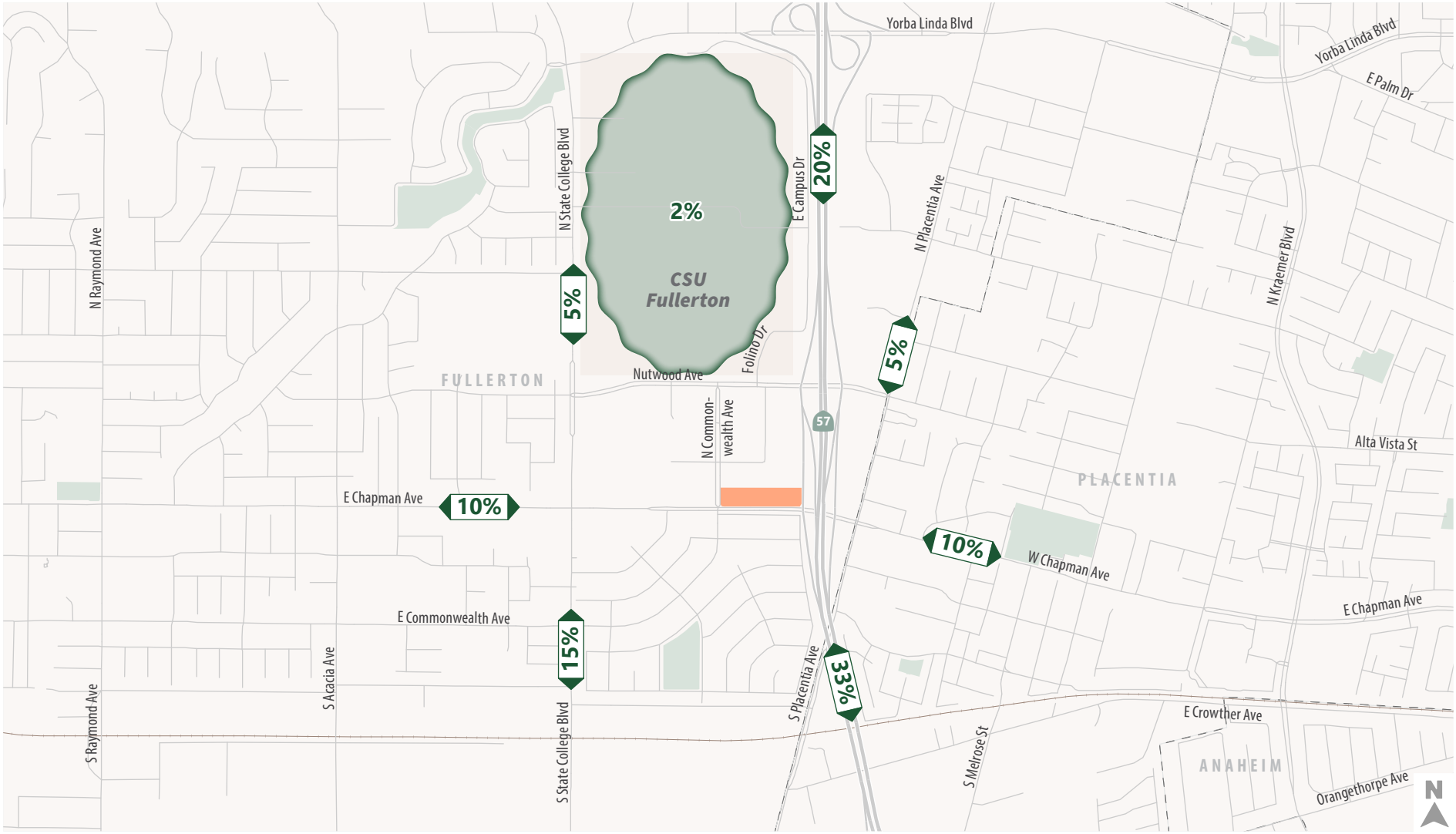


Figure 4

Project Vehicular Trip Distribution

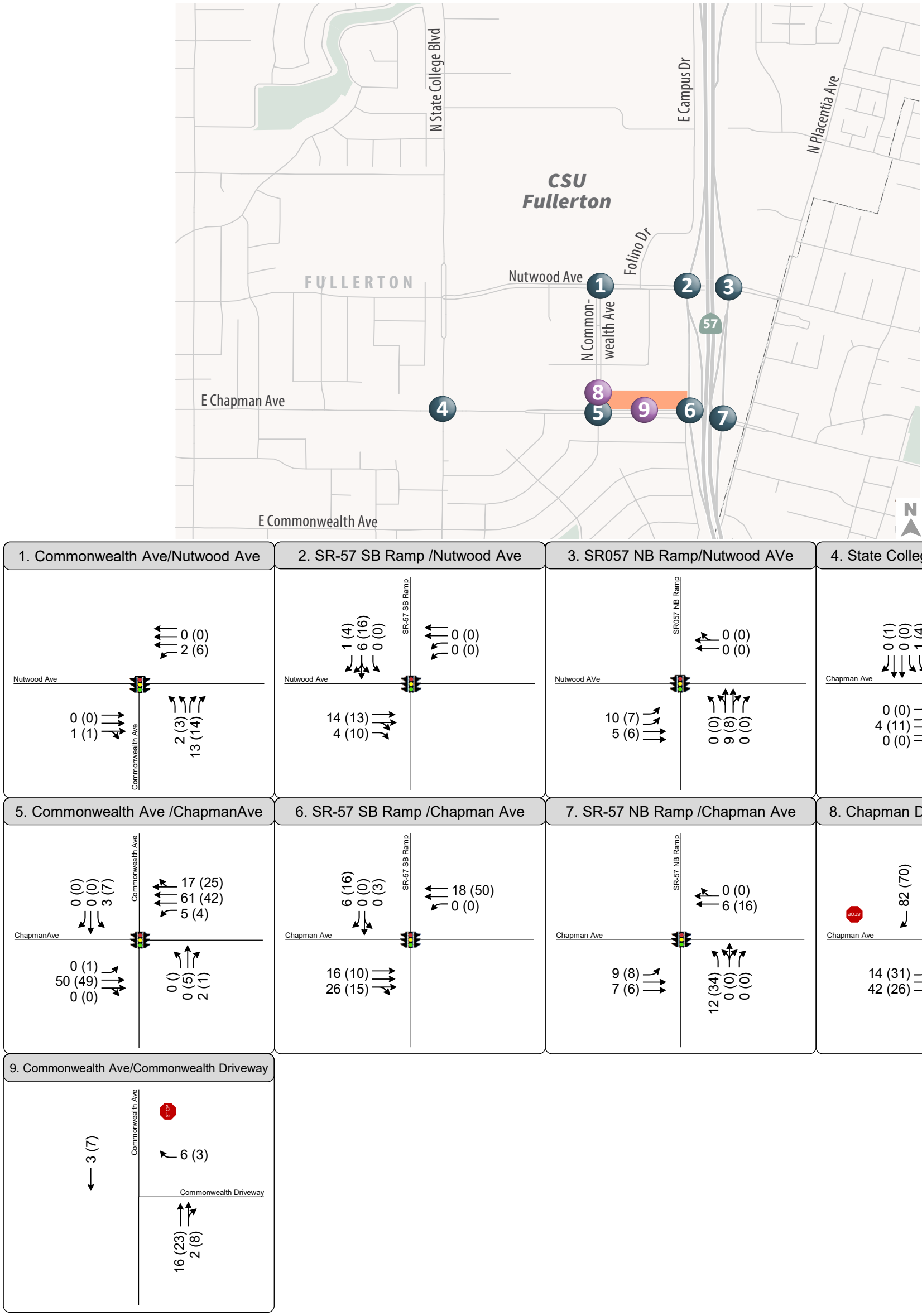


Figure 5

Project Trip Assignment

4. Level of Service (LOS) Analysis

Analysis Methods

Level of Service (LOS) is system of grading the operational performance of a roadway or intersection from A to F. LOS is a qualitative description of traffic flow from a vehicle driver's perspective based on factors such as speed, travel time, delay, and freedom to maneuver. Six levels of service are defined ranging from LOS A (free-flow conditions) to LOS F (over capacity conditions). LOS E corresponds to operations "at capacity." When traffic demands exceed roadway or intersection capacity, extreme congestion and delay result and operations are designated LOS F.

Signalized Intersections

Traffic conditions at signalized intersections were evaluated using methods developed by the Transportation Research Board (TRB), as documented in the *6th Edition Highway Capacity Manual* (2016 HCM) for vehicles using the traffic modeling analysis software Synchro 10.0. The HCM method calculates control delay at an intersection based on inputs such as traffic volumes, lane geometry, signal phasing and timing, pedestrian crossing times, and peak hour factors. Control delay is defined as the delay directly associated with the traffic control device (i.e., a stop sign or a traffic signal) and specifically includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The relationship between LOS and control delay is summarized in **Table 2**.

Table 2: Signalized Intersection LOS Criteria

Level of Service	Description	Delay in Seconds per Vehicle
A	Progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	< 10.0
B	Progression is good, cycle lengths are short, or both. More vehicles stop than with LOS A, causing higher levels of average delay.	> 10.0 to 20.0
C	Higher congestion may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level, though many still pass through the intersection without stopping.	> 20.0 to 35.0
D	The city of Fullerton recognizes this level as the limit of acceptable operating conditions. The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	> 35.0 to 55.0
E	This level is considered unacceptable. These high delay values generally indicate poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	> 55.0 to 80.0
F	This level is considered unacceptable with oversaturation, which is when arrival flow rates exceed the capacity of the intersection. This level may also occur at high V/C ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be contributing factors to such delay levels.	> 80.0

Source: 2016 *Highway Capacity Manual*

Unsignalized Intersections

For unsignalized (all-way stop controlled and side-street stop controlled) intersections, the 2016 HCM method for unsignalized intersections was used. With this method, operations are defined by the average control delay per vehicle (measured in seconds). The control delay incorporates delay associated with deceleration, acceleration, stopping, and moving up in queue. **Table 3** summarizes the relationship between LOS and delay for unsignalized intersections. At side-street stop-controlled intersections, the delay is calculated for each stop-controlled movement, the left turn movement from the major street, as well as the intersection average. The intersection average delay and highest movement/approach delay are reported for side-street stop-controlled intersections.

Table 3: Unsignalized Intersection LOS Criteria

Level of Service	Description	Delay in Seconds per Vehicle
A	Little or no delays	≤ 10.0
B	Short traffic delays	> 10.0 to 15.0
C	Average traffic delays	> 15.0 to 25.0
D	Long traffic delays	> 25.0 to 35.0
E	Very long traffic delays	> 35.0 to 50.0
F	Severe Congestion	> 50.0

Source: 2016 *Highway Capacity Manual*

Study Locations and Analysis Scenarios

Project effects on study area facilities were determined by measuring how project traffic could change the operations of off-site intersections in the vicinity of the site during the morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak periods. The following intersections were selected based on a review of the project location and estimates of the added traffic from the project:

8. Commonwealth at Nutwood Avenue
9. SR-57 SB Ramps at Nutwood Avenue
10. SR-57 NB Ramps at Nutwood Avenue
11. State College Boulevard at Chapman Avenue
12. Commonwealth Avenue at Chapman Avenue
13. SR-57 SB Ramps at Chapman Avenue
14. SR-57 NB Ramps at Chapman Avenue
15. Chapman Driveway at Chapman Avenue (Project Driveway)
16. Commonwealth Avenue at Commonwealth Driveway (Project Driveway)

The following scenarios were evaluated:

- ***Existing*** – Existing (2021) conditions based on recent traffic counts, as described in Chapter 2
- ***Project Opening Year (2024) Conditions*** – Existing (2021) traffic volumes increased based on the growth rate in the study area (derived from the OCTAM travel demand forecasting model)
- ***Project Opening Year (2024) With Project Conditions*** – Project Opening Year (2024) Conditions' traffic volumes plus traffic generated by the proposed project

- ***Future Year (2045) Conditions*** – Traffic volumes estimated using the OCTAM travel demand forecasting model
- ***Future Year (2045) With Project Conditions*** – Future Year (2045) Conditions' traffic volumes plus traffic generated by the proposed project

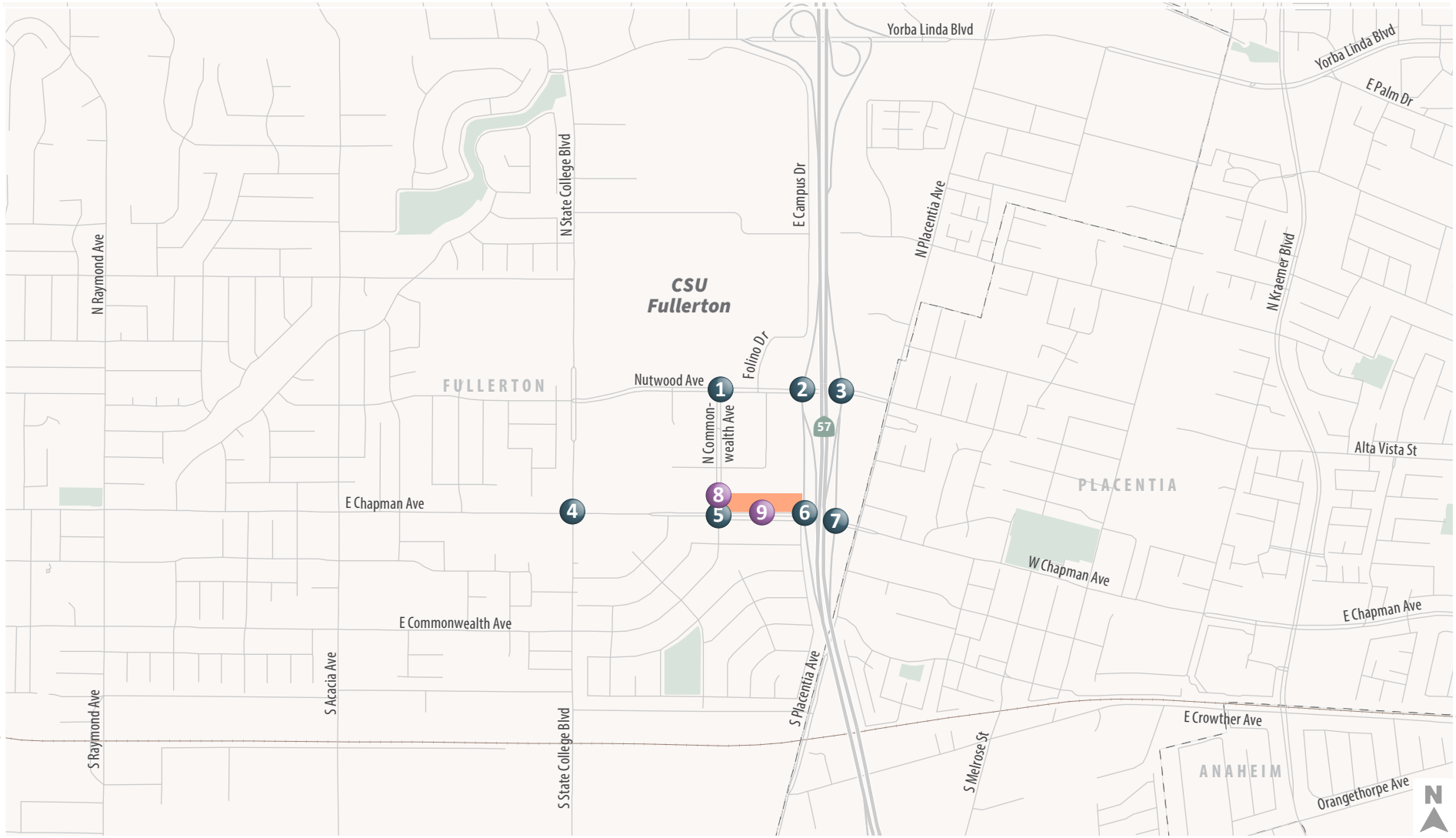


Figure 6

Study Intersection Locations

Existing Intersection Levels of Service

As previously stated, given the current COVID-19 pandemic, it was not appropriate to collect traffic volumes at the study intersections, so the existing 2021 peak hour turning movement volumes had to be developed, as described in Chapter 2.

These volumes along with existing intersection lane configurations were used to calculate the levels of service for the study intersections during each peak hour, using the Synchro 10.0 software program, as presented in **Table 4.** Peak hour factors and pedestrian and bicycle activity were taken from the data collected for the College Town Specific Plan. Detailed intersection LOS calculation worksheets are presented in **Appendix B**.

As presented int Table 4, all study intersections currently operate within the LOS standards as outlined in the City's TAPP, except State College Boulevard and Chapman Avenue, which operates at an unacceptable LOS E during the AM peak hour and LOS F in the PM peak hour. The City of Fullerton is actively monitoring traffic operations at this intersection and adjusting traffic signal timing parameters as necessary; however, the City has no current traffic flow improvement projects or future roadway widening plans to address the peak period LOS deficiencies occurring at this intersection.

Queuing results are presented in **Appendix C.**

Table 4: Existing Conditions Peak Hour Intersection LOS Summary

Intersection	Control[1]	Peak Hour	Delay	LOS
1. Commonwealth Avenue at Nutwood Avenue[3]	Signal	AM PM	12.8 16.1	B B
2. SR-57 SB Ramps at Nutwood Avenue[2]	Signal	AM PM	26.8 19.7	C B
3. SR-57 NB Ramps at Nutwood Avenue[2]	Signal	AM PM	32.5 25.6	C C
4. State College Boulevard at Chapman Avenue[2]	Signal	AM PM	**70.2** **89.9**	**E** **F**
5. Commonwealth Avenue at Chapman Avenue[2]	Signal	AM PM	16.9 18.9	B B
6. SR-57 SB Ramps at Chapman Avenue[2]	Signal	AM PM	16.0 17.7	B B
7. SR-57 NB Ramps at Chapman Avenue[2]	Signal	AM PM	27.1 30.7	C C

Notes:
1. Signal = signalized intersection / Side-Street Stop = Two-Way Stop Controlled
2. Average intersection delay is calculated using the HCM 6th method for vehicles
3. Average intersection delay is calculated using HCM 2000 method for vehicles
Source: Fehr & Peers, 2021

Opening Year (2024) Conditions

Opening Year Forecasts

The Existing Conditions peak hour turning movement volumes were increased based on the growth rate in the study area that was observed in the OCTAM travel demand model. These increased peak hour volumes are summarized in **Figure 7** and were used to calculate LOS for the study intersections during each peak hour, as presented in **Table 5.**

The traffic volumes from the Opening Year (2024) Conditions scenario, presented in **Figure 7,** were added to the project trip assignment, presented in **Figure 5.** The Opening Year With Project volumes are shown on **Figure 8** and were used to calculate LOS for the study intersections during each peak hour, as presented in **Table 5.** Detailed intersection LOS calculation worksheets are presented in **Appendix B.**

Opening Year Intersection Operations

Although LOS is no longer used to determine significant transportation impacts under CEQA, the LOS evaluations provided here are intended for informational purposes for decision makers, City staff, and the readers consideration. Freeway ramp intersections at SR-57 at Nutwood Avenue and Chapman Avenue are similarly provided for informational purposes for Caltrans.

As shown, most study intersections operate within the level of service standards set by the City of Fullerton in the Opening Year with and without the project. State College Boulevard at Chapman Avenue operates at unacceptable LOS E in the AM peak hour and unacceptable LOS F in the PM peak hour in both the Opening Year and Opening Year with Project conditions.

Queuing results are presented in **Appendix C.**

Table 5: Opening Year (2024) Conditions Peak Hour Intersection LOS Summary

Intersection	Control[1]	Peak Hour	Opening Year (2024)		Opening Year (2024) With Project	
			Delay	LOS	Delay	LOS
1. Commonwealth Avenue at Nutwood Avenue[3]	Signal	AM PM	12.0 15.5	B B	12.4 15.8	B B
2. SR-57 SB Ramps at Nutwood Avenue[2]	Signal	AM PM	28.2 20.8	C C	28.4 21.3	C C
3. SR-57 NB Ramps at Nutwood Avenue[2]	Signal	AM PM	33.8 25.9	C C	34.2 26.1	C C
4. State College Boulevard at Chapman Avenue[2]	Signal	AM PM	**77.7** **98.1**	**E** **F**	**78.0** **99.2**	**E** **F**
5. Commonwealth Avenue at Chapman Avenue[2]	Signal	AM PM	17.3 19.5	B B	17.7 20.1	B C
6. SR-57 SB Ramps at Chapman Avenue[2]	Signal	AM PM	16.7 18.3	B B	17.0 19.0	B B
7. SR-57 NB Ramps at Chapman Avenue[2]	Signal	AM PM	28.2 32.4	C C	29.1 34.6	C C
8. Chapman Driveway at Chapman Avenue (Project Driveway)[2]	Side-Street Stop	AM PM	--	--	1.0 (31.9) 1.0 (24.6)	A (D) A (C)
9. Commonwealth Avenue at Commonwealth Driveway (Project Driveway)[2]	Side Street Stop	AM PM	--	--	1.0 (10.7) 1.0 (9.7)	A (B) A (A)

Notes:
1. Signal = signalized intersection / Side-Street Stop = Two-Way Stop Controlled
2. Average intersection delay is calculated using the HCM 6th method for vehicles.
3. Average intersection delay is calculated using HCM 2000 method for vehicles
4. Side-street stop-controlled intersection delay I presented as intersection average (worst approach) in for delay and LOS. The worst approach delay for both Project driveways is the driveway.

Source: Fehr & Peers, 2021

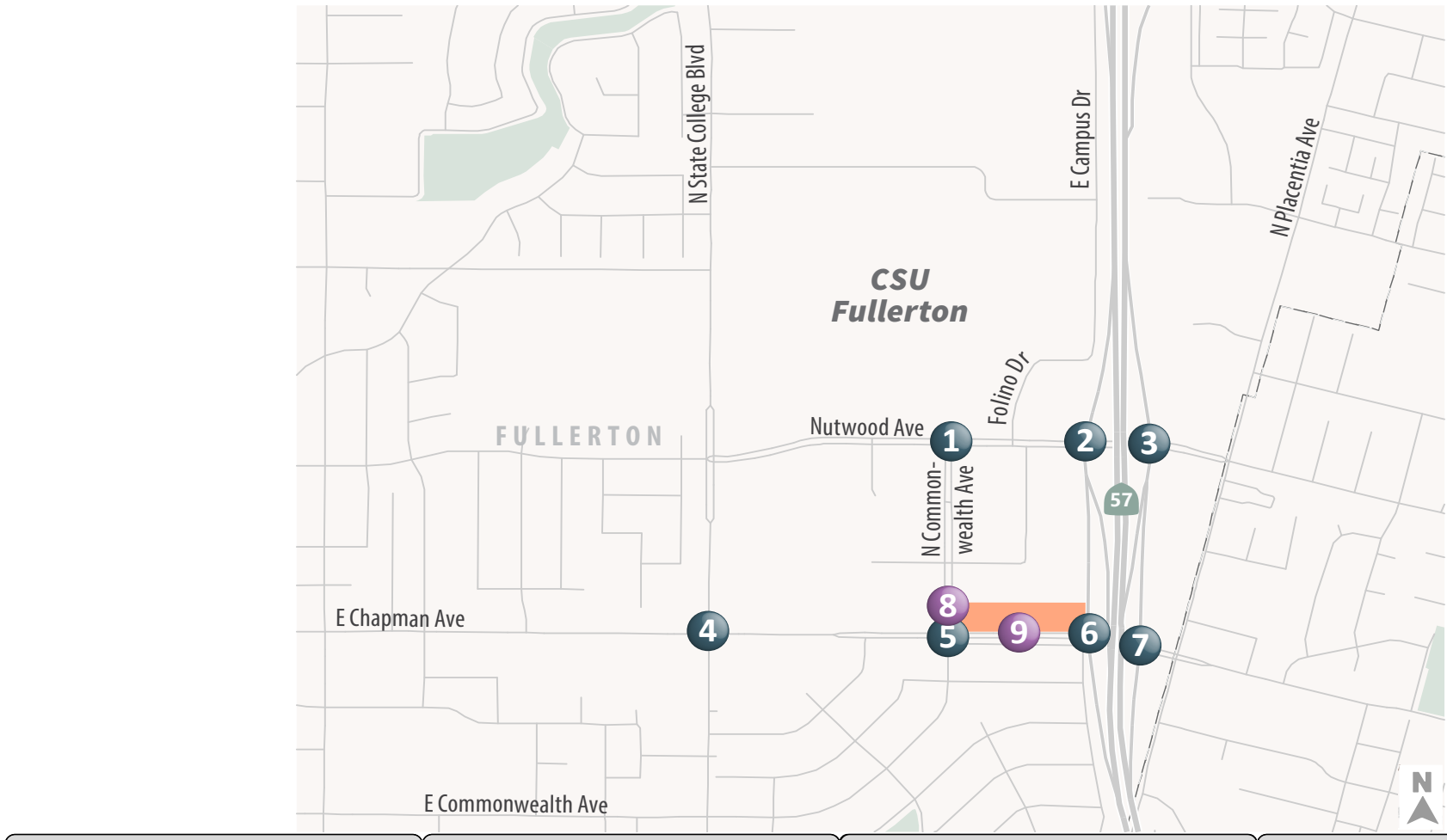
Opening Year Effects

As outlined in the City's TAPP, LOS D has been established as the acceptable operating grade for all intersections in the City.

An effect on transportation occurs if any of the following criteria are satisfied:

1. The project causes an intersection operating at or above an acceptable operating condition to degrade to an unacceptable condition, or
2. The project causes an intersection operating at LOS E to increase in delay by 4 or more seconds [er vehicle, or
3. The project causes an intersection operating at LOS F to increase in delay by 2 or more seconds per vehicle

As presented in Table 5, all study intersection are expected to operate within the LOS standards as outlined in the City's TAPP in the Opening Year (2024) with and without the Project, except the intersection of State College Boulevard and Chapman Avenue, which is expected to continue to operate at an unacceptable LOS E and LOS F during the AM and PM peak hours respectively. However, since the Project is expected to add less than four seconds of delay per vehicle in the AM peak hour and less than two seconds of delay per vehicle in the PM peak hour to the intersection; therefore, in accordance with the City's TAPP, the slight degradation in intersection operation is not considered significant and thus the Project is not deemed responsible for providing traffic capacity or flow improvements at the intersection.



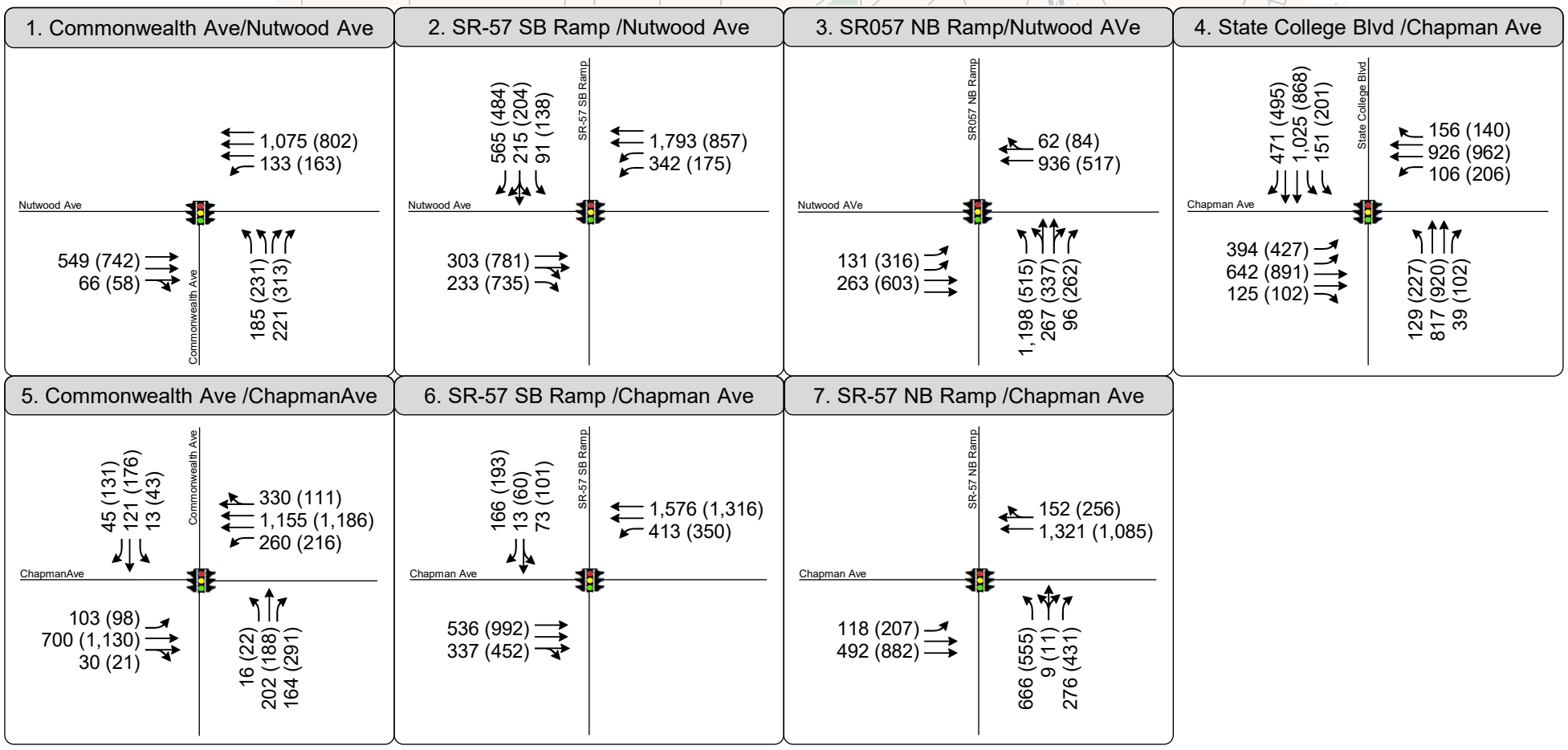


Figure 7

Peak Hour Intersection Volumes, Lane Configurations, and Traffic Control - Opening Year (2024) Without Project Conditions

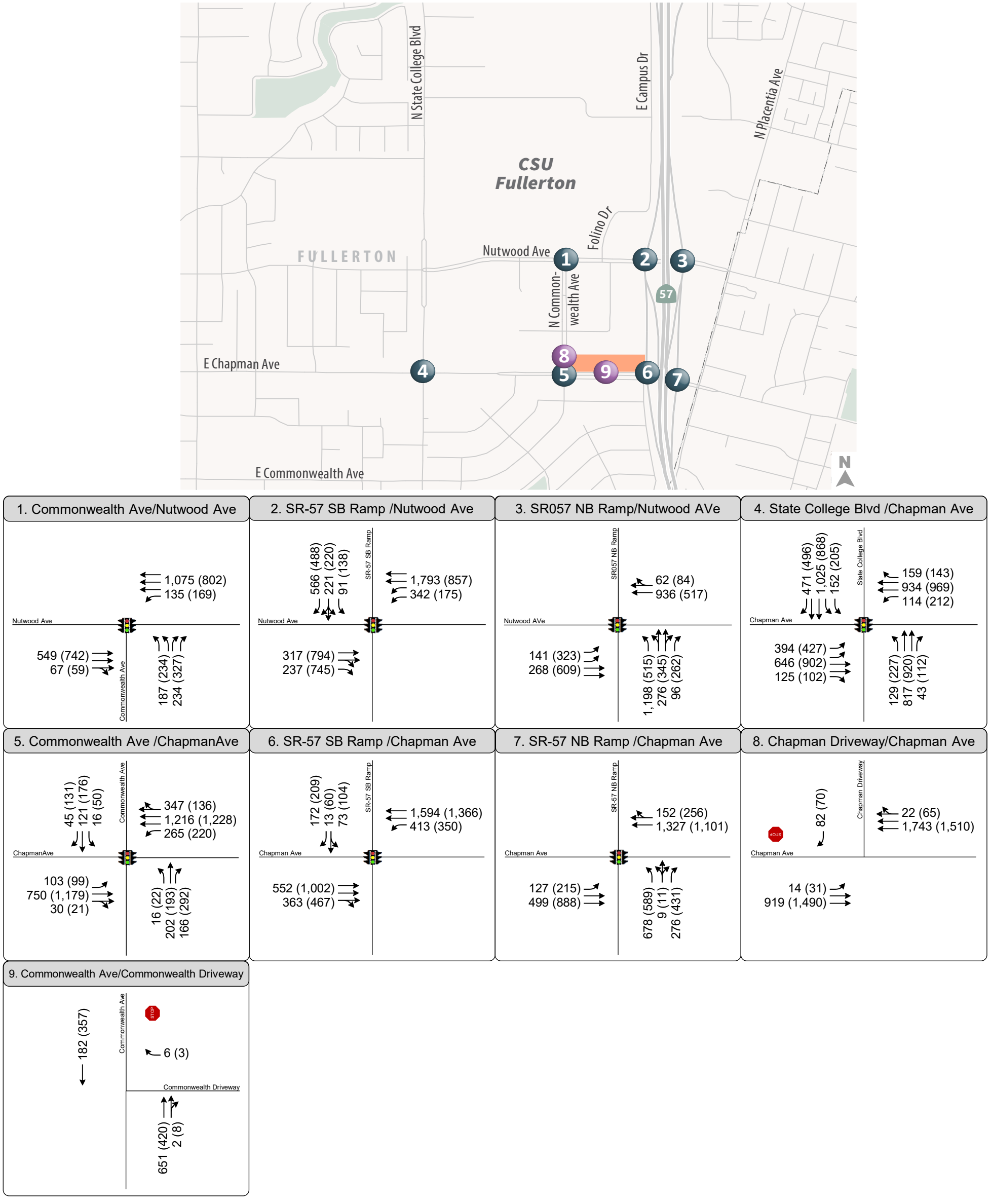


Figure 8

Peak Hour Intersection Volumes, Lane Configurations, and Traffic Control - Opening Year (2024) With Project Conditions

Future Year (2045) Conditions Traffic

Future Year Forecasts

The Orange County Transportation Analysis Model (OCTAM) version 5.0 was used to evaluate the expected level of traffic volume growth in the study area. The model includes base year 2016 and future year 2045 scenarios, and the difference between the two scenarios was applied to the Existing 2021 turning movement to produce Future Year 2045 turning movement forecasts.

The traffic volumes from the Future Year (2045) Without Project Conditions scenario, shown on **Figure 9,** were added to the project trip assignment, shown on **Figure 5.** The 2045 plus project volumes are shown on **Figure 10** and were used to calculate the levels of service for the study intersections during each peak hour, using Synchro 10.0 software program, as presented in **Table 6.** Detailed intersection LOS calculation worksheets are presented in **Appendix B.**

Future Year Intersection Operations

Although LOS is no longer used to determine significant transportation impacts under CEQA, the LOS evaluations provided here are intended for informational purposes for decision makers, City staff, and the readers consideration. Freeway ramp intersections at SR-57 at Nutwood Avenue and Chapman Avenue are similarly provided for informational purposes for Caltrans.

As presented in Table 6, most study intersections are projected to operate within the LOS standards as outlined in the City's TAPP in the Future Year (2045) with and without the Project. The following four intersections are projected to operate an unacceptable LOS levels during one or more peak hours:

- The Project's exit at the main Chapman Avenue driveway is projected to operate at LOS F in the AM peak hour."
- SR-57 SB Ramps at Nutwood Avenue is projected to operate at LOS E in the AM peak hour with and without the Project:
- SR-57 NB Ramps at Nutwood Avenue is projected to operate at LOS E in the AM peak hour with and without the Project
- State College Boulevard at Chapman Avenue is projected to operate at LOS F in the AM and PM peak hours with and without the Project

Queuing results are presented in **Appendix C.**

Table 6: Future Year (2045) Conditions Peak Hour Intersection LOS Summary

Intersection	Control[1]	Peak Hour	Future Year (2045)		Future Year (2045) With Project Conditions	
			Delay	LOS	Delay	LOS
1. Commonwealth Avenue at Nutwood Avenue[3]	Signal	AM PM	13.5 17.1	B B	13.9 17.6	B B
2. SR-57 SB Ramps at Nutwood Avenue[2]	Signal	AM PM	**61.1** 26.6	**E** C	**61.2** 27.4	**E** C
3. SR-57 NB Ramps at Nutwood Avenue[2]	Signal	AM PM	**57.7** 29.7	**E** C	**58.4** 29.8	**E** C
4. State College Boulevard at Chapman Avenue[2]	Signal	AM PM	**139.3** **173.8**	**F** **F**	**139.8** **175.4**	**F** **F**
5. Commonwealth Avenue at Chapman Avenue[2]	Signal	AM PM	20.7 26.5	C C	21.6 29.1	C C
6. SR-57 SB Ramps at Chapman Avenue[2]	Signal	AM PM	20.4 24.5	C C	20.9 25.8	C C
7. SR-57 NB Ramps at Chapman Avenue[2]	Signal	AM PM	46.9 47.8	D D	49.8 51.6	D D
8. Chapman Driveway at Chapman Avenue (Project Driveway)[2]	Side-Street Stop	AM PM	--	--	**1.5 (50.4)** 1.0 (33.4)	**A (F)** A (D)
9. Commonwealth Avenue at Commonwealth Driveway (Project Driveway)[2]	Side Street Stop	AM PM	--	--	1.0 (11.3) 1.0 (10.0)	A (B) A (B)

Notes:
1. Signal = signalized intersection / Side-Street Stop = Two-Way Stop Controlled
2. Average intersection delay is calculated using the HCM 6th method for vehicles.
3. Average intersection delay is calculated using HCM 2000 method for vehicles
4. Side-street stop-controlled intersection delay I presented as intersection average (worst approach) in for delay and LOS. The worst approach delay for both Project driveways is the driveway.

Source: Fehr & Peers, 2021

Future Year Effects

As outlined in the City's TAPP, LOS D has been established as the acceptable operating grade for all intersections in the City.

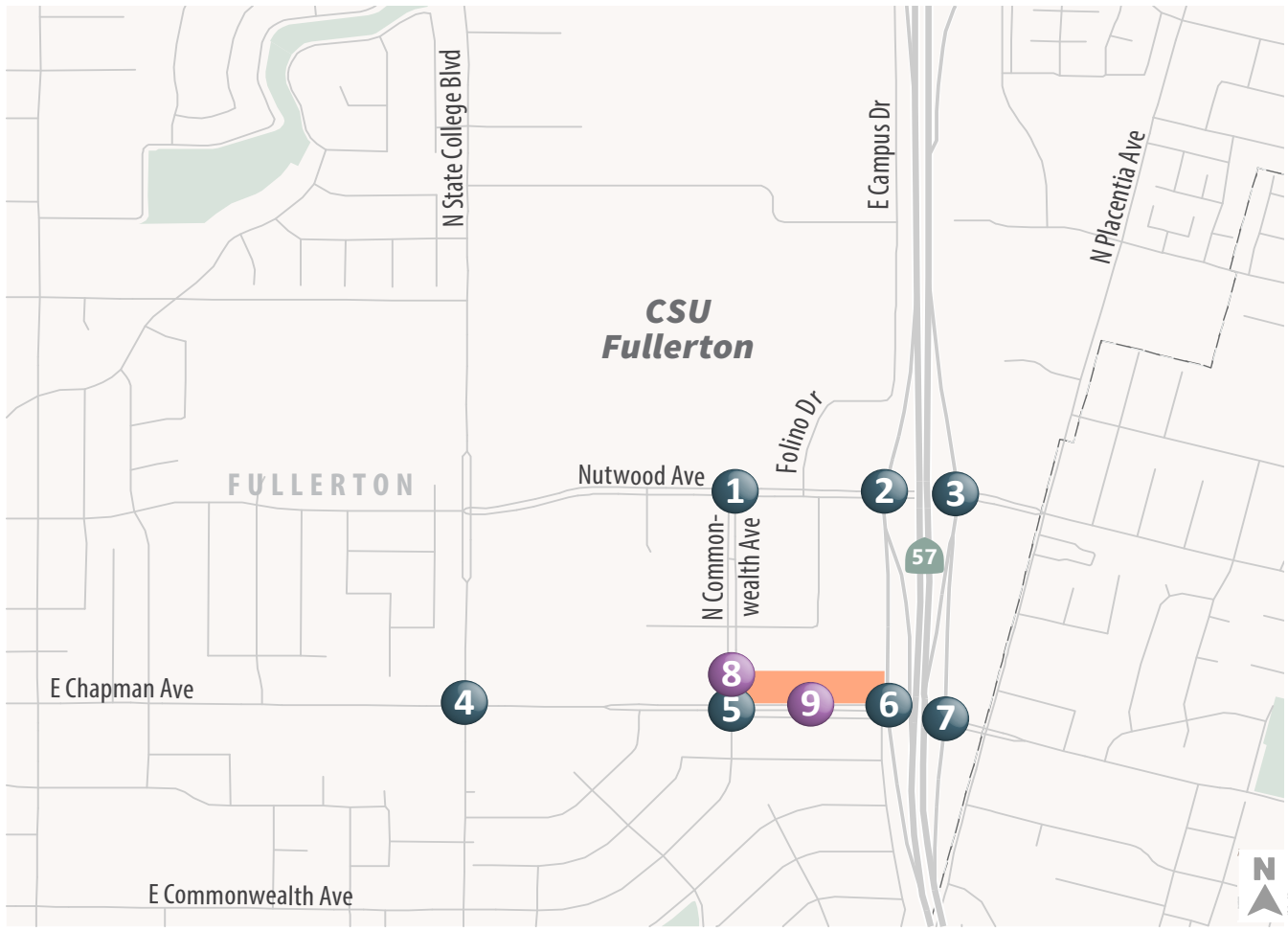
An effect on transportation occurs if any of the following criteria are satisfied:

1. The project causes an intersection operating at or above an acceptable operating condition to degrade to an unacceptable condition, or
2. The project causes an intersection operating at LOS E to increase in delay by 4 or more seconds per vehicle, or
3. The project causes an intersection operating at LOS F to increase in delay by 2 or more seconds per vehicle

The intersection of State College Boulevard and Chapman Avenue is projected to operate at LOS F during both the AM and PM peak hour in the Future Year (2045) with and without the Project. However, since the Project is expected to add less than two seconds of delay per vehicle in both peak hours; in accordance with the City's TAPP, the slight degradation in intersection operation is not considered significant and thus the Project is not deemed responsible for providing traffic capacity or flow improvements at the intersection.

Although Caltrans no longer considers LOS as an evaluation tool for the purposes of CEQA, both SR-57 ramp intersections at Nutwood Avenue are projected to operate at LOS E in the AM peak hour based on the criteria set forth in the City's TAPP. However, since the Project is expected to add less than four seconds of delay per vehicle in the AM peak hour to either of these two intersections; therefore, in accordance with the City's TAPP, the slight degradation in intersections operations is not considered significant and thus the Project is not deemed responsible for providing traffic capacity or flow improvements at either intersection.

Chapman Driveway at Chapman Avenue (Project Driveway) the driveway operates at LOS F in the AM peak hour with the Project. As traffic volume increases on Chapman Avenue through Future Year (2045) there could be fewer gaps in conflicting traffic flow to accommodate vehicles exiting the site, possibly leading to queuing into the parking structure during peak periods. Manual on Uniform Traffic Control Devices (MUTCD) peak hour signal warrants were evaluated for this intersection. Peak hour signal warrants are **not** met at this intersection, and there is no effect on transportation at this location. Signal warrant worksheets are presented in **Appendix D.**



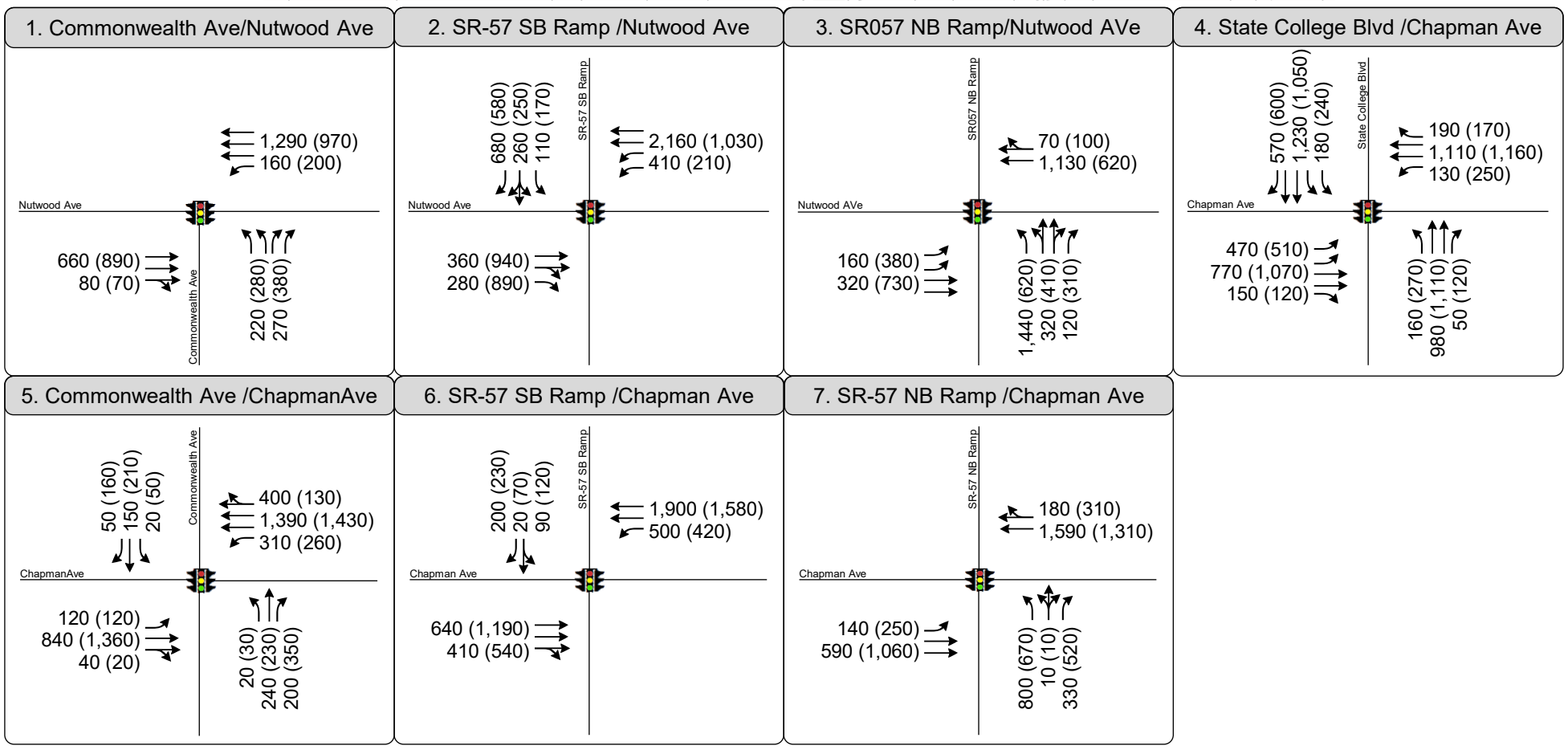
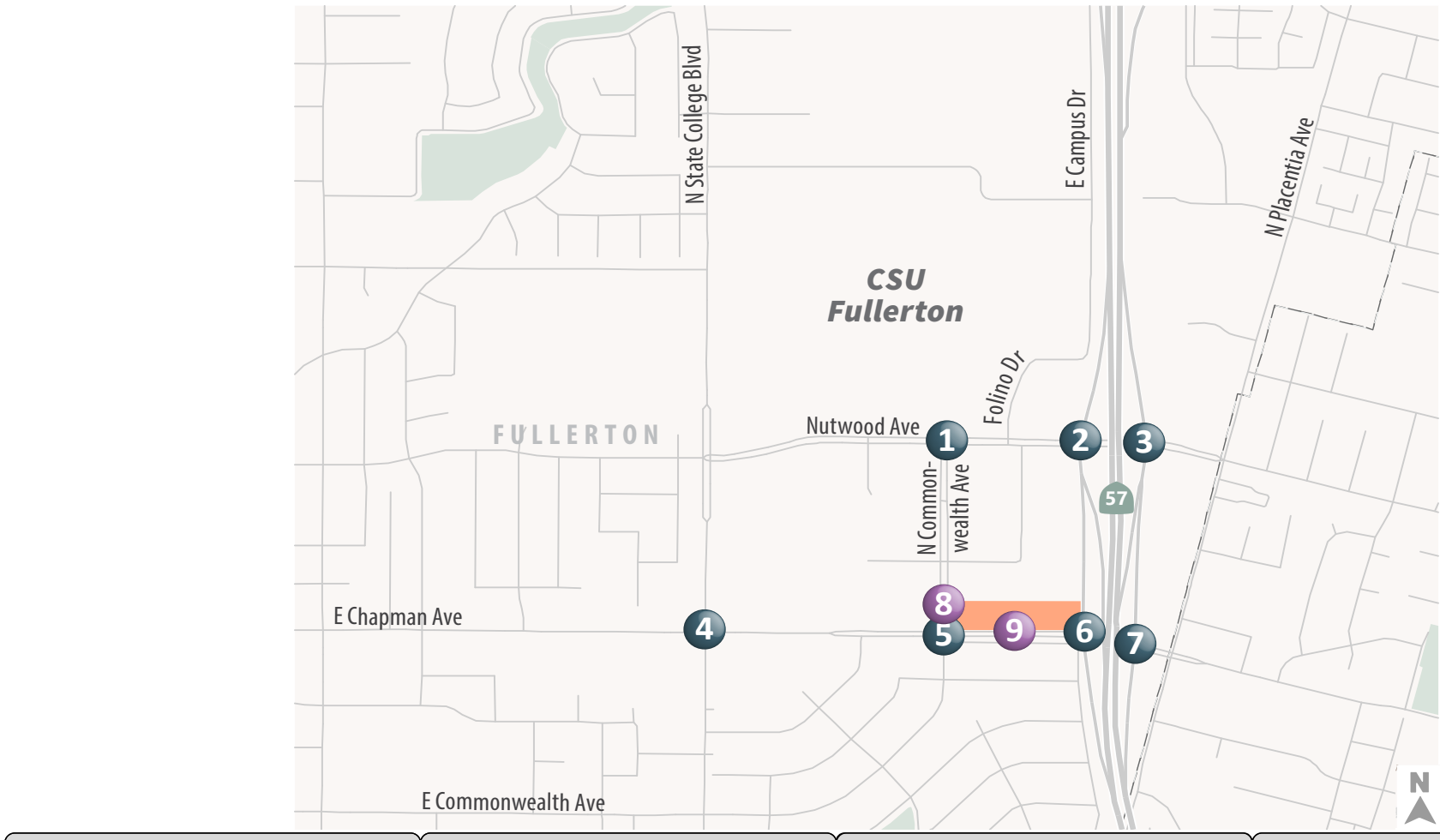


Figure 9

Peak Hour Intersection Volumes, Lane Configurations, and Traffic Control - Future Year (2045) Without Project Conditions



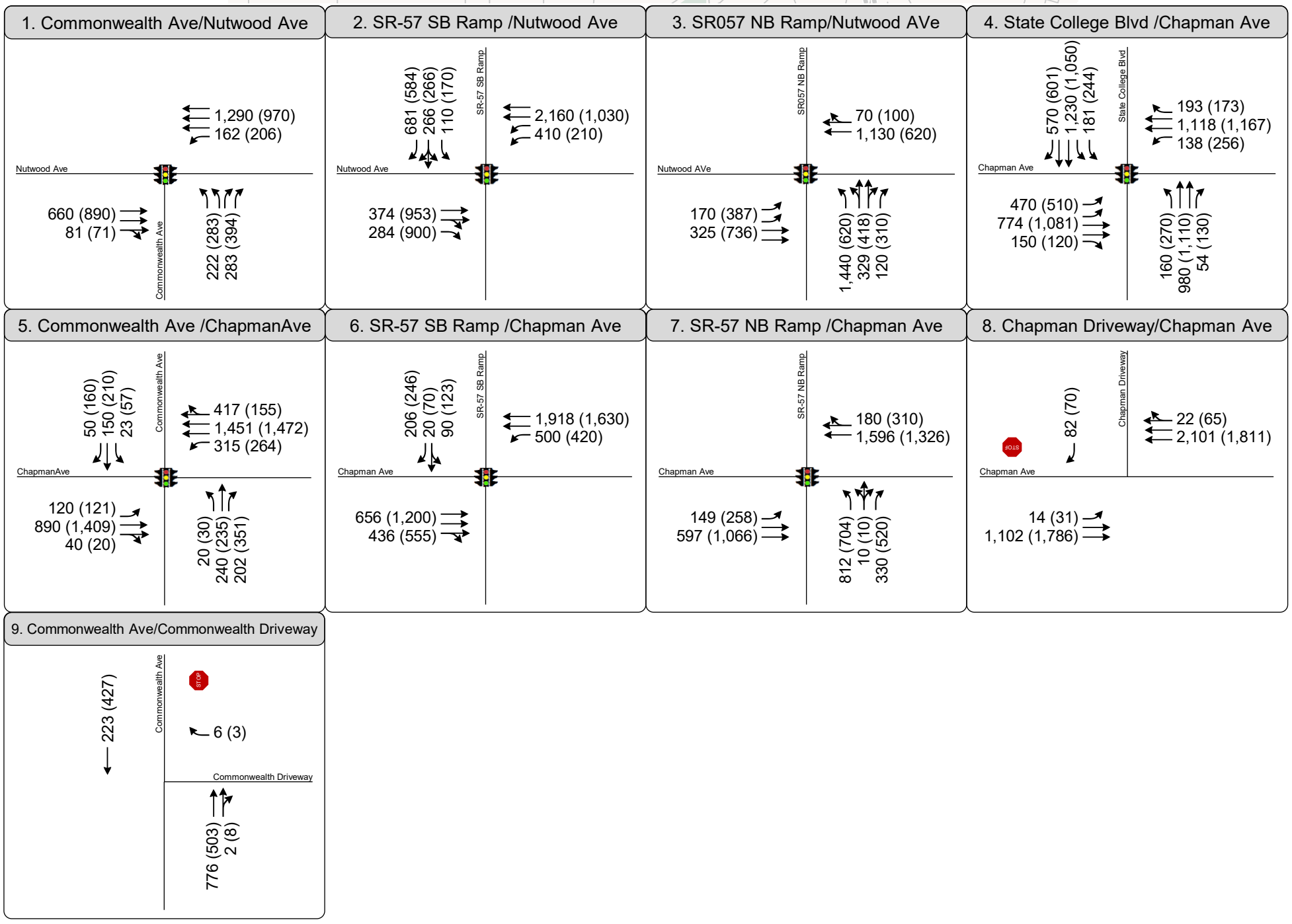


Figure 10

Peak Hour Intersection Volumes, Lane Configurations, and Traffic Control - Future Year (2045) With Project Conditions

5. Site Plan Review

This chapter reviews impacts on public transit and active transportation and analyzes site access for pedestrians, bicycles, and emergency vehicles based on the site plan presented previously on Figure .

Emergency Vehicle Access

Several factors determine whether a project has sufficient access for emergency vehicles, including:

1. Number of access points (both public and emergency access only)
2. Width of access points
3. Width of internal roadways

Each of these factors is discussed in further detail below.

Based on the *2019 California Fire Code*, the minimum number of access roads serving residential development(s) shall be based upon the number of dwelling units served as follows:

- Multiple Family Residential Projects having more than 100 dwelling units should be provided with two separated and approved fire apparatus access roads (D106.1). ***Exception***: Projects having up to 200 dwelling units may have a single approved fire apparatus access road when all buildings, including nonresidential occupancies, are equipped throughout with approved automatic sprinkler systems installed in accordance with Section 903.3.1.1 or 903.3.1.2.
- Multiple Family Residential Projects having more than 200 dwelling units shall be provided with two separate and approved fire apparatus access roads regardless of whether they are equipped with an approved automatic sprinkler system.
- Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses.

The Project proposes two right-in, right-out driveways. Access will be provided from Chapman Avenue and Commonwealth Avenue. Both access points provide at least 20-feet of space for emergency vehicle access. This provides adequate emergency vehicle access to the Project site.

Active Transportation

In the Project area, the only facility with an existing bicycle facility is Commonwealth Avenue, which currently provides Class II bicycle facilities in both directions along the project frontage.

Proposed bicycle facilities in the Project vicinity are described below based on the *Fullerton Bicycle Master Plan (2012)* and the *Fullerton Bike Connection Plan (2017):*

- Nutwood Avenue does not have existing bicycle facilities. The Fullerton Bicycle Master Plan includes planned Class III on Nutwood Avenue Yorba Linda Boulevard from State College Boulevard to Placentia Avenue. The Fullerton Bike Connection Plan includes Class II bike lanes on Nutwood Ave between State College Blvd and Placentia Ave, with buffers accompanying the bike lanes intermittently as the cross section allows,
- State College Boulevard does not have existing bicycle facilities and are not proposed in the future.
- Chapman Avenue does not have existing bike facilities and a Class III bike route is proposed between Commonwealth Avenue and Placentia Avenue along the Project frontage in the future.

Existing and proposed bike facilities in the study area are presented in **Figure 11.**

The Project site plan presented in Figure 1 shows no change to the existing bike lanes on Commonwealth Avenue and no change to Chapman Avenue along the Project frontage, providing adequate space for the planned Class III bike route. The Project proposes no changes to Nutwood Avenue and does not interfere with planned Class II facilities on that route.

Sidewalks are currently provided on Commonwealth Avenue and Chapman Avenue along the Project site frontage, and striped crosswalks are provided at the signalized intersection of Commonwealth Avenue and Chapman Avenue. Based on a review of relevant plans and projects in the area, there are no planned changes to sidewalks or pedestrian infrastructure in the study area.

The Project site plan presented in Figure 1 shows no change to the sidewalks on Commonwealth Avenue and Chapman Avenue along the Project frontage, and no change to the existing crosswalks at the adjacent intersection.

New bicycle and pedestrian trips will be generated by the Project. As Since most residents of the Project are anticipated to be students of the nearby universities, it is anticipated that a significant portion of the Project trips to and from the two campuses each day will be made by transit, bicycle, walking, or other non-vehicular travel methods. The Project is expected to generate approximately 690 non-vehicular trips daily, with 39 of those being in the AM peak hour and 56 being in the PM peak hour. The Project would not

change overall student enrollment but is anticipated to shift some students from driving to walking or biking, as the project would provide housing for existing students at a distance that makes walking and biking accessible for its residents. The increase in walking and biking trips would represent a small increase in the number of pedestrians and cyclists in the Project area. For example, over 400 pedestrians cross Nutwood Avenue at the intersection with Commonwealth Avenue in the AM and PM peak hours. The increase in bicycle and pedestrian trips in the study area is not expected to degrade the performance or safety of existing and planned facilities.

The Project is consistent with the adopted plans regarding bicycle and pedestrian infrastructure and is not expected to decrease the performance or safety of these facilities. Therefore, the project is considered to have a ***less than significant impact*** on active transportation.

Public Transit

The potential impact to transit service or facilities was evaluated based on whether the proposed project would physically disrupt an existing facility/service or interfere with the implementation of a planned facility/service. In addition, the proposed project was evaluated to determine if it would create potential conflicts with applicable policies, plans, or programs (as defined in the regulatory setting above) supporting transit such that the conflict could reduce transit trips or increase conflicts with other modes.

A review of the project description did not identify any disruption to existing transit facilities. New transit trips will be generated by the Project, but the Project would not modify a transit stop location or affect transit headways.

Additional transit ridership demand could increase boarding and alighting activity at existing bus stops and transit terminals located near the project site and at the Fullerton Metrolink Station.

The Project is consistent with the adopted plans regarding public transit and is not expected to decrease the performance or safety of these facilities. Therefore, the project is considered to have a ***less than significant impact*** on public transit.

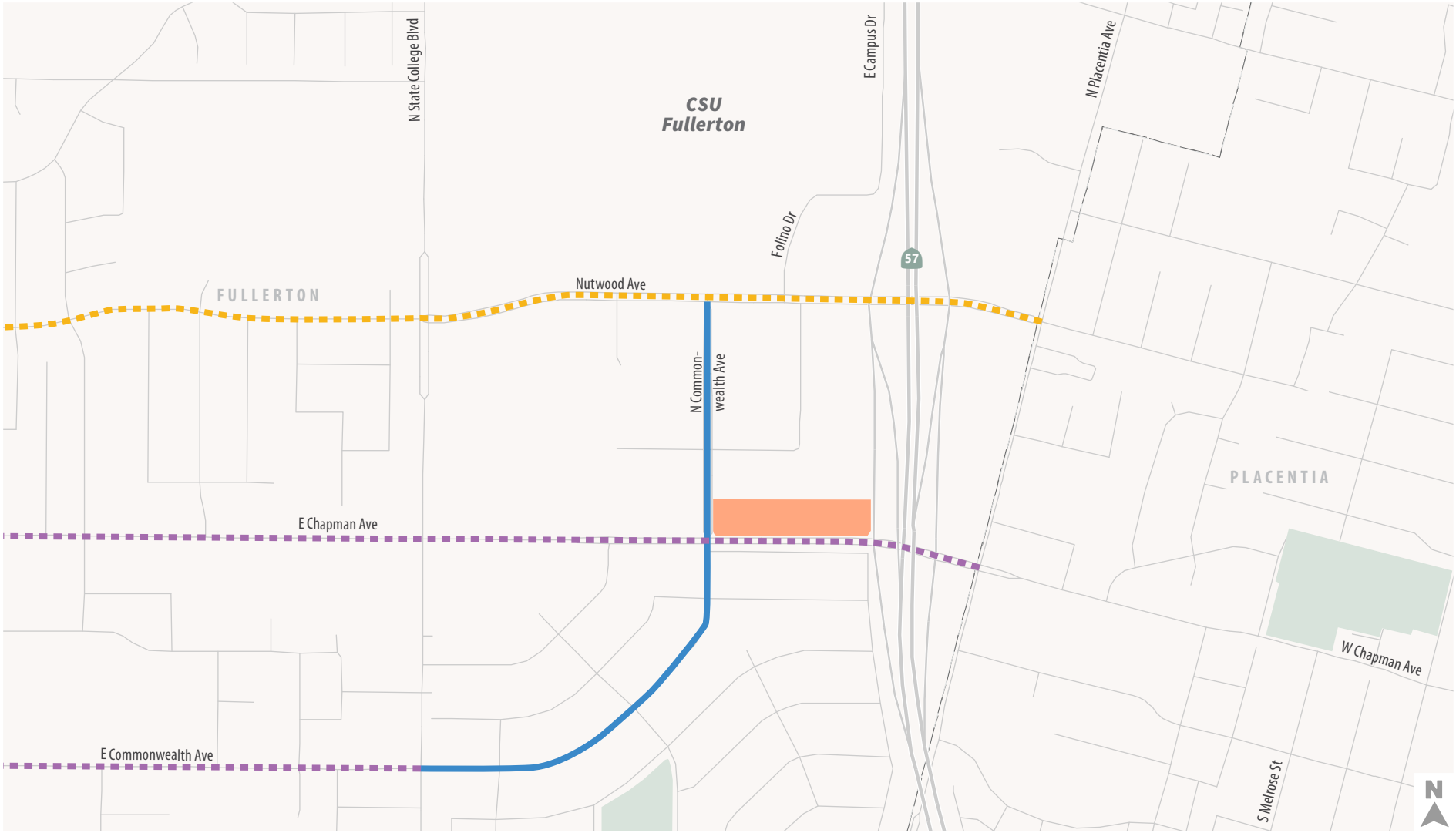


Figure 11

Existing and Planned Bicycle Facilities

6. Vehicle Miles Traveled (VMT)

As noted in Chapter 1, the City's TAPP includes the following criteria to identify if there is a potential significant impact under CEQA as determined by the VMT analysis.

A VMT analysis shall be required for a proposed project that does not meet any of the following criteria:

- Located in a Transit Priority Area;
- Located in a Low VMT-generating area;
- Project type is presumed to have a less than significant impact.

If a project meets any of the screening criteria, no further analysis for VMT is needed.

The remainder of this chapter documents the VMT screening.

The Project is located within a Transit Priority Area, or a half-mile from high-quality transit. High-quality transit is defined as a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. As documented in Chapter 2, bus stops for OCTA Route 57 are located within a half-mile of the project site, and this route has 15-minute headways during weekday peak commute hours. Prior to COVID-19, Route 26 also operated with 15-minute headways during peak commute hours on weekdays. With the reopening of all on-campus facilities and other nearby offices and retail centers, it is expected that Route 26 will increase service by opening year.

As specified in the City's TAPP, projects located in a TPA should NOT have any of the following characteristics to be eligible for screening:

1. Has a Floor Area Ratio (FAR) of less than 0.75;
2. Includes more parking for use by residents, customers, or employees of the project than required by the City;
3. Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Southern California Association of Governments [SCAG]); or
4. Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

These requirements for the Hub at Fullerton are documented below in **Table 7**.

Table 7: TPA Screening Review

Criteria	Project Eligibility
Project is located within a half-mile a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.	OCTA Route 57 is located within a half-mile of the project site, and has 15-minute headways during weekday peak commute hours
Has a Floor Area Ratio (FAR) of greater than 0.75	The project site is 3.55 acres (154,638 square feet). The total proposed building floor area (without the parking garage and exterior amenities) is 483,957 square feet. This results in a FAR of over 3.0, which is greater than 0.75
Does not include more parking for use by residents, customers, or employees of the project than required by the City	The project includes 376 vehicle parking stalls. This is less parking than is required for a building of this size that includes multi-family apartments and retail per the City of Fullerton Municipal Code
Is consistent with the applicable Sustainable Communities Strategy (as determined by the lead agency)	While the project does require a General Plan Amendment and Zoning Code Amendment, the land use assumption in OCTAM version 5.0 reflect the 2020 SCAG RTP/SCS. The Traffic Analysis Zone (TAZ) where the project is located was reviewed and the land use growth in that zone did not exceed the growth proposed by the project. The project is therefore considered consistent with land use projections produced by SCAG within the current RTP/SCS.
Does not replace affordable residential units with a smaller number of moderate- or high-income residential units	No affordable residential units are replaced by the project

Source: Fehr & Peers, 2021

Based on this review of the VMT screening criteria, the project is presumed to have a ***less than significant*** impact on transportation.

Appendix

Appendix A: Traffic Counts

Prepared by National Data & Surveying Services

VOLUME

State College Blvd Bet. SR-91 & Fender Ave

Day: Tuesday
Date: 9/24/2019

City: Fullerton
Project #: CA19_1188_001

DAILY TOTALS	NB	SB	EB	WB	Total
	9,835	12,825	0	0	22,660

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	24		21				45		12:00	172		161				333	
00:15	14		14				28		12:15	126		157				283	
00:30	12		20				32		12:30	152		151				303	
00:45	20	70	15	70			35	140	12:45	132	582	246	715			378	1297
01:00	12		12				24		13:00	122		226				348	
01:15	7		8				15		13:15	128		187				315	
01:30	6		12				18		13:30	136		196				332	
01:45	8	33	5	37			13	70	13:45	146	532	180	789			326	1321
02:00	7		11				18		14:00	140		186				326	
02:15	4		6				10		14:15	105		232				337	
02:30	3		11				14		14:30	130		282				412	
02:45	6	20	6	34			12	54	14:45	142	517	208	908			350	1425
03:00	6		9				15		15:00	149		208				357	
03:15	4		6				10		15:15	140		215				355	
03:30	8		14				22		15:30	170		221				391	
03:45	21	39	16	45			37	84	15:45	175	634	227	871			402	1505
04:00	16		21				37		16:00	143		319				462	
04:15	18		15				33		16:15	141		275				416	
04:30	21		32				53		16:30	176		250				426	
04:45	48	103	39	107			87	210	16:45	176	636	218	1062			394	1698
05:00	22		25				47		17:00	216		277				493	
05:15	36		31				67		17:15	210		254				464	
05:30	58		52				110		17:30	167		271				438	
05:45	49	165	73	181			122	346	17:45	169	762	233	1035			402	1797
06:00	76		113				189		18:00	175		199				374	
06:15	97		127				224		18:15	185		169				354	
06:30	121		187				308		18:30	185		191				376	
06:45	162	456	189	616			351	1072	18:45	147	692	223	782			370	1474
07:00	168		231				399		19:00	124		283				407	
07:15	218		255				473		19:15	100		170				270	
07:30	243		246				489		19:30	80		115				195	
07:45	256	885	223	955			479	1840	19:45	111	415	101	669			212	1084
08:00	231		210				441		20:00	82		133				215	
08:15	165		208				373		20:15	73		100				173	
08:30	170		212				382		20:30	56		104				160	
08:45	148	714	179	809			327	1523	20:45	73	284	92	429			165	713
09:00	148		156				304		21:00	57		91				148	
09:15	151		152				303		21:15	73		104				177	
09:30	140		154				294		21:30	44		92				136	
09:45	125	564	160	622			285	1186	21:45	63	237	95	382			158	619
10:00	115		173				288		22:00	60		91				151	
10:15	106		132				238		22:15	85		66				151	
10:30	124		127				251		22:30	105		43				148	
10:45	132	477	154	586			286	1063	22:45	98	348	43	243			141	591
11:00	152		134				286		23:00	58		53				111	
11:15	115		182				297		23:15	33		31				64	
11:30	128		223				351		23:30	35		44				79	
11:45	131	526	192	731			323	1257	23:45	18	144	19	147			37	291
TOTALS		4052		4793				8845	TOTALS		5783		8032				13815
SPLIT %		45.8%		54.2%				39.0%	SPLIT %		41.9%		58.1%				61.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	9,835	12,825	0	0	22,660

AM Peak Hour	07:15	07:00					07:15		PM Peak Hour	16:30	15:45					17:00		
AM Pk Volume	948	955					1882		PM Pk Volume	778	1071					1797		
Pk Hr Factor	0.926	0.936					0.962		Pk Hr Factor	0.900	0.839					0.911		
7 - 9 Volume	1599	1764	0	0			3363		4 - 6 Volume	1398	2097	0	0			3495		
7 - 9 Peak Hour	07:15	07:00					07:15		4 - 6 Peak Hour	16:30	16:00					17:00		
7 - 9 Pk Volume	948	955	0	0			1882		4 - 6 Pk Volume	778	1062	0	0			1797		
Pk Hr Factor	0.926	0.936	0.000	0.000			0.962		Pk Hr Factor	0.900	0.832	0.000	0.000			0.911		

Prepared by National Data & Surveying Services

VOLUME

State College Blvd Bet. SR-91 & Fender Ave

Day: Wednesday
Date: 9/25/2019

City: Fullerton
Project #: CA19_1188_001

DAILY TOTALS	NB	SB	EB	WB	Total
	9,933	13,311	0	0	23,244

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	27		31				58		12:00	151		174				325	
00:15	51		11				62		12:15	130		146				276	
00:30	28		22				50		12:30	129		175				304	
00:45	10	116	23	87			33	203	12:45	129	539	204	699			333	1238
01:00	14		11				25		13:00	132		215				347	
01:15	13		7				20		13:15	119		154				273	
01:30	6		12				18		13:30	154		157				311	
01:45	16	49	8	38			24	87	13:45	127	532	174	700			301	1232
02:00	7		13				20		14:00	139		212				351	
02:15	5		14				19		14:15	124		221				345	
02:30	5		15				20		14:30	151		275				426	
02:45	8	25	5	47			13	72	14:45	124	538	245	953			369	1491
03:00	2		7				9		15:00	136		240				376	
03:15	7		7				14		15:15	160		236				396	
03:30	12		3				15		15:30	150		264				414	
03:45	11	32	15	32			26	64	15:45	210	656	269	1009			479	1665
04:00	17		22				39		16:00	172		334				506	
04:15	15		11				26		16:15	157		288				445	
04:30	23		21				44		16:30	191		261				452	
04:45	39	94	45	99			84	193	16:45	179	699	236	1119			415	1818
05:00	40		27				67		17:00	238		248				486	
05:15	41		25				66		17:15	179		249				428	
05:30	48		46				94		17:30	167		269				436	
05:45	74	203	63	161			137	364	17:45	161	745	195	961			356	1706
06:00	66		107				173		18:00	167		203				370	
06:15	83		129				212		18:15	173		221				394	
06:30	111		174				285		18:30	164		214				378	
06:45	149	409	208	618			357	1027	18:45	138	642	219	857			357	1499
07:00	174		234				408		19:00	123		273				396	
07:15	230		249				479		19:15	111		190				301	
07:30	242		240				482		19:30	100		143				243	
07:45	268	914	230	953			498	1867	19:45	94	428	87	693			181	1121
08:00	217		201				418		20:00	75		112				187	
08:15	151		196				347		20:15	65		112				177	
08:30	135		177				312		20:30	60		89				149	
08:45	146	649	160	734			306	1383	20:45	63	263	103	416			166	679
09:00	141		145				286		21:00	60		121				181	
09:15	118		172				290		21:15	68		174				242	
09:30	160		154				314		21:30	63		181				244	
09:45	121	540	150	621			271	1161	21:45	63	254	178	654			241	908
10:00	125		156				281		22:00	64		161				225	
10:15	136		144				280		22:15	70		114				184	
10:30	130		145				275		22:30	117		79				196	
10:45	119	510	128	573			247	1083	22:45	101	352	48	402			149	754
11:00	146		157				303		23:00	78		41				119	
11:15	140		206				346		23:15	40		37				77	
11:30	135		187				322		23:30	40		45				85	
11:45	135	556	179	729			314	1285	23:45	30	188	33	156			63	344
TOTALS		4097		4692				8789	TOTALS		5836		8619				14455
SPLIT %		46.6%		53.4%				37.8%	SPLIT %		40.4%		59.6%				62.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	9,933	13,311	0	0	23,244

AM Peak Hour	07:15	07:00			07:15	PM Peak Hour	16:30	15:30			15:45
AM Pk Volume	957	953			1877	PM Pk Volume	787	1155			1882
Pk Hr Factor	0.893	0.957			0.942	Pk Hr Factor	0.827	0.865			0.930
7 - 9 Volume	1563	1687	0	0	3250	4 - 6 Volume	1444	2080	0	0	3524
7 - 9 Peak Hour	07:15	07:00			07:15	4 - 6 Peak Hour	16:30	16:00			16:00
7 - 9 Pk Volume	957	953	0	0	1877	4 - 6 Pk Volume	787	1119	0	0	1818
Pk Hr Factor	0.893	0.957	0.000	0.000	0.942	Pk Hr Factor	0.827	0.838	0.000	0.000	0.898

Prepared by National Data & Surveying Services

VOLUME

State College Blvd Bet. Fender Ave & Nutwood Ave

Day: Tuesday
Date: 9/24/2019

City: Fullerton
Project #: CA19_1188_002

DAILY TOTALS	NB	SB	EB	WB	Total
	10,852	13,114	0	0	23,966

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	27		24				51		12:00	203		188				391	
00:15	21		12				33		12:15	171		165				336	
00:30	11		12				23		12:30	200		178				378	
00:45	13	72	10	58			23	130	12:45	150	724	236	767			386	1491
01:00	17		4				21		13:00	136		246				382	
01:15	10		12				22		13:15	172		197				369	
01:30	8		6				14		13:30	145		202				347	
01:45	10	45	4	26			14	71	13:45	168	621	170	815			338	1436
02:00	7		2				9		14:00	152		164				316	
02:15	3		5				8		14:15	144		224				368	
02:30	2		6				8		14:30	168		270				438	
02:45	5	17	5	18			10	35	14:45	168	632	242	900			410	1532
03:00	5		5				10		15:00	209		181				390	
03:15	4		4				8		15:15	198		219				417	
03:30	5		7				12		15:30	205		195				400	
03:45	8	22	10	26			18	48	15:45	202	814	234	829			436	1643
04:00	10		8				18		16:00	171		254				425	
04:15	6		12				18		16:15	154		276				430	
04:30	10		17				27		16:30	211		230				441	
04:45	20	46	31	68			51	114	16:45	180	716	237	997			417	1713
05:00	10		29				39		17:00	255		259				514	
05:15	19		31				50		17:15	240		289				529	
05:30	27		54				81		17:30	223		264				487	
05:45	39	95	88	202			127	297	17:45	197	915	252	1064			449	1979
06:00	53		95				148		18:00	219		215				434	
06:15	80		123				203		18:15	200		183				383	
06:30	129		171				300		18:30	190		209				399	
06:45	170	432	205	594			375	1026	18:45	164	773	252	859			416	1632
07:00	152		228				380		19:00	124		278				402	
07:15	196		239				435		19:15	117		202				319	
07:30	285		275				560		19:30	120		132				252	
07:45	294	927	250	992			544	1919	19:45	113	474	120	732			233	1206
08:00	252		254				506		20:00	106		137				243	
08:15	182		226				408		20:15	92		125				217	
08:30	170		216				386		20:30	84		109				193	
08:45	143	747	198	894			341	1641	20:45	80	362	96	467			176	829
09:00	154		184				338		21:00	74		111				185	
09:15	153		168				321		21:15	86		107				193	
09:30	160		175				335		21:30	70		79				149	
09:45	133	600	194	721			327	1321	21:45	67	297	103	400			170	697
10:00	119		165				284		22:00	71		94				165	
10:15	120		140				260		22:15	91		65				156	
10:30	135		134				269		22:30	88		40				128	
10:45	132	506	150	589			282	1095	22:45	69	319	36	235			105	554
11:00	147		154				301		23:00	49		33				82	
11:15	147		181				328		23:15	33		34				67	
11:30	145		210				355		23:30	37		33				70	
11:45	117	556	191	736			308	1292	23:45	21	140	25	125			46	265
TOTALS		4065		4924				**8989**	**TOTALS**		6787		8190				**14977**
SPLIT %		45.2%		54.8%				**37.5%**	**SPLIT %**		45.3%		54.7%				**62.5%**

DAILY TOTALS	NB	SB	EB	WB	Total
	10,852	13,114	0	0	23,966

AM Peak Hour	07:15	07:15				**07:15**	**PM Peak Hour**	17:00	17:00				**17:00**
AM Pk Volume	1027	1018				**2045**	**PM Pk Volume**	915	1064				**1979**
Pk Hr Factor	0.873	0.925				**0.913**	**Pk Hr Factor**	0.897	0.920				**0.935**
7 - 9 Volume	1674	1886	0	0		**3560**	**4 - 6 Volume**	1631	2061	0	0		**3692**
7 - 9 Peak Hour	07:15	07:15				**07:15**	**4 - 6 Peak Hour**	17:00	17:00				**17:00**
7 - 9 Pk Volume	1027	1018	0	0		**2045**	**4 - 6 Pk Volume**	915	1064	0	0		**1979**
Pk Hr Factor	0.873	0.925	0.000	0.000		**0.913**	**Pk Hr Factor**	0.897	0.920	0.000	0.000		**0.935**

Prepared by National Data & Surveying Services

VOLUME

State College Blvd Bet. Fender Ave & Nutwood Ave

Day: Wednesday
Date: 9/25/2019

City: Fullerton
Project #: CA19_1188_002

DAILY TOTALS	NB	SB	EB	WB	Total
	11,038	13,637	0	0	24,675

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	33		21				54		12:00	179		175				354	
00:15	54		20				74		12:15	190		157				347	
00:30	32		15				47		12:30	171		192				363	
00:45	10	129	14	70			24	199	12:45	154	694	199	723			353	1417
01:00	19		9				28		13:00	150		226				376	
01:15	11		9				20		13:15	136		184				320	
01:30	12		7				19		13:30	170		166				336	
01:45	12	54	4	29			16	83	13:45	161	617	159	735			320	1352
02:00	8		8				16		14:00	169		222				391	
02:15	5		5				10		14:15	146		208				354	
02:30	5		13				18		14:30	195		247				442	
02:45	6	24	6	32			12	56	14:45	131	641	238	915			369	1556
03:00	6		3				9		15:00	189		212				401	
03:15	4		7				11		15:15	199		251				450	
03:30	7		5				12		15:30	208		225				433	
03:45	8	25	12	27			20	52	15:45	229	825	306	994			535	1819
04:00	7		12				19		16:00	208		297				505	
04:15	11		12				23		16:15	191		299				490	
04:30	11		27				38		16:30	202		264				466	
04:45	14	43	41	92			55	135	16:45	211	812	230	1090			441	1902
05:00	17		18				35		17:00	250		245				495	
05:15	24		28				52		17:15	212		290				502	
05:30	30		55				85		17:30	184		274				458	
05:45	42	113	90	191			132	304	17:45	202	848	228	1037			430	1885
06:00	47		101				148		18:00	189		227				416	
06:15	66		132				198		18:15	206		229				435	
06:30	124		188				312		18:30	200		235				435	
06:45	145	382	205	626			350	1008	18:45	159	754	255	946			414	1700
07:00	169		228				397		19:00	147		263				410	
07:15	230		227				457		19:15	130		190				320	
07:30	267		228				495		19:30	137		143				280	
07:45	298	964	248	931			546	1895	19:45	96	510	104	700			200	1210
08:00	233		222				455		20:00	95		120				215	
08:15	164		215				379		20:15	82		119				201	
08:30	153		195				348		20:30	78		107				185	
08:45	170	720	189	821			359	1541	20:45	80	335	124	470			204	805
09:00	133		188				321		21:00	75		142				217	
09:15	139		156				295		21:15	74		190				264	
09:30	186		145				331		21:30	67		191				258	
09:45	137	595	162	651			299	1246	21:45	73	289	183	706			256	995
10:00	109		178				287		22:00	67		152				219	
10:15	133		165				298		22:15	82		109				191	
10:30	134		114				248		22:30	119		61				180	
10:45	125	501	142	599			267	1100	22:45	90	358	44	366			134	724
11:00	152		176				328		23:00	66		38				104	
11:15	158		188				346		23:15	43		40				83	
11:30	148		197				345		23:30	37		34				71	
11:45	162	620	182	743			344	1363	23:45	39	185	31	143			70	328
TOTALS		4170		4812				8982	TOTALS		6868		8825				15693
SPLIT %		46.4%		53.6%				36.4%	SPLIT %		43.8%		56.2%				63.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	11,038	13,637	0	0	24,675

AM Peak Hour	07:15	07:00				07:15	PM Peak Hour	16:30	15:45				15:45
AM Pk Volume	1028	931				1953	PM Pk Volume	875	1166				1996
Pk Hr Factor	0.862	0.939				0.894	Pk Hr Factor	0.875	0.953				0.933
7 - 9 Volume	1684	1752	0	0		3436	4 - 6 Volume	1660	2127	0	0		3787
7 - 9 Peak Hour	07:15	07:00				07:15	4 - 6 Peak Hour	16:30	16:00				16:30
7 - 9 Pk Volume	1028	931	0	0		1953	4 - 6 Pk Volume	875	1090	0	0		1904
Pk Hr Factor	0.862	0.939	0.000	0.000		0.894	Pk Hr Factor	0.875	0.911	0.000	0.000		0.948

Prepared by National Data & Surveying Services

VOLUME

State College Blvd Bet. Nutwood Ave & Yorba Linda Blvd

Day: Tuesday
Date: 9/24/2019

City: Fullerton
Project #: CA19_1188_003

DAILY TOTALS	NB	SB	EB	WB	Total
	18,200	11,611	0	0	29,811

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	41		13				54		12:00	229		146				375	
00:15	18		13				31		12:15	234		136				370	
00:30	18		14				32		12:30	262		145				407	
00:45	13	90	9	49			22	139	12:45	329	1054	152	579			481	1633
01:00	14		5				19		13:00	379		138				517	
01:15	9		7				16		13:15	259		151				410	
01:30	9		7				16		13:30	260		156				416	
01:45	7	39	2	21			9	60	13:45	237	1135	161	606			398	1741
02:00	9		3				12		14:00	284		139				423	
02:15	5		3				8		14:15	361		150				511	
02:30	2		5				7		14:30	400		206				606	
02:45	2	18	2	13			4	31	14:45	270	1315	208	703			478	2018
03:00	6		4				10		15:00	387		230				617	
03:15	4		3				7		15:15	394		198				592	
03:30	8		3				11		15:30	308		184				492	
03:45	9	27	8	18			17	45	15:45	438	1527	189	801			627	2328
04:00	9		12				21		16:00	478		192				670	
04:15	5		11				16		16:15	389		222				611	
04:30	9		9				18		16:30	329		213				542	
04:45	21	44	16	48			37	92	16:45	330	1526	200	827			530	2353
05:00	24		19				43		17:00	393		220				613	
05:15	19		29				48		17:15	472		235				707	
05:30	24		37				61		17:30	455		206				661	
05:45	39	106	72	157			111	263	17:45	400	1720	243	904			643	2624
06:00	39		97				136		18:00	355		182				537	
06:15	51		130				181		18:15	367		213				580	
06:30	121		302				423		18:30	383		207				590	
06:45	253	464	340	869			593	1333	18:45	408	1513	184	786			592	2299
07:00	162		192				354		19:00	427		161				588	
07:15	134		260				394		19:15	253		133				386	
07:30	173		383				556		19:30	216		103				319	
07:45	194	663	291	1126			485	1789	19:45	211	1107	96	493			307	1600
08:00	235		291				526		20:00	196		79				275	
08:15	239		244				483		20:15	199		95				294	
08:30	203		251				454		20:30	173		95				268	
08:45	202	879	211	997			413	1876	20:45	149	717	82	351			231	1068
09:00	207		180				387		21:00	169		79				248	
09:15	210		182				392		21:15	227		61				288	
09:30	247		184				431		21:30	181		64				245	
09:45	267	931	166	712			433	1643	21:45	192	769	46	250			238	1019
10:00	210		128				338		22:00	215		58				273	
10:15	167		121				288		22:15	159		33				192	
10:30	144		118				262		22:30	131		30				161	
10:45	190	711	123	490			313	1201	22:45	109	614	26	147			135	761
11:00	199		115				314		23:00	98		30				128	
11:15	258		155				413		23:15	72		24				96	
11:30	246		143				389		23:30	72		25				97	
11:45	223	926	157	570			380	1496	23:45	63	305	15	94			78	399
TOTALS		4898		5070				9968	TOTALS		13302		6541				19843
SPLIT %		49.1%		50.9%				33.4%	SPLIT %		67.0%		33.0%				66.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	18,200	11,611	0	0	29,811

AM Peak Hour	11:15	07:15				07:30	PM Peak Hour	17:00	17:00				17:00
AM Pk Volume	956	1225				2050	PM Pk Volume	1720	904				2624
Pk Hr Factor	0.926	0.800				0.922	Pk Hr Factor	0.911	0.930				0.928
7 - 9 Volume	1542	2123	0	0		3665	4 - 6 Volume	3246	1731	0	0		4977
7 - 9 Peak Hour	08:00	07:15				07:30	4 - 6 Peak Hour	17:00	17:00				17:00
7 - 9 Pk Volume	879	1225	0	0		2050	4 - 6 Pk Volume	1720	904	0	0		2624
Pk Hr Factor	0.919	0.800	0.000	0.000		0.922	Pk Hr Factor	0.911	0.930	0.000	0.000		0.928

Prepared by National Data & Surveying Services

VOLUME

State College Blvd Bet. Nutwood Ave & Yorba Linda Blvd

Day: Wednesday
Date: 9/25/2019

City: Fullerton
Project #: CA19_1188_003

DAILY TOTALS	NB	SB	EB	WB	Total
	18,598	12,840	0	0	31,438

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	89		17				106		12:00	239		148				387	
00:15	66		8				74		12:15	218		155				373	
00:30	49		9				58		12:30	260		160				420	
00:45	20	224	6	40			26	264	12:45	364	1081	168	631			532	1712
01:00	21		4				25		13:00	335		168				503	
01:15	16		3				19		13:15	239		147				386	
01:30	14		3				17		13:30	234		138				372	
01:45	14	65	3	13			17	78	13:45	214	1022	164	617			378	1639
02:00	9		7				16		14:00	282		180				462	
02:15	10		4				14		14:15	363		159				522	
02:30	4		7				11		14:30	356		188				544	
02:45	8	31	5	23			13	54	14:45	258	1259	255	782			513	2041
03:00	7		3				10		15:00	313		272				585	
03:15	5		1				6		15:15	415		271				686	
03:30	8		1				9		15:30	353		249				602	
03:45	6	26	9	14			15	40	15:45	453	1534	267	1059			720	2593
04:00	4		8				12		16:00	505		227				732	
04:15	11		13				24		16:15	341		226				567	
04:30	11		10				21		16:30	360		206				566	
04:45	22	48	20	51			42	99	16:45	356	1562	226	885			582	2447
05:00	20		15				35		17:00	427		223				650	
05:15	25		26				51		17:15	514		214				728	
05:30	23		44				67		17:30	424		236				660	
05:45	41	109	78	163			119	272	17:45	344	1709	227	900			571	2609
06:00	36		110				146		18:00	385		202				587	
06:15	51		146				197		18:15	332		210				542	
06:30	110		344				454		18:30	353		263				616	
06:45	262	459	408	1008			670	1467	18:45	426	1496	218	893			644	2389
07:00	181		200				381		19:00	437		220				657	
07:15	114		361				475		19:15	251		127				378	
07:30	162		370				532		19:30	227		104				331	
07:45	217	674	266	1197			483	1871	19:45	184	1099	97	548			281	1647
08:00	211		231				442		20:00	202		84				286	
08:15	223		253				476		20:15	228		103				331	
08:30	200		231				431		20:30	198		74				272	
08:45	202	836	238	953			440	1789	20:45	174	802	98	359			272	1161
09:00	227		173				400		21:00	194		121				315	
09:15	241		162				403		21:15	177		150				327	
09:30	209		164				373		21:30	223		109				332	
09:45	261	938	170	669			431	1607	21:45	183	777	113	493			296	1270
10:00	184		140				324		22:00	201		119				320	
10:15	199		141				340		22:15	154		62				216	
10:30	179		137				316		22:30	146		32				178	
10:45	219	781	146	564			365	1345	22:45	184	685	37	250			221	935
11:00	221		178				399		23:00	137		33				170	
11:15	282		150				432		23:15	104		35				139	
11:30	265		159				424		23:30	77		16				93	
11:45	250	1018	141	628			391	1646	23:45	45	363	16	100			61	463
TOTALS		5209		5323				10532	TOTALS		13389		7517				20906
SPLIT %		49.5%		50.5%				33.5%	SPLIT %		64.0%		36.0%				66.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	18,598	12,840	0	0	31,438

AM Peak Hour	11:15	06:45			06:45	PM Peak Hour	15:15	15:00			15:15
AM Pk Volume	1036	1339			2058	PM Pk Volume	1726	1059			2740
Pk Hr Factor	0.918	0.820			0.768	Pk Hr Factor	0.854	0.973			0.936
7 - 9 Volume	1510	2150	0	0	3660	4 - 6 Volume	3271	1785	0	0	5056
7 - 9 Peak Hour	07:45	07:15			07:30	4 - 6 Peak Hour	16:45	17:00			16:45
7 - 9 Pk Volume	851	1228	0	0	1933	4 - 6 Pk Volume	1721	900	0	0	2620
Pk Hr Factor	0.954	0.830	0.000	0.000	0.908	Pk Hr Factor	0.837	0.953	0.000	0.000	0.900

Prepared by National Data & Surveying Services

VOLUME

State College Blvd Bet. Yorba Linda Blvd & Bastanchury Rd

Day: Tuesday
Date: 9/24/2019

City: Fullerton
Project #: CA19_1188_004

DAILY TOTALS	NB	SB	EB	WB	Total
	13,483	11,617	0	0	25,100

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	18		14				32		12:00	201		128				329	
00:15	17		9				26		12:15	176		132				308	
00:30	13		9				22		12:30	180		146				326	
00:45	13	61	6	38			19	99	12:45	263	820	129	535			392	1355
01:00	13		7				20		13:00	305		115				420	
01:15	4		7				11		13:15	185		129				314	
01:30	9		3				12		13:30	208		153				361	
01:45	2	28	2	19			4	47	13:45	189	887	156	553			345	1440
02:00	11		3				14		14:00	214		166				380	
02:15	5		1				6		14:15	232		152				384	
02:30	2		1				3		14:30	279		165				444	
02:45	6	24	2	7			8	31	14:45	243	968	189	672			432	1640
03:00	4		5				9		15:00	277		226				503	
03:15	5		2				7		15:15	342		211				553	
03:30	7		5				12		15:30	262		189				451	
03:45	11	27	4	16			15	43	15:45	319	1200	194	820			513	2020
04:00	5		11				16		16:00	418		187				605	
04:15	8		6				14		16:15	303		179				482	
04:30	9		18				27		16:30	310		210				520	
04:45	9	31	14	49			23	80	16:45	298	1329	211	787			509	2116
05:00	15		25				40		17:00	338		198				536	
05:15	14		48				62		17:15	372		171				543	
05:30	15		38				53		17:30	406		171				577	
05:45	25	69	77	188			102	257	17:45	309	1425	199	739			508	2164
06:00	40		118				158		18:00	272		168				440	
06:15	43		193				236		18:15	251		152				403	
06:30	78		294				372		18:30	248		171				419	
06:45	153	314	348	953			501	1267	18:45	285	1056	129	620			414	1676
07:00	124		266				390		19:00	254		130				384	
07:15	108		333				441		19:15	174		133				307	
07:30	144		373				517		19:30	152		101				253	
07:45	172	548	387	1359			559	1907	19:45	125	705	100	464			225	1169
08:00	170		320				490		20:00	126		69				195	
08:15	127		286				413		20:15	120		76				196	
08:30	154		273				427		20:30	114		61				175	
08:45	133	584	272	1151			405	1735	20:45	95	455	85	291			180	746
09:00	106		231				337		21:00	94		74				168	
09:15	130		226				356		21:15	118		68				186	
09:30	128		211				339		21:30	110		42				152	
09:45	172	536	210	878			382	1414	21:45	96	418	56	240			152	658
10:00	164		132				296		22:00	133		41				174	
10:15	117		135				252		22:15	107		35				142	
10:30	134		125				259		22:30	99		23				122	
10:45	170	585	144	536			314	1121	22:45	94	433	29	128			123	561
11:00	168		120				288		23:00	66		22				88	
11:15	197		122				319		23:15	43		18				61	
11:30	224		117				341		23:30	48		19				67	
11:45	189	778	141	500			330	1278	23:45	45	202	15	74			60	276
TOTALS		3585		5694				**9279**	**TOTALS**		9898		5923				**15821**
SPLIT %		38.6%		61.4%				**37.0%**	**SPLIT %**		62.6%		37.4%				**63.0%**

DAILY TOTALS	NB	SB	EB	WB	Total
	13,483	11,617	0	0	25,100

AM Peak Hour	11:15	07:15					**07:15**		**PM Peak Hour**	17:00	15:00					**16:45**		
AM Pk Volume	811	1413					**2007**		**PM Pk Volume**	1425	820					**2165**		
Pk Hr Factor	0.905	0.913					**0.898**		**Pk Hr Factor**	0.877	0.907					**0.938**		
7 - 9 Volume	1132	2510	0	0			**3642**		**4 - 6 Volume**	2754	1526	0	0			**4280**		
7 - 9 Peak Hour	07:45	07:15					**07:15**		**4 - 6 Peak Hour**	17:00	16:15					**16:45**		
7 - 9 Pk Volume	623	1413	0	0			**2007**		**4 - 6 Pk Volume**	1425	798	0	0			**2165**		
Pk Hr Factor	0.906	0.913	0.000	0.000			**0.898**		**Pk Hr Factor**	0.877	0.945	0.000	0.000			**0.938**		

Prepared by National Data & Surveying Services

VOLUME

State College Blvd Bet. Yorba Linda Blvd & Bastanchury Rd

Day: Wednesday
Date: 9/25/2019

City: Fullerton
Project #: CA19_1188_004

DAILY TOTALS	NB	SB	EB	WB	Total
	13,278	11,815	0	0	25,093

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	54		17				71		12:00	183		139				322	
00:15	41		6				47		12:15	152		138				290	
00:30	32		5				37		12:30	176		163				339	
00:45	12	139	5	33			17	172	12:45	271	782	141	581			412	1363
01:00	9		5				14		13:00	242		117				359	
01:15	10		1				11		13:15	158		138				296	
01:30	8		3				11		13:30	188		106				294	
01:45	12	39	6	15			18	54	13:45	167	755	155	516			322	1271
02:00	8		2				10		14:00	184		153				337	
02:15	4		4				8		14:15	231		158				389	
02:30	3		1				4		14:30	277		148				425	
02:45	10	25	4	11			14	36	14:45	201	893	233	692			434	1585
03:00	5		5				10		15:00	272		233				505	
03:15	3		4				7		15:15	331		247				578	
03:30	10		6				16		15:30	251		186				437	
03:45	4	22	5	20			9	42	15:45	325	1179	226	892			551	2071
04:00	3		7				10		16:00	423		202				625	
04:15	9		9				18		16:15	307		198				505	
04:30	8		14				22		16:30	302		189				491	
04:45	11	31	18	48			29	79	16:45	340	1372	212	801			552	2173
05:00	15		24				39		17:00	342		208				550	
05:15	17		40				57		17:15	407		180				587	
05:30	20		42				62		17:30	359		181				540	
05:45	28	80	66	172			94	252	17:45	251	1359	213	782			464	2141
06:00	28		102				130		18:00	282		183				465	
06:15	44		178				222		18:15	227		206				433	
06:30	69		300				369		18:30	196		202				398	
06:45	155	296	357	937			512	1233	18:45	278	983	198	789			476	1772
07:00	134		249				383		19:00	290		185				475	
07:15	72		376				448		19:15	193		174				367	
07:30	134		434				568		19:30	121		101				222	
07:45	188	528	313	1372			501	1900	19:45	121	725	86	546			207	1271
08:00	121		259				380		20:00	111		86				197	
08:15	109		248				357		20:15	153		76				229	
08:30	114		235				349		20:30	160		69				229	
08:45	136	480	274	1016			410	1496	20:45	199	623	78	309			277	932
09:00	112		216				328		21:00	122		88				210	
09:15	106		195				301		21:15	107		77				184	
09:30	125		199				324		21:30	114		56				170	
09:45	176	519	177	787			353	1306	21:45	95	438	59	280			154	718
10:00	133		153				286		22:00	119		47				166	
10:15	138		143				281		22:15	120		45				165	
10:30	133		116				249		22:30	114		38				152	
10:45	153	557	119	531			272	1088	22:45	108	461	31	161			139	622
11:00	165		126				291		23:00	87		23				110	
11:15	185		92				277		23:15	77		21				98	
11:30	241		112				353		23:30	59		18				77	
11:45	159	750	110	440			269	1190	23:45	19	242	22	84			41	326
TOTALS		3466		5382				8848	TOTALS		9812		6433				16245
SPLIT %		39.2%		60.8%				35.3%	SPLIT %		60.4%		39.6%				64.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	13,278	11,815	0	0	25,093

AM Peak Hour	11:15	06:45			06:45	PM Peak Hour	16:45	14:45			16:45
AM Pk Volume	768	1416			1911	PM Pk Volume	1448	899			2229
Pk Hr Factor	0.797	0.816			0.841	Pk Hr Factor	0.889	0.910			0.949
7 - 9 Volume	1008	2388	0	0	3396	4 - 6 Volume	2731	1583	0	0	4314
7 - 9 Peak Hour	07:30	07:15			07:00	4 - 6 Peak Hour	16:45	16:15			16:45
7 - 9 Pk Volume	552	1382	0	0	1900	4 - 6 Pk Volume	1448	807	0	0	2229
Pk Hr Factor	0.734	0.796	0.000	0.000	0.836	Pk Hr Factor	0.889	0.952	0.000	0.000	0.949

Prepared by National Data & Surveying Services

VOLUME

Nutwood Ave Bet. State College Blvd & SR-57

Day: Tuesday
Date: 9/24/2019

City: Fullerton
Project #: CA19_1188_005

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	9,250	11,930	21,180

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			19		24		43		12:00			128		174		302	
00:15			18		15		33		12:15			134		203		337	
00:30			17		14		31		12:30			139		203		342	
00:45			9	63	14	67	23	130	12:45			193	594	237	817	430	1411
01:00			7		9		16		13:00			187		175		362	
01:15			9		8		17		13:15			135		127		262	
01:30			3		5		8		13:30			114		141		255	
01:45			3	22	4	26	7	48	13:45			145	581	180	623	325	1204
02:00			6		5		11		14:00			161		185		346	
02:15			1		2		3		14:15			203		227		430	
02:30			5		3		8		14:30			158		194		352	
02:45			7	19	10	20	17	39	14:45			114	636	194	800	308	1436
03:00			4		3		7		15:00			156		187		343	
03:15			3		8		11		15:15			175		212		387	
03:30			2		6		8		15:30			138		261		399	
03:45			6	15	10	27	16	42	15:45			199	668	230	890	429	1558
04:00			4		6		10		16:00			187		210		397	
04:15			5		9		14		16:15			161		139		300	
04:30			5		12		17		16:30			147		143		290	
04:45			12	26	20	47	32	73	16:45			138	633	161	653	299	1286
05:00			11		20		31		17:00			177		220		397	
05:15			11		23		34		17:15			176		225		401	
05:30			20		30		50		17:30			188		205		393	
05:45			19	61	45	118	64	179	17:45			143	684	190	840	333	1524
06:00			20		46		66		18:00			159		182		341	
06:15			56		92		148		18:15			155		181		336	
06:30			85		141		226		18:30			168		210		378	
06:45			132	293	202	481	334	774	18:45			172	654	244	817	416	1471
07:00			111		159		270		19:00			100		179		279	
07:15			123		200		323		19:15			138		119		257	
07:30			115		264		379		19:30			126		105		231	
07:45			119	468	336	959	455	1427	19:45			129	493	104	507	233	1000
08:00			128		312		440		20:00			110		94		204	
08:15			125		251		376		20:15			137		101		238	
08:30			97		229		326		20:30			115		96		211	
08:45			89	439	174	966	263	1405	20:45			126	488	79	370	205	858
09:00			118		155		273		21:00			106		85		191	
09:15			115		173		288		21:15			120		99		219	
09:30			117		224		341		21:30			118		90		208	
09:45			148	498	222	774	370	1272	21:45			147	491	115	389	262	880
10:00			115		151		266		22:00			102		79		181	
10:15			98		146		244		22:15			80		51		131	
10:30			97		145		242		22:30			71		37		108	
10:45			111	421	177	619	288	1040	22:45			51	304	50	217	101	521
11:00			135		213		348		23:00			65		33		98	
11:15			153		236		389		23:15			31		35		66	
11:30			146		155		301		23:30			29		29		58	
11:45			109	543	175	779	284	1322	23:45			31	156	27	124	58	280
TOTALS				2868		4883		7751	TOTALS				6382		7047		13429
SPLIT %				37.0%		63.0%		36.6%	SPLIT %				47.5%		52.5%		63.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	9,250	11,930	21,180

AM Peak Hour			10:45	07:30	07:30	PM Peak Hour	15:15	15:15	15:15
AM Pk Volume			545	1163	1650	PM Pk Volume	699	913	1612
Pk Hr Factor			0.891	0.865	0.907	Pk Hr Factor	0.878	0.875	0.939
7 - 9 Volume	0	0	907	1925	2832	4 - 6 Volume	0	0	1317	1493	2810
7 - 9 Peak Hour			07:30	07:30	07:30	4 - 6 Peak Hour			17:00	17:00	17:00
7 - 9 Pk Volume	0	0	487	1163	1650	4 - 6 Pk Volume	0	0	684	840	1524
Pk Hr Factor	0.000	0.000	0.951	0.865	0.907	Pk Hr Factor	0.000	0.000	0.910	0.933	0.950

Prepared by National Data & Surveying Services

VOLUME

Nutwood Ave Bet. State College Blvd & SR-57

Day: Wednesday
Date: 9/25/2019

City: Fullerton
Project #: CA19_1188_005

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	9,761	12,650	22,411

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			36		18		54		12:00			163		187		350	
00:15			44		25		69		12:15			139		203		342	
00:30			18		16		34		12:30			167		230		397	
00:45			11	109	11	70	22	179	12:45			175	644	232	852	407	1496
01:00			10		19		29		13:00			175		177		352	
01:15			12		6		18		13:15			130		126		256	
01:30			9		8		17		13:30			133		158		291	
01:45			6	37	5	38	11	75	13:45			118	556	200	661	318	1217
02:00			7		6		13		14:00			175		224		399	
02:15			7		7		14		14:15			202		227		429	
02:30			2		6		8		14:30			188		171		359	
02:45			7	23	10	29	17	52	14:45			147	712	171	793	318	1505
03:00			5		3		8		15:00			165		163		328	
03:15			5		5		10		15:15			179		204		383	
03:30			2		9		11		15:30			181		230		411	
03:45			3	15	6	23	9	38	15:45			199	724	243	840	442	1564
04:00			4		3		7		16:00			202		176		378	
04:15			3		10		13		16:15			157		155		312	
04:30			7		26		33		16:30			143		145		288	
04:45			11	25	27	66	38	91	16:45			152	654	182	658	334	1312
05:00			9		22		31		17:00			182		226		408	
05:15			15		38		53		17:15			199		236		435	
05:30			16		34		50		17:30			181		192		373	
05:45			12	52	38	132	50	184	17:45			149	711	174	828	323	1539
06:00			37		66		103		18:00			175		191		366	
06:15			47		92		139		18:15			195		189		384	
06:30			79		143		222		18:30			179		220		399	
06:45			99	262	222	523	321	785	18:45			187	736	266	866	453	1602
07:00			123		200		323		19:00			132		186		318	
07:15			132		251		383		19:15			136		140		276	
07:30			113		350		463		19:30			146		99		245	
07:45			108	476	349	1150	457	1626	19:45			112	526	121	546	233	1072
08:00			125		292		417		20:00			135		100		235	
08:15			110		269		379		20:15			150		109		259	
08:30			84		220		304		20:30			140		105		245	
08:45			110	429	215	996	325	1425	20:45			110	535	86	400	196	935
09:00			111		202		313		21:00			128		88		216	
09:15			89		186		275		21:15			138		120		258	
09:30			128		239		367		21:30			158		131		289	
09:45			141	469	235	862	376	1331	21:45			180	604	130	469	310	1073
10:00			126		168		294		22:00			126		92		218	
10:15			88		137		225		22:15			81		84		165	
10:30			108		171		279		22:30			66		61		127	
10:45			111	433	190	666	301	1099	22:45			49	322	44	281	93	603
11:00			125		191		316		23:00			40		53		93	
11:15			153		211		364		23:15			44		33		77	
11:30			151		167		318		23:30			33		31		64	
11:45			126	555	189	758	315	1313	23:45			35	152	26	143	61	295
TOTALS				2885		5313		8198	TOTALS				6876		7337		14213
SPLIT %				35.2%		64.8%		36.6%	SPLIT %				48.4%		51.6%		63.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	9,761	12,650	22,411

AM Peak Hour			11:45	07:30	07:15	PM Peak Hour	15:15	18:00	15:15
AM Pk Volume			595	1260	1720	PM Pk Volume	761	866	1614
Pk Hr Factor			0.891	0.900	0.929	Pk Hr Factor	0.942	0.814	0.913
7 - 9 Volume	0	0	905	2146	3051	4 - 6 Volume	0	0	1365	1486	2851
7 - 9 Peak Hour			07:15	07:30	07:15	4 - 6 Peak Hour			16:45	16:45	16:45
7 - 9 Pk Volume	0	0	478	1260	1720	4 - 6 Pk Volume	0	0	714	836	1550
Pk Hr Factor	0.000	0.000	0.905	0.900	0.929	Pk Hr Factor	0.000	0.000	0.897	0.886	0.891

Prepared by National Data & Surveying Services

VOLUME

Nutwood Ave/Primrose Ave Bet. SR-57 & Bradford Ave

Day: Tuesday
Date: 9/24/2019

City: Placentia
Project #: CA19_1188_006

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	711	747	1,458

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			3	2	5	12:00			10	7	17
00:15			1	2	3	12:15			14	5	19
00:30			1	0	1	12:30			17	9	26
00:45			0	5	0	4	0	9	12:45				17	58	12	33	29	91
01:00			0	1	1	13:00			12	13	25
01:15			0	0	0	13:15			8	6	14
01:30			2	2	4	13:30			12	5	17
01:45			1	3	0	3	1	6	13:45				7	39	9	33	16	72
02:00			0	0	0	14:00			9	6	15
02:15			0	0	0	14:15			18	12	30
02:30			0	1	1	14:30			13	13	26
02:45			0	0	1	0	1	14:45					14	54	19	50	33	104
03:00			0	0	0	15:00			13	11	24
03:15			2	3	5	15:15			14	14	28
03:30			2	0	2	15:30			10	13	23
03:45			0	4	1	4	1	8	15:45				9	46	15	53	24	99
04:00			0	0	0	16:00			13	10	23
04:15			0	0	0	16:15			7	15	22
04:30			0	3	3	16:30			11	9	20
04:45			2	2	2	5	4	7	16:45				16	47	16	50	32	97
05:00			0	6	6	17:00			13	16	29
05:15			1	2	3	17:15			19	15	34
05:30			1	3	4	17:30			19	9	28
05:45			1	3	2	13	3	16	17:45				16	67	12	52	28	119
06:00			1	7	8	18:00			13	11	24
06:15			2	7	9	18:15			13	5	18
06:30			2	19	21	18:30			17	9	26
06:45			3	8	18	51	21	59	18:45				8	51	12	37	20	88
07:00			6	13	19	19:00			10	14	24
07:15			13	14	27	19:15			8	10	18
07:30			41	35	76	19:30			12	9	21
07:45			23	83	32	94	55	177	19:45				6	36	9	42	15	78
08:00			10	12	22	20:00			5	10	15
08:15			6	12	18	20:15			10	7	17
08:30			4	12	16	20:30			5	10	15
08:45			5	25	5	41	10	66	20:45				5	25	4	31	9	56
09:00			8	11	19	21:00			6	9	15
09:15			11	9	20	21:15			12	5	17
09:30			5	8	13	21:30			7	3	10
09:45			15	39	8	36	23	75	21:45				7	32	9	26	16	58
10:00			3	3	6	22:00			3	5	8
10:15			5	13	18	22:15			5	2	7
10:30			4	4	8	22:30			3	7	10
10:45			11	23	4	24	15	47	22:45				3	14	3	17	6	31
11:00			11	9	20	23:00			2	7	9
11:15			10	12	22	23:15			3	1	4
11:30			9	8	17	23:30			1	3	4
11:45			9	39	6	35	15	74	23:45				2	8	1	12	3	20
TOTALS				234	311	545	TOTALS				477	436	913
SPLIT %				42.9%	57.1%	37.4%	SPLIT %				52.2%	47.8%	62.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	711	747	1,458

AM Peak Hour			07:15	07:00	07:15	PM Peak Hour			16:45	14:30	16:45
AM Pk Volume			87	94	180	PM Pk Volume			67	57	123
Pk Hr Factor			0.530	0.671	0.592	Pk Hr Factor			0.882	0.750	0.904
7 - 9 Volume	0	0	108	135	243	4 - 6 Volume	0	0	114	102	216
7 - 9 Peak Hour			07:15	07:00	07:15	4 - 6 Peak Hour			16:45	16:15	16:45
7 - 9 Pk Volume	0	0	87	94	180	4 - 6 Pk Volume	0	0	67	56	123
Pk Hr Factor	0.000	0.000	0.530	0.671	0.592	Pk Hr Factor	0.000	0.000	0.882	0.875	0.904

Prepared by National Data & Surveying Services

VOLUME

Nutwood Ave/Primrose Ave Bet. SR-57 & Bradford Ave

Day: Wednesday
Date: 9/25/2019

City: Placentia
Project #: CA19_1188_006

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	776	753	1,529

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			4		1		5		12:00			15		10		25	
00:15			4		2		6		12:15			12		12		24	
00:30			1		0		1		12:30			8		12		20	
00:45			2	11	2	5	4	16	12:45			6	41	9	43	15	84
01:00			1		1		2		13:00			11		12		23	
01:15			0		1		1		13:15			20		12		32	
01:30			1		2		3		13:30			7		7		14	
01:45			3	5	1	5	4	10	13:45			13	51	7	38	20	89
02:00			2		1		3		14:00			13		9		22	
02:15			3		0		3		14:15			11		9		20	
02:30			2		3		5		14:30			10		9		19	
02:45			1	8	0	4	1	12	14:45			15	49	17	44	32	93
03:00			0		2		2		15:00			13		10		23	
03:15			1		1		2		15:15			15		9		24	
03:30			0		1		1		15:30			11		14		25	
03:45			0	1	1	5	1	6	15:45			8	47	12	45	20	92
04:00			1		1		2		16:00			10		17		27	
04:15			0		1		1		16:15			12		8		20	
04:30			0		1		1		16:30			15		10		25	
04:45			0	1	1	4	1	5	16:45			12	49	13	48	25	97
05:00			1		1		2		17:00			15		14		29	
05:15			0		2		2		17:15			29		8		37	
05:30			2		5		7		17:30			10		15		25	
05:45			1	4	4	12	5	16	17:45			18	72	10	47	28	119
06:00			1		6		7		18:00			14		9		23	
06:15			1		8		9		18:15			17		13		30	
06:30			3		15		18		18:30			15		15		30	
06:45			5	10	13	42	18	52	18:45			8	54	11	48	19	102
07:00			6		13		19		19:00			16		9		25	
07:15			15		14		29		19:15			20		9		29	
07:30			41		31		72		19:30			7		8		15	
07:45			38	100	32	90	70	190	19:45			8	51	11	37	19	88
08:00			10		14		24		20:00			8		5		13	
08:15			9		15		24		20:15			9		9		18	
08:30			4		9		13		20:30			13		15		28	
08:45			4	27	9	47	13	74	20:45			7	37	9	38	16	75
09:00			6		5		11		21:00			8		9		17	
09:15			7		9		16		21:15			8		10		18	
09:30			8		10		18		21:30			9		7		16	
09:45			7	28	15	39	22	67	21:45			10	35	6	32	16	67
10:00			9		7		16		22:00			7		7		14	
10:15			5		12		17		22:15			7		7		14	
10:30			4		8		12		22:30			4		1		5	
10:45			6	24	2	29	8	53	22:45			4	22	2	17	6	39
11:00			5		5		10		23:00			3		1		4	
11:15			8		11		19		23:15			3		2		5	
11:30			9		9		18		23:30			3		1		4	
11:45			11	33	4	29	15	62	23:45			7	16	1	5	8	21
TOTALS				252		311		563	TOTALS				524		442		966
SPLIT %				44.8%		55.2%		36.8%	SPLIT %				54.2%		45.8%		63.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	776	753	1,529

AM Peak Hour			07:15	07:30	07:15	PM Peak Hour	17:00	15:15	17:00
AM Pk Volume			104	92	195	PM Pk Volume	72	52	119
Pk Hr Factor			0.634	0.719	0.677	Pk Hr Factor	0.621	0.765	0.804
7 - 9 Volume	0	0	127	137	264	4 - 6 Volume	0	0	121	95	216
7 - 9 Peak Hour			07:15	07:30	07:15	4 - 6 Peak Hour			17:00	16:45	17:00
7 - 9 Pk Volume	0	0	104	92	195	4 - 6 Pk Volume	0	0	72	50	119
Pk Hr Factor	0.000	0.000	0.634	0.719	0.677	Pk Hr Factor	0.000	0.000	0.621	0.833	0.804

Prepared by National Data & Surveying Services

VOLUME

Yorba Linda Blvd Bet. State College Blvd & Placentia Ave

Day: Tuesday
Date: 10/8/2019

City: Fullerton
Project #: CA19_1188_007

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	20,005	18,168	38,173

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			45		30		75		12:00			264		208		472	
00:15			29		20		49		12:15			231		236		467	
00:30			32		14		46		12:30			283		259		542	
00:45			28	134	11	75	39	209	12:45			362	1140	232	935	594	2075
01:00			15		24		39		13:00			399		228		627	
01:15			7		19		26		13:15			285		231		516	
01:30			8		21		29		13:30			273		255		528	
01:45			22	52	13	77	35	129	13:45			247	1204	256	970	503	2174
02:00			8		10		18		14:00			306		233		539	
02:15			9		11		20		14:15			415		243		658	
02:30			16		17		33		14:30			480		275		755	
02:45			8	41	11	49	19	90	14:45			315	1516	286	1037	601	2553
03:00			7		6		13		15:00			331		279		610	
03:15			15		3		18		15:15			351		279		630	
03:30			15		10		25		15:30			361		284		645	
03:45			13	50	12	31	25	81	15:45			436	1479	281	1123	717	2602
04:00			14		12		26		16:00			497		269		766	
04:15			27		12		39		16:15			370		283		653	
04:30			42		16		58		16:30			339		313		652	
04:45			41	124	32	72	73	196	16:45			302	1508	311	1176	613	2684
05:00			58		39		97		17:00			410		332		742	
05:15			75		62		137		17:15			395		327		722	
05:30			107		64		171		17:30			409		342		751	
05:45			107	347	77	242	184	589	17:45			291	1505	360	1361	651	2866
06:00			200		77		277		18:00			291		321		612	
06:15			187		109		296		18:15			332		311		643	
06:30			249		156		405		18:30			299		337		636	
06:45			304	940	227	569	531	1509	18:45			388	1310	309	1278	697	2588
07:00			305		220		525		19:00			440		297		737	
07:15			272		299		571		19:15			276		286		562	
07:30			290		422		712		19:30			221		203		424	
07:45			288	1155	445	1386	733	2541	19:45			197	1134	198	984	395	2118
08:00			302		389		691		20:00			190		174		364	
08:15			281		316		597		20:15			240		180		420	
08:30			281		317		598		20:30			219		185		404	
08:45			231	1095	316	1338	547	2433	20:45			194	843	178	717	372	1560
09:00			252		287		539		21:00			218		256		474	
09:15			248		312		560		21:15			197		253		450	
09:30			221		336		557		21:30			188		231		419	
09:45			248	969	299	1234	547	2203	21:45			214	817	237	977	451	1794
10:00			234		188		422		22:00			158		197		355	
10:15			228		209		437		22:15			105		95		200	
10:30			237		232		469		22:30			100		74		174	
10:45			189	888	267	896	456	1784	22:45			85	448	61	427	146	875
11:00			242		239		481		23:00			78		74		152	
11:15			260		268		528		23:15			76		69		145	
11:30			313		220		533		23:30			40		43		83	
11:45			247	1062	264	991	511	2053	23:45			50	244	37	223	87	467
TOTALS				6857		6960		13817	TOTALS				13148		11208		24356
SPLIT %				49.6%		50.4%		36.2%	SPLIT %				54.0%		46.0%		63.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	20,005	18,168	38,173

AM Peak Hour			06:45	07:30	07:30	PM Peak Hour	15:30	17:00	17:00
AM Pk Volume			1171	1572	2733	PM Pk Volume	1664	1361	2866
Pk Hr Factor			0.960	0.883	0.932	Pk Hr Factor	0.837	0.945	0.954
7 - 9 Volume	0	0	2250	2724	4974	4 - 6 Volume	0	0	3013	2537	5550
7 - 9 Peak Hour			07:30	07:30	07:30	4 - 6 Peak Hour			16:45	17:00	17:00
7 - 9 Pk Volume	0	0	1161	1572	2733	4 - 6 Pk Volume	0	0	1516	1361	2866
Pk Hr Factor	0.000	0.000	0.961	0.883	0.932	Pk Hr Factor	0.000	0.000	0.924	0.945	0.954

Prepared by National Data & Surveying Services

VOLUME

Yorba Linda Blvd Bet. State College Blvd & Placentia Ave

Day: Wednesday
Date: 10/9/2019

City: Fullerton
Project #: CA19_1188_007

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	20,346	18,676	39,022

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			50		39		89		12:00			313		272		585	
00:15			35		35		70		12:15			258		272		530	
00:30			40		34		74		12:30			270		294		564	
00:45			22	147	29	137	51	284	12:45			363	1204	257	1095	620	2299
01:00			22		28		50		13:00			404		262		666	
01:15			15		25		40		13:15			281		236		517	
01:30			15		17		32		13:30			256		227		483	
01:45			23	75	19	89	42	164	13:45			288	1229	297	1022	585	2251
02:00			9		19		28		14:00			268		264		532	
02:15			12		11		23		14:15			381		274		655	
02:30			11		6		17		14:30			381		284		665	
02:45			11	43	16	52	27	95	14:45			305	1335	272	1094	577	2429
03:00			6		12		18		15:00			332		289		621	
03:15			11		5		16		15:15			333		290		623	
03:30			9		9		18		15:30			348		316		664	
03:45			9	35	18	44	27	79	15:45			421	1434	288	1183	709	2617
04:00			25		9		34		16:00			489		275		764	
04:15			21		12		33		16:15			377		292		669	
04:30			43		12		55		16:30			377		327		704	
04:45			42	131	28	61	70	192	16:45			321	1564	299	1193	620	2757
05:00			46		40		86		17:00			380		347		727	
05:15			66		44		110		17:15			403		373		776	
05:30			126		71		197		17:30			394		362		756	
05:45			142	380	62	217	204	597	17:45			323	1500	359	1441	682	2941
06:00			156		97		253		18:00			355		338		693	
06:15			212		111		323		18:15			334		304		638	
06:30			227		166		393		18:30			331		315		646	
06:45			285	880	210	584	495	1464	18:45			399	1419	321	1278	720	2697
07:00			294		210		504		19:00			417		259		676	
07:15			259		311		570		19:15			300		223		523	
07:30			282		380		662		19:30			228		194		422	
07:45			308	1143	435	1336	743	2479	19:45			168	1113	180	856	348	1969
08:00			322		373		695		20:00			201		159		360	
08:15			236		336		572		20:15			246		164		410	
08:30			285		325		610		20:30			199		159		358	
08:45			225	1068	289	1323	514	2391	20:45			187	833	239	721	426	1554
09:00			234		264		498		21:00			241		268		509	
09:15			223		317		540		21:15			202		255		457	
09:30			249		291		540		21:30			200		264		464	
09:45			270	976	273	1145	543	2121	21:45			202	845	288	1075	490	1920
10:00			318		201		519		22:00			145		202		347	
10:15			348		225		573		22:15			100		119		219	
10:30			271		226		497		22:30			88		106		194	
10:45			225	1162	261	913	486	2075	22:45			101	434	100	527	201	961
11:00			276		227		503		23:00			79		107		186	
11:15			275		238		513		23:15			78		89		167	
11:30			307		251		558		23:30			63		56		119	
11:45			247	1105	262	978	509	2083	23:45			71	291	60	312	131	603
TOTALS				7145		6879		**14024**	**TOTALS**				13201		11797		**24998**
SPLIT %				50.9%		49.1%		**35.9%**	**SPLIT %**				52.8%		47.2%		**64.1%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	20,346	18,676	39,022

AM Peak Hour			09:45	07:30	**07:30**	**PM Peak Hour**	15:45	17:00	**17:00**
AM Pk Volume			1207	1524	**2672**	**PM Pk Volume**	1664	1441	**2941**
Pk Hr Factor			0.867	0.876	**0.899**	**Pk Hr Factor**	0.851	0.966	**0.947**
7 - 9 Volume	0	0	2211	2659	**4870**	**4 - 6 Volume**	0	0	3064	2634	**5698**
7 - 9 Peak Hour			07:15	07:30	**07:30**	**4 - 6 Peak Hour**			16:00	17:00	**17:00**
7 - 9 Pk Volume	0	0	1171	1524	**2672**	**4 - 6 Pk Volume**	0	0	1564	1441	**2941**
Pk Hr Factor	0.000	0.000	0.909	0.876	**0.899**	**Pk Hr Factor**	0.000	0.000	0.800	0.966	**0.947**

Prepared by National Data & Surveying Services

VOLUME

E Chapman Ave Bet. State College Blvd & SR-57

Day: Tuesday
Date: 9/24/2019

City: Fullerton
Project #: CA19_1188_008

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	17,560	16,825	34,385

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			30		44		74		12:00			293		259		552	
00:15			24		45		69		12:15			302		269		571	
00:30			23		28		51		12:30			262		274		536	
00:45			22	99	18	135	40	234	12:45			279	1136	309	1111	588	2247
01:00			13		18		31		13:00			246		291		537	
01:15			13		13		26		13:15			273		281		554	
01:30			10		11		21		13:30			241		257		498	
01:45			12	48	12	54	24	102	13:45			230	990	278	1107	508	2097
02:00			9		16		25		14:00			272		276		548	
02:15			12		9		21		14:15			265		288		553	
02:30			14		3		17		14:30			272		267		539	
02:45			11	46	4	32	15	78	14:45			317	1126	259	1090	576	2216
03:00			7		9		16		15:00			310		306		616	
03:15			15		13		28		15:15			269		322		591	
03:30			8		17		25		15:30			283		282		565	
03:45			7	37	17	56	24	93	15:45			309	1171	239	1149	548	2320
04:00			13		12		25		16:00			309		311		620	
04:15			18		29		47		16:15			325		286		611	
04:30			20		37		57		16:30			317		276		593	
04:45			29	80	31	109	60	189	16:45			313	1264	266	1139	579	2403
05:00			24		41		65		17:00			342		282		624	
05:15			35		56		91		17:15			338		281		619	
05:30			60		87		147		17:30			327		289		616	
05:45			76	195	88	272	164	467	17:45			320	1327	266	1118	586	2445
06:00			77		124		201		18:00			284		273		557	
06:15			104		123		227		18:15			285		274		559	
06:30			181		186		367		18:30			313		266		579	
06:45			259	621	256	689	515	1310	18:45			330	1212	308	1121	638	2333
07:00			207		263		470		19:00			266		281		547	
07:15			259		221		480		19:15			226		233		459	
07:30			292		228		520		19:30			243		242		485	
07:45			287	1045	216	928	503	1973	19:45			203	938	205	961	408	1899
08:00			307		238		545		20:00			197		189		386	
08:15			343		272		615		20:15			170		186		356	
08:30			240		236		476		20:30			172		152		324	
08:45			245	1135	205	951	450	2086	20:45			142	681	180	707	322	1388
09:00			223		174		397		21:00			154		199		353	
09:15			268		224		492		21:15			146		199		345	
09:30			238		196		434		21:30			142		185		327	
09:45			270	999	223	817	493	1816	21:45			110	552	204	787	314	1339
10:00			254		214		468		22:00			144		188		332	
10:15			210		229		439		22:15			125		132		257	
10:30			227		185		412		22:30			125		92		217	
10:45			212	903	187	815	399	1718	22:45			138	532	75	487	213	1019
11:00			263		205		468		23:00			105		68		173	
11:15			298		215		513		23:15			59		62		121	
11:30			299		285		584		23:30			77		53		130	
11:45			231	1091	261	966	492	2057	23:45			91	332	41	224	132	556
TOTALS				6299		5824		12123	TOTALS				11261		11001		22262
SPLIT %				52.0%		48.0%		35.3%	SPLIT %				50.6%		49.4%		64.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	17,560	16,825	34,385

AM Peak Hour			07:30	11:30	11:30	PM Peak Hour			17:00	14:45	17:00
AM Pk Volume			1229	1074	2199	PM Pk Volume			1327	1169	2445
Pk Hr Factor			0.896	0.942	0.941	Pk Hr Factor			0.970	0.908	0.980
7 - 9 Volume	0	0	2180	1879	4059	4 - 6 Volume	0	0	2591	2257	4848
7 - 9 Peak Hour			07:30	07:45	07:30	4 - 6 Peak Hour			17:00	16:00	17:00
7 - 9 Pk Volume	0	0	1229	962	2183	4 - 6 Pk Volume	0	0	1327	1139	2445
Pk Hr Factor	0.000	0.000	0.896	0.884	0.887	Pk Hr Factor	0.000	0.000	0.970	0.916	0.980

Prepared by National Data & Surveying Services

VOLUME

E Chapman Ave Bet. State College Blvd & SR-57

Day: Wednesday
Date: 9/25/2019

City: Fullerton
Project #: CA19_1188_008

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	18,380	16,836	35,216

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			87		52		139		12:00			253		260		513	
00:15			70		43		113		12:15			274		238		512	
00:30			45		29		74		12:30			263		286		549	
00:45			28	230	29	153	57	383	12:45			279	1069	280	1064	559	2133
01:00			23		22		45		13:00			300		291		591	
01:15			17		21		38		13:15			268		307		575	
01:30			17		26		43		13:30			258		236		494	
01:45			13	70	13	82	26	152	13:45			279	1105	235	1069	514	2174
02:00			11		12		23		14:00			264		292		556	
02:15			10		13		23		14:15			242		272		514	
02:30			10		10		20		14:30			279		295		574	
02:45			8	39	8	43	16	82	14:45			311	1096	256	1115	567	2211
03:00			4		6		10		15:00			280		312		592	
03:15			15		14		29		15:15			290		313		603	
03:30			11		19		30		15:30			271		288		559	
03:45			16	46	20	59	36	105	15:45			339	1180	278	1191	617	2371
04:00			10		11		21		16:00			316		282		598	
04:15			13		16		29		16:15			343		304		647	
04:30			18		36		54		16:30			319		288		607	
04:45			33	74	41	104	74	178	16:45			324	1302	281	1155	605	2457
05:00			25		33		58		17:00			374		276		650	
05:15			41		58		99		17:15			375		287		662	
05:30			57		78		135		17:30			377		274		651	
05:45			70	193	93	262	163	455	17:45			332	1458	263	1100	595	2558
06:00			81		133		214		18:00			346		276		622	
06:15			120		123		243		18:15			354		270		624	
06:30			195		184		379		18:30			309		280		589	
06:45			237	633	259	699	496	1332	18:45			303	1312	297	1123	600	2435
07:00			218		260		478		19:00			285		253		538	
07:15			262		250		512		19:15			235		200		435	
07:30			289		239		528		19:30			208		178		386	
07:45			276	1045	231	980	507	2025	19:45			241	969	176	807	417	1776
08:00			300		195		495		20:00			194		200		394	
08:15			276		211		487		20:15			178		235		413	
08:30			251		244		495		20:30			180		157		337	
08:45			298	1125	194	844	492	1969	20:45			156	708	193	785	349	1493
09:00			277		161		438		21:00			150		232		382	
09:15			247		218		465		21:15			141		206		347	
09:30			306		232		538		21:30			150		206		356	
09:45			252	1082	217	828	469	1910	21:45			144	585	193	837	337	1422
10:00			225		220		445		22:00			148		162		310	
10:15			220		215		435		22:15			168		104		272	
10:30			223		187		410		22:30			149		93		242	
10:45			260	928	190	812	450	1740	22:45			172	637	101	460	273	1097
11:00			274		215		489		23:00			133		85		218	
11:15			264		232		496		23:15			115		72		187	
11:30			327		256		583		23:30			64		59		123	
11:45			256	1121	276	979	532	2100	23:45			61	373	69	285	130	658
TOTALS				6586		5845		**12431**	**TOTALS**				11794		10991		**22785**
SPLIT %				53.0%		47.0%		**35.3%**	**SPLIT %**				51.8%		48.2%		**64.7%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	18,380	16,836	35,216

AM Peak Hour			07:30	11:45	**11:30**	**PM Peak Hour**	17:00	15:00	**16:45**
AM Pk Volume			1141	1060	**2140**	**PM Pk Volume**	1458	1191	**2568**
Pk Hr Factor			0.951	0.927	**0.918**	**Pk Hr Factor**	0.967	0.951	**0.970**
7 - 9 Volume	0	0	2170	1824	**3994**	**4 - 6 Volume**	0	0	2760	2255	**5015**
7 - 9 Peak Hour			07:30	07:00	**07:15**	**4 - 6 Peak Hour**			17:00	16:00	**16:45**
7 - 9 Pk Volume	0	0	1141	980	**2042**	**4 - 6 Pk Volume**	0	0	1458	1155	**2568**
Pk Hr Factor	0.000	0.000	0.951	0.942	**0.967**	**Pk Hr Factor**	0.000	0.000	0.967	0.950	**0.970**

Prepared by National Data & Surveying Services

VOLUME

E Chapman Ave Bet. SR-57 & Bradford Ave

Day: Tuesday
Date: 9/24/2019

City: Placentia
Project #: CA19_1188_009

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,760	11,174	23,934

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			24	10	34	12:00			192	169	361
00:15			27	9	36	12:15			166	171	337
00:30			27	5	32	12:30			192	171	363
00:45			17 95	15 39	32 134	12:45			199 749	157 668	356 1417
01:00			10	2	12	13:00			201	142	343
01:15			12	2	14	13:15			177	155	332
01:30			7	10	17	13:30			189	138	327
01:45			8 37	6 20	14 57	13:45			217 784	167 602	384 1386
02:00			10	7	17	14:00			195	183	378
02:15			5	6	11	14:15			211	162	373
02:30			3	3	6	14:30			235	185	420
02:45			4 22	5 21	9 43	14:45			276 917	200 730	476 1647
03:00			5	5	10	15:00			267	254	521
03:15			4	9	13	15:15			236	163	399
03:30			9	12	21	15:30			201	229	430
03:45			10 28	14 40	24 68	15:45			236 940	220 866	456 1806
04:00			8	13	21	16:00			256	221	477
04:15			11	19	30	16:15			255	159	414
04:30			16	31	47	16:30			252	215	467
04:45			21 56	39 102	60 158	16:45			244 1007	212 807	456 1814
05:00			22	39	61	17:00			248	234	482
05:15			39	54	93	17:15			311	199	510
05:30			49	72	121	17:30			251	216	467
05:45			53 163	79 244	132 407	17:45			276 1086	185 834	461 1920
06:00			52	98	150	18:00			259	175	434
06:15			62	97	159	18:15			263	203	466
06:30			113	179	292	18:30			276	169	445
06:45			109 336	186 560	295 896	18:45			251 1049	171 718	422 1767
07:00			134	192	326	19:00			226	127	353
07:15			181	212	393	19:15			232	162	394
07:30			204	216	420	19:30			177	147	324
07:45			174 693	270 890	444 1583	19:45			194 829	133 569	327 1398
08:00			155	155	310	20:00			144	130	274
08:15			141	201	342	20:15			154	85	239
08:30			146	171	317	20:30			135	95	230
08:45			135 577	152 679	287 1256	20:45			137 570	85 395	222 965
09:00			138	144	282	21:00			137	63	200
09:15			147	154	301	21:15			127	70	197
09:30			122	159	281	21:30			108	80	188
09:45			155 562	162 619	317 1181	21:45			127 499	52 265	179 764
10:00			148	153	301	22:00			113	69	182
10:15			140	159	299	22:15			81	67	148
10:30			136	139	275	22:30			79	47	126
10:45			160 584	146 597	306 1181	22:45			55 328	40 223	95 551
11:00			154	134	288	23:00			61	29	90
11:15			149	137	286	23:15			41	25	66
11:30			187	177	364	23:30			44	26	70
11:45			168 658	146 594	314 1252	23:45			45 191	12 92	57 283
TOTALS			3811	4405	8216	TOTALS			8949	6769	15718
SPLIT %			46.4%	53.6%	34.3%	SPLIT %			56.9%	43.1%	65.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,760	11,174	23,934

AM Peak Hour			11:45	07:00	07:00	PM Peak Hour			17:15	15:00	17:00
AM Pk Volume			718	890	1583	PM Pk Volume			1097	866	1920
Pk Hr Factor			0.935	0.824	0.891	Pk Hr Factor			0.882	0.852	0.941
7 - 9 Volume	0	0	1270	1569	2839	4 - 6 Volume	0	0	2093	1641	3734
7 - 9 Peak Hour			07:15	07:00	07:00	4 - 6 Peak Hour			17:00	16:45	17:00
7 - 9 Pk Volume	0	0	714	890	1583	4 - 6 Pk Volume	0	0	1086	861	1920
Pk Hr Factor	0.000	0.000	0.875	0.824	0.891	Pk Hr Factor	0.000	0.000	0.873	0.920	0.941

Prepared by National Data & Surveying Services

VOLUME

E Chapman Ave Bet. SR-57 & Bradford Ave

Day: Wednesday
Date: 9/25/2019

City: Placentia
Project #: CA19_1188_009

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,850	11,350	24,200

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			41		13		54		12:00			170		161		331	
00:15			47		15		62		12:15			168		161		329	
00:30			28		7		35		12:30			199		154		353	
00:45			25	141	13	48	38	189	12:45			220	757	153	629	373	1386
01:00			20		9		29		13:00			193		149		342	
01:15			16		11		27		13:15			206		155		361	
01:30			15		7		22		13:30			180		161		341	
01:45			4	55	2	29	6	84	13:45			194	773	184	649	378	1422
02:00			9		10		19		14:00			214		166		380	
02:15			11		8		19		14:15			188		138		326	
02:30			13		10		23		14:30			209		149		358	
02:45			8	41	7	35	15	76	14:45			233	844	199	652	432	1496
03:00			5		8		13		15:00			219		236		455	
03:15			9		12		21		15:15			259		183		442	
03:30			7		9		16		15:30			203		219		422	
03:45			10	31	17	46	27	77	15:45			231	912	224	862	455	1774
04:00			11		18		29		16:00			259		176		435	
04:15			9		18		27		16:15			277		196		473	
04:30			19		31		50		16:30			299		214		513	
04:45			29	68	32	99	61	167	16:45			253	1088	214	800	467	1888
05:00			19		42		61		17:00			286		223		509	
05:15			32		65		97		17:15			278		236		514	
05:30			55		62		117		17:30			291		217		508	
05:45			60	166	102	271	162	437	17:45			312	1167	195	871	507	2038
06:00			58		91		149		18:00			255		219		474	
06:15			63		106		169		18:15			262		184		446	
06:30			95		173		268		18:30			249		196		445	
06:45			122	338	182	552	304	890	18:45			221	987	171	770	392	1757
07:00			138		186		324		19:00			198		122		320	
07:15			164		228		392		19:15			217		160		377	
07:30			215		226		441		19:30			161		137		298	
07:45			195	712	273	913	468	1625	19:45			156	732	124	543	280	1275
08:00			170		195		365		20:00			167		117		284	
08:15			144		178		322		20:15			147		96		243	
08:30			159		199		358		20:30			117		162		279	
08:45			136	609	157	729	293	1338	20:45			128	559	98	473	226	1032
09:00			141		164		305		21:00			139		77		216	
09:15			135		147		282		21:15			119		69		188	
09:30			125		147		272		21:30			106		61		167	
09:45			143	544	149	607	292	1151	21:45			115	479	40	247	155	726
10:00			136		123		259		22:00			151		58		209	
10:15			145		143		288		22:15			100		68		168	
10:30			112		158		270		22:30			75		63		138	
10:45			134	527	141	565	275	1092	22:45			92	418	48	237	140	655
11:00			145		155		300		23:00			93		35		128	
11:15			160		151		311		23:15			60		35		95	
11:30			164		187		351		23:30			49		15		64	
11:45			202	671	126	619	328	1290	23:45			29	231	19	104	48	335
TOTALS				3903		4513		8416	TOTALS				8947		6837		15784
SPLIT %				46.4%		53.6%		34.8%	SPLIT %				56.7%		43.3%		65.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,850	11,350	24,200

AM Peak Hour			07:15	07:15	07:15	PM Peak Hour			17:00	16:45	17:00
AM Pk Volume			744	922	1666	PM Pk Volume			1167	890	2038
Pk Hr Factor			0.865	0.844	0.890	Pk Hr Factor			0.935	0.943	0.991
7 - 9 Volume	0	0	1321	1642	2963	4 - 6 Volume	0	0	2255	1671	3926
7 - 9 Peak Hour			07:15	07:15	07:15	4 - 6 Peak Hour			17:00	16:45	17:00
7 - 9 Pk Volume	0	0	744	922	1666	4 - 6 Pk Volume	0	0	1167	890	2038
Pk Hr Factor	0.000	0.000	0.865	0.844	0.890	Pk Hr Factor	0.000	0.000	0.935	0.943	0.991

Prepared by National Data & Surveying Services

VOLUME

Associated Rd Bet. SR-90 & Bastanchury Rd

Day: Tuesday
Date: 9/24/2019

City: Fullerton
Project #: CA19_1188_010

DAILY TOTALS	NB	SB	EB	WB	Total
	4,532	7,068	0	0	11,600

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	13		9				22		12:00	51		96				147	
00:15	10		7				17		12:15	65		105				170	
00:30	7		4				11		12:30	49		106				155	
00:45	3	33	6	26			9	59	12:45	63	228	95	402			158	630
01:00	2		6				8		13:00	92		83				175	
01:15	1		3				4		13:15	64		95				159	
01:30	8		3				11		13:30	67		80				147	
01:45	2	13	5	17			7	30	13:45	61	284	102	360			163	644
02:00	6		1				7		14:00	74		119				193	
02:15	2		2				4		14:15	77		99				176	
02:30	0		3				3		14:30	75		111				186	
02:45	2	10	3	9			5	19	14:45	84	310	125	454			209	764
03:00	2		4				6		15:00	74		136				210	
03:15	1		5				6		15:15	63		102				165	
03:30	3		3				6		15:30	89		111				200	
03:45	2	8	3	15			5	23	15:45	99	325	128	477			227	802
04:00	3		4				7		16:00	92		112				204	
04:15	6		3				9		16:15	95		159				254	
04:30	4		5				9		16:30	100		166				266	
04:45	4	17	9	21			13	38	16:45	110	397	190	627			300	1024
05:00	6		13				19		17:00	109		167				276	
05:15	8		21				29		17:15	120		186				306	
05:30	9		34				43		17:30	136		155				291	
05:45	22	45	46	114			68	159	17:45	101	466	162	670			263	1136
06:00	21		63				84		18:00	107		130				237	
06:15	24		87				111		18:15	94		135				229	
06:30	28		133				161		18:30	93		108				201	
06:45	68	141	114	397			182	538	18:45	88	382	91	464			179	846
07:00	60		118				178		19:00	87		108				195	
07:15	48		172				220		19:15	79		89				168	
07:30	74		170				244		19:30	50		75				125	
07:45	91	273	139	599			230	872	19:45	58	274	69	341			127	615
08:00	68		140				208		20:00	46		64				110	
08:15	72		129				201		20:15	47		59				106	
08:30	58		143				201		20:30	47		40				87	
08:45	59	257	119	531			178	788	20:45	49	189	44	207			93	396
09:00	39		105				144		21:00	37		38				75	
09:15	44		83				127		21:15	34		49				83	
09:30	40		86				126		21:30	42		36				78	
09:45	57	180	106	380			163	560	21:45	41	154	37	160			78	314
10:00	44		84				128		22:00	39		36				75	
10:15	41		80				121		22:15	19		33				52	
10:30	42		73				115		22:30	25		18				43	
10:45	41	168	84	321			125	489	22:45	23	106	24	111			47	217
11:00	43		81				124		23:00	16		11				27	
11:15	50		81				131		23:15	12		5				17	
11:30	61		86				147		23:30	16		8				24	
11:45	63	217	86	334			149	551	23:45	11	55	7	31			18	86
TOTALS		1362		2764				4126	TOTALS		3170		4304				7474
SPLIT %		33.0%		67.0%				35.6%	SPLIT %		42.4%		57.6%				64.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	4,532	7,068	0	0	11,600

AM Peak Hour	07:30	07:15			07:15	PM Peak Hour	16:45	16:30			16:45
AM Pk Volume	305	621			902	PM Pk Volume	475	709			1173
Pk Hr Factor	0.838	0.903			0.924	Pk Hr Factor	0.873	0.933			0.958
7 - 9 Volume	530	1130	0	0	1660	4 - 6 Volume	863	1297	0	0	2160
7 - 9 Peak Hour	07:30	07:15			07:15	4 - 6 Peak Hour	16:45	16:30			16:45
7 - 9 Pk Volume	305	621	0	0	902	4 - 6 Pk Volume	475	709	0	0	1173
Pk Hr Factor	0.838	0.903	0.000	0.000	0.924	Pk Hr Factor	0.873	0.933	0.000	0.000	0.958

Prepared by National Data & Surveying Services

VOLUME

Associated Rd Bet. SR-90 & Bastanchury Rd

Day: Wednesday
Date: 9/25/2019

City: Fullerton
Project #: CA19_1188_010

DAILY TOTALS	NB	SB	EB	WB	Total
	4,543	7,715	0	0	12,258

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	13		5				18		12:00	62		106				168	
00:15	6		12				18		12:15	48		106				154	
00:30	14		1				15		12:30	60		139				199	
00:45	3	36	9	27			12	63	12:45	58	228	121	472			179	700
01:00	5		1				6		13:00	87		118				205	
01:15	2		6				8		13:15	73		119				192	
01:30	6		1				7		13:30	77		146				223	
01:45	2	15	2	10			4	25	13:45	59	296	133	516			192	812
02:00	2		1				3		14:00	67		105				172	
02:15	3		1				4		14:15	59		89				148	
02:30	2		3				5		14:30	76		119				195	
02:45	4	11	17	22			21	33	14:45	61	263	115	428			176	691
03:00	1		8				9		15:00	77		136				213	
03:15	1		2				3		15:15	78		87				165	
03:30	1		3				4		15:30	83		111				194	
03:45	0	3	4	17			4	20	15:45	100	338	108	442			208	780
04:00	5		6				11		16:00	94		107				201	
04:15	2		6				8		16:15	96		182				278	
04:30	6		6				12		16:30	88		194				282	
04:45	10	23	13	31			23	54	16:45	107	385	175	658			282	1043
05:00	4		12				16		17:00	138		166				304	
05:15	2		24				26		17:15	132		203				335	
05:30	7		37				44		17:30	113		141				254	
05:45	14	27	48	121			62	148	17:45	89	472	169	679			258	1151
06:00	18		73				91		18:00	96		110				206	
06:15	19		91				110		18:15	92		120				212	
06:30	34		108				142		18:30	93		127				220	
06:45	63	134	122	394			185	528	18:45	85	366	78	435			163	801
07:00	58		139				197		19:00	98		100				198	
07:15	48		183				231		19:15	74		88				162	
07:30	66		234				300		19:30	59		84				143	
07:45	82	254	157	713			239	967	19:45	53	284	77	349			130	633
08:00	65		171				236		20:00	56		64				120	
08:15	46		156				202		20:15	64		60				124	
08:30	44		172				216		20:30	58		41				99	
08:45	39	194	126	625			165	819	20:45	52	230	45	210			97	440
09:00	49		120				169		21:00	47		42				89	
09:15	42		115				157		21:15	42		55				97	
09:30	54		99				153		21:30	41		33				74	
09:45	57	202	113	447			170	649	21:45	31	161	43	173			74	334
10:00	48		86				134		22:00	27		42				69	
10:15	61		91				152		22:15	20		35				55	
10:30	51		91				142		22:30	25		18				43	
10:45	58	218	99	367			157	585	22:45	23	95	22	117			45	212
11:00	52		89				141		23:00	23		13				36	
11:15	64		116				180		23:15	19		9				28	
11:30	69		97				166		23:30	18		4				22	
11:45	60	245	125	427			185	672	23:45	3	63	9	35			12	98
TOTALS		1362		3201				4563	TOTALS		3181		4514				7695
SPLIT %		29.8%		70.2%				37.2%	SPLIT %		41.3%		58.7%				62.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	4,543	7,715	0	0	12,258

AM Peak Hour	07:15	07:15				07:15	PM Peak Hour	16:45	16:30				16:30
AM Pk Volume	261	745				1006	PM Pk Volume	490	738				1203
Pk Hr Factor	0.796	0.796				0.838	Pk Hr Factor	0.888	0.909				0.898
7 - 9 Volume	448	1338	0	0		1786	4 - 6 Volume	857	1337	0	0		2194
7 - 9 Peak Hour	07:15	07:15				07:15	4 - 6 Peak Hour	16:45	16:30				16:30
7 - 9 Pk Volume	261	745	0	0		1006	4 - 6 Pk Volume	490	738	0	0		1203
Pk Hr Factor	0.796	0.796	0.000	0.000		0.838	Pk Hr Factor	0.888	0.909	0.000	0.000		0.898

Prepared by National Data & Surveying Services

VOLUME

Associated Rd Bet. Bastanchury Rd & Yorba Linda Blvd

Day: Tuesday
Date: 9/24/2019

City: Fullerton
Project #: CA19_1188_011

DAILY TOTALS	NB	SB	EB	WB	Total
	10,609	12,965	0	0	23,574

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	27		19				46		12:00	159		197				356	
00:15	25		20				45		12:15	154		190				344	
00:30	22		8				30		12:30	141		173				314	
00:45	16	90	10	57			26	147	12:45	137	591	204	764			341	1355
01:00	12		6				18		13:00	165		136				301	
01:15	10		10				20		13:15	135		150				285	
01:30	12		9				21		13:30	154		184				338	
01:45	15	49	8	33			23	82	13:45	143	597	182	652			325	1249
02:00	14		9				23		14:00	141		195				336	
02:15	3		9				12		14:15	198		189				387	
02:30	9		5				14		14:30	188		248				436	
02:45	10	36	11	34			21	70	14:45	185	712	223	855			408	1567
03:00	5		7				12		15:00	167		224				391	
03:15	3		6				9		15:15	176		180				356	
03:30	9		11				20		15:30	177		180				357	
03:45	5	22	17	41			22	63	15:45	211	731	218	802			429	1533
04:00	3		12				15		16:00	223		232				455	
04:15	8		30				38		16:15	203		202				405	
04:30	8		29				37		16:30	229		214				443	
04:45	21	40	38	109			59	149	16:45	212	867	214	862			426	1729
05:00	10		30				40		17:00	228		268				496	
05:15	16		69				85		17:15	243		226				469	
05:30	28		106				134		17:30	244		238				482	
05:45	41	95	121	326			162	421	17:45	236	951	237	969			473	1920
06:00	41		158				199		18:00	228		219				447	
06:15	66		206				272		18:15	222		198				420	
06:30	57		238				295		18:30	232		189				421	
06:45	123	287	235	837			358	1124	18:45	243	925	165	771			408	1696
07:00	124		223				347		19:00	200		175				375	
07:15	114		257				371		19:15	165		157				322	
07:30	150		291				441		19:30	156		142				298	
07:45	174	562	291	1062			465	1624	19:45	135	656	103	577			238	1233
08:00	142		233				375		20:00	119		106				225	
08:15	114		247				361		20:15	134		80				214	
08:30	119		243				362		20:30	126		109				235	
08:45	130	505	217	940			347	1445	20:45	137	516	113	408			250	924
09:00	107		202				309		21:00	100		116				216	
09:15	131		202				333		21:15	124		84				208	
09:30	109		227				336		21:30	110		95				205	
09:45	113	460	205	836			318	1296	21:45	143	477	76	371			219	848
10:00	119		148				267		22:00	102		68				170	
10:15	101		155				256		22:15	62		60				122	
10:30	128		177				305		22:30	59		47				106	
10:45	112	460	153	633			265	1093	22:45	46	269	44	219			90	488
11:00	124		163				287		23:00	52		48				100	
11:15	130		167				297		23:15	39		35				74	
11:30	158		183				341		23:30	33		29				62	
11:45	143	555	164	677			307	1232	23:45	32	156	18	130			50	286
TOTALS		3161		5585				**8746**	**TOTALS**		7448		7380				**14828**
SPLIT %		36.1%		63.9%				**37.1%**	**SPLIT %**		50.2%		49.8%				**62.9%**

DAILY TOTALS	NB	SB	EB	WB	Total
	10,609	12,965	0	0	23,574

AM Peak Hour	11:30	07:15			**07:15**	**PM Peak Hour**	17:00	17:00			**17:00**
AM Pk Volume	614	1072			**1652**	**PM Pk Volume**	951	969			**1920**
Pk Hr Factor	0.965	0.921			**0.888**	**Pk Hr Factor**	0.974	0.904			**0.968**
7 - 9 Volume	1067	2002	0	0	**3069**	**4 - 6 Volume**	1818	1831	0	0	**3649**
7 - 9 Peak Hour	07:15	07:15			**07:15**	**4 - 6 Peak Hour**	17:00	17:00			**17:00**
7 - 9 Pk Volume	580	1072	0	0	**1652**	**4 - 6 Pk Volume**	951	969	0	0	**1920**
Pk Hr Factor	0.833	0.921	0.000	0.000	**0.888**	**Pk Hr Factor**	0.974	0.904	0.000	0.000	**0.968**

Prepared by National Data & Surveying Services

VOLUME

Associated Rd Bet. Bastanchury Rd & Yorba Linda Blvd

Day: Wednesday
Date: 9/25/2019

City: Fullerton
Project #: CA19_1188_011

DAILY TOTALS	NB	SB	EB	WB	Total
	10,873	13,142	0	0	24,015

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	29		22				51		12:00	139		191				330	
00:15	29		17				46		12:15	119		164				283	
00:30	26		16				42		12:30	125		194				319	
00:45	12	96	7	62			19	158	12:45	157	540	152	701			309	1241
01:00	17		13				30		13:00	161		137				298	
01:15	12		8				20		13:15	164		177				341	
01:30	19		14				33		13:30	165		206				371	
01:45	13	61	10	45			23	106	13:45	129	619	179	699			308	1318
02:00	6		7				13		14:00	126		196				322	
02:15	7		7				14		14:15	168		208				376	
02:30	11		10				21		14:30	195		193				388	
02:45	6	30	9	33			15	63	14:45	179	668	249	846			428	1514
03:00	10		9				19		15:00	217		212				429	
03:15	4		11				15		15:15	195		203				398	
03:30	4		14				18		15:30	177		242				419	
03:45	11	29	14	48			25	77	15:45	194	783	241	898			435	1681
04:00	10		11				21		16:00	238		216				454	
04:15	8		29				37		16:15	187		260				447	
04:30	11		30				41		16:30	217		220				437	
04:45	18	47	37	107			55	154	16:45	230	872	237	933			467	1805
05:00	13		39				52		17:00	262		252				514	
05:15	17		63				80		17:15	253		254				507	
05:30	27		81				108		17:30	249		209				458	
05:45	40	97	137	320			177	417	17:45	226	990	239	954			465	1944
06:00	37		125				162		18:00	229		234				463	
06:15	63		186				249		18:15	226		211				437	
06:30	67		247				314		18:30	212		225				437	
06:45	132	299	226	784			358	1083	18:45	190	857	228	898			418	1755
07:00	114		242				356		19:00	213		165				378	
07:15	102		240				342		19:15	183		165				348	
07:30	132		256				388		19:30	157		127				284	
07:45	184	532	299	1037			483	1569	19:45	143	696	132	589			275	1285
08:00	159		235				394		20:00	123		125				248	
08:15	110		237				347		20:15	137		87				224	
08:30	108		218				326		20:30	145		106				251	
08:45	132	509	204	894			336	1403	20:45	129	534	106	424			235	958
09:00	113		199				312		21:00	142		67				209	
09:15	152		216				368		21:15	118		106				224	
09:30	120		200				320		21:30	137		96				233	
09:45	120	505	189	804			309	1309	21:45	126	523	76	345			202	868
10:00	112		176				288		22:00	99		87				186	
10:15	130		150				280		22:15	67		61				128	
10:30	108		165				273		22:30	69		48				117	
10:45	148	498	164	655			312	1153	22:45	70	305	62	258			132	563
11:00	146		164				310		23:00	66		52				118	
11:15	134		172				306		23:15	61		44				105	
11:30	133		137				270		23:30	46		38				84	
11:45	165	578	185	658			350	1236	23:45	32	205	16	150			48	355
TOTALS		3281		5447				8728	TOTALS		7592		7695				15287
SPLIT %		37.6%		62.4%				36.3%	SPLIT %		49.7%		50.3%				63.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	10,873	13,142	0	0	24,015

AM Peak Hour	07:30	07:00				07:30	PM Peak Hour	16:45	16:15				16:45
AM Pk Volume	585	1037				1612	PM Pk Volume	994	969				1946
Pk Hr Factor	0.795	0.867				0.834	Pk Hr Factor	0.948	0.932				0.946
7 - 9 Volume	1041	1931	0	0		2972	4 - 6 Volume	1862	1887	0	0		3749
7 - 9 Peak Hour	07:30	07:00				07:30	4 - 6 Peak Hour	16:45	16:15				16:45
7 - 9 Pk Volume	585	1037	0	0		1612	4 - 6 Pk Volume	994	969	0	0		1946
Pk Hr Factor	0.795	0.867	0.000	0.000		0.834	Pk Hr Factor	0.948	0.932	0.000	0.000		0.946

Prepared by National Data & Surveying Services

VOLUME

Commonwealth Ave Bet. Nutwood Ave & E Chapman Ave

Day: Tuesday
Date: 9/24/2019

City: Fullerton
Project #: CA19_1188_012

DAILY TOTALS	NB	SB	EB	WB	Total
	6,686	3,629	0	0	10,315

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	8		14				22		12:00	123		41				164	
00:15	6		11				17		12:15	115		54				169	
00:30	15		6				21		12:30	128		58				186	
00:45	9	38	7	38			16	76	12:45	143	509	82	235			225	744
01:00	3		2				5		13:00	101		70				171	
01:15	3		5				8		13:15	96		59				155	
01:30	6		2				8		13:30	88		48				136	
01:45	4	16	0	9			4	25	13:45	107	392	37	214			144	606
02:00	4		2				6		14:00	124		68				192	
02:15	3		1				4		14:15	129		61				190	
02:30	2		5				7		14:30	120		82				202	
02:45	2	11	0	8			2	19	14:45	119	492	59	270			178	762
03:00	1		1				2		15:00	96		57				153	
03:15	0		1				1		15:15	110		54				164	
03:30	4		4				8		15:30	159		62				221	
03:45	4	9	5	11			9	20	15:45	129	494	95	268			224	762
04:00	1		2				3		16:00	82		100				182	
04:15	4		5				9		16:15	116		57				173	
04:30	6		8				14		16:30	109		40				149	
04:45	3	14	7	22			10	36	16:45	89	396	57	254			146	650
05:00	5		3				8		17:00	136		102				238	
05:15	12		6				18		17:15	85		85				170	
05:30	11		12				23		17:30	106		87				193	
05:45	16	44	18	39			34	83	17:45	84	411	62	336			146	747
06:00	23		10				33		18:00	90		56				146	
06:15	39		17				56		18:15	90		60				150	
06:30	60		15				75		18:30	121		70				191	
06:45	74	196	29	71			103	267	18:45	147	448	100	286			247	734
07:00	115		23				138		19:00	96		93				189	
07:15	118		29				147		19:15	83		66				149	
07:30	151		38				189		19:30	43		52				95	
07:45	229	613	42	132			271	745	19:45	49	271	29	240			78	511
08:00	282		50				332		20:00	58		43				101	
08:15	203		55				258		20:15	55		43				98	
08:30	93		41				134		20:30	37		39				76	
08:45	81	659	38	184			119	843	20:45	35	185	40	165			75	350
09:00	83		32				115		21:00	40		36				76	
09:15	88		41				129		21:15	36		40				76	
09:30	97		40				137		21:30	52		42				94	
09:45	100	368	54	167			154	535	21:45	34	162	34	152			68	314
10:00	76		39				115		22:00	41		35				76	
10:15	75		36				111		22:15	42		27				69	
10:30	63		30				93		22:30	37		27				64	
10:45	73	287	41	146			114	433	22:45	50	170	25	114			75	284
11:00	103		49				152		23:00	29		22				51	
11:15	107		80				187		23:15	22		12				34	
11:30	89		45				134		23:30	24		15				39	
11:45	93	392	28	202			121	594	23:45	34	109	17	66			51	175
TOTALS		2647		1029				3676	TOTALS		4039		2600				6639
SPLIT %		72.0%		28.0%				35.6%	SPLIT %		60.8%		39.2%				64.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	6,686	3,629	0	0	10,315

AM Peak Hour	07:30	10:45				07:30	PM Peak Hour	12:00	17:00				15:30
AM Pk Volume	865	215				1050	PM Pk Volume	509	336				800
Pk Hr Factor	0.767	0.672				0.791	Pk Hr Factor	0.890	0.824				0.893
7 - 9 Volume	1272	316	0	0		1588	4 - 6 Volume	807	590	0	0		1397
7 - 9 Peak Hour	07:30	07:45				07:30	4 - 6 Peak Hour	16:15	17:00				16:45
7 - 9 Pk Volume	865	188	0	0		1050	4 - 6 Pk Volume	450	336	0	0		747
Pk Hr Factor	0.767	0.855	0.000	0.000		0.791	Pk Hr Factor	0.827	0.824	0.000	0.000		0.785

Prepared by National Data & Surveying Services

VOLUME

Commonwealth Ave Bet. Nutwood Ave & E Chapman Ave

Day: Wednesday
Date: 9/25/2019

City: Fullerton
Project #: CA19_1188_012

DAILY TOTALS	NB	SB	EB	WB	Total
	6,289	3,775	0	0	10,064

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	26		13				39		12:00	60		48				108	
00:15	26		14				40		12:15	120		64				184	
00:30	17		3				20		12:30	133		68				201	
00:45	6	75	10	40			16	115	12:45	101	414	60	240			161	654
01:00	8		12				20		13:00	76		71				147	
01:15	10		2				12		13:15	71		45				116	
01:30	3		4				7		13:30	81		40				121	
01:45	5	26	6	24			11	50	13:45	98	326	58	214			156	540
02:00	5		3				8		14:00	92		49				141	
02:15	2		1				3		14:15	114		75				189	
02:30	0		2				2		14:30	74		63				137	
02:45	2	9	0	6			2	15	14:45	92	372	50	237			142	609
03:00	0		1				1		15:00	84		49				133	
03:15	2		1				3		15:15	100		58				158	
03:30	2		2				4		15:30	132		68				200	
03:45	5	9	3	7			8	16	15:45	123	439	91	266			214	705
04:00	1		4				5		16:00	116		90				206	
04:15	5		5				10		16:15	79		57				136	
04:30	2		4				6		16:30	93		58				151	
04:45	7	15	12	25			19	40	16:45	92	380	45	250			137	630
05:00	3		10				13		17:00	120		95				215	
05:15	6		8				14		17:15	112		82				194	
05:30	16		10				26		17:30	96		99				195	
05:45	19	44	15	43			34	87	17:45	89	417	52	328			141	745
06:00	19		13				32		18:00	83		55				138	
06:15	33		13				46		18:15	98		64				162	
06:30	42		17				59		18:30	120		72				192	
06:45	61	155	20	63			81	218	18:45	131	432	74	265			205	697
07:00	100		26				126		19:00	76		82				158	
07:15	148		29				177		19:15	71		56				127	
07:30	186		42				228		19:30	53		50				103	
07:45	245	679	45	142			290	821	19:45	48	248	41	229			89	477
08:00	208		57				265		20:00	40		64				104	
08:15	153		59				212		20:15	47		52				99	
08:30	101		43				144		20:30	41		49				90	
08:45	102	564	35	194			137	758	20:45	45	173	48	213			93	386
09:00	68		28				96		21:00	44		47				91	
09:15	80		35				115		21:15	71		47				118	
09:30	98		53				151		21:30	60		59				119	
09:45	107	353	76	192			183	545	21:45	57	232	60	213			117	445
10:00	84		42				126		22:00	42		42				84	
10:15	62		35				97		22:15	38		34				72	
10:30	72		38				110		22:30	49		33				82	
10:45	83	301	59	174			142	475	22:45	52	181	16	125			68	306
11:00	81		49				130		23:00	49		18				67	
11:15	78		78				156		23:15	33		15				48	
11:30	81		59				140		23:30	19		11				30	
11:45	95	335	46	232			141	567	23:45	9	110	9	53			18	163
TOTALS		2565		1142				**3707**	**TOTALS**		3724		2633				**6357**
SPLIT %		69.2%		30.8%				**36.8%**	**SPLIT %**		58.6%		41.4%				**63.2%**

DAILY TOTALS	NB	SB	EB	WB	Total
	6,289	3,775	0	0	10,064

AM Peak Hour	07:30	10:45						**07:30**	**PM Peak Hour**	15:15	17:00							**15:15**
AM Pk Volume	792	245						**995**	**PM Pk Volume**	471	328							**778**
Pk Hr Factor	0.808	0.785						**0.858**	**Pk Hr Factor**	0.892	0.828							**0.909**
7 - 9 Volume	1243	336	0	0				**1579**	**4 - 6 Volume**	797	578	0	0					**1375**
7 - 9 Peak Hour	07:30	07:45						**07:30**	**4 - 6 Peak Hour**	16:45	17:00							**17:00**
7 - 9 Pk Volume	792	204	0	0				**995**	**4 - 6 Pk Volume**	420	328	0	0					**745**
Pk Hr Factor	0.808	0.864	0.000	0.000				**0.858**	**Pk Hr Factor**	0.875	0.828	0.000	0.000					**0.866**

Prepared by National Data & Surveying Services

VOLUME

Commonwealth Ave Bet. E Chapman Ave & State College Blvd

Day: Tuesday
Date: 9/24/2019

City: Fullerton
Project #: CA19_1188_013

DAILY TOTALS	NB	SB	EB	WB	Total
	5,193	4,096	0	0	9,289

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	13		8				21		12:00	74		58				132	
00:15	9		9				18		12:15	78		50				128	
00:30	7		8				15		12:30	73		68				141	
00:45	10	39	6	31			16	70	12:45	77	302	75	251			152	553
01:00	8		6				14		13:00	80		77				157	
01:15	9		5				14		13:15	69		68				137	
01:30	4		1				5		13:30	78		47				125	
01:45	7	28	4	16			11	44	13:45	70	297	53	245			123	542
02:00	2		5				7		14:00	81		64				145	
02:15	5		3				8		14:15	75		63				138	
02:30	3		8				11		14:30	83		77				160	
02:45	7	17	2	18			9	35	14:45	70	309	62	266			132	575
03:00	3		1				4		15:00	78		64				142	
03:15	2		8				10		15:15	80		65				145	
03:30	6		5				11		15:30	87		66				153	
03:45	7	18	9	23			16	41	15:45	84	329	85	280			169	609
04:00	10		8				18		16:00	86		101				187	
04:15	8		5				13		16:15	84		59				143	
04:30	19		15				34		16:30	94		75				169	
04:45	8	45	10	38			18	83	16:45	87	351	77	312			164	663
05:00	21		7				28		17:00	130		90				220	
05:15	19		9				28		17:15	73		122				195	
05:30	34		17				51		17:30	112		103				215	
05:45	37	111	42	75			79	186	17:45	70	385	99	414			169	799
06:00	28		24				52		18:00	91		77				168	
06:15	43		31				74		18:15	97		77				174	
06:30	60		38				98		18:30	95		59				154	
06:45	65	196	45	138			110	334	18:45	75	358	80	293			155	651
07:00	70		48				118		19:00	74		81				155	
07:15	89		49				138		19:15	52		60				112	
07:30	96		60				156		19:30	74		54				128	
07:45	122	377	61	218			183	595	19:45	68	268	54	249			122	517
08:00	140		50				190		20:00	66		41				107	
08:15	104		53				157		20:15	60		33				93	
08:30	72		54				126		20:30	47		34				81	
08:45	59	375	42	199			101	574	20:45	34	207	43	151			77	358
09:00	67		53				120		21:00	48		29				77	
09:15	58		55				113		21:15	44		41				85	
09:30	78		49				127		21:30	47		27				74	
09:45	59	262	48	205			107	467	21:45	33	172	25	122			58	294
10:00	58		49				107		22:00	39		26				65	
10:15	56		48				104		22:15	50		25				75	
10:30	47		55				102		22:30	46		22				68	
10:45	54	215	54	206			108	421	22:45	45	180	15	88			60	268
11:00	69		43				112		23:00	21		13				34	
11:15	71		70				141		23:15	25		10				35	
11:30	56		51				107		23:30	23		10				33	
11:45	65	261	44	208			109	469	23:45	22	91	17	50			39	141
TOTALS		1944		1375				**3319**	**TOTALS**		3249		2721				**5970**
SPLIT %		58.6%		41.4%				**35.7%**	**SPLIT %**		54.4%		45.6%				**64.3%**

DAILY TOTALS	NB	SB	EB	WB	Total
	5,193	4,096	0	0	9,289

AM Peak Hour	07:30	07:30			**07:30**	**PM Peak Hour**	16:45	17:00			**17:00**
AM Pk Volume	462	224			**686**	**PM Pk Volume**	402	414			**799**
Pk Hr Factor	0.825	0.918			**0.903**	**Pk Hr Factor**	0.773	0.848			**0.908**
7 - 9 Volume	752	417	0	0	**1169**	**4 - 6 Volume**	736	726	0	0	**1462**
7 - 9 Peak Hour	07:30	07:30			**07:30**	**4 - 6 Peak Hour**	16:45	17:00			**17:00**
7 - 9 Pk Volume	462	224	0	0	**686**	**4 - 6 Pk Volume**	402	414	0	0	**799**
Pk Hr Factor	0.825	0.918	0.000	0.000	**0.903**	**Pk Hr Factor**	0.773	0.848	0.000	0.000	**0.908**

Prepared by National Data & Surveying Services

VOLUME

Commonwealth Ave Bet. E Chapman Ave & State College Blvd

Day: Wednesday
Date: 9/25/2019

City: Fullerton
Project #: CA19_1188_013

DAILY TOTALS	NB	SB	EB	WB	Total
	5,233	4,052	0	0	9,285

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	15		9				24		12:00	57		47				104	
00:15	16		5				21		12:15	97		56				153	
00:30	13		4				17		12:30	72		61				133	
00:45	18	62	8	26			26	88	12:45	72	298	58	222			130	520
01:00	8		7				15		13:00	68		50				118	
01:15	6		9				15		13:15	56		52				108	
01:30	8		3				11		13:30	78		55				133	
01:45	9	31	3	22			12	53	13:45	66	268	53	210			119	478
02:00	5		3				8		14:00	71		47				118	
02:15	8		2				10		14:15	82		54				136	
02:30	6		1				7		14:30	77		61				138	
02:45	3	22	2	8			5	30	14:45	60	290	61	223			121	513
03:00	5		3				8		15:00	80		63				143	
03:15	3		1				4		15:15	116		81				197	
03:30	6		6				12		15:30	91		56				147	
03:45	5	19	5	15			10	34	15:45	87	374	65	265			152	639
04:00	8		10				18		16:00	95		97				192	
04:15	7		8				15		16:15	68		62				130	
04:30	16		10				26		16:30	86		67				153	
04:45	15	46	12	40			27	86	16:45	100	349	67	293			167	642
05:00	18		13				31		17:00	107		96				203	
05:15	13		13				26		17:15	93		101				194	
05:30	33		16				49		17:30	83		104				187	
05:45	41	105	37	79			78	184	17:45	78	361	77	378			155	739
06:00	34		30				64		18:00	83		76				159	
06:15	45		26				71		18:15	118		76				194	
06:30	55		31				86		18:30	95		66				161	
06:45	60	194	46	133			106	327	18:45	72	368	80	298			152	666
07:00	82		38				120		19:00	44		83				127	
07:15	90		53				143		19:15	49		72				121	
07:30	109		61				170		19:30	70		50				120	
07:45	149	430	72	224			221	654	19:45	53	216	39	244			92	460
08:00	138		67				205		20:00	58		46				104	
08:15	80		61				141		20:15	45		40				85	
08:30	73		52				125		20:30	59		44				103	
08:45	62	353	66	246			128	599	20:45	58	220	45	175			103	395
09:00	69		46				115		21:00	55		39				94	
09:15	58		50				108		21:15	56		38				94	
09:30	67		53				120		21:30	44		34				78	
09:45	85	279	60	209			145	488	21:45	47	202	44	155			91	357
10:00	55		56				111		22:00	29		22				51	
10:15	61		48				109		22:15	34		28				62	
10:30	63		47				110		22:30	39		23				62	
10:45	53	232	44	195			97	427	22:45	46	148	17	90			63	238
11:00	66		55				121		23:00	32		23				55	
11:15	69		74				143		23:15	30		14				44	
11:30	65		55				120		23:30	19		11				30	
11:45	68	268	60	244			128	512	23:45	17	98	10	58			27	156
TOTALS		2041		1441				**3482**	**TOTALS**		3192		2611				**5803**
SPLIT %		58.6%		41.4%				**37.5%**	**SPLIT %**		55.0%		45.0%				**62.5%**

DAILY TOTALS	NB	SB	EB	WB	Total
	5,233	4,052	0	0	9,285

AM Peak Hour	07:15	07:30			**07:15**	**PM Peak Hour**	15:15	17:00			**16:45**
AM Pk Volume	486	261			**739**	**PM Pk Volume**	389	378			**751**
Pk Hr Factor	0.815	0.906			**0.836**	**Pk Hr Factor**	0.838	0.909			**0.925**
7 - 9 Volume	783	470	0	0	**1253**	**4 - 6 Volume**	710	671	0	0	**1381**
7 - 9 Peak Hour	07:15	07:30			**07:15**	**4 - 6 Peak Hour**	16:30	17:00			**16:45**
7 - 9 Pk Volume	486	261	0	0	**739**	**4 - 6 Pk Volume**	386	378	0	0	**751**
Pk Hr Factor	0.815	0.906	0.000	0.000	**0.836**	**Pk Hr Factor**	0.902	0.909	0.000	0.000	**0.925**

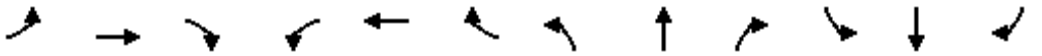
College Town Specific Plan Count Data

Count Source							AM Peak											PM Peak											AM	PM
DKS ID	AGA ID	NDS ID	City Traffix ID	F&P ID	N/S	E/W	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	PHF	PHF
	1		1085	1	State College	Yorba Linda	23	391	281	162	1,570	175	95	230	47	859	300	181	31	928	707	204	506	50	47	121	28	537	164	243	0.857	
	3		1309	2	SR-57 SB Off-ramp	Yorba Linda	0	0	0	129	0	194	0	469	0	0	1,298	0	0	0	0	374	0	147	0	885	0	0	1,125	0	0.943	0.968
	4		1310	3	SR-57 NB Off-ramp	Yorba Linda	613	0	474	0	0	0	0	487	0	0	1,385	390	475	0	536	0	0	0	0	1,085	0	0	1,140	234	0.934	0.976
	6		1124	4	Placentia	Yorba Linda	181	255	103	75	346	332	236	610	124	218	1,159	48	166	528	219	86	328	297	272	1,171	138	214	847	103	0.966	0.974
17			1106	5	Placentia	Madison	33	405	105	57	893	19	27	16	118	328	9	70	124	986	193	89	605	25	27	13	82	145	18	46	0.847	0.934
13			1026	6	State College	Nutwood	41	938	315	275	1288	41	58	119	47	248	96	272	46	1162	242	235	1093	52	61	71	43	458	163	367	0.88	0.906
24			149	7	Commonwealth	Nutwood	175	0	209	0	0	0	0	517	62	125	1014	0	217	0	295	0	0	0	0	699	54	153	756	0	0.916	0.86
23			1916	8	Folino/Langsdorf	Nutwood	0	0	33	133	0	68	311	365	56	234	1072	908	0	0	145	600	0	245	264	730	69	141	636	485	0.893	0.868
21			1311	9	SR-57 SB Ramps	Nutwood	0	0	0	85	203	533	0	285	219	322	1690	0	0	0	0	130	192	456	0	736	693	165	730	0	0.93	0.843
20			1312	10	SR-57 NB Ramps	Nutwood	1129	251	90	0	0	0	123	248	0	0	883	58	485	317	247	0	0	0	298	530	0	0	487	80	0.924	0.901
18			1107	11	Placentia	Nutwood	97	410	50	7	736	650	194	34	110	52	107	14	113	915	19	16	555	251	588	43	235	21	49	16	0.898	0.97
14			1027	12	State College	Chapman	121	770	37	143	966	444	372	605	117	100	873	147	214	867	96	189	818	467	403	840	96	194	907	132	0.844	0.95
30			1058	13	Commonwealth	Chapman	16	190	154	13	114	43	97	660	28	245	1088	311	20	178	275	41	166	123	92	1065	19	204	1117	105	0.893	0.959
29			1313	14	SR-57 SB Ramps	Chapman	0	0	0	69	13	156	0	505	317	389	1485	0	0	0	0	95	56	182	0	935	426	330	1241	0	0.932	0.943
28			1314	15	SR-57 NB Ramps	Chapman	628	9	260	0	0	0	112	464	0	0	1246	144	523	11	406	0	0	0	195	831	0	0	1022	242	0.958	0.971
34			1108	16	Placentia	Chapman	202	287	91	140	546	163	171	466	127	153	952	80	259	609	149	185	410	214	295	804	116	126	754	123	0.897	0.967
15			1028	17	State College	Commonwealth	104	711	117	19	1004	176	190	278	92	112	197	26	173	938	93	32	805	225	192	313	78	95	258	26	0.925	0.947
16		3	1109	18	State College	Orangethorpe	195	962	105	94	925	114	159	515	145	155	638	80	216	955	128	104	944	144	160	665	279	210	746	140	0.844	0.95
32		2	1520	19	SR 57 SB	Orangethorpe	1	7	24	311	1	185	92	602	0	8	912	315	5	10	11	189	1	244	247	777	4	6	998	291	0.966	0.92
31		1	1521	20	SR 57 NB	Orangethorpe	283	3	470	0	0	0	107	830	0	0	956	202	204	1	454	0	0	0	166	808	0	0	1082	504	0.987	0.969

Appendix B: HCM LOS Worksheets

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	533	64	129	1044	180	215
Future Volume (vph)	533	64	129	1044	180	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9		3.0	4.9	3.6	3.0
Lane Util. Factor	0.91		1.00	0.91	0.97	0.88
Frpb, ped/bikes	0.99		1.00	1.00	1.00	0.77
Flpb, ped/bikes	1.00		0.99	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4947		1748	5085	3433	2148
Flt Permitted	1.00		0.37	1.00	0.95	1.00
Satd. Flow (perm)	4947		680	5085	3433	2148
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	579	70	140	1135	196	234
RTOR Reduction (vph)	9	0	0	0	0	0
Lane Group Flow (vph)	640	0	140	1135	196	234
Confl. Peds. (#/hr)		85	85		105	427
Turn Type	NA		pm+pt	NA	Prot	pm+ov
Protected Phases	2		1	6	3	1
Permitted Phases			6			3
Actuated Green, G (s)	61.3		71.7	71.7	11.0	18.4
Effective Green, g (s)	61.3		71.7	71.7	11.0	18.4
Actuated g/C Ratio	0.61		0.72	0.72	0.11	0.18
Clearance Time (s)	4.9		3.0	4.9	3.6	3.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3032		566	3645	377	395
v/s Ratio Prot	0.13		0.02	c0.22	0.06	c0.04
v/s Ratio Perm			0.16			0.07
v/c Ratio	0.21		0.25	0.31	0.52	0.59
Uniform Delay, d1	8.6		4.5	5.2	42.0	37.4
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2		0.2	0.2	1.2	2.4
Delay (s)	8.8		4.7	5.4	43.2	39.7
Level of Service	A		A	A	D	D
Approach Delay (s)	8.8			5.3	41.3	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



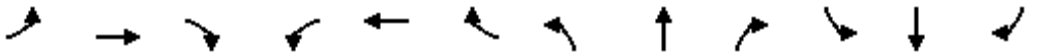
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	294	226	332	1741	0	0	0	0	88	209	549
Future Volume (veh/h)	0	294	226	332	1741	0	0	0	0	88	209	549
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	316	127	357	1872	0				95	367	377
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1725	726	429	2240	0				480	504	427
Arrive On Green	0.00	0.46	0.46	0.12	0.63	0.00				0.27	0.27	0.27
Sat Flow, veh/h	0	3741	1575	3456	3647	0				1781	1870	1585
Grp Volume(v), veh/h	0	316	127	357	1872	0				95	367	377
Grp Sat Flow(s),veh/h/ln	0	1870	1575	1728	1777	0				1781	1870	1585
Q Serve(g_s), s	0.0	5.0	4.7	10.1	41.2	0.0				4.1	17.8	22.8
Cycle Q Clear(g_c), s	0.0	5.0	4.7	10.1	41.2	0.0				4.1	17.8	22.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1725	726	429	2240	0				480	504	427
V/C Ratio(X)	0.00	0.18	0.17	0.83	0.84	0.00				0.20	0.73	0.88
Avail Cap(c_a), veh/h	0	1725	726	581	2240	0				552	580	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	15.9	15.8	42.8	14.4	0.0				28.2	33.2	35.0
Incr Delay (d2), s/veh	0.0	0.2	0.5	5.6	3.9	0.0				0.2	3.9	15.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.1	1.7	4.6	15.4	0.0				1.8	8.5	10.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	16.1	16.3	48.4	18.3	0.0				28.4	37.1	50.5
LnGrp LOS	A	B	B	D	B	A				C	D	D
Approach Vol, veh/h		443			2229						839	
Approach Delay, s/veh		16.2			23.1						42.1	
Approach LOS		B			C						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	16.9	51.1		32.0		68.0
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0
Max Green Setting (Gmax), s	16.8	37.7		31.0		59.0
Max Q Clear Time (g_c+I1), s	12.1	7.0		24.8		43.2
Green Ext Time (p_c), s	0.3	3.7		2.2		13.6

Intersection Summary		
HCM 6th Ctrl Delay		26.8
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.



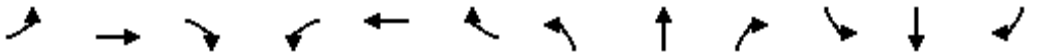
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	255	0	0	909	60	1163	259	93	0	0	0
Future Volume (veh/h)	127	255	0	0	909	60	1163	259	93	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.86	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	141	283	0	0	1010	67	1292	288	55			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	190	1796	0	0	1355	90	1406	738	623			
Arrive On Green	0.05	0.51	0.00	0.00	0.41	0.41	0.39	0.39	0.39			
Sat Flow, veh/h	3456	3647	0	0	3436	222	3563	1870	1579			
Grp Volume(v), veh/h	141	283	0	0	537	540	1292	288	55			
Grp Sat Flow(s),veh/h/ln	1728	1777	0	0	1777	1787	1781	1870	1579			
Q Serve(g_s), s	4.0	4.3	0.0	0.0	25.7	25.8	34.4	11.0	2.2			
Cycle Q Clear(g_c), s	4.0	4.3	0.0	0.0	25.7	25.8	34.4	11.0	2.2			
Prop In Lane	1.00		0.00	0.00		0.12	1.00		1.00			
Lane Grp Cap(c), veh/h	190	1796	0	0	720	725	1406	738	623			
V/C Ratio(X)	0.74	0.16	0.00	0.00	0.75	0.75	0.92	0.39	0.09			
Avail Cap(c_a), veh/h	190	1796	0	0	720	725	1568	823	695			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	46.6	13.3	0.0	0.0	25.3	25.3	28.8	21.7	19.0			
Incr Delay (d2), s/veh	14.4	0.2	0.0	0.0	6.9	6.9	8.1	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			
%ile BackOfQ(50%),veh/ln	2.1	1.7	0.0	0.0	11.7	11.8	15.7	4.8	2.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.0	13.5	0.0	0.0	32.2	32.2	36.8	21.8	19.0			
LnGrp LOS	E	B	A	A	C	C	D	C	B			
Approach Vol, veh/h		424			1077			1635				
Approach Delay, s/veh		29.3			32.2			33.6				
Approach LOS		C			C			C				

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		55.5		44.5	10.0	45.5						
Change Period (Y+Rc), s		5.0		5.0	4.5	5.0						
Max Green Setting (Gmax), s		46.0		44.0	5.5	36.0						
Max Q Clear Time (g_c+I1), s		6.3		36.4	6.0	27.8						
Green Ext Time (p_c), s		2.7		3.0	0.0	5.2						

Intersection Summary												
HCM 6th Ctrl Delay			32.5									
HCM 6th LOS			C									

Notes

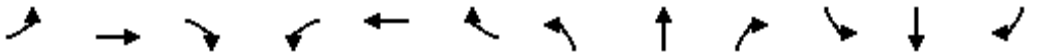
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	383	623	121	103	899	151	125	793	38	147	995	457
Future Volume (veh/h)	383	623	121	103	899	151	125	793	38	147	995	457
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	456	742	46	123	1070	57	149	944	12	175	1185	504
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	380	1211	535	152	1124	491	160	944	410	415	1051	629
Arrive On Green	0.11	0.34	0.34	0.09	0.32	0.32	0.09	0.27	0.27	0.12	0.30	0.30
Sat Flow, veh/h	3456	3554	1571	1781	3554	1552	1781	3554	1542	3456	3554	1537
Grp Volume(v), veh/h	456	742	46	123	1070	57	149	944	12	175	1185	504
Grp Sat Flow(s),veh/h/ln	1728	1777	1571	1781	1777	1552	1781	1777	1542	1728	1777	1537
Q Serve(g_s), s	11.0	17.4	2.0	6.8	29.5	2.6	8.3	26.6	0.6	4.7	29.6	29.0
Cycle Q Clear(g_c), s	11.0	17.4	2.0	6.8	29.5	2.6	8.3	26.6	0.6	4.7	29.6	29.0
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	380	1211	535	152	1124	491	160	944	410	415	1051	629
V/C Ratio(X)	1.20	0.61	0.09	0.81	0.95	0.12	0.93	1.00	0.03	0.42	1.13	0.80
Avail Cap(c_a), veh/h	380	1211	535	196	1127	492	160	944	410	415	1051	629
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	44.5	27.5	22.4	44.9	33.4	24.3	45.2	36.7	27.2	40.8	35.2	26.3
Incr Delay (d2), s/veh	112.5	0.9	0.1	17.2	16.6	0.1	50.7	29.2	0.1	3.1	69.9	10.4
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	10.5	7.2	0.7	3.6	14.5	0.9	5.8	14.7	0.2	2.1	22.3	11.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	157.0	28.4	22.5	62.2	50.0	24.4	95.8	65.9	27.3	43.9	105.1	36.6
LnGrp LOS	F	C	C	E	D	C	F	E	C	D	F	D
Approach Vol, veh/h		1244			1250			1105			1864	
Approach Delay, s/veh		75.3			50.0			69.5			80.8	
Approach LOS		E			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	35.1	12.5	39.4	16.0	32.1	15.0	36.9
Change Period (Y+Rc), s	4.0	5.5	4.0	5.3	4.0	5.5	4.0	5.3
Max Green Setting (Gmax), s	9.0	29.5	11.0	31.7	12.0	26.5	11.0	31.7
Max Q Clear Time (g_c+I1), s	10.3	31.6	8.8	19.4	6.7	28.6	13.0	31.5
Green Ext Time (p_c), s	0.0	0.0	0.1	3.9	0.2	0.0	0.0	0.2

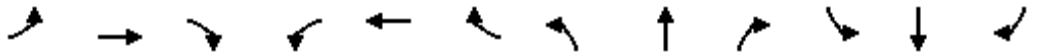
Intersection Summary	
HCM 6th Ctrl Delay	70.2
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	680	29	252	1121	320	16	196	159	13	117	44
Future Volume (veh/h)	100	680	29	252	1121	320	16	196	159	13	117	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	0.99		0.96	0.88		0.83	0.90		0.83
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	112	764	31	283	1260	317	18	220	31	15	131	7
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	280	1834	74	506	2310	581	270	445	312	211	445	312
Arrive On Green	0.05	0.53	0.53	0.09	0.57	0.57	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3476	141	1781	4028	1013	1095	1870	1313	1021	1870	1313
Grp Volume(v), veh/h	112	390	405	283	1065	512	18	220	31	15	131	7
Grp Sat Flow(s),veh/h/ln	1781	1777	1840	1781	1702	1637	1095	1870	1313	1021	1870	1313
Q Serve(g_s), s	2.8	13.3	13.3	6.8	19.4	19.4	1.4	10.2	1.8	1.3	5.7	0.4
Cycle Q Clear(g_c), s	2.8	13.3	13.3	6.8	19.4	19.4	7.1	10.2	1.8	11.4	5.7	0.4
Prop In Lane	1.00		0.08	1.00		0.62	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	280	937	971	506	1952	939	270	445	312	211	445	312
V/C Ratio(X)	0.40	0.42	0.42	0.56	0.55	0.55	0.07	0.49	0.10	0.07	0.29	0.02
Avail Cap(c_a), veh/h	332	937	971	673	1952	939	277	458	322	218	458	322
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	11.3	14.3	14.3	9.7	13.2	13.2	34.1	32.9	29.7	37.9	31.2	29.2
Incr Delay (d2), s/veh	0.9	1.4	1.3	1.0	1.1	2.3	0.1	0.9	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	1.1	5.2	5.4	2.4	6.9	6.9	0.4	4.6	0.6	0.3	2.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.2	15.7	15.6	10.6	14.3	15.5	34.2	33.8	29.9	38.0	31.6	29.2
LnGrp LOS	B	B	B	B	B	B	C	C	C	D	C	C
Approach Vol, veh/h		907			1860			269			153	
Approach Delay, s/veh		15.2			14.1			33.4			32.1	
Approach LOS		B			B			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		28.3	13.7	58.1		28.3	9.1	62.6				
Change Period (Y+Rc), s		4.5	4.3	5.3		4.5	4.3	5.3				
Max Green Setting (Gmax), s		24.5	18.7	42.7		24.5	7.7	53.7				
Max Q Clear Time (g_c+I1), s		13.4	8.8	15.3		12.2	4.8	21.4				
Green Ext Time (p_c), s		0.5	0.6	5.0		1.0	0.1	13.8				

Intersection Summary												
HCM 6th Ctrl Delay			16.9									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	520	327	401	1530	0	0	0	0	71	13	161
Future Volume (veh/h)	0	520	327	401	1530	0	0	0	0	71	13	161
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	542	242	418	1594	0				74	14	106
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1810	783	459	2908	0				135	26	139
Arrive On Green	0.00	0.52	0.52	0.26	0.82	0.00				0.09	0.09	0.09
Sat Flow, veh/h	0	3656	1509	1781	3647	0				1509	286	1548
Grp Volume(v), veh/h	0	529	255	418	1594	0				88	0	106
Grp Sat Flow(s),veh/h/ln	0	1702	1592	1781	1777	0				1795	0	1548
Q Serve(g_s), s	0.0	8.8	9.2	22.8	14.8	0.0				4.7	0.0	6.7
Cycle Q Clear(g_c), s	0.0	8.8	9.2	22.8	14.8	0.0				4.7	0.0	6.7
Prop In Lane	0.00		0.95	1.00		0.00				0.84		1.00
Lane Grp Cap(c), veh/h	0	1766	826	459	2908	0				161	0	139
V/C Ratio(X)	0.00	0.30	0.31	0.91	0.55	0.00				0.55	0.00	0.76
Avail Cap(c_a), veh/h	0	1766	826	631	2908	0				241	0	207
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	13.7	13.8	36.0	3.0	0.0				43.6	0.0	44.5
Incr Delay (d2), s/veh	0.0	0.4	1.0	14.1	0.7	0.0				2.9	0.0	9.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.2	3.3	11.2	2.8	0.0				2.2	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.1	14.8	50.1	3.7	0.0				46.5	0.0	53.5
LnGrp LOS	A	B	B	D	A	A				D	A	D
Approach Vol, veh/h		784			2012						194	
Approach Delay, s/veh		14.3			13.4						50.3	
Approach LOS		B			B						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	30.0	56.5		13.6		86.4
Change Period (Y+Rc), s	* 4.2	4.6		4.6		4.6
Max Green Setting (Gmax), s	* 35	37.8		13.4		77.4
Max Q Clear Time (g_c+I1), s	24.8	11.2		8.7		16.8
Green Ext Time (p_c), s	1.0	9.8		0.3		38.2

Intersection Summary		
HCM 6th Ctrl Delay		16.0
HCM 6th LOS		B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	478	0	0	1283	148	647	9	268	0	0	0
Future Volume (veh/h)	115	478	0	0	1283	148	647	9	268	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	120	498	0	0	1336	145	706	0	63			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	149	2428	0	0	1803	195	800	0	356			
Arrive On Green	0.08	0.68	0.00	0.00	0.56	0.56	0.22	0.00	0.22			
Sat Flow, veh/h	1781	3647	0	0	3326	349	3563	0	1585			
Grp Volume(v), veh/h	120	498	0	0	731	750	706	0	63			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1805	1781	0	1585			
Q Serve(g_s), s	6.6	5.2	0.0	0.0	30.9	31.4	19.2	0.0	3.2			
Cycle Q Clear(g_c), s	6.6	5.2	0.0	0.0	30.9	31.4	19.2	0.0	3.2			
Prop In Lane	1.00		0.00	0.00		0.19	1.00		1.00			
Lane Grp Cap(c), veh/h	149	2428	0	0	991	1007	800	0	356			
V/C Ratio(X)	0.81	0.21	0.00	0.00	0.74	0.74	0.88	0.00	0.18			
Avail Cap(c_a), veh/h	185	2428	0	0	991	1007	905	0	403			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	45.0	5.8	0.0	0.0	16.6	16.7	37.5	0.0	31.3			
Incr Delay (d2), s/veh	18.6	0.2	0.0	0.0	4.9	5.0	9.4	0.0	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.6	1.6	0.0	0.0	12.5	12.9	9.3	0.0	1.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.6	6.0	0.0	0.0	21.5	21.7	46.8	0.0	31.5			
LnGrp LOS	E	A	A	A	C	C	D	A	C			
Approach Vol, veh/h		618			1481			769				
Approach Delay, s/veh		17.2			21.6			45.6				
Approach LOS		B			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		72.9			12.6	60.4		27.1				
Change Period (Y+Rc), s		4.6			* 4.2	4.6		4.6				
Max Green Setting (Gmax), s		65.4			* 10	50.8		25.4				
Max Q Clear Time (g_c+I1), s		7.2			8.6	33.4		21.2				
Green Ext Time (p_c), s		7.2			0.0	13.8		1.3				

Intersection Summary	
HCM 6th Ctrl Delay	27.1
HCM 6th LOS	C

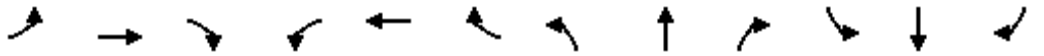
Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	720	56	158	779	224	304
Future Volume (vph)	720	56	158	779	224	304
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9		3.0	4.9	3.6	3.0
Lane Util. Factor	0.91		1.00	0.91	0.97	0.88
Frpb, ped/bikes	0.99		1.00	1.00	1.00	0.78
Flpb, ped/bikes	1.00		0.99	1.00	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4992		1758	5085	3433	2176
Flt Permitted	1.00		0.29	1.00	0.95	1.00
Satd. Flow (perm)	4992		534	5085	3433	2176
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	783	61	172	847	243	330
RTOR Reduction (vph)	5	0	0	0	0	0
Lane Group Flow (vph)	839	0	172	847	243	330
Confl. Peds. (#/hr)		85	85		105	427
Turn Type	NA		pm+pt	NA	Prot	pm+ov
Protected Phases	2		1	6	3	1
Permitted Phases			6			3
Actuated Green, G (s)	59.4		70.7	70.7	12.0	20.3
Effective Green, g (s)	59.4		70.7	70.7	12.0	20.3
Actuated g/C Ratio	0.59		0.71	0.71	0.12	0.20
Clearance Time (s)	4.9		3.0	4.9	3.6	3.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2965		479	3595	411	441
v/s Ratio Prot	0.17		0.03	0.17	0.07	c0.06
v/s Ratio Perm			c0.22			0.09
v/c Ratio	0.28		0.36	0.24	0.59	0.75
Uniform Delay, d1	9.9		5.1	5.2	41.7	37.4
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2		0.5	0.2	2.3	6.8
Delay (s)	10.1		5.5	5.3	44.0	44.3
Level of Service	B		A	A	D	D
Approach Delay (s)	10.1			5.3	44.1	
Approach LOS	B			A	D	

Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	758	714	170	832	0	0	0	0	134	198	470
Future Volume (veh/h)	0	758	714	170	832	0	0	0	0	134	198	470
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	955	454	183	895	0				144	278	282
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2121	894	249	2431	0				385	404	342
Arrive On Green	0.00	0.57	0.57	0.07	0.68	0.00				0.22	0.22	0.22
Sat Flow, veh/h	0	3741	1577	3456	3647	0				1781	1870	1585
Grp Volume(v), veh/h	0	955	454	183	895	0				144	278	282
Grp Sat Flow(s),veh/h/ln	0	1870	1577	1728	1777	0				1781	1870	1585
Q Serve(g_s), s	0.0	14.8	17.5	5.2	10.6	0.0				6.9	13.7	17.0
Cycle Q Clear(g_c), s	0.0	14.8	17.5	5.2	10.6	0.0				6.9	13.7	17.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2121	894	249	2431	0				385	404	342
V/C Ratio(X)	0.00	0.45	0.51	0.73	0.37	0.00				0.37	0.69	0.82
Avail Cap(c_a), veh/h	0	2121	894	328	2431	0				570	599	507
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	12.6	13.2	45.5	6.7	0.0				33.4	36.1	37.4
Incr Delay (d2), s/veh	0.0	0.7	2.1	3.6	0.4	0.0				0.6	2.1	6.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.9	6.2	2.3	3.5	0.0				3.0	6.4	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	13.3	15.2	49.0	7.1	0.0				34.0	38.2	44.3
LnGrp LOS	A	B	B	D	A	A				C	D	D
Approach Vol, veh/h		1409			1078						704	
Approach Delay, s/veh		13.9			14.2						39.8	
Approach LOS		B			B						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.7	61.7		26.6		73.4
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0
Max Green Setting (Gmax), s	9.5	44.0		32.0		58.0
Max Q Clear Time (g_c+I1), s	7.2	19.5		19.0		12.6
Green Ext Time (p_c), s	0.1	12.9		2.6		11.1

Intersection Summary			
HCM 6th Ctrl Delay		19.7	
HCM 6th LOS		B	

Notes

User approved volume balancing among the lanes for turning movement.

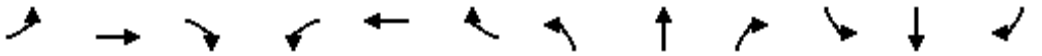
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	307	585	0	0	502	82	500	327	254	0	0	0
Future Volume (veh/h)	307	585	0	0	502	82	500	327	254	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.89	1.00		0.99			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	341	650	0	0	558	91	619	274	95			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	425	2453	0	0	1568	254	747	392	330			
Arrive On Green	0.12	0.69	0.00	0.00	0.52	0.52	0.21	0.21	0.21			
Sat Flow, veh/h	3456	3647	0	0	3095	487	3563	1870	1574			
Grp Volume(v), veh/h	341	650	0	0	329	320	619	274	95			
Grp Sat Flow(s),veh/h/ln	1728	1777	0	0	1777	1712	1781	1870	1574			
Q Serve(g_s), s	9.6	6.9	0.0	0.0	10.9	11.0	16.6	13.6	5.1			
Cycle Q Clear(g_c), s	9.6	6.9	0.0	0.0	10.9	11.0	16.6	13.6	5.1			
Prop In Lane	1.00		0.00	0.00		0.28	1.00		1.00			
Lane Grp Cap(c), veh/h	425	2453	0	0	928	894	747	392	330			
V/C Ratio(X)	0.80	0.27	0.00	0.00	0.35	0.36	0.83	0.70	0.29			
Avail Cap(c_a), veh/h	639	2453	0	0	928	894	1247	655	551			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	42.7	5.9	0.0	0.0	14.0	14.0	37.8	36.6	33.2			
Incr Delay (d2), s/veh	4.4	0.3	0.0	0.0	1.1	1.1	0.9	0.8	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.3	2.3	0.0	0.0	4.4	4.3	7.2	6.2	4.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.1	6.1	0.0	0.0	15.1	15.2	38.7	37.4	33.4			
LnGrp LOS	D	A	A	A	B	B	D	D	C			
Approach Vol, veh/h		991			649			988				
Approach Delay, s/veh		20.2			15.1			37.8				
Approach LOS		C			B			D				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		74.0		26.0	16.8	57.2			
Change Period (Y+Rc), s		5.0		5.0	4.5	5.0			
Max Green Setting (Gmax), s		55.0		35.0	18.5	32.0			
Max Q Clear Time (g_c+I1), s		8.9		18.6	11.6	13.0			
Green Ext Time (p_c), s		7.3		2.4	0.7	5.3			

Intersection Summary		
HCM 6th Ctrl Delay		25.6
HCM 6th LOS		C

Notes

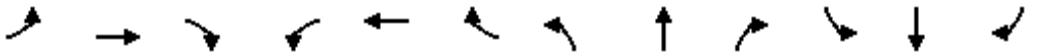
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	415	865	99	200	934	136	220	893	99	195	843	481
Future Volume (veh/h)	415	865	99	200	934	136	220	893	99	195	843	481
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	494	1030	39	238	1112	52	262	1063	36	232	1004	533
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	380	1127	498	196	1127	492	160	942	409	415	1048	628
Arrive On Green	0.11	0.32	0.32	0.11	0.32	0.32	0.09	0.26	0.26	0.12	0.29	0.29
Sat Flow, veh/h	3456	3554	1570	1781	3554	1552	1781	3554	1542	3456	3554	1537
Grp Volume(v), veh/h	494	1030	39	238	1112	52	262	1063	36	232	1004	533
Grp Sat Flow(s),veh/h/ln	1728	1777	1570	1781	1777	1552	1781	1777	1542	1728	1777	1537
Q Serve(g_s), s	11.0	27.9	1.7	11.0	31.1	2.4	9.0	26.5	1.8	6.3	27.8	29.5
Cycle Q Clear(g_c), s	11.0	27.9	1.7	11.0	31.1	2.4	9.0	26.5	1.8	6.3	27.8	29.5
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	380	1127	498	196	1127	492	160	942	409	415	1048	628
V/C Ratio(X)	1.30	0.91	0.08	1.21	0.99	0.11	1.63	1.13	0.09	0.56	0.96	0.85
Avail Cap(c_a), veh/h	380	1127	498	196	1127	492	160	942	409	415	1048	628
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	44.5	32.8	23.9	44.5	33.9	24.1	45.5	36.8	27.7	41.5	34.6	27.1
Incr Delay (d2), s/veh	152.9	11.4	0.1	134.0	23.6	0.1	311.9	71.5	0.4	5.4	19.3	13.5
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	12.6	13.1	0.6	12.0	16.3	0.9	17.7	20.1	0.7	2.9	14.2	13.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	197.4	44.2	24.0	178.5	57.6	24.2	357.4	108.3	28.1	46.9	53.9	40.6
LnGrp LOS	F	D	C	F	E	C	F	F	C	D	D	D
Approach Vol, veh/h		1563			1402			1361			1769	
Approach Delay, s/veh		92.1			76.9			154.1			49.0	
Approach LOS		F			E			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	35.0	15.0	37.0	16.0	32.0	15.0	37.0
Change Period (Y+Rc), s	4.0	5.5	4.0	5.3	4.0	5.5	4.0	5.3
Max Green Setting (Gmax), s	9.0	29.5	11.0	31.7	12.0	26.5	11.0	31.7
Max Q Clear Time (g_c+I1), s	11.0	31.5	13.0	29.9	8.3	28.5	13.0	33.1
Green Ext Time (p_c), s	0.0	0.0	0.0	1.2	0.3	0.0	0.0	0.0

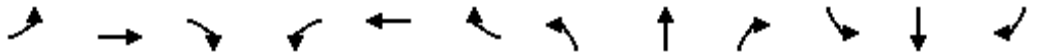
Intersection Summary	
HCM 6th Ctrl Delay	89.9
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	1097	20	210	1151	108	21	183	283	42	171	127
Future Volume (veh/h)	95	1097	20	210	1151	108	21	183	283	42	171	127
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	0.90		0.83	0.91		0.83
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	107	1233	21	236	1293	112	24	206	76	47	192	24
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	315	1928	33	347	2732	237	230	446	313	215	446	313
Arrive On Green	0.05	0.54	0.54	0.08	0.57	0.57	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3573	61	1781	4766	413	1045	1870	1314	995	1870	1314
Grp Volume(v), veh/h	107	613	641	236	923	482	24	206	76	47	192	24
Grp Sat Flow(s),veh/h/ln	1781	1777	1857	1781	1702	1775	1045	1870	1314	995	1870	1314
Q Serve(g_s), s	2.6	24.2	24.3	5.6	15.9	15.9	2.0	9.4	4.7	4.2	8.7	1.4
Cycle Q Clear(g_c), s	2.6	24.2	24.3	5.6	15.9	15.9	10.7	9.4	4.7	13.7	8.7	1.4
Prop In Lane	1.00		0.03	1.00		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	315	959	1002	347	1951	1017	230	446	313	215	446	313
V/C Ratio(X)	0.34	0.64	0.64	0.68	0.47	0.47	0.10	0.46	0.24	0.22	0.43	0.08
Avail Cap(c_a), veh/h	367	959	1002	536	1951	1017	237	458	322	222	458	322
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	10.2	16.2	16.2	14.7	12.5	12.5	36.9	32.6	30.8	38.4	32.3	29.5
Incr Delay (d2), s/veh	0.6	3.3	3.1	2.3	0.8	1.6	0.2	0.7	0.4	0.5	0.7	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	1.0	9.7	10.1	2.1	5.6	6.1	0.5	4.2	1.5	1.1	4.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.8	19.4	19.3	17.1	13.3	14.1	37.1	33.3	31.2	38.9	33.0	29.6
LnGrp LOS	B	B	B	B	B	B	D	C	C	D	C	C
Approach Vol, veh/h		1361			1641			306			263	
Approach Delay, s/veh		18.7			14.1			33.1			33.7	
Approach LOS		B			B			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		28.3	12.4	59.3		28.3	9.0	62.6				
Change Period (Y+Rc), s		4.5	4.3	5.3		4.5	4.3	5.3				
Max Green Setting (Gmax), s		24.5	18.7	42.7		24.5	7.7	53.7				
Max Q Clear Time (g_c+I1), s		15.7	7.6	26.3		12.7	4.6	17.9				
Green Ext Time (p_c), s		0.9	0.5	7.4		1.1	0.1	11.8				

Intersection Summary												
HCM 6th Ctrl Delay			18.9									
HCM 6th LOS			B									



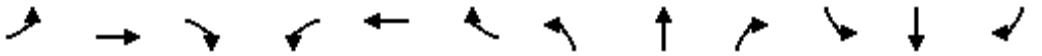
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	963	439	340	1278	0	0	0	0	98	58	187
Future Volume (veh/h)	0	963	439	340	1278	0	0	0	0	98	58	187
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1003	389	354	1331	0				102	60	97
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1929	748	395	2835	0				126	74	171
Arrive On Green	0.00	0.53	0.53	0.22	0.80	0.00				0.11	0.11	0.11
Sat Flow, veh/h	0	3783	1401	1781	3647	0				1142	672	1555
Grp Volume(v), veh/h	0	945	447	354	1331	0				162	0	97
Grp Sat Flow(s),veh/h/ln	0	1702	1612	1781	1777	0				1813	0	1555
Q Serve(g_s), s	0.0	17.9	17.9	19.3	12.1	0.0				8.7	0.0	5.9
Cycle Q Clear(g_c), s	0.0	17.9	17.9	19.3	12.1	0.0				8.7	0.0	5.9
Prop In Lane	0.00		0.87	1.00		0.00				0.63		1.00
Lane Grp Cap(c), veh/h	0	1817	860	395	2835	0				200	0	171
V/C Ratio(X)	0.00	0.52	0.52	0.90	0.47	0.00				0.81	0.00	0.57
Avail Cap(c_a), veh/h	0	1817	860	631	2835	0				243	0	208
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	15.0	15.0	37.8	3.3	0.0				43.5	0.0	42.2
Incr Delay (d2), s/veh	0.0	1.1	2.2	10.0	0.6	0.0				15.5	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	6.6	6.5	9.2	2.6	0.0				4.7	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	16.1	17.3	47.8	3.8	0.0				59.0	0.0	45.1
LnGrp LOS	A	B	B	D	A	A				E	A	D
Approach Vol, veh/h		1392			1685						259	
Approach Delay, s/veh		16.5			13.1						53.8	
Approach LOS		B			B						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	26.4	58.0		15.6		84.4
Change Period (Y+Rc), s	* 4.2	4.6		4.6		4.6
Max Green Setting (Gmax), s	* 35	37.8		13.4		77.4
Max Q Clear Time (g_c+I1), s	21.3	19.9		10.7		14.1
Green Ext Time (p_c), s	0.9	13.2		0.3		29.8

Intersection Summary		
HCM 6th Ctrl Delay		17.7
HCM 6th LOS		B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	201	856	0	0	1053	249	539	11	418	0	0	0
Future Volume (veh/h)	201	856	0	0	1053	249	539	11	418	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	209	892	0	0	1097	237	652	0	189			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	185	2467	0	0	1593	342	762	0	339			
Arrive On Green	0.10	0.69	0.00	0.00	0.55	0.55	0.21	0.00	0.21			
Sat Flow, veh/h	1781	3647	0	0	2999	624	3563	0	1585			
Grp Volume(v), veh/h	209	892	0	0	669	665	652	0	189			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1753	1781	0	1585			
Q Serve(g_s), s	10.4	10.2	0.0	0.0	27.3	27.6	17.6	0.0	10.6			
Cycle Q Clear(g_c), s	10.4	10.2	0.0	0.0	27.3	27.6	17.6	0.0	10.6			
Prop In Lane	1.00		0.00	0.00		0.36	1.00		1.00			
Lane Grp Cap(c), veh/h	185	2467	0	0	974	961	762	0	339			
V/C Ratio(X)	1.13	0.36	0.00	0.00	0.69	0.69	0.86	0.00	0.56			
Avail Cap(c_a), veh/h	185	2467	0	0	974	961	905	0	403			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	44.8	6.2	0.0	0.0	16.4	16.5	37.8	0.0	35.1			
Incr Delay (d2), s/veh	104.8	0.4	0.0	0.0	3.9	4.1	7.1	0.0	1.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	9.8	3.2	0.0	0.0	10.9	11.0	8.3	0.0	4.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	149.6	6.7	0.0	0.0	20.3	20.6	44.9	0.0	36.5			
LnGrp LOS	F	A	A	A	C	C	D	A	D			
Approach Vol, veh/h		1101			1334			841				
Approach Delay, s/veh		33.8			20.4			43.0				
Approach LOS		C			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		74.0			14.6	59.4		26.0				
Change Period (Y+Rc), s		4.6			* 4.2	4.6		4.6				
Max Green Setting (Gmax), s		65.4			* 10	50.8		25.4				
Max Q Clear Time (g_c+I1), s		12.2			12.4	29.6		19.6				
Green Ext Time (p_c), s		15.3			0.0	15.0		1.8				

Intersection Summary	
HCM 6th Ctrl Delay	30.7
HCM 6th LOS	C

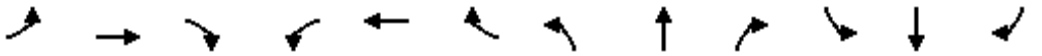
Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	549	66	133	1075	185	221
Future Volume (vph)	549	66	133	1075	185	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9		3.0	4.9	3.6	3.0
Lane Util. Factor	0.91		1.00	0.91	0.97	0.88
Frpb, ped/bikes	0.99		1.00	1.00	1.00	0.77
Flpb, ped/bikes	1.00		0.99	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4947		1750	5085	3433	2146
Flt Permitted	1.00		0.36	1.00	0.95	1.00
Satd. Flow (perm)	4947		664	5085	3433	2146
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	597	72	145	1168	201	240
RTOR Reduction (vph)	9	0	0	0	0	0
Lane Group Flow (vph)	660	0	145	1168	201	240
Confl. Peds. (#/hr)		85	85		105	427
Turn Type	NA		pm+pt	NA	Prot	pm+ov
Protected Phases	2		1	6	3	1
Permitted Phases			6			3
Actuated Green, G (s)	61.2		71.6	71.6	11.1	18.5
Effective Green, g (s)	61.2		71.6	71.6	11.1	18.5
Actuated g/C Ratio	0.61		0.72	0.72	0.11	0.18
Clearance Time (s)	4.9		3.0	4.9	3.6	3.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3027		555	3640	381	397
v/s Ratio Prot	0.13		0.02	c0.23	0.06	c0.04
v/s Ratio Perm			0.17			0.07
v/c Ratio	0.22		0.26	0.32	0.53	0.60
Uniform Delay, d1	8.7		4.5	5.2	42.0	37.4
Progression Factor	1.00		1.00	1.00	0.93	0.82
Incremental Delay, d2	0.2		0.3	0.2	1.1	2.3
Delay (s)	8.9		4.8	5.5	40.2	33.0
Level of Service	A		A	A	D	C
Approach Delay (s)	8.9			5.4	36.3	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



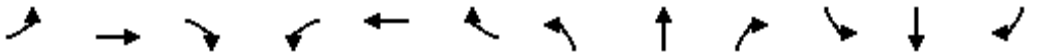
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	303	233	342	1793	0	0	0	0	91	215	565
Future Volume (veh/h)	0	303	233	342	1793	0	0	0	0	91	215	565
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	326	128	368	1928	0				98	380	390
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1688	710	440	2216	0				493	517	438
Arrive On Green	0.00	0.45	0.45	0.13	0.62	0.00				0.28	0.28	0.28
Sat Flow, veh/h	0	3741	1575	3456	3647	0				1781	1870	1585
Grp Volume(v), veh/h	0	326	128	368	1928	0				98	380	390
Grp Sat Flow(s),veh/h/ln	0	1870	1575	1728	1777	0				1781	1870	1585
Q Serve(g_s), s	0.0	5.2	4.9	10.4	44.7	0.0				4.2	18.4	23.6
Cycle Q Clear(g_c), s	0.0	5.2	4.9	10.4	44.7	0.0				4.2	18.4	23.6
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1688	710	440	2216	0				493	517	438
V/C Ratio(X)	0.00	0.19	0.18	0.84	0.87	0.00				0.20	0.73	0.89
Avail Cap(c_a), veh/h	0	1688	710	581	2216	0				552	580	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	16.5	16.4	42.6	15.5	0.0				27.7	32.8	34.7
Incr Delay (d2), s/veh	0.0	0.3	0.6	6.3	5.0	0.0				0.2	4.3	16.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.2	1.8	4.7	17.0	0.0				1.8	8.8	10.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	16.8	16.9	48.9	20.5	0.0				27.9	37.1	51.5
LnGrp LOS	A	B	B	D	C	A				C	D	D
Approach Vol, veh/h		454			2296						868	
Approach Delay, s/veh		16.8			25.1						42.5	
Approach LOS		B			C						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	17.2	50.1		32.7		67.3
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0
Max Green Setting (Gmax), s	16.8	37.7		31.0		59.0
Max Q Clear Time (g_c+I1), s	12.4	7.2		25.6		46.7
Green Ext Time (p_c), s	0.3	3.8		2.0		11.0

Intersection Summary		
HCM 6th Ctrl Delay		28.2
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.



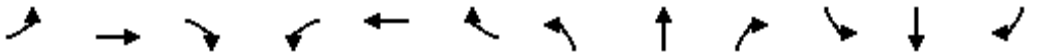
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	263	0	0	936	62	1198	267	96	0	0	0
Future Volume (veh/h)	131	263	0	0	936	62	1198	267	96	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.85	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	146	292	0	0	1040	69	1331	297	60			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	190	1763	0	0	1324	88	1439	755	638			
Arrive On Green	0.05	0.50	0.00	0.00	0.40	0.40	0.40	0.40	0.40			
Sat Flow, veh/h	3456	3647	0	0	3435	222	3563	1870	1579			
Grp Volume(v), veh/h	146	292	0	0	553	556	1331	297	60			
Grp Sat Flow(s),veh/h/ln	1728	1777	0	0	1777	1786	1781	1870	1579			
Q Serve(g_s), s	4.2	4.5	0.0	0.0	27.3	27.3	35.6	11.3	2.4			
Cycle Q Clear(g_c), s	4.2	4.5	0.0	0.0	27.3	27.3	35.6	11.3	2.4			
Prop In Lane	1.00		0.00	0.00		0.12	1.00		1.00			
Lane Grp Cap(c), veh/h	190	1763	0	0	704	708	1439	755	638			
V/C Ratio(X)	0.77	0.17	0.00	0.00	0.79	0.79	0.93	0.39	0.09			
Avail Cap(c_a), veh/h	190	1763	0	0	704	708	1568	823	695			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	46.6	13.8	0.0	0.0	26.5	26.5	28.4	21.1	18.5			
Incr Delay (d2), s/veh	17.2	0.2	0.0	0.0	8.6	8.6	8.8	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			
%ile BackOfQ(50%),veh/ln	2.2	1.8	0.0	0.0	12.6	12.7	16.3	4.9	2.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.8	14.0	0.0	0.0	35.1	35.1	37.2	21.2	18.5			
LnGrp LOS	E	B	A	A	D	D	D	C	B			
Approach Vol, veh/h		438			1109			1688				
Approach Delay, s/veh		30.6			35.1			33.7				
Approach LOS		C			D			C				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		54.6		45.4	10.0	44.6			
Change Period (Y+Rc), s		5.0		5.0	4.5	5.0			
Max Green Setting (Gmax), s		46.0		44.0	5.5	36.0			
Max Q Clear Time (g_c+I1), s		6.5		37.6	6.2	29.3			
Green Ext Time (p_c), s		2.8		2.8	0.0	4.5			

Intersection Summary		
HCM 6th Ctrl Delay		33.8
HCM 6th LOS		C

Notes

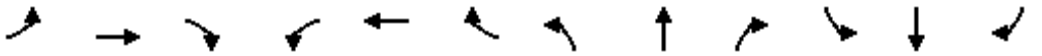
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	394	642	125	106	926	156	129	817	39	151	1025	471
Future Volume (veh/h)	394	642	125	106	926	156	129	817	39	151	1025	471
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	469	764	48	126	1102	59	154	973	11	180	1220	521
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	380	1207	534	155	1127	492	160	942	409	415	1048	628
Arrive On Green	0.11	0.34	0.34	0.09	0.32	0.32	0.09	0.26	0.26	0.12	0.29	0.29
Sat Flow, veh/h	3456	3554	1571	1781	3554	1552	1781	3554	1542	3456	3554	1537
Grp Volume(v), veh/h	469	764	48	126	1102	59	154	973	11	180	1220	521
Grp Sat Flow(s),veh/h/ln	1728	1777	1571	1781	1777	1552	1781	1777	1542	1728	1777	1537
Q Serve(g_s), s	11.0	18.1	2.1	6.9	30.7	2.7	8.6	26.5	0.5	4.8	29.5	29.5
Cycle Q Clear(g_c), s	11.0	18.1	2.1	6.9	30.7	2.7	8.6	26.5	0.5	4.8	29.5	29.5
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	380	1207	534	155	1127	492	160	942	409	415	1048	628
V/C Ratio(X)	1.23	0.63	0.09	0.81	0.98	0.12	0.96	1.03	0.03	0.43	1.16	0.83
Avail Cap(c_a), veh/h	380	1207	534	196	1127	492	160	942	409	415	1048	628
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	44.5	27.8	22.5	44.8	33.8	24.2	45.3	36.8	27.2	40.8	35.2	26.8
Incr Delay (d2), s/veh	126.1	1.1	0.1	18.0	21.6	0.1	59.2	38.2	0.1	3.3	84.3	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	11.2	7.5	0.8	3.8	15.9	1.0	6.3	15.8	0.2	2.2	24.4	12.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	170.6	28.9	22.6	62.8	55.4	24.4	104.5	75.0	27.3	44.1	119.6	38.9
LnGrp LOS	F	C	C	E	E	C	F	F	C	D	F	D
Approach Vol, veh/h		1281			1287			1138			1921	
Approach Delay, s/veh		80.5			54.7			78.5			90.6	
Approach LOS		F			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	35.0	12.7	39.3	16.0	32.0	15.0	37.0
Change Period (Y+Rc), s	4.0	5.5	4.0	5.3	4.0	5.5	4.0	5.3
Max Green Setting (Gmax), s	9.0	29.5	11.0	31.7	12.0	26.5	11.0	31.7
Max Q Clear Time (g_c+I1), s	10.6	31.5	8.9	20.1	6.8	28.5	13.0	32.7
Green Ext Time (p_c), s	0.0	0.0	0.1	3.9	0.2	0.0	0.0	0.0

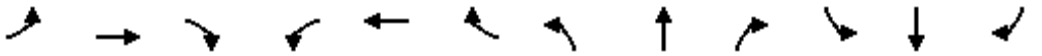
Intersection Summary	
HCM 6th Ctrl Delay	77.7
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	700	30	260	1155	330	16	202	164	13	121	45
Future Volume (veh/h)	103	700	30	260	1155	330	16	202	164	13	121	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	0.99		0.96	0.88		0.83	0.91		0.83
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	116	787	32	292	1298	328	18	227	33	15	136	9
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	272	1824	74	499	2305	582	266	445	312	207	445	312
Arrive On Green	0.05	0.52	0.52	0.10	0.57	0.57	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3476	141	1781	4025	1016	1091	1870	1313	1015	1870	1313
Grp Volume(v), veh/h	116	402	417	292	1098	528	18	227	33	15	136	9
Grp Sat Flow(s),veh/h/ln	1781	1777	1840	1781	1702	1636	1091	1870	1313	1015	1870	1313
Q Serve(g_s), s	3.0	13.9	13.9	7.0	20.3	20.4	1.4	10.5	2.0	1.3	6.0	0.5
Cycle Q Clear(g_c), s	3.0	13.9	13.9	7.0	20.3	20.4	7.4	10.5	2.0	11.8	6.0	0.5
Prop In Lane	1.00		0.08	1.00		0.62	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	272	932	966	499	1950	937	266	445	312	207	445	312
V/C Ratio(X)	0.43	0.43	0.43	0.58	0.56	0.56	0.07	0.51	0.11	0.07	0.31	0.03
Avail Cap(c_a), veh/h	323	932	966	661	1950	937	274	458	322	214	458	322
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	11.7	14.6	14.6	10.0	13.5	13.5	34.3	33.0	29.8	38.2	31.3	29.2
Incr Delay (d2), s/veh	1.1	1.5	1.4	1.1	1.2	2.5	0.1	0.9	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	1.1	5.5	5.7	2.5	7.2	7.3	0.4	4.7	0.6	0.3	2.7	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.7	16.1	16.0	11.1	14.7	15.9	34.4	34.0	29.9	38.3	31.7	29.3
LnGrp LOS	B	B	B	B	B	B	C	C	C	D	C	C
Approach Vol, veh/h		935			1918			278			160	
Approach Delay, s/veh		15.6			14.5			33.5			32.2	
Approach LOS		B			B			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		28.3	13.9	57.8		28.3	9.1	62.6				
Change Period (Y+Rc), s		4.5	4.3	5.3		4.5	4.3	5.3				
Max Green Setting (Gmax), s		24.5	18.7	42.7		24.5	7.7	53.7				
Max Q Clear Time (g_c+I1), s		13.8	9.0	15.9		12.5	5.0	22.4				
Green Ext Time (p_c), s		0.5	0.6	5.2		1.0	0.1	14.2				

Intersection Summary	
HCM 6th Ctrl Delay	17.3
HCM 6th LOS	B



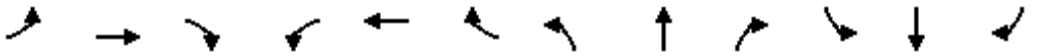
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	536	337	413	1576	0	0	0	0	73	13	166
Future Volume (veh/h)	0	536	337	413	1576	0	0	0	0	73	13	166
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	558	250	430	1642	0				76	14	117
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1760	765	470	2884	0				146	27	149
Arrive On Green	0.00	0.51	0.51	0.26	0.81	0.00				0.10	0.10	0.10
Sat Flow, veh/h	0	3649	1514	1781	3647	0				1515	279	1551
Grp Volume(v), veh/h	0	545	263	430	1642	0				90	0	117
Grp Sat Flow(s),veh/h/ln	0	1702	1591	1781	1777	0				1795	0	1551
Q Serve(g_s), s	0.0	9.4	9.8	23.4	16.2	0.0				4.8	0.0	7.4
Cycle Q Clear(g_c), s	0.0	9.4	9.8	23.4	16.2	0.0				4.8	0.0	7.4
Prop In Lane	0.00		0.95	1.00		0.00				0.84		1.00
Lane Grp Cap(c), veh/h	0	1721	804	470	2884	0				173	0	149
V/C Ratio(X)	0.00	0.32	0.33	0.91	0.57	0.00				0.52	0.00	0.78
Avail Cap(c_a), veh/h	0	1721	804	631	2884	0				240	0	208
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	14.6	14.6	35.7	3.3	0.0				43.0	0.0	44.2
Incr Delay (d2), s/veh	0.0	0.5	1.1	14.8	0.8	0.0				2.4	0.0	12.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.5	3.5	11.6	3.2	0.0				2.2	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.0	15.7	50.5	4.1	0.0				45.4	0.0	56.3
LnGrp LOS	A	B	B	D	A	A				D	A	E
Approach Vol, veh/h		808			2072						207	
Approach Delay, s/veh		15.3			13.7						51.6	
Approach LOS		B			B						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	30.6	55.2		14.2		85.8
Change Period (Y+Rc), s	* 4.2	4.6		4.6		4.6
Max Green Setting (Gmax), s	* 35	37.8		13.4		77.4
Max Q Clear Time (g_c+I1), s	25.4	11.8		9.4		18.2
Green Ext Time (p_c), s	1.0	10.1		0.3		39.1

Intersection Summary		
HCM 6th Ctrl Delay		16.7
HCM 6th LOS		B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	492	0	0	1321	152	666	9	276	0	0	0
Future Volume (veh/h)	118	492	0	0	1321	152	666	9	276	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	123	512	0	0	1376	149	726	0	63			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	152	2412	0	0	1783	192	817	0	363			
Arrive On Green	0.09	0.68	0.00	0.00	0.55	0.55	0.23	0.00	0.23			
Sat Flow, veh/h	1781	3647	0	0	3327	348	3563	0	1585			
Grp Volume(v), veh/h	123	512	0	0	752	773	726	0	63			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1805	1781	0	1585			
Q Serve(g_s), s	6.8	5.4	0.0	0.0	32.9	33.6	19.7	0.0	3.2			
Cycle Q Clear(g_c), s	6.8	5.4	0.0	0.0	32.9	33.6	19.7	0.0	3.2			
Prop In Lane	1.00		0.00	0.00		0.19	1.00		1.00			
Lane Grp Cap(c), veh/h	152	2412	0	0	980	995	817	0	363			
V/C Ratio(X)	0.81	0.21	0.00	0.00	0.77	0.78	0.89	0.00	0.17			
Avail Cap(c_a), veh/h	185	2412	0	0	980	995	905	0	403			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	44.9	6.0	0.0	0.0	17.5	17.6	37.3	0.0	30.9			
Incr Delay (d2), s/veh	19.4	0.2	0.0	0.0	5.8	5.9	10.1	0.0	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.7	1.7	0.0	0.0	13.5	14.0	9.6	0.0	1.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.3	6.2	0.0	0.0	23.2	23.5	47.4	0.0	31.2			
LnGrp LOS	E	A	A	A	C	C	D	A	C			
Approach Vol, veh/h		635			1525			789				
Approach Delay, s/veh		17.5			23.4			46.1				
Approach LOS		B			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		72.5			12.7	59.7		27.5				
Change Period (Y+Rc), s		4.6			* 4.2	4.6		4.6				
Max Green Setting (Gmax), s		65.4			* 10	50.8		25.4				
Max Q Clear Time (g_c+I1), s		7.4			8.8	35.6		21.7				
Green Ext Time (p_c), s		7.4			0.0	12.6		1.2				

Intersection Summary	
HCM 6th Ctrl Delay	28.2
HCM 6th LOS	C

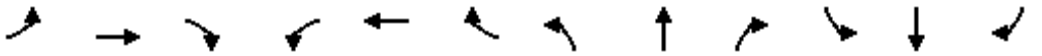
Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	742	58	163	802	231	313
Future Volume (vph)	742	58	163	802	231	313
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9		3.0	4.9	3.6	3.0
Lane Util. Factor	0.91		1.00	0.91	0.97	0.88
Frpb, ped/bikes	0.99		1.00	1.00	1.00	0.78
Flpb, ped/bikes	1.00		0.99	1.00	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4992		1759	5085	3433	2178
Flt Permitted	1.00		0.28	1.00	0.95	1.00
Satd. Flow (perm)	4992		517	5085	3433	2178
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	807	63	177	872	251	340
RTOR Reduction (vph)	5	0	0	0	0	0
Lane Group Flow (vph)	865	0	177	872	251	340
Confl. Peds. (#/hr)		85	85		105	427
Turn Type	NA		pm+pt	NA	Prot	pm+ov
Protected Phases	2		1	6	3	1
Permitted Phases			6			3
Actuated Green, G (s)	59.1		70.5	70.5	12.2	20.6
Effective Green, g (s)	59.1		70.5	70.5	12.2	20.6
Actuated g/C Ratio	0.59		0.70	0.70	0.12	0.21
Clearance Time (s)	4.9		3.0	4.9	3.6	3.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2950		468	3584	418	448
v/s Ratio Prot	0.17		0.03	0.17	0.07	c0.06
v/s Ratio Perm			c0.23			0.09
v/c Ratio	0.29		0.38	0.24	0.60	0.76
Uniform Delay, d1	10.1		5.2	5.3	41.6	37.4
Progression Factor	1.00		1.00	1.00	0.85	0.96
Incremental Delay, d2	0.3		0.5	0.2	2.3	7.0
Delay (s)	10.4		5.7	5.4	37.8	43.0
Level of Service	B		A	A	D	D
Approach Delay (s)	10.4			5.5	40.8	
Approach LOS	B			A	D	

Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



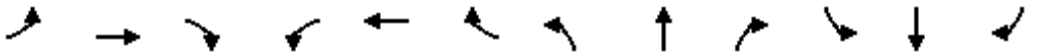
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	781	735	175	857	0	0	0	0	138	204	484
Future Volume (veh/h)	0	781	735	175	857	0	0	0	0	138	204	484
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	993	471	188	922	0				148	302	308
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2054	866	254	2373	0				414	434	368
Arrive On Green	0.00	0.55	0.55	0.07	0.67	0.00				0.23	0.23	0.23
Sat Flow, veh/h	0	3741	1576	3456	3647	0				1781	1870	1585
Grp Volume(v), veh/h	0	993	471	188	922	0				148	302	308
Grp Sat Flow(s),veh/h/ln	0	1870	1576	1728	1777	0				1781	1870	1585
Q Serve(g_s), s	0.0	16.3	19.2	5.3	11.6	0.0				7.0	14.8	18.5
Cycle Q Clear(g_c), s	0.0	16.3	19.2	5.3	11.6	0.0				7.0	14.8	18.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2054	866	254	2373	0				414	434	368
V/C Ratio(X)	0.00	0.48	0.54	0.74	0.39	0.00				0.36	0.70	0.84
Avail Cap(c_a), veh/h	0	2054	866	328	2373	0				570	599	507
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	13.8	14.5	45.4	7.5	0.0				32.1	35.1	36.6
Incr Delay (d2), s/veh	0.0	0.8	2.5	4.1	0.5	0.0				0.5	2.1	8.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.6	6.9	2.4	4.0	0.0				3.0	6.9	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.7	16.9	49.5	7.9	0.0				32.7	37.2	45.2
LnGrp LOS	A	B	B	D	A	A				C	D	D
Approach Vol, veh/h		1464			1110						758	
Approach Delay, s/veh		15.4			15.0						39.6	
Approach LOS		B			B						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.9	59.9		28.2		71.8
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0
Max Green Setting (Gmax), s	9.5	44.0		32.0		58.0
Max Q Clear Time (g_c+I1), s	7.3	21.2		20.5		13.6
Green Ext Time (p_c), s	0.1	12.9		2.7		11.5

Intersection Summary		
HCM 6th Ctrl Delay		20.8
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.



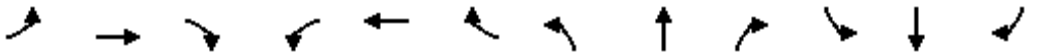
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	316	603	0	0	517	84	515	337	262	0	0	0
Future Volume (veh/h)	316	603	0	0	517	84	515	337	262	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.89	1.00		0.99			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	351	670	0	0	574	93	637	282	128			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	435	2432	0	0	1543	249	768	403	339			
Arrive On Green	0.13	0.68	0.00	0.00	0.51	0.51	0.22	0.22	0.22			
Sat Flow, veh/h	3456	3647	0	0	3097	484	3563	1870	1574			
Grp Volume(v), veh/h	351	670	0	0	338	329	637	282	128			
Grp Sat Flow(s),veh/h/ln	1728	1777	0	0	1777	1711	1781	1870	1574			
Q Serve(g_s), s	9.9	7.3	0.0	0.0	11.4	11.6	17.1	13.9	6.9			
Cycle Q Clear(g_c), s	9.9	7.3	0.0	0.0	11.4	11.6	17.1	13.9	6.9			
Prop In Lane	1.00		0.00	0.00		0.28	1.00		1.00			
Lane Grp Cap(c), veh/h	435	2432	0	0	913	879	768	403	339			
V/C Ratio(X)	0.81	0.28	0.00	0.00	0.37	0.37	0.83	0.70	0.38			
Avail Cap(c_a), veh/h	639	2432	0	0	913	879	1247	655	551			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	42.5	6.1	0.0	0.0	14.6	14.6	37.5	36.2	33.5			
Incr Delay (d2), s/veh	4.8	0.3	0.0	0.0	1.2	1.2	1.1	0.8	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			
%ile BackOfQ(50%),veh/ln	4.4	2.4	0.0	0.0	4.6	4.5	7.5	6.4	6.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.4	6.4	0.0	0.0	15.8	15.9	38.6	37.0	33.7			
LnGrp LOS	D	A	A	A	B	B	D	D	C			
Approach Vol, veh/h		1021			667			1047				
Approach Delay, s/veh		20.5			15.8			37.6				
Approach LOS		C			B			D				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		73.4		26.6	17.1	56.4			
Change Period (Y+Rc), s		5.0		5.0	4.5	5.0			
Max Green Setting (Gmax), s		55.0		35.0	18.5	32.0			
Max Q Clear Time (g_c+I1), s		9.3		19.1	11.9	13.6			
Green Ext Time (p_c), s		7.6		2.5	0.7	5.4			

Intersection Summary		
HCM 6th Ctrl Delay		25.9
HCM 6th LOS		C

Notes

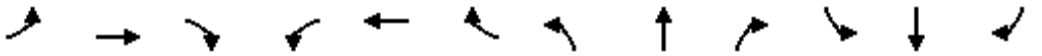
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	427	891	102	206	962	140	227	920	102	201	868	495
Future Volume (veh/h)	427	891	102	206	962	140	227	920	102	201	868	495
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	508	1061	42	245	1145	57	270	1095	39	239	1033	549
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	380	1127	498	196	1127	492	160	942	409	415	1048	628
Arrive On Green	0.11	0.32	0.32	0.11	0.32	0.32	0.09	0.26	0.26	0.12	0.29	0.29
Sat Flow, veh/h	3456	3554	1570	1781	3554	1552	1781	3554	1542	3456	3554	1537
Grp Volume(v), veh/h	508	1061	42	245	1145	57	270	1095	39	239	1033	549
Grp Sat Flow(s),veh/h/ln	1728	1777	1570	1781	1777	1552	1781	1777	1542	1728	1777	1537
Q Serve(g_s), s	11.0	29.1	1.9	11.0	31.7	2.6	9.0	26.5	1.9	6.5	28.9	29.5
Cycle Q Clear(g_c), s	11.0	29.1	1.9	11.0	31.7	2.6	9.0	26.5	1.9	6.5	28.9	29.5
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	380	1127	498	196	1127	492	160	942	409	415	1048	628
V/C Ratio(X)	1.34	0.94	0.08	1.25	1.02	0.12	1.68	1.16	0.10	0.58	0.99	0.87
Avail Cap(c_a), veh/h	380	1127	498	196	1127	492	160	942	409	415	1048	628
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	44.5	33.3	24.0	44.5	34.2	24.2	45.5	36.8	27.7	41.6	35.0	27.5
Incr Delay (d2), s/veh	168.3	15.0	0.1	147.7	31.0	0.1	333.4	85.0	0.5	5.7	24.5	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	13.4	14.2	0.7	12.7	17.7	0.9	18.7	21.9	0.7	3.0	15.4	14.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	212.8	48.2	24.0	192.2	65.1	24.3	378.9	121.8	28.2	47.3	59.5	43.2
LnGrp LOS	F	D	C	F	F	C	F	F	C	D	E	D
Approach Vol, veh/h		1611			1447			1404			1821	
Approach Delay, s/veh		99.5			85.0			168.6			53.0	
Approach LOS		F			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	35.0	15.0	37.0	16.0	32.0	15.0	37.0
Change Period (Y+Rc), s	4.0	5.5	4.0	5.3	4.0	5.5	4.0	5.3
Max Green Setting (Gmax), s	9.0	29.5	11.0	31.7	12.0	26.5	11.0	31.7
Max Q Clear Time (g_c+I1), s	11.0	31.5	13.0	31.1	8.5	28.5	13.0	33.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.3	0.0	0.0	0.0

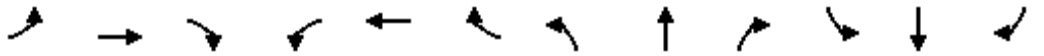
Intersection Summary	
HCM 6th Ctrl Delay	98.1
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	1130	21	216	1186	111	22	188	291	43	176	131
Future Volume (veh/h)	98	1130	21	216	1186	111	22	188	291	43	176	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	0.90		0.83	0.91		0.83
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	110	1270	23	243	1333	116	25	211	88	48	198	25
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	306	1919	35	340	2729	237	226	446	313	211	446	313
Arrive On Green	0.05	0.54	0.54	0.08	0.57	0.57	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3569	65	1781	4764	415	1040	1870	1314	983	1870	1314
Grp Volume(v), veh/h	110	632	661	243	952	497	25	211	88	48	198	25
Grp Sat Flow(s),veh/h/ln	1781	1777	1857	1781	1702	1775	1040	1870	1314	983	1870	1314
Q Serve(g_s), s	2.7	25.5	25.6	5.8	16.6	16.6	2.1	9.7	5.5	4.4	9.0	1.5
Cycle Q Clear(g_c), s	2.7	25.5	25.6	5.8	16.6	16.6	11.1	9.7	5.5	14.1	9.0	1.5
Prop In Lane	1.00		0.03	1.00		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	306	955	998	340	1950	1017	226	446	313	211	446	313
V/C Ratio(X)	0.36	0.66	0.66	0.72	0.49	0.49	0.11	0.47	0.28	0.23	0.44	0.08
Avail Cap(c_a), veh/h	358	955	998	525	1950	1017	233	458	322	218	458	322
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	10.4	16.6	16.6	16.0	12.7	12.7	37.2	32.7	31.1	38.7	32.4	29.6
Incr Delay (d2), s/veh	0.7	3.6	3.5	2.8	0.9	1.7	0.2	0.8	0.5	0.5	0.7	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	1.0	10.3	10.7	2.6	5.9	6.4	0.5	4.3	1.7	1.1	4.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.1	20.2	20.1	18.8	13.5	14.3	37.4	33.5	31.6	39.3	33.1	29.7
LnGrp LOS	B	C	C	B	B	B	D	C	C	D	C	C
Approach Vol, veh/h		1403			1692			324			271	
Approach Delay, s/veh		19.4			14.5			33.2			33.9	
Approach LOS		B			B			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		28.4	12.6	59.1		28.4	9.1	62.6				
Change Period (Y+Rc), s		4.5	4.3	5.3		4.5	4.3	5.3				
Max Green Setting (Gmax), s		24.5	18.7	42.7		24.5	7.7	53.7				
Max Q Clear Time (g_c+I1), s		16.1	7.8	27.6		13.1	4.7	18.6				
Green Ext Time (p_c), s		0.9	0.5	7.3		1.2	0.1	12.3				

Intersection Summary												
HCM 6th Ctrl Delay			19.5									
HCM 6th LOS			B									



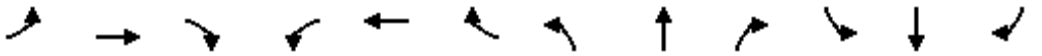
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	992	452	350	1316	0	0	0	0	101	60	193
Future Volume (veh/h)	0	992	452	350	1316	0	0	0	0	101	60	193
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1033	402	365	1371	0				105	62	110
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1895	738	406	2825	0				129	76	176
Arrive On Green	0.00	0.52	0.52	0.23	0.80	0.00				0.11	0.11	0.11
Sat Flow, veh/h	0	3779	1405	1781	3647	0				1140	673	1556
Grp Volume(v), veh/h	0	974	461	365	1371	0				167	0	110
Grp Sat Flow(s),veh/h/ln	0	1702	1611	1781	1777	0				1813	0	1556
Q Serve(g_s), s	0.0	19.0	19.0	19.9	12.9	0.0				9.0	0.0	6.8
Cycle Q Clear(g_c), s	0.0	19.0	19.0	19.9	12.9	0.0				9.0	0.0	6.8
Prop In Lane	0.00		0.87	1.00		0.00				0.63		1.00
Lane Grp Cap(c), veh/h	0	1787	846	406	2825	0				205	0	176
V/C Ratio(X)	0.00	0.55	0.55	0.90	0.49	0.00				0.82	0.00	0.63
Avail Cap(c_a), veh/h	0	1787	846	631	2825	0				243	0	208
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	15.8	15.8	37.5	3.4	0.0				43.3	0.0	42.3
Incr Delay (d2), s/veh	0.0	1.2	2.5	10.8	0.6	0.0				16.5	0.0	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.0	7.0	9.5	2.9	0.0				4.9	0.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	17.0	18.3	48.2	4.0	0.0				59.8	0.0	46.7
LnGrp LOS	A	B	B	D	A	A				E	A	D
Approach Vol, veh/h		1435			1736						277	
Approach Delay, s/veh		17.4			13.3						54.6	
Approach LOS		B			B						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	27.0	57.1		15.9		84.1
Change Period (Y+Rc), s	* 4.2	4.6		4.6		4.6
Max Green Setting (Gmax), s	* 35	37.8		13.4		77.4
Max Q Clear Time (g_c+I1), s	21.9	21.0		11.0		14.9
Green Ext Time (p_c), s	0.9	12.8		0.3		31.1

Intersection Summary		
HCM 6th Ctrl Delay		18.3
HCM 6th LOS		B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	207	882	0	0	1085	256	555	11	431	0	0	0
Future Volume (veh/h)	207	882	0	0	1085	256	555	11	431	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	216	919	0	0	1130	245	676	0	204			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	185	2446	0	0	1574	339	783	0	348			
Arrive On Green	0.10	0.69	0.00	0.00	0.54	0.54	0.22	0.00	0.22			
Sat Flow, veh/h	1781	3647	0	0	2997	625	3563	0	1585			
Grp Volume(v), veh/h	216	919	0	0	689	686	676	0	204			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1752	1781	0	1585			
Q Serve(g_s), s	10.4	10.9	0.0	0.0	29.0	29.5	18.3	0.0	11.5			
Cycle Q Clear(g_c), s	10.4	10.9	0.0	0.0	29.0	29.5	18.3	0.0	11.5			
Prop In Lane	1.00		0.00	0.00		0.36	1.00		1.00			
Lane Grp Cap(c), veh/h	185	2446	0	0	963	950	783	0	348			
V/C Ratio(X)	1.17	0.38	0.00	0.00	0.71	0.72	0.86	0.00	0.59			
Avail Cap(c_a), veh/h	185	2446	0	0	963	950	905	0	403			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	44.8	6.6	0.0	0.0	17.1	17.2	37.6	0.0	34.9			
Incr Delay (d2), s/veh	117.9	0.4	0.0	0.0	4.5	4.8	7.8	0.0	1.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	10.5	3.4	0.0	0.0	11.7	11.8	8.7	0.0	4.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	162.7	7.0	0.0	0.0	21.6	22.0	45.3	0.0	36.6			
LnGrp LOS	F	A	A	A	C	C	D	A	D			
Approach Vol, veh/h		1135			1375			880				
Approach Delay, s/veh		36.6			21.8			43.3				
Approach LOS		D			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		73.4			14.6	58.8		26.6				
Change Period (Y+Rc), s		4.6			* 4.2	4.6		4.6				
Max Green Setting (Gmax), s		65.4			* 10	50.8		25.4				
Max Q Clear Time (g_c+I1), s		12.9			12.4	31.5		20.3				
Green Ext Time (p_c), s		15.9			0.0	14.3		1.7				

Intersection Summary	
HCM 6th Ctrl Delay	32.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	549	67	135	1075	187	234
Future Volume (vph)	549	67	135	1075	187	234
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9		3.0	4.9	3.6	3.0
Lane Util. Factor	0.91		1.00	0.91	0.97	0.88
Frpb, ped/bikes	0.99		1.00	1.00	1.00	0.77
Flpb, ped/bikes	1.00		0.99	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4945		1750	5085	3433	2145
Flt Permitted	1.00		0.36	1.00	0.95	1.00
Satd. Flow (perm)	4945		663	5085	3433	2145
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	597	73	147	1168	203	254
RTOR Reduction (vph)	9	0	0	0	0	0
Lane Group Flow (vph)	661	0	147	1168	203	254
Confl. Peds. (#/hr)		85	85		105	427
Turn Type	NA		pm+pt	NA	Prot	pm+ov
Protected Phases	2		1	6	3	1
Permitted Phases			6			3
Actuated Green, G (s)	61.1		71.5	71.5	11.2	18.6
Effective Green, g (s)	61.1		71.5	71.5	11.2	18.6
Actuated g/C Ratio	0.61		0.72	0.72	0.11	0.19
Clearance Time (s)	4.9		3.0	4.9	3.6	3.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3021		554	3635	384	398
v/s Ratio Prot	0.13		0.02	c0.23	0.06	c0.05
v/s Ratio Perm			0.17			0.07
v/c Ratio	0.22		0.27	0.32	0.53	0.64
Uniform Delay, d1	8.7		4.5	5.3	41.9	37.6
Progression Factor	1.00		1.00	1.00	0.96	0.85
Incremental Delay, d2	0.2		0.3	0.2	1.1	2.9
Delay (s)	8.9		4.8	5.5	41.5	34.7
Level of Service	A		A	A	D	C
Approach Delay (s)	8.9			5.4	37.7	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	317	237	342	1793	0	0	0	0	91	221	566
Future Volume (veh/h)	0	317	237	342	1793	0	0	0	0	91	221	566
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	341	131	368	1928	0				98	384	394
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1680	707	440	2208	0				496	521	442
Arrive On Green	0.00	0.45	0.45	0.13	0.62	0.00				0.28	0.28	0.28
Sat Flow, veh/h	0	3741	1574	3456	3647	0				1781	1870	1585
Grp Volume(v), veh/h	0	341	131	368	1928	0				98	384	394
Grp Sat Flow(s),veh/h/ln	0	1870	1574	1728	1777	0				1781	1870	1585
Q Serve(g_s), s	0.0	5.5	5.0	10.4	44.9	0.0				4.2	18.6	23.9
Cycle Q Clear(g_c), s	0.0	5.5	5.0	10.4	44.9	0.0				4.2	18.6	23.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1680	707	440	2208	0				496	521	442
V/C Ratio(X)	0.00	0.20	0.19	0.84	0.87	0.00				0.20	0.74	0.89
Avail Cap(c_a), veh/h	0	1680	707	581	2208	0				552	580	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	16.7	16.5	42.6	15.7	0.0				27.5	32.7	34.6
Incr Delay (d2), s/veh	0.0	0.3	0.6	6.3	5.1	0.0				0.2	4.4	17.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.4	1.9	4.7	17.2	0.0				1.8	8.9	11.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	17.0	17.1	48.9	20.8	0.0				27.7	37.1	51.8
LnGrp LOS	A	B	B	D	C	A				C	D	D
Approach Vol, veh/h		472			2296						876	
Approach Delay, s/veh		17.0			25.3						42.7	
Approach LOS		B			C						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	17.2	49.9		32.9		67.1
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0
Max Green Setting (Gmax), s	16.8	37.7		31.0		59.0
Max Q Clear Time (g_c+I1), s	12.4	7.5		25.9		46.9
Green Ext Time (p_c), s	0.3	4.0		2.0		10.8

Intersection Summary	
HCM 6th Ctrl Delay	28.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	141	268	0	0	936	62	1198	276	96	0	0	0
Future Volume (veh/h)	141	268	0	0	936	62	1198	276	96	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.85	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	157	298	0	0	1040	69	1331	307	59			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	190	1763	0	0	1323	88	1439	756	638			
Arrive On Green	0.05	0.50	0.00	0.00	0.40	0.40	0.40	0.40	0.40			
Sat Flow, veh/h	3456	3647	0	0	3435	222	3563	1870	1579			
Grp Volume(v), veh/h	157	298	0	0	553	556	1331	307	59			
Grp Sat Flow(s),veh/h/ln	1728	1777	0	0	1777	1786	1781	1870	1579			
Q Serve(g_s), s	4.5	4.6	0.0	0.0	27.3	27.3	35.5	11.7	2.3			
Cycle Q Clear(g_c), s	4.5	4.6	0.0	0.0	27.3	27.3	35.5	11.7	2.3			
Prop In Lane	1.00		0.00	0.00		0.12	1.00		1.00			
Lane Grp Cap(c), veh/h	190	1763	0	0	704	707	1439	756	638			
V/C Ratio(X)	0.83	0.17	0.00	0.00	0.79	0.79	0.92	0.41	0.09			
Avail Cap(c_a), veh/h	190	1763	0	0	704	707	1568	823	695			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	46.8	13.9	0.0	0.0	26.5	26.5	28.4	21.2	18.5			
Incr Delay (d2), s/veh	24.8	0.2	0.0	0.0	8.6	8.6	8.8	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			
%ile BackOfQ(50%),veh/ln	2.6	1.8	0.0	0.0	12.6	12.7	16.3	5.1	2.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.6	14.1	0.0	0.0	35.1	35.1	37.2	21.4	18.5			
LnGrp LOS	E	B	A	A	D	D	D	C	B			
Approach Vol, veh/h		455			1109			1697				
Approach Delay, s/veh		33.9			35.1			33.7				
Approach LOS		C			D			C				

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	54.6		45.4	10.0	44.6
Change Period (Y+Rc), s	5.0		5.0	4.5	5.0
Max Green Setting (Gmax), s	46.0		44.0	5.5	36.0
Max Q Clear Time (g_c+I1), s	6.6		37.5	6.5	29.3
Green Ext Time (p_c), s	2.9		2.9	0.0	4.5

Intersection Summary	
HCM 6th Ctrl Delay	34.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	394	688	125	114	976	159	129	817	43	152	1025	471
Future Volume (veh/h)	394	688	125	114	976	159	129	817	43	152	1025	471
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	469	819	48	136	1162	66	154	973	14	181	1220	521
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	380	1186	524	166	1127	492	160	942	409	415	1048	628
Arrive On Green	0.11	0.33	0.33	0.09	0.32	0.32	0.09	0.26	0.26	0.12	0.29	0.29
Sat Flow, veh/h	3456	3554	1571	1781	3554	1552	1781	3554	1542	3456	3554	1537
Grp Volume(v), veh/h	469	819	48	136	1162	66	154	973	14	181	1220	521
Grp Sat Flow(s),veh/h/ln	1728	1777	1571	1781	1777	1552	1781	1777	1542	1728	1777	1537
Q Serve(g_s), s	11.0	20.0	2.1	7.5	31.7	3.0	8.6	26.5	0.7	4.9	29.5	29.5
Cycle Q Clear(g_c), s	11.0	20.0	2.1	7.5	31.7	3.0	8.6	26.5	0.7	4.9	29.5	29.5
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	380	1186	524	166	1127	492	160	942	409	415	1048	628
V/C Ratio(X)	1.23	0.69	0.09	0.82	1.03	0.13	0.96	1.03	0.03	0.44	1.16	0.83
Avail Cap(c_a), veh/h	380	1186	524	196	1127	492	160	942	409	415	1048	628
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	44.5	28.8	22.9	44.5	34.2	24.4	45.3	36.8	27.3	40.9	35.2	26.8
Incr Delay (d2), s/veh	126.1	1.7	0.1	20.4	35.2	0.1	59.2	38.2	0.2	3.3	84.3	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	11.2	8.4	0.8	4.2	18.4	1.1	6.3	15.8	0.3	2.2	24.4	12.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	170.6	30.6	23.0	64.9	69.4	24.5	104.5	75.0	27.4	44.2	119.6	38.9
LnGrp LOS	F	C	C	E	F	C	F	F	C	D	F	D
Approach Vol, veh/h		1336			1364			1141			1922	
Approach Delay, s/veh		79.4			66.8			78.4			90.6	
Approach LOS		E			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	35.0	13.3	38.7	16.0	32.0	15.0	37.0
Change Period (Y+Rc), s	4.0	5.5	4.0	5.3	4.0	5.5	4.0	5.3
Max Green Setting (Gmax), s	9.0	29.5	11.0	31.7	12.0	26.5	11.0	31.7
Max Q Clear Time (g_c+I1), s	10.0	31.5	9.5	22.0	6.9	28.5	13.0	33.7
Green Ext Time (p_c), s	0.0	0.0	0.0	3.8	0.2	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	80.0
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	750	30	265	1216	347	16	202	166	16	121	45
Future Volume (veh/h)	103	750	30	265	1216	347	16	202	166	16	121	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	0.99		0.96	0.88		0.83	0.91		0.83
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	116	843	32	298	1366	347	18	227	33	18	136	9
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	258	1823	69	480	2302	583	266	445	313	207	445	313
Arrive On Green	0.05	0.52	0.52	0.10	0.57	0.57	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3487	132	1781	4021	1018	1091	1870	1313	1015	1870	1313
Grp Volume(v), veh/h	116	430	445	298	1156	557	18	227	33	18	136	9
Grp Sat Flow(s),veh/h/ln	1781	1777	1842	1781	1702	1636	1091	1870	1313	1015	1870	1313
Q Serve(g_s), s	3.0	15.2	15.2	7.2	22.0	22.1	1.4	10.5	2.0	1.6	6.0	0.5
Cycle Q Clear(g_c), s	3.0	15.2	15.2	7.2	22.0	22.1	7.4	10.5	2.0	12.1	6.0	0.5
Prop In Lane	1.00		0.07	1.00		0.62	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	929	963	480	1949	936	266	445	313	207	445	313
V/C Ratio(X)	0.45	0.46	0.46	0.62	0.59	0.60	0.07	0.51	0.11	0.09	0.31	0.03
Avail Cap(c_a), veh/h	309	929	963	638	1949	936	274	458	322	214	458	322
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	12.3	15.0	15.0	10.6	13.8	13.9	34.3	33.0	29.8	38.3	31.3	29.2
Incr Delay (d2), s/veh	1.2	1.7	1.6	1.3	1.3	2.8	0.1	0.9	0.1	0.2	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	1.1	6.1	6.3	2.5	7.8	8.0	0.4	4.7	0.6	0.4	2.7	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	16.7	16.6	11.9	15.2	16.6	34.4	33.9	29.9	38.5	31.7	29.3
LnGrp LOS	B	B	B	B	B	B	C	C	C	D	C	C
Approach Vol, veh/h		991			2011			278			163	
Approach Delay, s/veh		16.3			15.1			33.5			32.3	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	28.3	14.1	57.6	28.3	9.1	62.6
Change Period (Y+Rc), s	4.5	4.3	5.3	4.5	4.3	5.3
Max Green Setting (Gmax), s	24.5	18.7	42.7	24.5	7.7	53.7
Max Q Clear Time (g_c+I1), s	14.1	9.2	17.2	12.5	5.0	24.1
Green Ext Time (p_c), s	0.5	0.6	5.5	1.0	0.1	14.8

Intersection Summary	
HCM 6th Ctrl Delay	17.7
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	552	363	413	1594	0	0	0	0	73	13	172
Future Volume (veh/h)	0	552	363	413	1594	0	0	0	0	73	13	172
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	575	273	430	1660	0				76	14	124
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1709	789	470	2869	0				152	28	156
Arrive On Green	0.00	0.50	0.50	0.26	0.81	0.00				0.10	0.10	0.10
Sat Flow, veh/h	0	3577	1574	1781	3647	0				1515	279	1552
Grp Volume(v), veh/h	0	574	274	430	1660	0				90	0	124
Grp Sat Flow(s),veh/h/ln	0	1702	1580	1781	1777	0				1795	0	1552
Q Serve(g_s), s	0.0	10.1	10.5	23.4	16.9	0.0				4.7	0.0	7.8
Cycle Q Clear(g_c), s	0.0	10.1	10.5	23.4	16.9	0.0				4.7	0.0	7.8
Prop In Lane	0.00		1.00	1.00		0.00				0.84		1.00
Lane Grp Cap(c), veh/h	0	1706	792	470	2869	0				181	0	156
V/C Ratio(X)	0.00	0.34	0.35	0.91	0.58	0.00				0.50	0.00	0.79
Avail Cap(c_a), veh/h	0	1706	792	631	2869	0				240	0	208
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	15.0	15.0	35.7	3.5	0.0				42.6	0.0	44.0
Incr Delay (d2), s/veh	0.0	0.5	1.2	14.8	0.9	0.0				2.1	0.0	14.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.8	3.7	11.6	3.5	0.0				2.2	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.5	16.2	50.5	4.3	0.0				44.7	0.0	58.1
LnGrp LOS	A	B	B	D	A	A				D	A	E
Approach Vol, veh/h		848			2090						214	
Approach Delay, s/veh		15.7			13.8						52.5	
Approach LOS		B			B						D	

Timer - Assigned Phs	1	2		4		6			
Phs Duration (G+Y+Rc), s	30.6	54.7		14.7		85.3			
Change Period (Y+Rc), s	* 4.2	4.6		4.6		4.6			
Max Green Setting (Gmax), s	* 35	37.8		13.4		77.4			
Max Q Clear Time (g_c+I1), s	25.4	12.5		9.8		18.9			
Green Ext Time (p_c), s	1.0	10.5		0.3		39.4			

Intersection Summary	
HCM 6th Ctrl Delay	17.0
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	499	0	0	1327	152	678	9	276	0	0	0
Future Volume (veh/h)	127	499	0	0	1327	152	678	9	276	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	132	520	0	0	1382	149	738	0	63			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	162	2402	0	0	1758	188	827	0	368			
Arrive On Green	0.09	0.68	0.00	0.00	0.54	0.54	0.23	0.00	0.23			
Sat Flow, veh/h	1781	3647	0	0	3329	347	3563	0	1585			
Grp Volume(v), veh/h	132	520	0	0	755	776	738	0	63			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1805	1781	0	1585			
Q Serve(g_s), s	7.3	5.6	0.0	0.0	33.8	34.4	20.1	0.0	3.2			
Cycle Q Clear(g_c), s	7.3	5.6	0.0	0.0	33.8	34.4	20.1	0.0	3.2			
Prop In Lane	1.00		0.00	0.00		0.19	1.00		1.00			
Lane Grp Cap(c), veh/h	162	2402	0	0	965	981	827	0	368			
V/C Ratio(X)	0.82	0.22	0.00	0.00	0.78	0.79	0.89	0.00	0.17			
Avail Cap(c_a), veh/h	185	2402	0	0	965	981	905	0	403			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	44.6	6.1	0.0	0.0	18.1	18.3	37.2	0.0	30.7			
Incr Delay (d2), s/veh	21.6	0.2	0.0	0.0	6.3	6.5	10.6	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			
%ile BackOfQ(50%),veh/ln	4.1	1.8	0.0	0.0	14.0	14.5	9.8	0.0	1.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.3	6.4	0.0	0.0	24.4	24.8	47.8	0.0	30.9			
LnGrp LOS	E	A	A	A	C	C	D	A	C			
Approach Vol, veh/h		652			1531			801				
Approach Delay, s/veh		18.5			24.6			46.5				
Approach LOS		B			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		72.2			13.3	58.9		27.8				
Change Period (Y+Rc), s		4.6			* 4.2	4.6		4.6				
Max Green Setting (Gmax), s		65.4			* 10	50.8		25.4				
Max Q Clear Time (g_c+I1), s		7.6			9.3	36.4		22.1				
Green Ext Time (p_c), s		7.5			0.0	12.0		1.1				

Intersection Summary	
HCM 6th Ctrl Delay	29.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	919	1743	22	0	82
Future Vol, veh/h	14	919	1743	22	0	82
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	65	-	-	-	-	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	15	999	1895	24	0	89

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1919	0	-	0	-	960
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	3.92
Pot Cap-1 Maneuver	137	-	-	-	0	221
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	137	-	-	-	-	221
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	31.9
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	137	-	-	-	221
HCM Lane V/C Ratio	0.111	-	-	-	0.403
HCM Control Delay (s)	34.5	-	-	-	31.9
HCM Lane LOS	D	-	-	-	D
HCM 95th %tile Q(veh)	0.4	-	-	-	1.8

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	6	651	2	0	182
Future Vol, veh/h	0	6	651	2	0	182
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	0	7	708	2	0	198

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	355	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.93	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.319	-	-	-	-
Pot Cap-1 Maneuver	0	642	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	642	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	642	-
HCM Lane V/C Ratio	-	-	0.01	-
HCM Control Delay (s)	-	-	10.7	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	742	59	169	802	234	327
Future Volume (vph)	742	59	169	802	234	327
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9		3.0	4.9	3.6	3.0
Lane Util. Factor	0.91		1.00	0.91	0.97	0.88
Frpb, ped/bikes	0.99		1.00	1.00	1.00	0.78
Flpb, ped/bikes	1.00		0.99	1.00	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4991		1759	5085	3433	2184
Flt Permitted	1.00		0.28	1.00	0.95	1.00
Satd. Flow (perm)	4991		515	5085	3433	2184
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	807	64	184	872	254	355
RTOR Reduction (vph)	5	0	0	0	0	0
Lane Group Flow (vph)	866	0	184	872	254	355
Confl. Peds. (#/hr)		85	85		105	427
Turn Type	NA		pm+pt	NA	Prot	pm+ov
Protected Phases	2		1	6	3	1
Permitted Phases			6			3
Actuated Green, G (s)	58.8		70.4	70.4	12.3	20.9
Effective Green, g (s)	58.8		70.4	70.4	12.3	20.9
Actuated g/C Ratio	0.59		0.70	0.70	0.12	0.21
Clearance Time (s)	4.9		3.0	4.9	3.6	3.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2934		469	3579	422	456
v/s Ratio Prot	0.17		0.03	0.17	0.07	c0.07
v/s Ratio Perm			c0.24			0.10
v/c Ratio	0.30		0.39	0.24	0.60	0.78
Uniform Delay, d1	10.3		5.2	5.3	41.5	37.4
Progression Factor	1.00		1.00	1.00	0.86	0.96
Incremental Delay, d2	0.3		0.5	0.2	2.3	7.8
Delay (s)	10.5		5.8	5.4	38.2	43.6
Level of Service	B		A	A	D	D
Approach Delay (s)	10.5			5.5	41.3	
Approach LOS	B			A	D	

Intersection Summary			
HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	794	745	175	857	0	0	0	0	138	220	488
Future Volume (veh/h)	0	794	745	175	857	0	0	0	0	138	220	488
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1020	482	188	922	0				148	316	322
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2022	852	254	2343	0				429	450	382
Arrive On Green	0.00	0.54	0.54	0.07	0.66	0.00				0.24	0.24	0.24
Sat Flow, veh/h	0	3741	1576	3456	3647	0				1781	1870	1585
Grp Volume(v), veh/h	0	1020	482	188	922	0				148	316	322
Grp Sat Flow(s),veh/h/ln	0	1870	1576	1728	1777	0				1781	1870	1585
Q Serve(g_s), s	0.0	17.2	20.2	5.3	11.9	0.0				6.9	15.4	19.4
Cycle Q Clear(g_c), s	0.0	17.2	20.2	5.3	11.9	0.0				6.9	15.4	19.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2022	852	254	2343	0				429	450	382
V/C Ratio(X)	0.00	0.50	0.57	0.74	0.39	0.00				0.35	0.70	0.84
Avail Cap(c_a), veh/h	0	2022	852	328	2343	0				570	599	507
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	14.5	15.2	45.4	7.8	0.0				31.4	34.7	36.2
Incr Delay (d2), s/veh	0.0	0.9	2.7	4.1	0.5	0.0				0.5	2.4	9.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.0	7.4	2.4	4.1	0.0				3.0	7.2	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.4	17.9	49.5	8.3	0.0				31.9	37.1	45.7
LnGrp LOS	A	B	B	D	A	A				C	D	D
Approach Vol, veh/h		1502			1110						786	
Approach Delay, s/veh		16.2			15.3						39.7	
Approach LOS		B			B						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.9	59.1		29.1		70.9
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0
Max Green Setting (Gmax), s	9.5	44.0		32.0		58.0
Max Q Clear Time (g_c+I1), s	7.3	22.2		21.4		13.9
Green Ext Time (p_c), s	0.1	12.9		2.7		11.5

Intersection Summary	
HCM 6th Ctrl Delay	21.3
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	323	609	0	0	517	84	515	345	262	0	0	0
Future Volume (veh/h)	323	609	0	0	517	84	515	345	262	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.89	1.00		0.99			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	359	677	0	0	574	93	641	287	132			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	443	2427	0	0	1531	247	773	406	342			
Arrive On Green	0.13	0.68	0.00	0.00	0.51	0.51	0.22	0.22	0.22			
Sat Flow, veh/h	3456	3647	0	0	3097	484	3563	1870	1574			
Grp Volume(v), veh/h	359	677	0	0	338	329	641	287	132			
Grp Sat Flow(s),veh/h/ln	1728	1777	0	0	1777	1711	1781	1870	1574			
Q Serve(g_s), s	10.1	7.5	0.0	0.0	11.5	11.7	17.2	14.2	7.2			
Cycle Q Clear(g_c), s	10.1	7.5	0.0	0.0	11.5	11.7	17.2	14.2	7.2			
Prop In Lane	1.00		0.00	0.00		0.28	1.00		1.00			
Lane Grp Cap(c), veh/h	443	2427	0	0	906	872	773	406	342			
V/C Ratio(X)	0.81	0.28	0.00	0.00	0.37	0.38	0.83	0.71	0.39			
Avail Cap(c_a), veh/h	639	2427	0	0	906	872	1247	655	551			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	42.4	6.2	0.0	0.0	14.8	14.9	37.4	36.2	33.5			
Incr Delay (d2), s/veh	5.1	0.3	0.0	0.0	1.2	1.2	1.2	0.9	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			
%ile BackOfQ(50%),veh/ln	4.5	2.5	0.0	0.0	4.7	4.6	7.5	6.5	6.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.6	6.5	0.0	0.0	16.0	16.1	38.6	37.1	33.7			
LnGrp LOS	D	A	A	A	B	B	D	D	C			
Approach Vol, veh/h		1036			667			1060				
Approach Delay, s/veh		20.7			16.1			37.6				
Approach LOS		C			B			D				

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	73.3		26.7	17.3	56.0
Change Period (Y+Rc), s	5.0		5.0	4.5	5.0
Max Green Setting (Gmax), s	55.0		35.0	18.5	32.0
Max Q Clear Time (g_c+I1), s	9.5		19.2	12.1	13.7
Green Ext Time (p_c), s	7.7		2.5	0.7	5.4

Intersection Summary	
HCM 6th Ctrl Delay	26.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	427	928	102	212	995	143	227	920	112	205	868	496
Future Volume (veh/h)	427	928	102	212	995	143	227	920	112	205	868	496
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	508	1105	42	252	1185	62	270	1095	51	244	1033	550
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	380	1127	498	196	1127	492	160	942	409	415	1048	628
Arrive On Green	0.11	0.32	0.32	0.11	0.32	0.32	0.09	0.26	0.26	0.12	0.29	0.29
Sat Flow, veh/h	3456	3554	1570	1781	3554	1552	1781	3554	1542	3456	3554	1537
Grp Volume(v), veh/h	508	1105	42	252	1185	62	270	1095	51	244	1033	550
Grp Sat Flow(s),veh/h/ln	1728	1777	1570	1781	1777	1552	1781	1777	1542	1728	1777	1537
Q Serve(g_s), s	11.0	30.8	1.9	11.0	31.7	2.8	9.0	26.5	2.5	6.7	28.9	29.5
Cycle Q Clear(g_c), s	11.0	30.8	1.9	11.0	31.7	2.8	9.0	26.5	2.5	6.7	28.9	29.5
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	380	1127	498	196	1127	492	160	942	409	415	1048	628
V/C Ratio(X)	1.34	0.98	0.08	1.29	1.05	0.13	1.68	1.16	0.12	0.59	0.99	0.88
Avail Cap(c_a), veh/h	380	1127	498	196	1127	492	160	942	409	415	1048	628
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	44.5	33.8	24.0	44.5	34.2	24.3	45.5	36.8	27.9	41.7	35.0	27.6
Incr Delay (d2), s/veh	168.3	22.2	0.1	161.6	41.6	0.1	333.4	85.0	0.6	6.0	24.5	15.8
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	18.4	16.0	0.7	13.5	19.4	1.0	18.7	21.9	1.0	3.1	15.4	14.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	212.8	56.1	24.0	206.1	75.7	24.4	378.9	121.8	28.6	47.7	59.5	43.4
LnGrp LOS	F	E	C	F	F	C	F	F	C	D	E	D
Approach Vol, veh/h		1655			1499			1416			1827	
Approach Delay, s/veh		103.4			95.5			167.4			53.1	
Approach LOS		F			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	35.0	15.0	37.0	16.0	32.0	15.0	37.0
Change Period (Y+Rc), s	4.0	5.5	4.0	5.3	4.0	5.5	4.0	5.3
Max Green Setting (Gmax), s	9.0	29.5	11.0	31.7	12.0	26.5	11.0	31.7
Max Q Clear Time (g_c+I1), s	11.0	31.5	13.0	32.8	8.7	28.5	13.0	33.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	101.3
HCM 6th LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	1179	21	220	1228	136	22	193	292	50	176	131
Future Volume (veh/h)	99	1179	21	220	1228	136	22	193	292	50	176	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	0.90		0.83	0.91		0.83
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	1325	23	247	1380	142	25	217	91	56	198	26
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	292	1916	33	328	2681	276	226	447	314	208	447	314
Arrive On Green	0.05	0.54	0.54	0.08	0.57	0.57	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3572	62	1781	4682	482	1039	1870	1314	977	1870	1314
Grp Volume(v), veh/h	111	659	689	247	1003	519	25	217	91	56	198	26
Grp Sat Flow(s),veh/h/ln	1781	1777	1857	1781	1702	1759	1039	1870	1314	977	1870	1314
Q Serve(g_s), s	2.8	27.3	27.4	5.9	17.9	17.9	2.1	10.0	5.7	5.2	9.0	1.5
Cycle Q Clear(g_c), s	2.8	27.3	27.4	5.9	17.9	17.9	11.1	10.0	5.7	15.2	9.0	1.5
Prop In Lane	1.00		0.03	1.00		0.27	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	292	953	996	328	1949	1007	226	447	314	208	447	314
V/C Ratio(X)	0.38	0.69	0.69	0.75	0.51	0.51	0.11	0.49	0.29	0.27	0.44	0.08
Avail Cap(c_a), veh/h	344	953	996	511	1949	1007	233	458	322	214	458	322
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	10.7	17.1	17.1	17.3	13.0	13.0	37.1	32.8	31.1	39.3	32.4	29.6
Incr Delay (d2), s/veh	0.8	4.1	3.9	3.5	1.0	1.9	0.2	0.8	0.5	0.7	0.7	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	1.0	11.1	11.5	3.3	6.3	6.8	0.5	4.5	1.8	1.3	4.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.5	21.2	21.0	20.8	13.9	14.8	37.3	33.6	31.6	40.0	33.1	29.7
LnGrp LOS	B	C	C	C	B	B	D	C	C	D	C	C
Approach Vol, veh/h		1459			1769			333			280	
Approach Delay, s/veh		20.4			15.2			33.3			34.2	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	28.4	12.7	58.9	28.4	9.1	62.6
Change Period (Y+Rc), s	4.5	4.3	5.3	4.5	4.3	5.3
Max Green Setting (Gmax), s	24.5	18.7	42.7	24.5	7.7	53.7
Max Q Clear Time (g_c+I1), s	17.2	7.9	29.4	13.1	4.8	19.9
Green Ext Time (p_c), s	0.8	0.5	7.1	1.2	0.1	13.1

Intersection Summary	
HCM 6th Ctrl Delay	20.1
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1002	467	350	1366	0	0	0	0	104	60	209
Future Volume (veh/h)	0	1002	467	350	1366	0	0	0	0	104	60	209
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1044	417	365	1423	0				108	62	136
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1873	748	406	2819	0				132	76	179
Arrive On Green	0.00	0.52	0.52	0.23	0.79	0.00				0.11	0.11	0.11
Sat Flow, veh/h	0	3749	1430	1781	3647	0				1152	661	1556
Grp Volume(v), veh/h	0	993	468	365	1423	0				170	0	136
Grp Sat Flow(s),veh/h/ln	0	1702	1606	1781	1777	0				1813	0	1556
Q Serve(g_s), s	0.0	19.6	19.6	19.9	13.8	0.0				9.2	0.0	8.5
Cycle Q Clear(g_c), s	0.0	19.6	19.6	19.9	13.8	0.0				9.2	0.0	8.5
Prop In Lane	0.00		0.89	1.00		0.00				0.64		1.00
Lane Grp Cap(c), veh/h	0	1781	840	406	2819	0				208	0	179
V/C Ratio(X)	0.00	0.56	0.56	0.90	0.50	0.00				0.82	0.00	0.76
Avail Cap(c_a), veh/h	0	1781	840	631	2819	0				243	0	209
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	16.0	16.0	37.5	3.6	0.0				43.2	0.0	42.9
Incr Delay (d2), s/veh	0.0	1.3	2.7	10.8	0.6	0.0				17.0	0.0	13.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.2	7.2	9.5	3.1	0.0				5.1	0.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	17.3	18.7	48.2	4.2	0.0				60.2	0.0	56.0
LnGrp LOS	A	B	B	D	A	A				E	A	E
Approach Vol, veh/h		1461			1788						306	
Approach Delay, s/veh		17.8			13.2						58.3	
Approach LOS		B			B						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	27.0	56.9		16.1		83.9
Change Period (Y+Rc), s	* 4.2	4.6		4.6		4.6
Max Green Setting (Gmax), s	* 35	37.8		13.4		77.4
Max Q Clear Time (g_c+I1), s	21.9	21.6		11.2		15.8
Green Ext Time (p_c), s	0.9	12.6		0.3		32.7

Intersection Summary	
HCM 6th Ctrl Delay	19.0
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	215	888	0	0	1101	256	589	11	431	0	0	0
Future Volume (veh/h)	215	888	0	0	1101	256	589	11	431	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	224	925	0	0	1147	247	715	0	211			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	185	2414	0	0	1551	332	815	0	363			
Arrive On Green	0.10	0.68	0.00	0.00	0.53	0.53	0.23	0.00	0.23			
Sat Flow, veh/h	1781	3647	0	0	3002	622	3563	0	1585			
Grp Volume(v), veh/h	224	925	0	0	698	696	715	0	211			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1753	1781	0	1585			
Q Serve(g_s), s	10.4	11.3	0.0	0.0	30.2	30.8	19.4	0.0	11.8			
Cycle Q Clear(g_c), s	10.4	11.3	0.0	0.0	30.2	30.8	19.4	0.0	11.8			
Prop In Lane	1.00		0.00	0.00		0.35	1.00		1.00			
Lane Grp Cap(c), veh/h	185	2414	0	0	948	935	815	0	363			
V/C Ratio(X)	1.21	0.38	0.00	0.00	0.74	0.75	0.88	0.00	0.58			
Avail Cap(c_a), veh/h	185	2414	0	0	948	935	905	0	403			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	44.8	7.0	0.0	0.0	17.9	18.1	37.2	0.0	34.3			
Incr Delay (d2), s/veh	133.7	0.5	0.0	0.0	5.1	5.4	9.1	0.0	1.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	11.3	3.6	0.0	0.0	12.4	12.5	9.3	0.0	4.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	178.5	7.4	0.0	0.0	23.0	23.4	46.3	0.0	36.0			
LnGrp LOS	F	A	A	A	C	C	D	A	D			
Approach Vol, veh/h		1149			1394			926				
Approach Delay, s/veh		40.8			23.2			44.0				
Approach LOS		D			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		72.5			14.6	57.9		27.5				
Change Period (Y+Rc), s		4.6			* 4.2	4.6		4.6				
Max Green Setting (Gmax), s		65.4			* 10	50.8		25.4				
Max Q Clear Time (g_c+I1), s		13.3			12.4	32.8		21.4				
Green Ext Time (p_c), s		16.0			0.0	13.7		1.5				

Intersection Summary	
HCM 6th Ctrl Delay	34.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	31	1490	1510	65	0	70
Future Vol, veh/h	31	1490	1510	65	0	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	65	-	-	-	-	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	34	1620	1641	71	0	76

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1712	0	-	0	-	856
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	3.92
Pot Cap-1 Maneuver	175	-	-	-	0	259
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	175	-	-	-	-	259
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	24.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	175	-	-	-	259
HCM Lane V/C Ratio	0.193	-	-	-	0.294
HCM Control Delay (s)	30.4	-	-	-	24.6
HCM Lane LOS	D	-	-	-	C
HCM 95th %tile Q(veh)	0.7	-	-	-	1.2

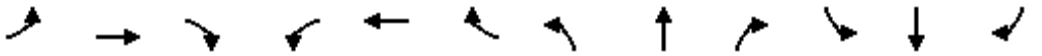
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	420	8	0	357
Future Vol, veh/h	0	3	420	8	0	357
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	0	3	457	9	0	388

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	233	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.93	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.319	-	-	-	-
Pot Cap-1 Maneuver	0	770	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	770	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	0
HCM LOS	A		

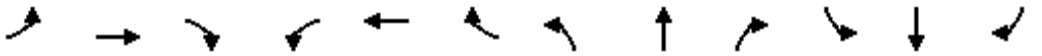
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	770	-
HCM Lane V/C Ratio	-	-	0.004	-
HCM Control Delay (s)	-	-	9.7	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	427	928	102	212	995	143	227	920	112	205	868	496
Future Volume (veh/h)	427	928	102	212	995	143	227	920	112	205	868	496
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	508	1105	42	252	1185	62	270	1095	51	244	1033	550
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	452	1091	482	233	1091	476	233	1238	541	239	1020	648
Arrive On Green	0.13	0.31	0.31	0.13	0.31	0.31	0.13	0.35	0.35	0.07	0.29	0.29
Sat Flow, veh/h	3456	3554	1570	1781	3554	1551	1781	3554	1552	3456	3554	1535
Grp Volume(v), veh/h	508	1105	42	252	1185	62	270	1095	51	244	1033	550
Grp Sat Flow(s),veh/h/ln	1728	1777	1570	1781	1777	1551	1781	1777	1552	1728	1777	1535
Q Serve(g_s), s	17.0	39.9	2.5	17.0	39.9	3.8	17.0	37.7	2.9	9.0	37.3	37.3
Cycle Q Clear(g_c), s	17.0	39.9	2.5	17.0	39.9	3.8	17.0	37.7	2.9	9.0	37.3	37.3
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	452	1091	482	233	1091	476	233	1238	541	239	1020	648
V/C Ratio(X)	1.12	1.01	0.09	1.08	1.09	0.13	1.16	0.88	0.09	1.02	1.01	0.85
Avail Cap(c_a), veh/h	452	1091	482	233	1091	476	233	1238	541	239	1020	648
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	56.5	45.0	32.1	56.5	45.0	32.5	56.5	39.9	28.5	60.5	46.3	34.3
Incr Delay (d2), s/veh	80.8	30.5	0.1	82.4	53.9	0.1	108.7	9.4	0.3	63.4	31.5	13.1
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	12.4	21.7	0.9	12.8	25.2	1.4	14.5	17.4	1.1	6.0	20.5	17.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	137.3	75.6	32.2	138.9	98.9	32.6	165.2	49.3	28.9	123.9	77.8	47.4
LnGrp LOS	F	F	C	F	F	C	F	D	C	F	F	D
Approach Vol, veh/h		1655			1499			1416			1827	
Approach Delay, s/veh		93.4			102.9			70.7			74.8	
Approach LOS		F			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	42.8	21.0	45.2	13.0	50.8	21.0	45.2
Change Period (Y+Rc), s	4.0	5.5	4.0	5.3	4.0	5.5	4.0	5.3
Max Green Setting (Gmax), s	17.0	37.3	17.0	39.9	9.0	45.3	17.0	39.9
Max Q Clear Time (g_c+I1), s	19.0	39.3	19.0	41.9	11.0	39.7	19.0	41.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	85.3
HCM 6th LOS	F



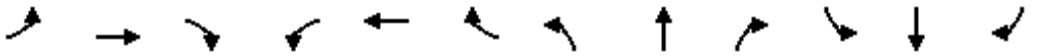
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	427	928	102	212	995	143	227	920	112	205	868	496
Future Volume (veh/h)	427	928	102	212	995	143	227	920	112	205	868	496
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	508	1105	42	252	1185	62	270	1095	51	244	1033	550
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	554	1609	495	308	1245	376	292	1330	582	266	1302	821
Arrive On Green	0.16	0.32	0.32	0.09	0.24	0.24	0.08	0.37	0.37	0.08	0.37	0.37
Sat Flow, veh/h	3456	5106	1570	3456	5106	1542	3456	3554	1555	3456	3554	1546
Grp Volume(v), veh/h	508	1105	42	252	1185	62	270	1095	51	244	1033	550
Grp Sat Flow(s),veh/h/ln	1728	1702	1570	1728	1702	1542	1728	1777	1555	1728	1777	1546
Q Serve(g_s), s	18.8	24.6	2.4	9.3	29.7	4.1	10.1	36.2	2.8	9.1	33.8	34.0
Cycle Q Clear(g_c), s	18.8	24.6	2.4	9.3	29.7	4.1	10.1	36.2	2.8	9.1	33.8	34.0
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	554	1609	495	308	1245	376	292	1330	582	266	1302	821
V/C Ratio(X)	0.92	0.69	0.08	0.82	0.95	0.16	0.92	0.82	0.09	0.92	0.79	0.67
Avail Cap(c_a), veh/h	558	1609	495	399	1245	376	292	1330	582	266	1302	821
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	53.7	38.9	31.3	58.2	48.4	38.7	59.1	36.8	26.3	59.6	36.8	22.6
Incr Delay (d2), s/veh	20.0	1.2	0.1	9.9	15.4	0.2	33.2	5.9	0.3	37.5	5.0	4.3
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	9.6	10.2	0.9	4.4	14.1	1.6	5.7	16.2	1.1	5.3	15.1	12.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.7	40.2	31.4	68.0	63.8	38.9	92.3	42.7	26.6	97.1	41.8	26.9
LnGrp LOS	E	D	C	E	E	D	F	D	C	F	D	C
Approach Vol, veh/h		1655			1499			1416			1827	
Approach Delay, s/veh		50.2			63.5			51.6			44.7	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	53.1	15.6	46.3	14.0	54.1	24.9	37.0
Change Period (Y+Rc), s	4.0	5.5	4.0	5.3	4.0	5.5	4.0	5.3
Max Green Setting (Gmax), s	11.0	47.5	15.0	37.7	10.0	48.5	21.0	31.7
Max Q Clear Time (g_c+I1), s	12.1	36.0	11.3	26.6	11.1	38.2	20.8	31.7
Green Ext Time (p_c), s	0.0	6.8	0.3	5.5	0.0	5.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	52.1
HCM 6th LOS	D

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	660	80	160	1290	220	270
Future Volume (vph)	660	80	160	1290	220	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9		3.0	4.9	3.6	3.0
Lane Util. Factor	0.91		1.00	0.91	0.97	0.88
Frpb, ped/bikes	0.99		1.00	1.00	1.00	0.78
Flpb, ped/bikes	1.00		0.99	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4946		1757	5085	3433	2168
Flt Permitted	1.00		0.30	1.00	0.95	1.00
Satd. Flow (perm)	4946		562	5085	3433	2168
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	717	87	174	1402	239	293
RTOR Reduction (vph)	9	0	0	0	0	0
Lane Group Flow (vph)	795	0	174	1402	239	293
Confl. Peds. (#/hr)		85	85		105	427
Turn Type	NA		pm+pt	NA	Prot	pm+ov
Protected Phases	2		1	6	3	1
Permitted Phases			6			3
Actuated Green, G (s)	59.6		70.7	70.7	12.0	20.1
Effective Green, g (s)	59.6		70.7	70.7	12.0	20.1
Actuated g/C Ratio	0.60		0.71	0.71	0.12	0.20
Clearance Time (s)	4.9		3.0	4.9	3.6	3.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2947		494	3595	411	435
v/s Ratio Prot	0.16		0.03	c0.28	0.07	c0.05
v/s Ratio Perm			0.22			0.08
v/c Ratio	0.27		0.35	0.39	0.58	0.67
Uniform Delay, d1	9.7		5.0	5.9	41.6	36.9
Progression Factor	1.00		1.00	1.00	1.00	0.95
Incremental Delay, d2	0.2		0.4	0.3	1.6	3.1
Delay (s)	10.0		5.4	6.2	43.3	38.2
Level of Service	A		A	A	D	D
Approach Delay (s)	10.0			6.2	40.5	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	48.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



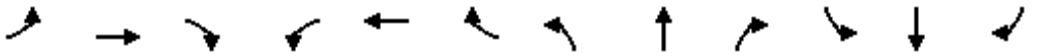
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	360	280	410	2160	0	0	0	0	110	260	680
Future Volume (veh/h)	0	360	280	410	2160	0	0	0	0	110	260	680
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	387	154	441	2323	0				118	466	480
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1488	626	509	2097	0				552	580	491
Arrive On Green	0.00	0.40	0.40	0.15	0.59	0.00				0.31	0.31	0.31
Sat Flow, veh/h	0	3741	1573	3456	3647	0				1781	1870	1585
Grp Volume(v), veh/h	0	387	154	441	2323	0				118	466	480
Grp Sat Flow(s),veh/h/ln	0	1870	1573	1728	1777	0				1781	1870	1585
Q Serve(g_s), s	0.0	7.0	6.5	12.5	59.0	0.0				4.9	22.9	30.0
Cycle Q Clear(g_c), s	0.0	7.0	6.5	12.5	59.0	0.0				4.9	22.9	30.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1488	626	509	2097	0				552	580	491
V/C Ratio(X)	0.00	0.26	0.25	0.87	1.11	0.00				0.21	0.80	0.98
Avail Cap(c_a), veh/h	0	1488	626	581	2097	0				552	580	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	20.2	20.1	41.7	20.5	0.0				25.5	31.7	34.1
Incr Delay (d2), s/veh	0.0	0.4	0.9	10.8	56.2	0.0				0.2	8.1	34.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.0	2.5	6.0	37.5	0.0				2.1	11.4	15.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.7	21.0	52.5	76.7	0.0				25.7	39.8	68.7
LnGrp LOS	A	C	C	D	F	A				C	D	E
Approach Vol, veh/h		541			2764						1064	
Approach Delay, s/veh		20.8			72.8						51.2	
Approach LOS		C			E						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	19.2	44.8		36.0		64.0
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0
Max Green Setting (Gmax), s	16.8	37.7		31.0		59.0
Max Q Clear Time (g_c+I1), s	14.5	9.0		32.0		61.0
Green Ext Time (p_c), s	0.3	4.6		0.0		0.0

Intersection Summary		
HCM 6th Ctrl Delay		61.1
HCM 6th LOS		E

Notes

User approved volume balancing among the lanes for turning movement.



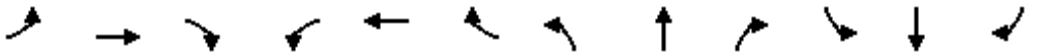
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	320	0	0	1130	70	1440	320	120	0	0	0
Future Volume (veh/h)	160	320	0	0	1130	70	1440	320	120	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.84	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	178	356	0	0	1256	78	1600	356	83			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	190	1635	0	0	1208	75	1568	823	695			
Arrive On Green	0.05	0.46	0.00	0.00	0.36	0.36	0.44	0.44	0.44			
Sat Flow, veh/h	3456	3647	0	0	3449	208	3563	1870	1580			
Grp Volume(v), veh/h	178	356	0	0	663	671	1600	356	83			
Grp Sat Flow(s),veh/h/ln	1728	1777	0	0	1777	1786	1781	1870	1580			
Q Serve(g_s), s	5.1	6.0	0.0	0.0	36.0	36.0	44.0	13.2	3.1			
Cycle Q Clear(g_c), s	5.1	6.0	0.0	0.0	36.0	36.0	44.0	13.2	3.1			
Prop In Lane	1.00		0.00	0.00		0.12	1.00		1.00			
Lane Grp Cap(c), veh/h	190	1635	0	0	640	643	1568	823	695			
V/C Ratio(X)	0.94	0.22	0.00	0.00	1.04	1.04	1.02	0.43	0.12			
Avail Cap(c_a), veh/h	190	1635	0	0	640	643	1568	823	695			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	47.1	16.2	0.0	0.0	32.0	32.0	28.0	19.4	16.5			
Incr Delay (d2), s/veh	47.3	0.3	0.0	0.0	45.4	47.2	28.1	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			
%ile BackOfQ(50%),veh/ln	3.4	2.4	0.0	0.0	22.7	23.2	23.8	5.6	3.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.4	16.5	0.0	0.0	77.4	79.2	56.1	19.5	16.6			
LnGrp LOS	F	B	A	A	F	F	F	B	B			
Approach Vol, veh/h		534			1334			2039				
Approach Delay, s/veh		42.5			78.3			48.1				
Approach LOS		D			E			D				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		51.0		49.0	10.0	41.0			
Change Period (Y+Rc), s		5.0		5.0	4.5	5.0			
Max Green Setting (Gmax), s		46.0		44.0	5.5	36.0			
Max Q Clear Time (g_c+I1), s		8.0		46.0	7.1	38.0			
Green Ext Time (p_c), s		3.5		0.0	0.0	0.0			

Intersection Summary		
HCM 6th Ctrl Delay	57.7	
HCM 6th LOS	E	

Notes

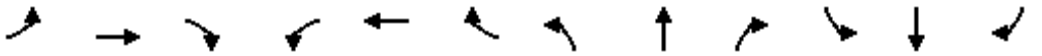
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	470	770	150	130	1110	190	160	980	50	180	1230	570
Future Volume (veh/h)	470	770	150	130	1110	190	160	980	50	180	1230	570
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	560	917	67	155	1321	97	190	1167	16	214	1464	639
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	380	1147	507	185	1127	492	160	942	409	415	1048	628
Arrive On Green	0.11	0.32	0.32	0.10	0.32	0.32	0.09	0.26	0.26	0.12	0.29	0.29
Sat Flow, veh/h	3456	3554	1570	1781	3554	1552	1781	3554	1542	3456	3554	1537
Grp Volume(v), veh/h	560	917	67	155	1321	97	190	1167	16	214	1464	639
Grp Sat Flow(s),veh/h/ln	1728	1777	1570	1781	1777	1552	1781	1777	1542	1728	1777	1537
Q Serve(g_s), s	11.0	23.5	3.0	8.5	31.7	4.6	9.0	26.5	0.8	5.8	29.5	29.5
Cycle Q Clear(g_c), s	11.0	23.5	3.0	8.5	31.7	4.6	9.0	26.5	0.8	5.8	29.5	29.5
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	380	1147	507	185	1127	492	160	942	409	415	1048	628
V/C Ratio(X)	1.47	0.80	0.13	0.84	1.17	0.20	1.19	1.24	0.04	0.52	1.40	1.02
Avail Cap(c_a), veh/h	380	1147	507	196	1127	492	160	942	409	415	1048	628
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	44.5	30.9	23.9	44.0	34.2	24.9	45.5	36.8	27.3	41.3	35.2	29.9
Incr Delay (d2), s/veh	226.8	4.1	0.1	24.8	87.3	0.2	129.5	116.8	0.2	4.5	184.3	40.5
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	16.5	10.2	1.1	4.9	26.5	1.6	9.6	26.1	0.3	2.7	38.9	21.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	271.3	35.0	24.1	68.8	121.5	25.1	175.0	153.5	27.5	45.8	219.5	70.4
LnGrp LOS	F	C	C	E	F	C	F	F	C	D	F	F
Approach Vol, veh/h		1544			1573			1373			2317	
Approach Delay, s/veh		120.2			110.4			155.0			162.4	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	35.0	14.4	37.6	16.0	32.0	15.0	37.0
Change Period (Y+Rc), s	4.0	5.5	4.0	5.3	4.0	5.5	4.0	5.3
Max Green Setting (Gmax), s	9.0	29.5	11.0	31.7	12.0	26.5	11.0	31.7
Max Q Clear Time (g_c+I1), s	11.0	31.5	10.5	25.5	7.8	28.5	13.0	33.7
Green Ext Time (p_c), s	0.0	0.0	0.0	3.1	0.3	0.0	0.0	0.0

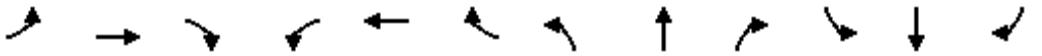
Intersection Summary	
HCM 6th Ctrl Delay	139.3
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	840	40	310	1390	400	20	240	200	20	150	50
Future Volume (veh/h)	120	840	40	310	1390	400	20	240	200	20	150	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	0.99		0.96	0.89		0.83	0.92		0.83
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	135	944	42	348	1562	409	22	270	44	22	169	11
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	232	1752	78	457	2262	584	246	446	314	180	446	314
Arrive On Green	0.06	0.51	0.51	0.11	0.57	0.57	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3460	154	1781	4002	1034	1069	1870	1314	979	1870	1314
Grp Volume(v), veh/h	135	485	501	348	1326	645	22	270	44	22	169	11
Grp Sat Flow(s),veh/h/ln	1781	1777	1837	1781	1702	1631	1069	1870	1314	979	1870	1314
Q Serve(g_s), s	3.6	18.5	18.5	8.7	27.7	28.5	1.8	12.8	2.6	2.0	7.6	0.6
Cycle Q Clear(g_c), s	3.6	18.5	18.5	8.7	27.7	28.5	9.3	12.8	2.6	14.9	7.6	0.6
Prop In Lane	1.00		0.08	1.00		0.63	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	232	900	930	457	1924	922	246	446	314	180	446	314
V/C Ratio(X)	0.58	0.54	0.54	0.76	0.69	0.70	0.09	0.60	0.14	0.12	0.38	0.04
Avail Cap(c_a), veh/h	271	900	930	587	1924	922	253	458	322	186	458	322
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	16.8	16.8	16.8	13.5	15.5	15.6	35.8	33.9	30.0	40.5	31.9	29.2
Incr Delay (d2), s/veh	2.3	2.3	2.2	4.3	2.0	4.4	0.2	2.2	0.2	0.3	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	1.4	7.5	7.7	3.4	10.0	10.5	0.5	5.9	0.8	0.5	3.5	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.1	19.1	19.0	17.8	17.5	20.1	35.9	36.0	30.2	40.8	32.4	29.3
LnGrp LOS	B	B	B	B	B	C	D	D	C	D	C	C
Approach Vol, veh/h		1121			2319			336			202	
Approach Delay, s/veh		19.0			18.3			35.3			33.1	
Approach LOS		B			B			D			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		28.4	15.7	55.9		28.4	9.8	61.8				
Change Period (Y+Rc), s		4.5	4.3	5.3		4.5	4.3	5.3				
Max Green Setting (Gmax), s		24.5	18.7	42.7		24.5	7.7	53.7				
Max Q Clear Time (g_c+I1), s		16.9	10.7	20.5		14.8	5.6	30.5				
Green Ext Time (p_c), s		0.6	0.7	6.2		1.2	0.1	15.2				

Intersection Summary	
HCM 6th Ctrl Delay	20.7
HCM 6th LOS	C



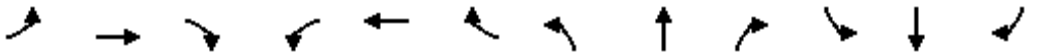
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	640	410	500	1900	0	0	0	0	90	20	200
Future Volume (veh/h)	0	640	410	500	1900	0	0	0	0	90	20	200
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	667	317	521	1979	0				94	21	153
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1482	687	557	2807	0				173	39	184
Arrive On Green	0.00	0.44	0.44	0.31	0.79	0.00				0.12	0.12	0.12
Sat Flow, veh/h	0	3572	1578	1781	3647	0				1469	328	1557
Grp Volume(v), veh/h	0	667	317	521	1979	0				115	0	153
Grp Sat Flow(s),veh/h/ln	0	1702	1578	1781	1777	0				1797	0	1557
Q Serve(g_s), s	0.0	13.8	14.2	28.4	26.4	0.0				6.0	0.0	9.6
Cycle Q Clear(g_c), s	0.0	13.8	14.2	28.4	26.4	0.0				6.0	0.0	9.6
Prop In Lane	0.00		1.00	1.00		0.00				0.82		1.00
Lane Grp Cap(c), veh/h	0	1482	687	557	2807	0				212	0	184
V/C Ratio(X)	0.00	0.45	0.46	0.94	0.71	0.00				0.54	0.00	0.83
Avail Cap(c_a), veh/h	0	1482	687	631	2807	0				241	0	209
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	19.8	20.0	33.4	5.0	0.0				41.5	0.0	43.1
Incr Delay (d2), s/veh	0.0	1.0	2.2	20.2	1.5	0.0				2.1	0.0	21.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.3	5.3	14.7	6.2	0.0				2.8	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.8	22.2	53.5	6.5	0.0				43.7	0.0	65.0
LnGrp LOS	A	C	C	D	A	A				D	A	E
Approach Vol, veh/h		984			2500						268	
Approach Delay, s/veh		21.3			16.3						55.9	
Approach LOS		C			B						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	35.5	48.1		16.4		83.6
Change Period (Y+Rc), s	* 4.2	4.6		4.6		4.6
Max Green Setting (Gmax), s	* 35	37.8		13.4		77.4
Max Q Clear Time (g_c+I1), s	30.4	16.2		11.6		28.4
Green Ext Time (p_c), s	0.8	11.2		0.2		41.2

Intersection Summary		
HCM 6th Ctrl Delay		20.4
HCM 6th LOS		C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	590	0	0	1590	180	800	10	330	0	0	0
Future Volume (veh/h)	140	590	0	0	1590	180	800	10	330	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	146	615	0	0	1656	179	871	0	76			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	176	2324	0	0	1661	177	905	0	403			
Arrive On Green	0.10	0.65	0.00	0.00	0.51	0.51	0.25	0.00	0.25			
Sat Flow, veh/h	1781	3647	0	0	3331	345	3563	0	1585			
Grp Volume(v), veh/h	146	615	0	0	898	937	871	0	76			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1805	1781	0	1585			
Q Serve(g_s), s	8.0	7.2	0.0	0.0	49.7	51.3	24.1	0.0	3.8			
Cycle Q Clear(g_c), s	8.0	7.2	0.0	0.0	49.7	51.3	24.1	0.0	3.8			
Prop In Lane	1.00		0.00	0.00		0.19	1.00		1.00			
Lane Grp Cap(c), veh/h	176	2324	0	0	912	926	905	0	403			
V/C Ratio(X)	0.83	0.26	0.00	0.00	0.98	1.01	0.96	0.00	0.19			
Avail Cap(c_a), veh/h	185	2324	0	0	912	926	905	0	403			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	44.2	7.2	0.0	0.0	23.9	24.3	36.8	0.0	29.2			
Incr Delay (d2), s/veh	25.0	0.3	0.0	0.0	26.3	32.6	21.3	0.0	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.7	2.4	0.0	0.0	25.1	27.8	12.9	0.0	1.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.2	7.5	0.0	0.0	50.2	56.9	58.1	0.0	29.5			
LnGrp LOS	E	A	A	A	D	F	E	A	C			
Approach Vol, veh/h		761			1835			947				
Approach Delay, s/veh		19.4			53.6			55.8				
Approach LOS		B			D			E				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		70.0			14.1	55.9		30.0				
Change Period (Y+Rc), s		4.6			* 4.2	4.6		4.6				
Max Green Setting (Gmax), s		65.4			* 10	50.8		25.4				
Max Q Clear Time (g_c+I1), s		9.2			10.0	53.3		26.1				
Green Ext Time (p_c), s		9.3			0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	46.9
HCM 6th LOS	D

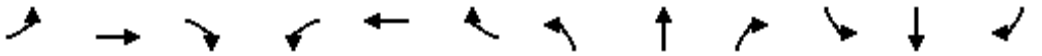
Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	890	70	200	970	280	380
Future Volume (vph)	890	70	200	970	280	380
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9		3.0	4.9	3.6	3.0
Lane Util. Factor	0.91		1.00	0.91	0.97	0.88
Frpb, ped/bikes	0.99		1.00	1.00	1.00	0.79
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4991		1764	5085	3433	2208
Flt Permitted	1.00		0.22	1.00	0.95	1.00
Satd. Flow (perm)	4991		409	5085	3433	2208
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	967	76	217	1054	304	413
RTOR Reduction (vph)	6	0	0	0	0	0
Lane Group Flow (vph)	1037	0	217	1054	304	413
Confl. Peds. (#/hr)		85	85		105	427
Turn Type	NA		pm+pt	NA	Prot	pm+ov
Protected Phases	2		1	6	3	1
Permitted Phases			6			3
Actuated Green, G (s)	57.1		69.6	69.6	13.1	22.6
Effective Green, g (s)	57.1		69.6	69.6	13.1	22.6
Actuated g/C Ratio	0.57		0.70	0.70	0.13	0.23
Clearance Time (s)	4.9		3.0	4.9	3.6	3.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2849		413	3539	449	499
v/s Ratio Prot	0.21		0.05	0.21	0.09	c0.08
v/s Ratio Perm			c0.32			0.11
v/c Ratio	0.36		0.53	0.30	0.68	0.83
Uniform Delay, d1	11.6		6.1	5.8	41.4	36.8
Progression Factor	1.00		1.00	1.00	0.89	0.98
Incremental Delay, d2	0.4		1.2	0.2	3.7	10.1
Delay (s)	12.0		7.3	6.0	40.5	46.0
Level of Service	B		A	A	D	D
Approach Delay (s)	12.0			6.3	43.7	
Approach LOS	B			A	D	

Intersection Summary			
HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	52.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



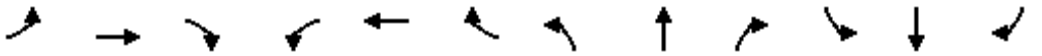
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	940	890	210	1030	0	0	0	0	170	250	580
Future Volume (veh/h)	0	940	890	210	1030	0	0	0	0	170	250	580
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1270	592	226	1108	0				183	397	406
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1805	760	292	2175	0				513	539	457
Arrive On Green	0.00	0.48	0.48	0.08	0.61	0.00				0.29	0.29	0.29
Sat Flow, veh/h	0	3741	1575	3456	3647	0				1781	1870	1585
Grp Volume(v), veh/h	0	1270	592	226	1108	0				183	397	406
Grp Sat Flow(s),veh/h/ln	0	1870	1575	1728	1777	0				1781	1870	1585
Q Serve(g_s), s	0.0	26.6	31.2	6.4	17.6	0.0				8.2	19.2	24.5
Cycle Q Clear(g_c), s	0.0	26.6	31.2	6.4	17.6	0.0				8.2	19.2	24.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1805	760	292	2175	0				513	539	457
V/C Ratio(X)	0.00	0.70	0.78	0.77	0.51	0.00				0.36	0.74	0.89
Avail Cap(c_a), veh/h	0	1805	760	328	2175	0				570	599	507
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	20.3	21.5	44.8	10.9	0.0				28.2	32.2	34.1
Incr Delay (d2), s/veh	0.0	2.3	7.7	8.4	0.9	0.0				0.4	4.3	16.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.4	12.3	3.0	6.4	0.0				3.5	9.1	11.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	22.6	29.2	53.2	11.8	0.0				28.7	36.4	50.4
LnGrp LOS	A	C	C	D	B	A				C	D	D
Approach Vol, veh/h		1862			1334						986	
Approach Delay, s/veh		24.7			18.8						40.8	
Approach LOS		C			B						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	12.9	53.2		33.8		66.2
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0
Max Green Setting (Gmax), s	9.5	44.0		32.0		58.0
Max Q Clear Time (g_c+I1), s	8.4	33.2		26.5		19.6
Green Ext Time (p_c), s	0.1	8.9		2.3		14.3

Intersection Summary		
HCM 6th Ctrl Delay		26.6
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.



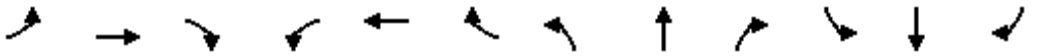
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	380	730	0	0	620	100	620	410	310	0	0	0
Future Volume (veh/h)	380	730	0	0	620	100	620	410	310	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.86	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	422	811	0	0	689	111	459	895	156			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	503	2130	0	0	1221	196	535	1124	474			
Arrive On Green	0.15	0.60	0.00	0.00	0.41	0.41	0.30	0.30	0.30			
Sat Flow, veh/h	3456	3647	0	0	3081	480	1781	3741	1577			
Grp Volume(v), veh/h	422	811	0	0	409	391	459	895	156			
Grp Sat Flow(s),veh/h/ln	1728	1777	0	0	1777	1691	1781	1870	1577			
Q Serve(g_s), s	11.9	11.8	0.0	0.0	17.7	17.8	24.3	22.0	7.7			
Cycle Q Clear(g_c), s	11.9	11.8	0.0	0.0	17.7	17.8	24.3	22.0	7.7			
Prop In Lane	1.00		0.00	0.00		0.28	1.00		1.00			
Lane Grp Cap(c), veh/h	503	2130	0	0	726	691	535	1124	474			
V/C Ratio(X)	0.84	0.38	0.00	0.00	0.56	0.57	0.86	0.80	0.33			
Avail Cap(c_a), veh/h	639	2130	0	0	726	691	623	1309	552			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	41.6	10.4	0.0	0.0	22.7	22.7	33.0	32.2	27.1			
Incr Delay (d2), s/veh	7.8	0.5	0.0	0.0	3.1	3.3	9.1	2.5	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.5	4.4	0.0	0.0	7.7	7.4	11.6	10.1	7.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.4	10.9	0.0	0.0	25.9	26.1	42.1	34.7	27.3			
LnGrp LOS	D	B	A	A	C	C	D	C	C			
Approach Vol, veh/h		1233			800			1510				
Approach Delay, s/veh		24.1			26.0			36.2				
Approach LOS		C			C			D				

Timer - Assigned Phs		2		4	5	6			
Phs Duration (G+Y+Rc), s		64.9		35.1	19.1	45.9			
Change Period (Y+Rc), s		5.0		5.0	4.5	5.0			
Max Green Setting (Gmax), s		55.0		35.0	18.5	32.0			
Max Q Clear Time (g_c+I1), s		13.8		26.3	13.9	19.8			
Green Ext Time (p_c), s		9.5		3.8	0.7	5.2			

Intersection Summary		
HCM 6th Ctrl Delay		29.7
HCM 6th LOS		C

Notes

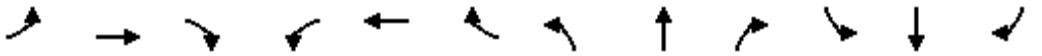
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	510	1070	120	250	1160	170	270	1110	120	240	1050	600
Future Volume (veh/h)	510	1070	120	250	1160	170	270	1110	120	240	1050	600
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	607	1274	64	298	1381	92	321	1321	61	286	1250	674
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	380	1127	498	196	1127	492	160	942	409	415	1048	628
Arrive On Green	0.11	0.32	0.32	0.11	0.32	0.32	0.09	0.26	0.26	0.12	0.29	0.29
Sat Flow, veh/h	3456	3554	1570	1781	3554	1552	1781	3554	1542	3456	3554	1537
Grp Volume(v), veh/h	607	1274	64	298	1381	92	321	1321	61	286	1250	674
Grp Sat Flow(s),veh/h/ln	1728	1777	1570	1781	1777	1552	1781	1777	1542	1728	1777	1537
Q Serve(g_s), s	11.0	31.7	2.9	11.0	31.7	4.3	9.0	26.5	3.0	7.9	29.5	29.5
Cycle Q Clear(g_c), s	11.0	31.7	2.9	11.0	31.7	4.3	9.0	26.5	3.0	7.9	29.5	29.5
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	380	1127	498	196	1127	492	160	942	409	415	1048	628
V/C Ratio(X)	1.60	1.13	0.13	1.52	1.23	0.19	2.00	1.40	0.15	0.69	1.19	1.07
Avail Cap(c_a), veh/h	380	1127	498	196	1127	492	160	942	409	415	1048	628
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	44.5	34.2	24.3	44.5	34.2	24.8	45.5	36.8	28.1	42.2	35.2	29.9
Incr Delay (d2), s/veh	280.7	70.5	0.1	258.7	109.7	0.2	472.4	187.7	0.8	9.1	96.1	57.4
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	19.4	23.9	1.1	18.8	30.0	1.6	24.9	35.3	1.2	3.8	26.1	24.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	325.2	104.6	24.4	303.2	143.8	25.0	517.9	224.4	28.9	51.3	131.4	87.2
LnGrp LOS	F	F	C	F	F	C	F	F	C	D	F	F
Approach Vol, veh/h		1945			1771			1703			2210	
Approach Delay, s/veh		170.8			164.5			272.7			107.6	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	35.0	15.0	37.0	16.0	32.0	15.0	37.0
Change Period (Y+Rc), s	4.0	5.5	4.0	5.3	4.0	5.5	4.0	5.3
Max Green Setting (Gmax), s	9.0	29.5	11.0	31.7	12.0	26.5	11.0	31.7
Max Q Clear Time (g_c+I1), s	11.0	31.5	13.0	33.7	9.9	28.5	13.0	33.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0

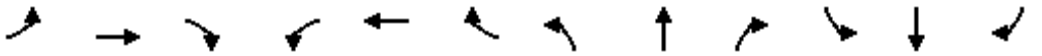
Intersection Summary	
HCM 6th Ctrl Delay	173.8
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	1360	20	260	1430	130	30	230	350	50	210	160
Future Volume (veh/h)	120	1360	20	260	1430	130	30	230	350	50	210	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	0.91		0.83	0.93		0.83
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	135	1528	21	292	1607	137	34	258	167	56	236	52
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	266	1790	25	329	2692	229	201	448	315	177	448	315
Arrive On Green	0.06	0.50	0.50	0.12	0.56	0.56	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3587	49	1781	4774	406	995	1870	1315	895	1870	1315
Grp Volume(v), veh/h	135	756	793	292	1145	599	34	258	167	56	236	52
Grp Sat Flow(s),veh/h/ln	1781	1777	1860	1781	1702	1776	995	1870	1315	895	1870	1315
Q Serve(g_s), s	3.7	37.1	37.2	9.6	22.1	22.2	3.1	12.2	11.1	5.9	11.0	3.1
Cycle Q Clear(g_c), s	3.7	37.1	37.2	9.6	22.1	22.2	14.1	12.2	11.1	18.1	11.0	3.1
Prop In Lane	1.00		0.03	1.00		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	266	887	928	329	1920	1002	201	448	315	177	448	315
V/C Ratio(X)	0.51	0.85	0.85	0.89	0.60	0.60	0.17	0.58	0.53	0.32	0.53	0.17
Avail Cap(c_a), veh/h	304	887	928	447	1920	1002	206	458	322	182	458	322
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	13.1	21.8	21.9	26.0	14.3	14.3	39.2	33.6	33.1	41.5	33.1	30.1
Incr Delay (d2), s/veh	1.5	10.2	9.9	15.1	1.4	2.6	0.4	1.7	1.6	1.0	1.1	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	1.4	16.4	17.2	8.1	8.0	8.7	0.8	5.5	3.5	1.3	5.1	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.6	32.0	31.8	41.1	15.7	17.0	39.6	35.3	34.7	42.5	34.2	30.4
LnGrp LOS	B	C	C	D	B	B	D	D	C	D	C	C
Approach Vol, veh/h		1684			2036			459			344	
Approach Delay, s/veh		30.5			19.7			35.4			35.0	
Approach LOS		C			B			D			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		28.4	16.4	55.2		28.4	9.9	61.7				
Change Period (Y+Rc), s		4.5	4.3	5.3		4.5	4.3	5.3				
Max Green Setting (Gmax), s		24.5	18.7	42.7		24.5	7.7	53.7				
Max Q Clear Time (g_c+I1), s		20.1	11.6	39.2		16.1	5.7	24.2				
Green Ext Time (p_c), s		0.7	0.5	2.7		1.5	0.1	14.9				

Intersection Summary												
HCM 6th Ctrl Delay			26.5									
HCM 6th LOS			C									



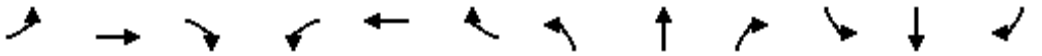
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1190	540	420	1580	0	0	0	0	120	70	230
Future Volume (veh/h)	0	1190	540	420	1580	0	0	0	0	120	70	230
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1240	489	438	1646	0				125	73	184
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1669	655	478	2751	0				153	90	209
Arrive On Green	0.00	0.46	0.46	0.27	0.77	0.00				0.13	0.13	0.13
Sat Flow, veh/h	0	3768	1413	1781	3647	0				1145	668	1560
Grp Volume(v), veh/h	0	1172	557	438	1646	0				198	0	184
Grp Sat Flow(s),veh/h/ln	0	1702	1609	1781	1777	0				1813	0	1560
Q Serve(g_s), s	0.0	28.2	28.4	23.9	19.5	0.0				10.6	0.0	11.6
Cycle Q Clear(g_c), s	0.0	28.2	28.4	23.9	19.5	0.0				10.6	0.0	11.6
Prop In Lane	0.00		0.88	1.00		0.00				0.63		1.00
Lane Grp Cap(c), veh/h	0	1578	746	478	2751	0				243	0	209
V/C Ratio(X)	0.00	0.74	0.75	0.92	0.60	0.00				0.81	0.00	0.88
Avail Cap(c_a), veh/h	0	1578	746	631	2751	0				243	0	209
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	21.9	22.0	35.5	4.8	0.0				42.1	0.0	42.5
Incr Delay (d2), s/veh	0.0	3.2	6.7	15.2	1.0	0.0				18.9	0.0	32.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.1	11.2	11.9	4.9	0.0				6.0	0.0	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	25.2	28.7	50.7	5.7	0.0				61.0	0.0	74.7
LnGrp LOS	A	C	C	D	A	A				E	A	E
Approach Vol, veh/h		1729			2084						382	
Approach Delay, s/veh		26.3			15.2						67.6	
Approach LOS		C			B						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	31.0	51.0		18.0		82.0
Change Period (Y+Rc), s	* 4.2	4.6		4.6		4.6
Max Green Setting (Gmax), s	* 35	37.8		13.4		77.4
Max Q Clear Time (g_c+I1), s	25.9	30.4		13.6		21.5
Green Ext Time (p_c), s	1.0	6.8		0.0		37.8

Intersection Summary		
HCM 6th Ctrl Delay		24.5
HCM 6th LOS		C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	1060	0	0	1310	310	670	10	520	0	0	0
Future Volume (veh/h)	250	1060	0	0	1310	310	670	10	520	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	260	1104	0	0	1365	302	838	0	294			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	185	2330	0	0	1478	321	899	0	400			
Arrive On Green	0.10	0.66	0.00	0.00	0.51	0.51	0.25	0.00	0.25			
Sat Flow, veh/h	1781	3647	0	0	2993	629	3563	0	1585			
Grp Volume(v), veh/h	260	1104	0	0	826	841	838	0	294			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1751	1781	0	1585			
Q Serve(g_s), s	10.4	15.5	0.0	0.0	42.6	45.3	23.0	0.0	17.0			
Cycle Q Clear(g_c), s	10.4	15.5	0.0	0.0	42.6	45.3	23.0	0.0	17.0			
Prop In Lane	1.00		0.00	0.00		0.36	1.00		1.00			
Lane Grp Cap(c), veh/h	185	2330	0	0	906	893	899	0	400			
V/C Ratio(X)	1.40	0.47	0.00	0.00	0.91	0.94	0.93	0.00	0.74			
Avail Cap(c_a), veh/h	185	2330	0	0	906	893	905	0	403			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	44.8	8.6	0.0	0.0	22.5	23.1	36.6	0.0	34.3			
Incr Delay (d2), s/veh	210.7	0.7	0.0	0.0	14.9	19.0	16.0	0.0	6.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	15.3	5.2	0.0	0.0	19.7	21.4	11.8	0.0	7.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	255.5	9.3	0.0	0.0	37.4	42.1	52.6	0.0	41.2			
LnGrp LOS	F	A	A	A	D	D	D	A	D			
Approach Vol, veh/h		1364			1667			1132				
Approach Delay, s/veh		56.2			39.8			49.6				
Approach LOS		E			D			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		70.2			14.6	55.6		29.8				
Change Period (Y+Rc), s		4.6			* 4.2	4.6		4.6				
Max Green Setting (Gmax), s		65.4			* 10	50.8		25.4				
Max Q Clear Time (g_c+I1), s		17.5			12.4	47.3		25.0				
Green Ext Time (p_c), s		20.1			0.0	3.3		0.2				

Intersection Summary	
HCM 6th Ctrl Delay	47.8
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	660	81	162	1290	222	283
Future Volume (vph)	660	81	162	1290	222	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9		3.0	4.9	3.6	3.0
Lane Util. Factor	0.91		1.00	0.91	0.97	0.88
Frpb, ped/bikes	0.99		1.00	1.00	1.00	0.78
Flpb, ped/bikes	1.00		0.99	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4945		1757	5085	3433	2172
Flt Permitted	1.00		0.30	1.00	0.95	1.00
Satd. Flow (perm)	4945		561	5085	3433	2172
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	717	88	176	1402	241	308
RTOR Reduction (vph)	9	0	0	0	0	0
Lane Group Flow (vph)	796	0	176	1402	241	308
Confl. Peds. (#/hr)		85	85		105	427
Turn Type	NA		pm+pt	NA	Prot	pm+ov
Protected Phases	2		1	6	3	1
Permitted Phases			6			3
Actuated Green, G (s)	59.5		70.7	70.7	12.0	20.2
Effective Green, g (s)	59.5		70.7	70.7	12.0	20.2
Actuated g/C Ratio	0.60		0.71	0.71	0.12	0.20
Clearance Time (s)	4.9		3.0	4.9	3.6	3.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2942		494	3595	411	438
v/s Ratio Prot	0.16		0.03	c0.28	0.07	c0.06
v/s Ratio Perm			0.22			0.08
v/c Ratio	0.27		0.36	0.39	0.59	0.70
Uniform Delay, d1	9.8		5.0	5.9	41.7	37.1
Progression Factor	1.00		1.00	1.00	1.03	0.97
Incremental Delay, d2	0.2		0.4	0.3	1.6	3.8
Delay (s)	10.0		5.5	6.2	44.4	39.7
Level of Service	B		A	A	D	D
Approach Delay (s)	10.0			6.2	41.7	
Approach LOS	B			A	D	

Intersection Summary			
HCM 2000 Control Delay	13.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	374	284	410	2160	0	0	0	0	110	266	681
Future Volume (veh/h)	0	374	284	410	2160	0	0	0	0	110	266	681
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	402	154	441	2323	0				118	470	483
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1488	626	509	2097	0				552	580	491
Arrive On Green	0.00	0.40	0.40	0.15	0.59	0.00				0.31	0.31	0.31
Sat Flow, veh/h	0	3741	1573	3456	3647	0				1781	1870	1585
Grp Volume(v), veh/h	0	402	154	441	2323	0				118	470	483
Grp Sat Flow(s),veh/h/ln	0	1870	1573	1728	1777	0				1781	1870	1585
Q Serve(g_s), s	0.0	7.3	6.5	12.5	59.0	0.0				4.9	23.2	30.2
Cycle Q Clear(g_c), s	0.0	7.3	6.5	12.5	59.0	0.0				4.9	23.2	30.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1488	626	509	2097	0				552	580	491
V/C Ratio(X)	0.00	0.27	0.25	0.87	1.11	0.00				0.21	0.81	0.98
Avail Cap(c_a), veh/h	0	1488	626	581	2097	0				552	580	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	20.3	20.1	41.7	20.5	0.0				25.5	31.8	34.2
Incr Delay (d2), s/veh	0.0	0.4	0.9	10.8	56.2	0.0				0.2	8.5	36.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.2	2.5	6.0	37.5	0.0				2.1	11.6	16.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.8	21.0	52.5	76.7	0.0				25.7	40.3	70.3
LnGrp LOS	A	C	C	D	F	A				C	D	E
Approach Vol, veh/h		556			2764						1071	
Approach Delay, s/veh		20.8			72.8						52.2	
Approach LOS		C			E						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	19.2	44.8		36.0		64.0
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0
Max Green Setting (Gmax), s	14.8	37.7		31.0		59.0
Max Q Clear Time (g_c+I1), s	14.5	9.3		32.2		61.0
Green Ext Time (p_c), s	0.3	4.7		0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	61.2
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	325	0	0	1130	70	1440	329	120	0	0	0
Future Volume (veh/h)	170	325	0	0	1130	70	1440	329	120	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.84	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	189	361	0	0	1256	78	1600	366	84			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	190	1635	0	0	1208	75	1568	823	695			
Arrive On Green	0.05	0.46	0.00	0.00	0.36	0.36	0.44	0.44	0.44			
Sat Flow, veh/h	3456	3647	0	0	3449	208	3563	1870	1580			
Grp Volume(v), veh/h	189	361	0	0	663	671	1600	366	84			
Grp Sat Flow(s),veh/h/ln	1728	1777	0	0	1777	1786	1781	1870	1580			
Q Serve(g_s), s	5.5	6.1	0.0	0.0	36.0	36.0	44.0	13.6	3.1			
Cycle Q Clear(g_c), s	5.5	6.1	0.0	0.0	36.0	36.0	44.0	13.6	3.1			
Prop In Lane	1.00		0.00	0.00		0.12	1.00		1.00			
Lane Grp Cap(c), veh/h	190	1635	0	0	640	643	1568	823	695			
V/C Ratio(X)	0.99	0.22	0.00	0.00	1.04	1.04	1.02	0.44	0.12			
Avail Cap(c_a), veh/h	190	1635	0	0	640	643	1568	823	695			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	47.2	16.2	0.0	0.0	32.0	32.0	28.0	19.5	16.6			
Incr Delay (d2), s/veh	63.6	0.3	0.0	0.0	45.4	47.2	28.1	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			
%ile BackOfQ(50%),veh/ln	4.0	2.5	0.0	0.0	22.7	23.2	23.8	5.8	3.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	110.8	16.5	0.0	0.0	77.4	79.2	56.1	19.6	16.6			
LnGrp LOS	F	B	A	A	F	F	F	B	B			
Approach Vol, veh/h		550			1334			2050				
Approach Delay, s/veh		48.9			78.3			48.0				
Approach LOS		D			E			D				

Timer - Assigned Phs	2		4	5	6				
Phs Duration (G+Y+Rc), s	51.0		49.0	10.0	41.0				
Change Period (Y+Rc), s	5.0		5.0	4.5	5.0				
Max Green Setting (Gmax), s	46.0		44.0	5.5	36.0				
Max Q Clear Time (g_c+I1), s	8.1		46.0	7.5	38.0				
Green Ext Time (p_c), s	3.6		0.0	0.0	0.0				

Intersection Summary		
HCM 6th Ctrl Delay	58.4	
HCM 6th LOS	E	

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	470	816	150	138	1160	193	160	980	54	181	1230	570
Future Volume (veh/h)	470	816	150	138	1160	193	160	980	54	181	1230	570
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	560	971	73	164	1381	105	190	1167	16	215	1464	639
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	380	1129	499	194	1127	492	160	942	409	415	1048	628
Arrive On Green	0.11	0.32	0.32	0.11	0.32	0.32	0.09	0.26	0.26	0.12	0.29	0.29
Sat Flow, veh/h	3456	3554	1570	1781	3554	1552	1781	3554	1542	3456	3554	1537
Grp Volume(v), veh/h	560	971	73	164	1381	105	190	1167	16	215	1464	639
Grp Sat Flow(s),veh/h/ln	1728	1777	1570	1781	1777	1552	1781	1777	1542	1728	1777	1537
Q Serve(g_s), s	11.0	25.6	3.3	9.0	31.7	5.0	9.0	26.5	0.8	5.8	29.5	29.5
Cycle Q Clear(g_c), s	11.0	25.6	3.3	9.0	31.7	5.0	9.0	26.5	0.8	5.8	29.5	29.5
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	380	1129	499	194	1127	492	160	942	409	415	1048	628
V/C Ratio(X)	1.47	0.86	0.15	0.84	1.23	0.21	1.19	1.24	0.04	0.52	1.40	1.02
Avail Cap(c_a), veh/h	380	1129	499	196	1127	492	160	942	409	415	1048	628
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	44.5	32.0	24.4	43.7	34.2	25.0	45.5	36.8	27.3	41.3	35.2	29.9
Incr Delay (d2), s/veh	226.8	6.9	0.1	26.9	109.7	0.2	129.5	116.8	0.2	4.6	184.3	40.5
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	16.5	11.5	1.2	5.3	30.0	1.8	9.6	26.1	0.3	2.7	38.9	21.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	271.3	38.9	24.5	70.6	143.8	25.2	175.0	153.5	27.5	45.9	219.5	70.4
LnGrp LOS	F	D	C	E	F	C	F	F	C	D	F	F
Approach Vol, veh/h		1604			1650			1373			2318	
Approach Delay, s/veh		119.4			129.0			155.0			162.3	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	35.0	14.9	37.1	16.0	32.0	15.0	37.0
Change Period (Y+Rc), s	4.0	5.5	4.0	5.3	4.0	5.5	4.0	5.3
Max Green Setting (Gmax), s	9.0	29.5	11.0	31.7	12.0	26.5	11.0	31.7
Max Q Clear Time (g_c+I1), s	11.0	31.5	11.0	27.6	7.8	28.5	13.0	33.7
Green Ext Time (p_c), s	0.0	0.0	0.0	2.3	0.3	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	143.0
HCM 6th LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	890	40	315	1451	417	20	240	202	23	150	50
Future Volume (veh/h)	120	890	40	315	1451	417	20	240	202	23	150	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	0.89		0.83	0.92		0.83
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	135	1000	42	354	1630	429	22	270	44	26	169	11
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	1750	74	442	2261	584	246	446	314	180	446	314
Arrive On Green	0.06	0.50	0.50	0.12	0.56	0.56	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3470	146	1781	4002	1034	1069	1870	1314	979	1870	1314
Grp Volume(v), veh/h	135	512	530	354	1382	677	22	270	44	26	169	11
Grp Sat Flow(s),veh/h/ln	1781	1777	1839	1781	1702	1631	1069	1870	1314	979	1870	1314
Q Serve(g_s), s	3.6	20.1	20.1	8.9	29.7	30.9	1.8	12.8	2.6	2.4	7.6	0.6
Cycle Q Clear(g_c), s	3.6	20.1	20.1	8.9	29.7	30.9	9.3	12.8	2.6	15.3	7.6	0.6
Prop In Lane	1.00		0.08	1.00		0.63	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	223	896	928	442	1923	922	246	446	314	180	446	314
V/C Ratio(X)	0.61	0.57	0.57	0.80	0.72	0.73	0.09	0.60	0.14	0.14	0.38	0.04
Avail Cap(c_a), veh/h	261	896	928	569	1923	922	253	458	322	186	458	322
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	18.3	17.3	17.3	14.8	15.9	16.2	35.8	33.9	30.0	40.7	31.9	29.2
Incr Delay (d2), s/veh	3.0	2.6	2.6	6.2	2.3	5.2	0.2	2.2	0.2	0.4	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	1.6	8.2	8.4	3.7	10.8	11.5	0.5	5.9	0.8	0.6	3.5	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.2	19.9	19.8	21.0	18.3	21.4	35.9	36.0	30.2	41.0	32.4	29.3
LnGrp LOS	C	B	B	C	B	C	D	D	C	D	C	C
Approach Vol, veh/h		1177			2413			336			206	
Approach Delay, s/veh		20.0			19.5			35.3			33.3	
Approach LOS		C			B			D			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	28.4	15.9	55.7	28.4	9.8	61.8
Change Period (Y+Rc), s	4.5	4.3	5.3	4.5	4.3	5.3
Max Green Setting (Gmax), s	24.5	18.7	42.7	24.5	7.7	53.7
Max Q Clear Time (g_c+I1), s	17.3	10.9	22.1	14.8	5.6	32.9
Green Ext Time (p_c), s	0.6	0.7	6.5	1.2	0.1	14.7

Intersection Summary	
HCM 6th Ctrl Delay	21.6
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	656	436	500	1918	0	0	0	0	90	20	206
Future Volume (veh/h)	0	656	436	500	1918	0	0	0	0	90	20	206
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	683	339	521	1998	0				94	21	160
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1468	680	557	2793	0				179	40	190
Arrive On Green	0.00	0.43	0.43	0.31	0.79	0.00				0.12	0.12	0.12
Sat Flow, veh/h	0	3572	1578	1781	3647	0				1469	328	1558
Grp Volume(v), veh/h	0	683	339	521	1998	0				115	0	160
Grp Sat Flow(s),veh/h/ln	0	1702	1578	1781	1777	0				1797	0	1558
Q Serve(g_s), s	0.0	14.3	15.6	28.4	27.5	0.0				6.0	0.0	10.0
Cycle Q Clear(g_c), s	0.0	14.3	15.6	28.4	27.5	0.0				6.0	0.0	10.0
Prop In Lane	0.00		1.00	1.00		0.00				0.82		1.00
Lane Grp Cap(c), veh/h	0	1468	680	557	2793	0				219	0	190
V/C Ratio(X)	0.00	0.47	0.50	0.94	0.72	0.00				0.52	0.00	0.84
Avail Cap(c_a), veh/h	0	1468	680	631	2793	0				241	0	209
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	20.2	20.6	33.4	5.2	0.0				41.2	0.0	42.9
Incr Delay (d2), s/veh	0.0	1.1	2.6	20.2	1.6	0.0				1.9	0.0	23.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.5	5.9	14.7	6.6	0.0				2.8	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	21.3	23.2	53.5	6.8	0.0				43.1	0.0	66.8
LnGrp LOS	A	C	C	D	A	A				D	A	E
Approach Vol, veh/h		1022			2519						275	
Approach Delay, s/veh		21.9			16.5						56.9	
Approach LOS		C			B						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	35.5	47.7		16.8		83.2
Change Period (Y+Rc), s*	4.2	4.6		4.6		4.6
Max Green Setting (Gmax), s	31.3	37.8		13.4		77.4
Max Q Clear Time (g_c+I1), s	30.4	17.6		12.0		29.5
Green Ext Time (p_c), s	0.8	11.2		0.2		40.7

Intersection Summary	
HCM 6th Ctrl Delay	20.9
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	149	597	0	0	1596	180	812	10	330	0	0	0
Future Volume (veh/h)	149	597	0	0	1596	180	812	10	330	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	155	622	0	0	1662	179	884	0	76			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	185	2324	0	0	1645	175	905	0	403			
Arrive On Green	0.10	0.65	0.00	0.00	0.51	0.51	0.25	0.00	0.25			
Sat Flow, veh/h	1781	3647	0	0	3332	344	3563	0	1585			
Grp Volume(v), veh/h	155	622	0	0	900	941	884	0	76			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1805	1781	0	1585			
Q Serve(g_s), s	8.5	7.3	0.0	0.0	50.5	50.8	24.6	0.0	3.8			
Cycle Q Clear(g_c), s	8.5	7.3	0.0	0.0	50.5	50.8	24.6	0.0	3.8			
Prop In Lane	1.00		0.00	0.00		0.19	1.00		1.00			
Lane Grp Cap(c), veh/h	185	2324	0	0	903	917	905	0	403			
V/C Ratio(X)	0.84	0.27	0.00	0.00	1.00	1.03	0.98	0.00	0.19			
Avail Cap(c_a), veh/h	185	2324	0	0	903	917	905	0	403			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	44.0	7.3	0.0	0.0	24.5	24.6	37.0	0.0	29.2			
Incr Delay (d2), s/veh	27.1	0.3	0.0	0.0	29.3	36.4	24.3	0.0	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.1	2.4	0.0	0.0	26.2	28.5	13.5	0.0	1.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.1	7.5	0.0	0.0	53.9	61.0	61.3	0.0	29.5			
LnGrp LOS	E	A	A	A	D	F	E	A	C			
Approach Vol, veh/h		777			1841			960				
Approach Delay, s/veh		20.2			57.5			58.8				
Approach LOS		C			E			E				

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		70.0			14.6	55.4		30.0				
Change Period (Y+Rc), s		4.6			* 4.2	4.6		4.6				
Max Green Setting (Gmax), s		65.4			* 10	50.8		25.4				
Max Q Clear Time (g_c+I1), s		9.3			10.5	52.8		26.6				
Green Ext Time (p_c), s		9.4			0.0	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	49.8	
HCM 6th LOS	D	

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	1102	2101	22	0	82
Future Vol, veh/h	14	1102	2101	22	0	82
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	65	-	-	-	-	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	15	1198	2284	24	0	89

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2308	0	-	0	-	1154
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	3.92
Pot Cap-1 Maneuver	87	-	-	-	0	164
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	87	-	-	-	-	164
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	50.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	87	-	-	-	164
HCM Lane V/C Ratio	0.175	-	-	-	0.543
HCM Control Delay (s)	55	-	-	-	50.4
HCM Lane LOS	F	-	-	-	F
HCM 95th %tile Q(veh)	0.6	-	-	-	2.8

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	6	776	2	0	223
Future Vol, veh/h	0	6	776	2	0	223
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	0	7	843	2	0	242

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	423	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.93	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.319	-	-	-	-
Pot Cap-1 Maneuver	0	580	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	580	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	580	-
HCM Lane V/C Ratio	-	-	0.011	-
HCM Control Delay (s)	-	-	11.3	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	890	71	206	970	283	394
Future Volume (vph)	890	71	206	970	283	394
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.9		3.0	4.9	3.6	3.0
Lane Util. Factor	0.91		1.00	0.91	0.97	0.88
Frpb, ped/bikes	0.99		1.00	1.00	1.00	0.79
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4990		1764	5085	3433	2213
Flt Permitted	1.00		0.22	1.00	0.95	1.00
Satd. Flow (perm)	4990		407	5085	3433	2213
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	967	77	224	1054	308	428
RTOR Reduction (vph)	6	0	0	0	0	0
Lane Group Flow (vph)	1038	0	224	1054	308	428
Confl. Peds. (#/hr)		85	85		105	427
Turn Type	NA		pm+pt	NA	Prot	pm+ov
Protected Phases	2		1	6	3	1
Permitted Phases			6			3
Actuated Green, G (s)	56.8		69.5	69.5	13.2	22.9
Effective Green, g (s)	56.8		69.5	69.5	13.2	22.9
Actuated g/C Ratio	0.57		0.70	0.70	0.13	0.23
Clearance Time (s)	4.9		3.0	4.9	3.6	3.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2834		414	3534	453	506
v/s Ratio Prot	0.21		0.05	0.21	0.09	c0.08
v/s Ratio Perm			c0.32			0.11
v/c Ratio	0.37		0.54	0.30	0.68	0.85
Uniform Delay, d1	11.8		6.2	5.9	41.4	36.9
Progression Factor	1.00		1.00	1.00	0.90	0.98
Incremental Delay, d2	0.4		1.4	0.2	3.7	11.4
Delay (s)	12.2		7.7	6.1	41.1	47.4
Level of Service	B		A	A	D	D
Approach Delay (s)	12.2			6.4	44.8	
Approach LOS	B			A	D	

Intersection Summary			
HCM 2000 Control Delay	17.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.5
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	953	900	210	1030	0	0	0	0	170	266	584
Future Volume (veh/h)	0	953	900	210	1030	0	0	0	0	170	266	584
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1300	604	226	1108	0				183	408	417
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1785	752	292	2156	0				523	549	465
Arrive On Green	0.00	0.48	0.48	0.08	0.61	0.00				0.29	0.29	0.29
Sat Flow, veh/h	0	3741	1575	3456	3647	0				1781	1870	1585
Grp Volume(v), veh/h	0	1300	604	226	1108	0				183	408	417
Grp Sat Flow(s),veh/h/ln	0	1870	1575	1728	1777	0				1781	1870	1585
Q Serve(g_s), s	0.0	27.8	32.5	6.4	17.8	0.0				8.1	19.7	25.2
Cycle Q Clear(g_c), s	0.0	27.8	32.5	6.4	17.8	0.0				8.1	19.7	25.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1785	752	292	2156	0				523	549	465
V/C Ratio(X)	0.00	0.73	0.80	0.77	0.51	0.00				0.35	0.74	0.90
Avail Cap(c_a), veh/h	0	1785	752	328	2156	0				570	599	507
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	20.9	22.2	44.8	11.2	0.0				27.8	31.9	33.9
Incr Delay (d2), s/veh	0.0	2.6	8.9	8.4	0.9	0.0				0.4	4.6	17.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	12.0	13.0	3.0	6.6	0.0				3.5	9.4	11.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	23.6	31.1	53.2	12.1	0.0				28.2	36.5	51.4
LnGrp LOS	A	C	C	D	B	A				C	D	D
Approach Vol, veh/h		1904			1334						1008	
Approach Delay, s/veh		26.0			19.1						41.2	
Approach LOS		C			B						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	12.9	52.7		34.3		65.7
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0
Max Green Setting (Gmax), s	9.5	44.0		32.0		58.0
Max Q Clear Time (g_c+I1), s	8.4	34.5		27.2		19.8
Green Ext Time (p_c), s	0.1	8.0		2.1		14.3

Intersection Summary		
HCM 6th Ctrl Delay		27.4
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	387	736	0	0	620	100	620	418	310	0	0	0
Future Volume (veh/h)	387	736	0	0	620	100	620	418	310	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.86	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	430	818	0	0	689	111	459	904	157			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	511	2129	0	0	1214	195	536	1125	474			
Arrive On Green	0.15	0.60	0.00	0.00	0.41	0.41	0.30	0.30	0.30			
Sat Flow, veh/h	3456	3647	0	0	3080	480	1781	3741	1577			
Grp Volume(v), veh/h	430	818	0	0	409	391	459	904	157			
Grp Sat Flow(s),veh/h/ln	1728	1777	0	0	1777	1690	1781	1870	1577			
Q Serve(g_s), s	12.1	12.0	0.0	0.0	17.8	17.8	24.3	22.3	7.7			
Cycle Q Clear(g_c), s	12.1	12.0	0.0	0.0	17.8	17.8	24.3	22.3	7.7			
Prop In Lane	1.00		0.00	0.00		0.28	1.00		1.00			
Lane Grp Cap(c), veh/h	511	2129	0	0	722	687	536	1125	474			
V/C Ratio(X)	0.84	0.38	0.00	0.00	0.57	0.57	0.86	0.80	0.33			
Avail Cap(c_a), veh/h	639	2129	0	0	722	687	623	1309	552			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	41.5	10.4	0.0	0.0	22.9	22.9	32.9	32.2	27.1			
Incr Delay (d2), s/veh	8.2	0.5	0.0	0.0	3.2	3.4	9.1	2.7	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.6	4.4	0.0	0.0	7.8	7.4	11.6	10.3	7.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.6	11.0	0.0	0.0	26.1	26.3	42.0	35.0	27.3			
LnGrp LOS	D	B	A	A	C	C	D	C	C			
Approach Vol, veh/h		1248			800			1520				
Approach Delay, s/veh		24.3			26.2			36.3				
Approach LOS		C			C			D				

Timer - Assigned Phs	2	4	5	6
Phs Duration (G+Y+Rc), s	64.9	35.1	19.3	45.6
Change Period (Y+Rc), s	5.0	5.0	4.5	5.0
Max Green Setting (Gmax), s	55.0	35.0	18.5	32.0
Max Q Clear Time (g_c+I1), s	14.0	26.3	14.1	19.8
Green Ext Time (p_c), s	9.6	3.8	0.7	5.2

Intersection Summary	
HCM 6th Ctrl Delay	29.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	510	1107	120	256	1193	173	270	1110	130	244	1050	601
Future Volume (veh/h)	510	1107	120	256	1193	173	270	1110	130	244	1050	601
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	607	1318	64	305	1420	96	321	1321	73	290	1250	675
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	380	1127	498	196	1127	492	160	942	409	415	1048	628
Arrive On Green	0.11	0.32	0.32	0.11	0.32	0.32	0.09	0.26	0.26	0.12	0.29	0.29
Sat Flow, veh/h	3456	3554	1570	1781	3554	1552	1781	3554	1542	3456	3554	1537
Grp Volume(v), veh/h	607	1318	64	305	1420	96	321	1321	73	290	1250	675
Grp Sat Flow(s),veh/h/ln	1728	1777	1570	1781	1777	1552	1781	1777	1542	1728	1777	1537
Q Serve(g_s), s	11.0	31.7	2.9	11.0	31.7	4.5	9.0	26.5	3.7	8.1	29.5	29.5
Cycle Q Clear(g_c), s	11.0	31.7	2.9	11.0	31.7	4.5	9.0	26.5	3.7	8.1	29.5	29.5
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	380	1127	498	196	1127	492	160	942	409	415	1048	628
V/C Ratio(X)	1.60	1.17	0.13	1.56	1.26	0.20	2.00	1.40	0.18	0.70	1.19	1.08
Avail Cap(c_a), veh/h	380	1127	498	196	1127	492	160	942	409	415	1048	628
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	44.5	34.2	24.3	44.5	34.2	24.9	45.5	36.8	28.4	42.3	35.2	29.9
Incr Delay (d2), s/veh	280.7	86.2	0.1	273.9	124.5	0.2	472.4	187.7	1.0	9.4	96.1	57.9
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	19.4	26.4	1.1	19.6	32.4	1.6	24.9	35.3	1.4	3.9	26.1	24.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	325.2	120.4	24.4	318.4	158.7	25.1	517.9	224.4	29.3	51.7	131.4	87.8
LnGrp LOS	F	F	C	F	F	C	F	F	C	D	F	F
Approach Vol, veh/h		1989			1821			1715			2215	
Approach Delay, s/veh		179.8			178.4			271.0			107.7	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	35.0	15.0	37.0	16.0	32.0	15.0	37.0
Change Period (Y+Rc), s	4.0	5.5	4.0	5.3	4.0	5.5	4.0	5.3
Max Green Setting (Gmax), s	9.0	29.5	11.0	31.7	12.0	26.5	11.0	31.7
Max Q Clear Time (g_c+I1), s	11.0	31.5	13.0	33.7	10.1	28.5	13.0	33.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	179.0
HCM 6th LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	1409	20	264	1472	155	30	235	351	57	210	160
Future Volume (veh/h)	121	1409	20	264	1472	155	30	235	351	57	210	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	0.91		0.83	0.93		0.83
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	136	1583	21	297	1654	163	34	264	169	64	236	53
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	257	1749	23	333	2647	260	201	448	315	174	448	315
Arrive On Green	0.06	0.49	0.49	0.13	0.56	0.56	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3589	48	1781	4705	463	994	1870	1315	889	1870	1315
Grp Volume(v), veh/h	136	783	821	297	1196	621	34	264	169	64	236	53
Grp Sat Flow(s),veh/h/ln	1781	1777	1860	1781	1702	1763	994	1870	1315	889	1870	1315
Q Serve(g_s), s	3.8	40.4	40.5	10.8	23.7	23.8	3.1	12.5	11.2	6.9	11.0	3.2
Cycle Q Clear(g_c), s	3.8	40.4	40.5	10.8	23.7	23.8	14.1	12.5	11.2	19.4	11.0	3.2
Prop In Lane	1.00		0.03	1.00		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	257	866	906	333	1915	992	201	448	315	174	448	315
V/C Ratio(X)	0.53	0.90	0.91	0.89	0.62	0.63	0.17	0.59	0.54	0.37	0.53	0.17
Avail Cap(c_a), veh/h	293	866	906	431	1915	992	206	458	322	179	458	322
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	14.1	23.5	23.5	28.3	14.7	14.8	39.2	33.7	33.2	42.2	33.1	30.1
Incr Delay (d2), s/veh	1.7	14.6	14.3	16.9	1.5	3.0	0.4	1.9	1.7	1.3	1.1	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	1.5	18.8	19.6	8.4	8.5	9.3	0.8	5.7	3.6	1.6	5.1	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.8	38.1	37.8	45.2	16.3	17.8	39.6	35.6	34.8	43.5	34.2	30.4
LnGrp LOS	B	D	D	D	B	B	D	D	C	D	C	C
Approach Vol, veh/h		1740			2114			467			353	
Approach Delay, s/veh		36.2			20.8			35.6			35.3	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	28.5	17.5	54.0	28.5	10.0	61.6
Change Period (Y+Rc), s	4.5	4.3	5.3	4.5	4.3	5.3
Max Green Setting (Gmax), s	24.5	18.7	42.7	24.5	7.7	53.7
Max Q Clear Time (g_c+I1), s	21.4	12.8	42.5	16.1	5.8	25.8
Green Ext Time (p_c), s	0.6	0.4	0.1	1.5	0.1	15.2

Intersection Summary	
HCM 6th Ctrl Delay	29.1
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1200	555	420	1630	0	0	0	0	123	70	246
Future Volume (veh/h)	0	1200	555	420	1630	0	0	0	0	123	70	246
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1250	503	438	1698	0				128	73	201
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1658	664	478	2751	0				155	88	209
Arrive On Green	0.00	0.46	0.46	0.27	0.77	0.00				0.13	0.13	0.13
Sat Flow, veh/h	0	3746	1432	1781	3647	0				1154	658	1560
Grp Volume(v), veh/h	0	1189	564	438	1698	0				201	0	201
Grp Sat Flow(s),veh/h/ln	0	1702	1605	1781	1777	0				1813	0	1560
Q Serve(g_s), s	0.0	28.8	29.1	23.9	20.7	0.0				10.8	0.0	12.8
Cycle Q Clear(g_c), s	0.0	28.8	29.1	23.9	20.7	0.0				10.8	0.0	12.8
Prop In Lane	0.00		0.89	1.00		0.00				0.64		1.00
Lane Grp Cap(c), veh/h	0	1578	744	478	2751	0				243	0	209
V/C Ratio(X)	0.00	0.75	0.76	0.92	0.62	0.00				0.83	0.00	0.96
Avail Cap(c_a), veh/h	0	1578	744	631	2751	0				243	0	209
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	22.1	22.2	35.5	4.9	0.0				42.2	0.0	43.0
Incr Delay (d2), s/veh	0.0	3.4	7.1	15.2	1.0	0.0				20.5	0.0	51.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.3	11.5	11.9	5.1	0.0				6.2	0.0	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	25.5	29.3	50.7	5.9	0.0				62.7	0.0	94.1
LnGrp LOS	A	C	C	D	A	A				E	A	F
Approach Vol, veh/h		1753			2136						402	
Approach Delay, s/veh		26.7			15.1						78.4	
Approach LOS		C			B						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	31.0	51.0		18.0		82.0
Change Period (Y+Rc), s*	4.2	4.6		4.6		4.6
Max Green Setting (Gmax), s	26.8	37.8		13.4		77.4
Max Q Clear Time (g_c+I1), s	25.9	31.1		14.8		22.7
Green Ext Time (p_c), s	1.0	6.2		0.0		38.6

Intersection Summary	
HCM 6th Ctrl Delay	25.8
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	258	1066	0	0	1326	310	704	10	520	0	0	0
Future Volume (veh/h)	258	1066	0	0	1326	310	704	10	520	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	269	1110	0	0	1381	303	873	0	295			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	185	2324	0	0	1476	317	905	0	403			
Arrive On Green	0.10	0.65	0.00	0.00	0.51	0.51	0.25	0.00	0.25			
Sat Flow, veh/h	1781	3647	0	0	2998	624	3563	0	1585			
Grp Volume(v), veh/h	269	1110	0	0	833	851	873	0	295			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1752	1781	0	1585			
Q Serve(g_s), s	10.4	15.7	0.0	0.0	43.5	46.4	24.2	0.0	17.1			
Cycle Q Clear(g_c), s	10.4	15.7	0.0	0.0	43.5	46.4	24.2	0.0	17.1			
Prop In Lane	1.00		0.00	0.00		0.36	1.00		1.00			
Lane Grp Cap(c), veh/h	185	2324	0	0	903	890	905	0	403			
V/C Ratio(X)	1.45	0.48	0.00	0.00	0.92	0.96	0.96	0.00	0.73			
Avail Cap(c_a), veh/h	185	2324	0	0	903	890	905	0	403			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	44.8	8.7	0.0	0.0	22.8	23.5	36.9	0.0	34.2			
Incr Delay (d2), s/veh	230.9	0.7	0.0	0.0	16.3	21.1	21.7	0.0	6.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	16.3	5.3	0.0	0.0	20.3	22.3	13.0	0.0	7.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	275.7	9.4	0.0	0.0	39.1	44.7	58.6	0.0	40.9			
LnGrp LOS	F	A	A	A	D	D	E	A	D			
Approach Vol, veh/h		1379			1684			1168				
Approach Delay, s/veh		61.4			41.9			54.1				
Approach LOS		E			D			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		70.0			14.6	55.4		30.0				
Change Period (Y+Rc), s		4.6			* 4.2	4.6		4.6				
Max Green Setting (Gmax), s		65.4			* 10	50.8		25.4				
Max Q Clear Time (g_c+I1), s		17.7			12.4	48.4		26.2				
Green Ext Time (p_c), s		20.2			0.0	2.3		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	51.6
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	31	1786	1811	65	0	70
Future Vol, veh/h	31	1786	1811	65	0	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	65	-	-	-	-	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	34	1941	1968	71	0	76

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2039	0	-	0	-	1020
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	3.92
Pot Cap-1 Maneuver	119	-	-	-	0	201
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	119	-	-	-	-	201
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	33.4
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	119	-	-	-	201
HCM Lane V/C Ratio	0.283	-	-	-	0.379
HCM Control Delay (s)	46.8	-	-	-	33.4
HCM Lane LOS	E	-	-	-	D
HCM 95th %tile Q(veh)	1.1	-	-	-	1.7

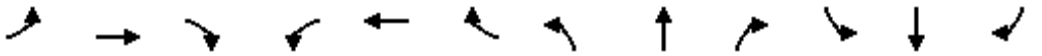
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	503	8	0	427
Future Vol, veh/h	0	3	503	8	0	427
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	0	3	547	9	0	464

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	278	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.93	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.319	-	-	-	-
Pot Cap-1 Maneuver	0	720	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	720	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	0
HCM LOS	B		

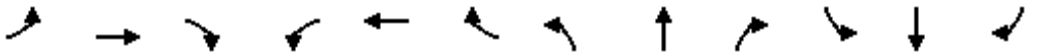
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	720	-
HCM Lane V/C Ratio	-	-	0.005	-
HCM Control Delay (s)	-	-	10	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	470	816	150	138	1160	193	160	980	54	181	1230	570
Future Volume (veh/h)	470	816	150	138	1160	193	160	980	54	181	1230	570
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	560	971	73	164	1381	105	190	1167	16	215	1464	639
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	438	1208	534	186	1130	494	131	1291	564	230	1267	752
Arrive On Green	0.13	0.34	0.34	0.10	0.32	0.32	0.07	0.36	0.36	0.07	0.36	0.36
Sat Flow, veh/h	3456	3554	1571	1781	3554	1552	1781	3554	1554	3456	3554	1545
Grp Volume(v), veh/h	560	971	73	164	1381	105	190	1167	16	215	1464	639
Grp Sat Flow(s),veh/h/ln	1728	1777	1571	1781	1777	1552	1781	1777	1554	1728	1777	1545
Q Serve(g_s), s	19.0	37.2	4.8	13.6	47.7	7.4	11.0	46.7	1.0	9.3	53.5	53.5
Cycle Q Clear(g_c), s	19.0	37.2	4.8	13.6	47.7	7.4	11.0	46.7	1.0	9.3	53.5	53.5
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	438	1208	534	186	1130	494	131	1291	564	230	1267	752
V/C Ratio(X)	1.28	0.80	0.14	0.88	1.22	0.21	1.45	0.90	0.03	0.93	1.16	0.85
Avail Cap(c_a), veh/h	438	1208	534	214	1130	494	131	1291	564	230	1267	752
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	65.5	44.9	34.3	66.2	51.1	37.4	69.5	45.3	30.7	69.7	48.2	34.1
Incr Delay (d2), s/veh	142.3	4.0	0.1	29.2	108.0	0.2	241.8	10.5	0.1	44.2	79.1	11.6
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	16.9	16.8	1.9	7.7	37.7	2.9	13.7	21.8	0.4	5.5	37.0	22.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	207.8	49.0	34.4	95.4	159.2	37.6	311.3	55.8	30.8	113.9	127.4	45.7
LnGrp LOS	F	D	C	F	F	D	F	E	C	F	F	D
Approach Vol, veh/h		1604			1650			1373			2318	
Approach Delay, s/veh		103.8			145.1			90.9			103.6	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	59.0	19.7	56.3	14.0	60.0	23.0	53.0
Change Period (Y+Rc), s	4.0	5.5	4.0	5.3	4.0	5.5	4.0	5.3
Max Green Setting (Gmax), s	11.0	53.5	18.0	48.7	10.0	54.5	19.0	47.7
Max Q Clear Time (g_c+I1), s	13.0	55.5	15.6	39.2	11.3	48.7	21.0	49.7
Green Ext Time (p_c), s	0.0	0.0	0.1	4.5	0.0	3.5	0.0	0.0

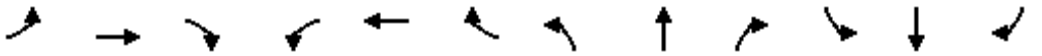
Intersection Summary	
HCM 6th Ctrl Delay	111.0
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	470	816	150	138	1160	193	160	980	54	181	1230	570
Future Volume (veh/h)	470	816	150	138	1160	193	160	980	54	181	1230	570
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	560	971	73	164	1381	105	190	1167	16	215	1464	639
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	604	2052	632	211	1471	446	207	1694	514	276	1796	820
Arrive On Green	0.17	0.40	0.40	0.06	0.29	0.29	0.06	0.33	0.33	0.08	0.35	0.35
Sat Flow, veh/h	3456	5106	1573	3456	5106	1549	3456	5106	1551	3456	5106	1544
Grp Volume(v), veh/h	560	971	73	164	1381	105	190	1167	16	215	1464	639
Grp Sat Flow(s),veh/h/ln	1728	1702	1573	1728	1702	1549	1728	1702	1551	1728	1702	1544
Q Serve(g_s), s	23.9	21.1	4.4	7.0	39.6	7.8	8.2	29.7	1.0	9.2	39.1	50.1
Cycle Q Clear(g_c), s	23.9	21.1	4.4	7.0	39.6	7.8	8.2	29.7	1.0	9.2	39.1	50.1
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	604	2053	632	211	1471	446	207	1694	514	276	1796	820
V/C Ratio(X)	0.93	0.47	0.12	0.78	0.94	0.24	0.92	0.69	0.03	0.78	0.82	0.78
Avail Cap(c_a), veh/h	622	2053	632	276	1488	451	207	1694	514	276	1796	820
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	61.0	33.1	28.1	69.4	52.1	40.8	70.1	43.4	33.8	67.7	44.2	28.7
Incr Delay (d2), s/veh	19.9	0.2	0.1	9.9	11.7	0.3	40.0	2.3	0.1	19.1	4.2	7.2
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	12.0	8.7	1.7	3.4	18.2	3.0	4.7	12.6	0.4	4.7	16.9	19.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.9	33.3	28.2	79.4	63.8	41.0	110.2	45.7	34.0	86.8	48.4	35.9
LnGrp LOS	F	C	C	E	E	D	F	D	C	F	D	D
Approach Vol, veh/h		1604			1650			1373			2318	
Approach Delay, s/veh		49.7			63.9			54.5			48.5	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	58.3	13.1	65.6	16.0	55.3	30.2	48.5
Change Period (Y+Rc), s	4.0	5.5	4.0	5.3	4.0	5.5	4.0	5.3
Max Green Setting (Gmax), s	9.0	51.5	12.0	58.7	12.0	48.5	27.0	43.7
Max Q Clear Time (g_c+I1), s	10.2	52.1	9.0	23.1	11.2	31.7	25.9	41.6
Green Ext Time (p_c), s	0.0	0.0	0.1	7.9	0.1	7.1	0.3	1.6

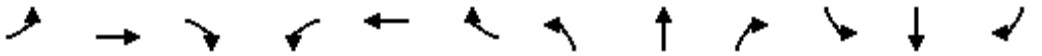
Intersection Summary	
HCM 6th Ctrl Delay	53.6
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	510	1107	120	256	1193	173	270	1110	130	244	1050	601
Future Volume (veh/h)	510	1107	120	256	1193	173	270	1110	130	244	1050	601
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	607	1318	64	305	1420	96	321	1321	73	290	1250	675
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	438	1177	520	202	1130	494	214	1339	586	184	1102	678
Arrive On Green	0.13	0.33	0.33	0.11	0.32	0.32	0.12	0.38	0.38	0.05	0.31	0.31
Sat Flow, veh/h	3456	3554	1571	1781	3554	1552	1781	3554	1555	3456	3554	1539
Grp Volume(v), veh/h	607	1318	64	305	1420	96	321	1321	73	290	1250	675
Grp Sat Flow(s),veh/h/ln	1728	1777	1571	1781	1777	1552	1781	1777	1555	1728	1777	1539
Q Serve(g_s), s	19.0	49.7	4.3	17.0	47.7	6.7	18.0	55.3	4.6	8.0	46.5	46.5
Cycle Q Clear(g_c), s	19.0	49.7	4.3	17.0	47.7	6.7	18.0	55.3	4.6	8.0	46.5	46.5
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	438	1177	520	202	1130	494	214	1339	586	184	1102	678
V/C Ratio(X)	1.39	1.12	0.12	1.51	1.26	0.19	1.50	0.99	0.12	1.57	1.13	1.00
Avail Cap(c_a), veh/h	438	1177	520	202	1130	494	214	1339	586	184	1102	678
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	65.5	50.2	35.0	66.5	51.2	37.2	66.0	46.4	30.6	71.0	51.7	42.3
Incr Delay (d2), s/veh	187.7	65.5	0.1	253.7	122.8	0.2	248.7	21.7	0.4	282.5	72.2	33.6
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	19.7	32.3	1.7	21.9	40.1	2.6	22.8	27.6	1.8	10.7	31.3	30.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	253.2	115.6	35.1	320.2	173.9	37.4	314.7	68.0	31.0	353.5	123.9	75.9
LnGrp LOS	F	F	D	F	F	D	F	E	C	F	F	E
Approach Vol, veh/h		1989			1821			1715			2215	
Approach Delay, s/veh		155.0			191.2			112.6			139.3	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	52.0	21.0	55.0	12.0	62.0	23.0	53.0
Change Period (Y+Rc), s	4.0	5.5	4.0	5.3	4.0	5.5	4.0	5.3
Max Green Setting (Gmax), s	18.0	46.5	17.0	49.7	8.0	56.5	19.0	47.7
Max Q Clear Time (g_c+I1), s	20.0	48.5	19.0	51.7	10.0	57.3	21.0	49.7
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 6th Ctrl Delay	149.7
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	510	1107	120	256	1193	173	270	1110	130	244	1050	601
Future Volume (veh/h)	510	1107	120	256	1193	173	270	1110	130	244	1050	601
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	607	1318	64	305	1420	96	321	1321	73	290	1250	675
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	660	1931	595	357	1483	450	346	1566	475	299	1498	753
Arrive On Green	0.19	0.38	0.38	0.10	0.29	0.29	0.10	0.31	0.31	0.09	0.29	0.29
Sat Flow, veh/h	3456	5106	1572	3456	5106	1549	3456	5106	1548	3456	5106	1536
Grp Volume(v), veh/h	607	1318	64	305	1420	96	321	1321	73	290	1250	675
Grp Sat Flow(s),veh/h/ln	1728	1702	1572	1728	1702	1549	1728	1702	1548	1728	1702	1536
Q Serve(g_s), s	25.9	32.5	4.0	13.0	41.0	7.0	13.8	36.3	5.1	12.6	34.4	44.0
Cycle Q Clear(g_c), s	25.9	32.5	4.0	13.0	41.0	7.0	13.8	36.3	5.1	12.6	34.4	44.0
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	660	1931	595	357	1483	450	346	1566	475	299	1498	753
V/C Ratio(X)	0.92	0.68	0.11	0.85	0.96	0.21	0.93	0.84	0.15	0.97	0.83	0.90
Avail Cap(c_a), veh/h	714	1931	595	461	1488	451	346	1566	475	299	1498	753
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	59.6	39.1	30.2	66.1	52.3	40.3	67.0	48.6	37.8	68.3	49.6	35.5
Incr Delay (d2), s/veh	16.5	1.0	0.1	11.8	14.5	0.2	30.8	5.7	0.7	44.5	5.6	15.5
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	12.7	13.5	1.5	6.3	19.2	2.7	7.5	15.9	2.0	7.3	15.2	25.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.0	40.1	30.3	78.0	66.8	40.5	97.8	54.4	38.5	112.8	55.2	51.0
LnGrp LOS	E	D	C	E	E	D	F	D	D	F	E	D
Approach Vol, veh/h		1989			1821			1715			2215	
Approach Delay, s/veh		50.7			67.2			61.8			61.5	
Approach LOS		D			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	49.5	19.5	62.0	17.0	51.5	32.6	48.9
Change Period (Y+Rc), s	4.0	5.5	4.0	5.3	4.0	5.5	4.0	5.3
Max Green Setting (Gmax), s	15.0	41.5	20.0	54.7	13.0	43.5	31.0	43.7
Max Q Clear Time (g_c+I1), s	15.8	46.0	15.0	34.5	14.6	38.3	27.9	43.0
Green Ext Time (p_c), s	0.0	0.0	0.5	9.4	0.0	3.5	0.8	0.6

Intersection Summary	
HCM 6th Ctrl Delay	60.2
HCM 6th LOS	E

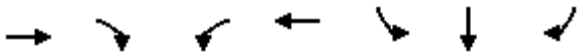
Appendix C: Queuing Results

Queuing results were calculated using the Synchro 10.0 software program. Results are presented in this appendix for the four ramp terminal intersections in the study area, at the SR-57 ramps at Nutwood Avenue and Chapman Avenue. Queue results are presented to determine if pocket lengths are sufficiently long to accommodate anticipated vehicular queuing demand. Results are presented in Table C-1 and the remainder of the appendix includes the Synchro queue output worksheets.

TABLE C-1
INTERSECTION QUEUE LENGTHS

						Existing Year (2021)		Opening Year (2024)		Opening Year Plus Project		Future Year (2045)		Future Year plus Project	
ID	Ramp	Control	Direction	Movement	Storage Length (ft)	AM Peak Hour Queue [a] Lane (ft)	PM Peak Hour Queue [a] Lane (ft)	AM Peak Hour Queue [a] Lane (ft)	PM Peak Hour Queue [a] Lane (ft)	AM Peak Hour Queue [a] Lane (ft)	PM Peak Hour Queue [a] Lane (ft)	AM Peak Hour Queue [a] Lane (ft)	PM Peak Hour Queue [a] Lane (ft)	AM Peak Hour Queue [a] Lane (ft)	PM Peak Hour Queue [a] Lane (ft)
2	Nutwood Ave & SR-57 SB Ramp	Signal	SB	Left	370	80	113	83	115	83	115	52	141	96	83
			SB	Right	370	349	213	368	231	370	240	282	392	500	226
			WB	Left	110	136	100	135	101	135	101	140	118	131	118
3	SR-57 NB Ramp & Nutwood Ave	Signal	NB	Right	160	35	69	37	83	38	86	49	171	50	173
			EB	Left	200	96	167	103	171	112	174	129	170	139	171
6	Chapman Ave & SR-57 SB	Signal	SB	Right	1,200	121	124	129	140	135	185	206	258	218	285
			WB	Left	280	282	262	284	259	283	252	286	242	282	233
7	SR-57 NB & Chapman Ave	Signal	NB	Right	500	62	175	64	193	64	204	70	356	70	366
			EB	Left	240	140	291	142	299	158	313	184	291	199	298

Notes:
[a]: 95th percentile queue.

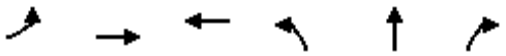


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	389	170	357	1872	85	430	395
v/c Ratio	0.28	0.25	0.73	0.88	0.17	0.90	0.80
Control Delay	19.3	4.3	38.9	21.5	26.4	56.4	39.5
Queue Delay	0.0	0.0	0.0	32.6	0.0	0.0	0.0
Total Delay	19.3	4.3	38.9	54.1	26.4	56.4	39.5
Queue Length 50th (ft)	83	0	115	426	41	274	197
Queue Length 95th (ft)	126	46	m136	m543	80	#468	#349
Internal Link Dist (ft)	214			101		816	
Turn Bay Length (ft)			110		370		370
Base Capacity (vph)	1381	681	576	2137	521	498	515
Starvation Cap Reductn	0	0	0	382	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.25	0.62	1.07	0.16	0.86	0.77

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	141	283	1077	646	944	93
v/c Ratio	0.70	0.17	0.85	0.93	0.93dl	0.14
Control Delay	82.7	12.3	37.1	49.7	26.8	5.3
Queue Delay	0.0	0.0	0.0	47.1	1.2	0.0
Total Delay	82.7	12.3	37.1	96.8	28.0	5.3
Queue Length 50th (ft)	50	34	331	412	273	4
Queue Length 95th (ft)	m#96	m47	#429	#663	355	35
Internal Link Dist (ft)		169	405		188	
Turn Bay Length (ft)	200					160
Base Capacity (vph)	200	1664	1269	708	1360	665
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	148	214	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.17	0.85	1.15	0.82	0.14

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

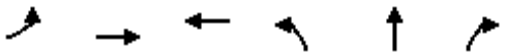
m Volume for 95th percentile queue is metered by upstream signal.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Lane Group	EBT	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	883	418	1594	88	168
v/c Ratio	0.39	0.82	0.57	0.42	0.67
Control Delay	29.6	36.8	7.6	45.5	37.1
Queue Delay	0.0	2.3	2.5	0.0	0.0
Total Delay	29.6	39.1	10.1	45.5	37.1
Queue Length 50th (ft)	180	237	250	53	60
Queue Length 95th (ft)	231	m282	416	95	121
Internal Link Dist (ft)	234		137	817	
Turn Bay Length (ft)					
Base Capacity (vph)	2326	630	2832	256	289
Starvation Cap Reductn	0	108	1070	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.80	0.90	0.34	0.58

Intersection Summary

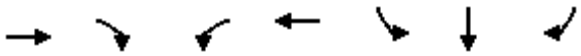
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	120	498	1490	357	354	251
v/c Ratio	0.69	0.21	0.82	0.86	0.89	0.45
Control Delay	56.5	10.3	25.2	57.0	60.8	6.7
Queue Delay	0.0	0.0	1.9	0.0	0.0	0.0
Total Delay	56.5	10.3	27.1	57.0	60.8	6.7
Queue Length 50th (ft)	82	140	407	227	235	0
Queue Length 95th (ft)	#138	10	511	#387	#412	62
Internal Link Dist (ft)		58	142		820	
Turn Bay Length (ft)						500
Base Capacity (vph)	184	2347	1820	430	414	572
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	190	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.21	0.91	0.83	0.86	0.44

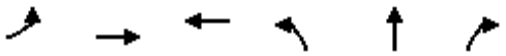
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1099	484	183	895	130	384	348
v/c Ratio	0.68	0.55	0.61	0.41	0.28	0.83	0.67
Control Delay	22.1	7.3	46.2	12.6	28.8	45.6	24.6
Queue Delay	0.4	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	22.5	7.3	46.2	12.8	28.8	45.6	24.6
Queue Length 50th (ft)	286	42	64	178	66	221	116
Queue Length 95th (ft)	386	146	100	213	113	336	213
Internal Link Dist (ft)	214			101		816	
Turn Bay Length (ft)			110		370		370
Base Capacity (vph)	1617	878	327	2209	537	533	578
Starvation Cap Reductn	155	15	0	479	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.56	0.56	0.52	0.24	0.72	0.60

Intersection Summary



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	341	650	649	311	636	254
v/c Ratio	0.66	0.30	0.45	0.70	0.73	0.45
Control Delay	61.9	7.0	23.5	40.2	37.1	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.9	7.0	23.5	40.2	37.1	7.2
Queue Length 50th (ft)	120	55	152	194	211	10
Queue Length 95th (ft)	167	85	242	270	253	69
Internal Link Dist (ft)		169	405		188	
Turn Bay Length (ft)	200					160
Base Capacity (vph)	635	2200	1432	563	1094	644
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.30	0.45	0.55	0.58	0.39

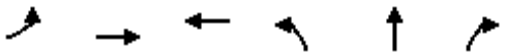
Intersection Summary

Lane Group	EBT	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	1460	354	1331	162	195
v/c Ratio	0.61	0.79	0.48	0.72	0.66
Control Delay	19.4	41.0	8.2	60.4	29.4
Queue Delay	0.0	0.5	1.4	0.0	0.0
Total Delay	19.4	41.5	9.7	60.4	29.4
Queue Length 50th (ft)	228	221	227	98	48
Queue Length 95th (ft)	316	m262	271	#186	124
Internal Link Dist (ft)	234		137	817	
Turn Bay Length (ft)					
Base Capacity (vph)	2399	626	2776	244	313
Starvation Cap Reductn	0	68	1172	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.61	0.63	0.83	0.66	0.62

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



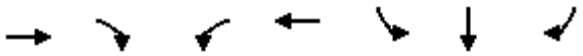
Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	209	892	1356	348	341	318
v/c Ratio	0.86	0.38	0.81	0.85	0.85	0.63
Control Delay	70.2	4.4	25.6	55.8	54.2	19.9
Queue Delay	0.0	0.5	0.1	0.1	0.2	0.0
Total Delay	70.2	4.8	25.7	56.0	54.4	19.9
Queue Length 50th (ft)	~145	133	352	216	206	74
Queue Length 95th (ft)	m#291	7	433	#372	#373	175
Internal Link Dist (ft)		58	142		820	
Turn Bay Length (ft)						500
Base Capacity (vph)	242	2358	1751	431	418	521
Starvation Cap Reductn	0	919	0	0	0	0
Spillback Cap Reductn	0	0	27	2	2	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.62	0.79	0.81	0.82	0.61

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

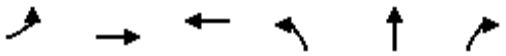


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	401	176	368	1928	88	442	407
v/c Ratio	0.29	0.26	0.74	0.91	0.17	0.92	0.82
Control Delay	19.7	4.3	38.5	23.0	26.5	59.3	40.9
Queue Delay	0.0	0.0	0.0	45.8	0.0	0.0	0.0
Total Delay	19.7	4.3	38.5	68.9	26.5	59.3	40.9
Queue Length 50th (ft)	87	0	118	446	43	286	208
Queue Length 95th (ft)	130	46	m135	m#606	83	#489	#368
Internal Link Dist (ft)	214			101		816	
Turn Bay Length (ft)			110		370		370
Base Capacity (vph)	1363	678	576	2126	521	497	515
Starvation Cap Reductn	0	0	0	382	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.26	0.64	1.11	0.17	0.89	0.79

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	146	292	1109	665	974	96
v/c Ratio	0.73	0.18	0.89	0.95	0.95dl	0.15
Control Delay	84.0	12.4	40.1	52.7	27.1	5.6
Queue Delay	0.0	0.0	0.0	45.2	2.0	0.0
Total Delay	84.0	12.4	40.1	97.9	29.1	5.6
Queue Length 50th (ft)	52	35	346	432	287	5
Queue Length 95th (ft)	m#103	m48	#471	#694	371	37
Internal Link Dist (ft)		169	405		188	
Turn Bay Length (ft)	200					160
Base Capacity (vph)	201	1648	1253	708	1360	665
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	164	237	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.18	0.89	1.22	0.87	0.14

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

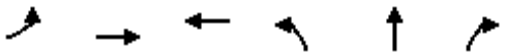
m Volume for 95th percentile queue is metered by upstream signal.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Lane Group	EBT	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	909	430	1642	90	173
v/c Ratio	0.41	0.83	0.59	0.41	0.68
Control Delay	30.1	36.9	8.5	44.4	39.0
Queue Delay	0.0	2.7	3.4	0.0	0.0
Total Delay	30.1	39.7	11.9	44.4	39.0
Queue Length 50th (ft)	186	246	298	54	66
Queue Length 95th (ft)	238	m284	474	96	129
Internal Link Dist (ft)	234		137	817	
Turn Bay Length (ft)					
Base Capacity (vph)	2281	628	2820	261	288
Starvation Cap Reductn	0	106	1054	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.40	0.82	0.93	0.34	0.60

Intersection Summary

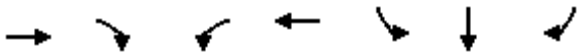
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	123	513	1534	368	364	259
v/c Ratio	0.70	0.22	0.85	0.89	0.91	0.46
Control Delay	57.8	9.8	26.3	60.8	65.0	6.8
Queue Delay	0.0	0.0	4.0	0.0	0.0	0.0
Total Delay	57.8	9.8	30.3	60.8	65.0	6.8
Queue Length 50th (ft)	84	145	428	236	243	0
Queue Length 95th (ft)	#142	10	537	#404	#428	64
Internal Link Dist (ft)		58	142		820	
Turn Bay Length (ft)						500
Base Capacity (vph)	184	2340	1815	427	411	575
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	208	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.22	0.95	0.86	0.89	0.45

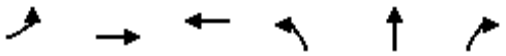
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1132	498	188	922	133	395	359
v/c Ratio	0.71	0.57	0.62	0.42	0.28	0.84	0.69
Control Delay	23.2	8.3	46.4	13.0	28.5	46.5	26.6
Queue Delay	0.4	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	23.6	8.3	46.4	13.2	28.5	46.5	26.6
Queue Length 50th (ft)	306	54	66	183	67	228	129
Queue Length 95th (ft)	403	168	101	223	115	350	231
Internal Link Dist (ft)	214			101		816	
Turn Bay Length (ft)			110		370		370
Base Capacity (vph)	1599	867	328	2190	537	532	572
Starvation Cap Reductn	139	9	0	447	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.58	0.57	0.53	0.25	0.74	0.63

Intersection Summary



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	351	670	667	320	655	262
v/c Ratio	0.67	0.31	0.47	0.70	0.74	0.47
Control Delay	61.8	7.3	24.1	40.3	37.2	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.8	7.3	24.1	40.3	37.2	8.5
Queue Length 50th (ft)	124	56	160	198	217	20
Queue Length 95th (ft)	m171	93	250	279	262	83
Internal Link Dist (ft)		169	405		188	
Turn Bay Length (ft)	200					160
Base Capacity (vph)	635	2185	1412	563	1094	637
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.31	0.47	0.57	0.60	0.41

Intersection Summary

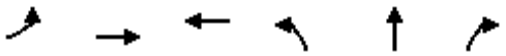
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	1504	365	1371	168	201
v/c Ratio	0.63	0.80	0.49	0.75	0.70
Control Delay	31.6	40.0	8.2	63.8	33.9
Queue Delay	0.0	0.7	1.9	0.0	0.0
Total Delay	31.6	40.7	10.1	63.8	33.9
Queue Length 50th (ft)	347	226	218	104	58
Queue Length 95th (ft)	404	m259	285	#195	#140
Internal Link Dist (ft)	234		137	817	
Turn Bay Length (ft)					
Base Capacity (vph)	2378	626	2771	239	302
Starvation Cap Reductn	0	74	1183	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.63	0.66	0.86	0.70	0.67

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



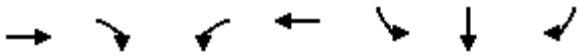
Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	216	919	1397	358	352	328
v/c Ratio	0.89	0.39	0.84	0.86	0.87	0.66
Control Delay	75.3	4.6	26.9	57.7	56.7	22.4
Queue Delay	0.0	0.5	0.1	0.2	0.2	0.0
Total Delay	75.3	5.1	27.1	57.8	56.8	22.4
Queue Length 50th (ft)	~155	86	365	226	217	89
Queue Length 95th (ft)	m#299	7	456	#389	#392	193
Internal Link Dist (ft)		58	142		820	
Turn Bay Length (ft)						500
Base Capacity (vph)	242	2352	1751	432	419	514
Starvation Cap Reductn	0	911	0	0	0	0
Spillback Cap Reductn	0	0	32	2	2	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.64	0.81	0.83	0.84	0.64

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

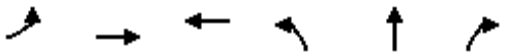


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	415	181	368	1928	88	449	408
v/c Ratio	0.31	0.27	0.74	0.91	0.17	0.93	0.81
Control Delay	20.0	4.3	38.4	23.1	26.4	60.7	40.8
Queue Delay	0.0	0.0	0.0	45.8	0.0	0.0	0.0
Total Delay	20.0	4.3	38.4	68.9	26.4	60.7	40.8
Queue Length 50th (ft)	91	0	118	446	43	293	208
Queue Length 95th (ft)	135	47	m135	m#606	83	#498	#370
Internal Link Dist (ft)	214			101		816	
Turn Bay Length (ft)			110		370		370
Base Capacity (vph)	1359	679	576	2121	521	498	515
Starvation Cap Reductn	0	0	0	382	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.27	0.64	1.11	0.17	0.90	0.79

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	157	298	1109	665	984	96
v/c Ratio	0.77	0.18	0.89	0.95	0.95dl	0.15
Control Delay	87.5	12.1	40.3	52.7	27.3	5.7
Queue Delay	0.0	0.0	0.0	45.2	2.2	0.0
Total Delay	87.5	12.1	40.3	97.9	29.5	5.7
Queue Length 50th (ft)	56	35	346	432	291	5
Queue Length 95th (ft)	m#112	m48	#471	#694	377	38
Internal Link Dist (ft)		169	405		188	
Turn Bay Length (ft)	200					160
Base Capacity (vph)	205	1648	1249	708	1360	665
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	165	238	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.18	0.89	1.22	0.88	0.14

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

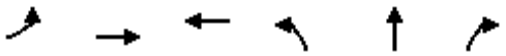
m Volume for 95th percentile queue is metered by upstream signal.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Lane Group	EBT	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	953	430	1660	90	179
v/c Ratio	0.43	0.84	0.60	0.40	0.69
Control Delay	29.7	37.1	9.3	43.7	40.2
Queue Delay	0.0	2.7	4.4	0.0	0.0
Total Delay	29.7	39.8	13.7	43.7	40.2
Queue Length 50th (ft)	197	251	345	53	70
Queue Length 95th (ft)	184	m283	m480	96	135
Internal Link Dist (ft)	234		137	817	
Turn Bay Length (ft)					
Base Capacity (vph)	2265	626	2811	262	289
Starvation Cap Reductn	0	104	1061	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.42	0.82	0.95	0.34	0.62

Intersection Summary

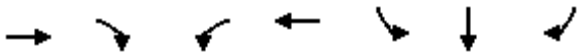
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	132	520	1540	374	370	259
v/c Ratio	0.75	0.22	0.85	0.90	0.93	0.46
Control Delay	59.8	9.5	26.8	62.3	66.9	6.7
Queue Delay	0.0	0.0	6.1	0.3	0.4	0.0
Total Delay	59.8	9.5	32.9	62.6	67.3	6.7
Queue Length 50th (ft)	90	147	431	241	249	0
Queue Length 95th (ft)	#158	10	541	#414	#438	64
Internal Link Dist (ft)		58	142		820	
Turn Bay Length (ft)						500
Base Capacity (vph)	184	2335	1806	426	410	575
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	226	2	2	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.22	0.97	0.88	0.91	0.45

Intersection Summary

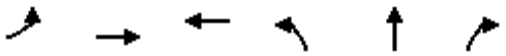
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1142	513	188	922	133	410	367
v/c Ratio	0.72	0.61	0.62	0.43	0.27	0.85	0.69
Control Delay	24.0	10.1	47.0	13.4	28.0	47.5	26.6
Queue Delay	0.5	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	24.5	10.1	47.0	13.6	28.0	47.5	26.6
Queue Length 50th (ft)	318	79	66	183	65	238	131
Queue Length 95th (ft)	409	204	101	223	115	#397	240
Internal Link Dist (ft)	214			101		816	
Turn Bay Length (ft)			110		370		370
Base Capacity (vph)	1578	847	326	2163	537	532	572
Starvation Cap Reductn	124	2	0	430	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.61	0.58	0.53	0.25	0.77	0.64

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	359	677	667	320	664	262
v/c Ratio	0.68	0.31	0.48	0.70	0.75	0.47
Control Delay	61.9	7.3	24.4	39.8	37.3	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.9	7.3	24.4	39.8	37.3	8.7
Queue Length 50th (ft)	126	56	161	198	220	23
Queue Length 95th (ft)	m174	95	250	279	266	86
Internal Link Dist (ft)		169	405		188	
Turn Bay Length (ft)	200					160
Base Capacity (vph)	635	2177	1398	563	1093	634
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.31	0.48	0.57	0.61	0.41

Intersection Summary

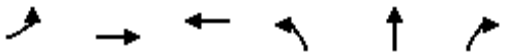
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	1530	365	1423	171	218
v/c Ratio	0.65	0.80	0.51	0.76	0.77
Control Delay	31.4	40.1	8.1	64.3	42.8
Queue Delay	0.0	0.7	2.3	0.0	0.0
Total Delay	31.4	40.8	10.4	64.3	42.8
Queue Length 50th (ft)	353	228	226	106	75
Queue Length 95th (ft)	410	m252	294	#201	#185
Internal Link Dist (ft)	234		137	817	
Turn Bay Length (ft)					
Base Capacity (vph)	2372	626	2768	239	294
Starvation Cap Reductn	0	75	1166	0	0
Spillback Cap Reductn	8	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.65	0.66	0.89	0.72	0.74

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



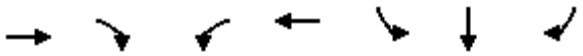
Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	224	925	1414	375	362	337
v/c Ratio	1.00	0.40	0.84	0.88	0.88	0.66
Control Delay	98.7	5.3	27.0	58.9	56.8	23.2
Queue Delay	0.0	0.6	0.2	0.2	0.2	0.0
Total Delay	98.7	5.9	27.2	59.2	57.1	23.2
Queue Length 50th (ft)	~166	82	371	241	229	97
Queue Length 95th (ft)	m#313	7	465	#414	#412	204
Internal Link Dist (ft)		58	142		820	
Turn Bay Length (ft)						500
Base Capacity (vph)	223	2335	1753	436	422	516
Starvation Cap Reductn	0	921	0	0	0	0
Spillback Cap Reductn	0	0	34	2	2	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.00	0.65	0.82	0.86	0.86	0.65

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



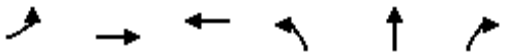
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	477	211	441	2323	106	533	490
v/c Ratio	0.37	0.31	0.82	1.11	0.20	1.08	0.95
Control Delay	21.7	4.4	34.9	74.2	26.7	99.2	59.6
Queue Delay	0.0	0.0	0.0	0.6	0.0	0.0	0.0
Total Delay	21.7	4.4	34.9	74.8	26.7	99.2	59.6
Queue Length 50th (ft)	111	0	140	~894	52	~418	282
Queue Length 95th (ft)	156	50	m131	m#832	96	#646	#500
Internal Link Dist (ft)	214			101		816	
Turn Bay Length (ft)			110		370		370
Base Capacity (vph)	1290	671	576	2088	521	492	515
Starvation Cap Reductn	0	0	0	378	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.31	0.77	1.36	0.20	1.08	0.95

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	178	356	1334	800	1169	120
v/c Ratio	0.95	0.22	1.07	1.13	1.13dl	0.18
Control Delay	114.7	12.6	78.7	104.0	33.1	6.8
Queue Delay	0.0	0.0	0.0	2.9	47.8	0.0
Total Delay	114.7	12.6	78.7	107.0	81.0	6.8
Queue Length 50th (ft)	63	43	~498	~653	379	13
Queue Length 95th (ft)	m#129	m58	#633	#904	486	49
Internal Link Dist (ft)		169	405		188	
Turn Bay Length (ft)	200					160
Base Capacity (vph)	188	1627	1246	708	1360	668
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	231	332	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.22	1.07	1.68	1.14	0.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

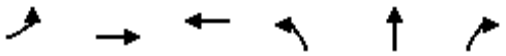
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Lane Group	EBT	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	1094	521	1979	115	208
v/c Ratio	0.54	0.90	0.72	0.50	0.79
Control Delay	31.4	30.5	10.6	47.8	51.4
Queue Delay	0.0	51.4	47.9	0.0	0.0
Total Delay	31.4	81.9	58.4	47.8	51.4
Queue Length 50th (ft)	232	308	497	67	88
Queue Length 95th (ft)	286	m286	m367	126	#206
Internal Link Dist (ft)	234		137	817	
Turn Bay Length (ft)					
Base Capacity (vph)	2073	626	2778	250	278
Starvation Cap Reductn	0	163	1139	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.53	1.13	1.21	0.46	0.75

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

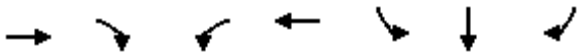


Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	146	615	1844	441	436	310
v/c Ratio	0.81	0.27	1.04	1.04	1.06	0.51
Control Delay	71.6	6.4	56.7	91.0	99.4	6.7
Queue Delay	0.0	0.4	26.2	1.6	1.9	0.0
Total Delay	71.6	6.7	82.9	92.6	101.2	6.7
Queue Length 50th (ft)	56	26	~670	~320	~337	0
Queue Length 95th (ft)	#184	10	#811	#518	#549	70
Internal Link Dist (ft)		58	142		820	
Turn Bay Length (ft)						500
Base Capacity (vph)	184	2314	1779	426	410	613
Starvation Cap Reductn	0	1090	0	0	0	0
Spillback Cap Reductn	0	0	358	2	2	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.50	1.30	1.04	1.07	0.51

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

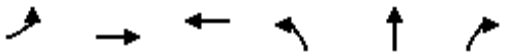


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1365	603	226	1108	165	474	437
v/c Ratio	0.91	0.76	0.72	0.53	0.32	0.92	0.83
Control Delay	35.5	18.8	47.7	15.6	28.0	55.6	40.7
Queue Delay	6.3	0.0	0.0	0.5	0.0	0.0	0.0
Total Delay	41.7	18.8	47.7	16.1	28.0	55.6	40.7
Queue Length 50th (ft)	430	183	78	221	83	294	218
Queue Length 95th (ft)	#597	361	m#118	294	141	#503	#392
Internal Link Dist (ft)	214			101		816	
Turn Bay Length (ft)			110		370		370
Base Capacity (vph)	1498	795	326	2088	537	532	539
Starvation Cap Reductn	108	1	0	496	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.76	0.69	0.70	0.31	0.89	0.81

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	422	811	800	386	793	310
v/c Ratio	0.74	0.40	0.65	0.75	0.79	0.55
Control Delay	62.4	9.9	30.5	39.7	36.8	16.8
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	62.4	10.2	30.5	39.7	36.8	16.8
Queue Length 50th (ft)	150	87	232	229	253	80
Queue Length 95th (ft)	m170	m112	309	347	331	171
Internal Link Dist (ft)		169	405		188	
Turn Bay Length (ft)	200					160
Base Capacity (vph)	635	2047	1234	563	1094	595
Starvation Cap Reductn	0	510	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.53	0.65	0.69	0.72	0.52

Intersection Summary

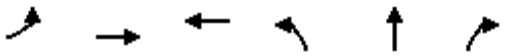
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	1803	438	1646	198	240
v/c Ratio	0.82	0.85	0.60	0.85	0.91
Control Delay	35.0	34.9	8.6	73.3	69.8
Queue Delay	0.0	3.8	28.4	0.0	0.0
Total Delay	35.0	38.6	37.0	73.3	69.8
Queue Length 50th (ft)	430	267	306	125	113
Queue Length 95th (ft)	#513	m242	m316	#245	#258
Internal Link Dist (ft)	234		137	817	
Turn Bay Length (ft)					
Base Capacity (vph)	2193	626	2749	239	267
Starvation Cap Reductn	0	114	1183	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.82	0.86	1.05	0.83	0.90

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



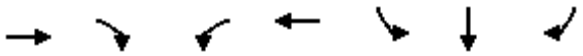
Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	260	1104	1688	433	421	396
v/c Ratio	1.41	0.48	0.96	1.02	1.02	0.84
Control Delay	239.5	2.9	38.5	86.2	84.8	42.7
Queue Delay	0.0	1.2	17.4	4.3	5.2	0.0
Total Delay	239.5	4.1	55.9	90.5	90.0	42.7
Queue Length 50th (ft)	~216	7	512	~297	~289	183
Queue Length 95th (ft)	m#291	8	#702	#506	#509	#356
Internal Link Dist (ft)		58	142		820	
Turn Bay Length (ft)						500
Base Capacity (vph)	184	2314	1751	426	414	469
Starvation Cap Reductn	0	920	0	0	0	0
Spillback Cap Reductn	0	0	124	6	7	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.41	0.79	1.04	1.03	1.03	0.84

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



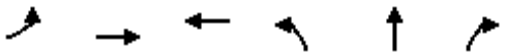
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	490	217	441	2323	106	540	490
v/c Ratio	0.38	0.32	0.82	1.11	0.20	1.10	0.95
Control Delay	21.9	4.3	34.8	74.2	26.7	103.0	59.6
Queue Delay	0.0	0.0	0.0	0.6	0.0	0.0	0.0
Total Delay	21.9	4.3	34.8	74.8	26.7	103.0	59.6
Queue Length 50th (ft)	115	0	139	~894	52	~428	282
Queue Length 95th (ft)	161	50	m131	m#832	96	#656	#500
Internal Link Dist (ft)	214			101		816	
Turn Bay Length (ft)			110		370		370
Base Capacity (vph)	1290	675	576	2088	521	493	515
Starvation Cap Reductn	0	0	0	378	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.32	0.77	1.36	0.20	1.10	0.95

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	189	361	1334	800	1179	120
v/c Ratio	1.01	0.22	1.07	1.13	1.13dl	0.18
Control Delay	128.6	12.4	78.7	104.0	33.7	6.9
Queue Delay	0.0	0.0	0.0	2.9	47.7	0.0
Total Delay	128.6	12.4	78.7	106.9	81.4	6.9
Queue Length 50th (ft)	~67	43	~498	~653	384	13
Queue Length 95th (ft)	m#139	m57	#633	#904	#498	50
Internal Link Dist (ft)		169	405		188	
Turn Bay Length (ft)	200					160
Base Capacity (vph)	188	1627	1246	708	1360	667
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	229	331	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.01	0.22	1.07	1.67	1.15	0.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

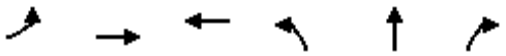
m Volume for 95th percentile queue is metered by upstream signal.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Lane Group	EBT	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	1137	521	1998	115	215
v/c Ratio	0.56	0.90	0.73	0.49	0.81
Control Delay	31.0	30.7	11.1	47.1	52.6
Queue Delay	0.0	51.3	47.9	0.0	0.0
Total Delay	31.0	82.0	58.9	47.1	52.6
Queue Length 50th (ft)	245	307	547	66	92
Queue Length 95th (ft)	297	m282	m364	126	#218
Internal Link Dist (ft)	234		137	817	
Turn Bay Length (ft)					
Base Capacity (vph)	2060	626	2769	252	280
Starvation Cap Reductn	0	161	1122	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.55	1.12	1.21	0.46	0.77

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

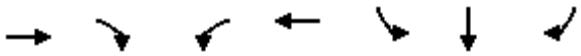


Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	155	622	1851	448	442	310
v/c Ratio	0.85	0.27	1.04	1.05	1.08	0.51
Control Delay	77.7	5.5	58.9	95.4	103.7	6.7
Queue Delay	0.0	0.3	23.7	1.7	2.0	0.0
Total Delay	77.7	5.9	82.6	97.2	105.7	6.7
Queue Length 50th (ft)	64	10	~675	~329	~346	0
Queue Length 95th (ft)	#199	10	#816	#530	#560	70
Internal Link Dist (ft)		58	142		820	
Turn Bay Length (ft)						500
Base Capacity (vph)	184	2314	1774	426	410	613
Starvation Cap Reductn	0	1066	0	0	0	0
Spillback Cap Reductn	0	0	367	2	2	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.50	1.32	1.06	1.08	0.51

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

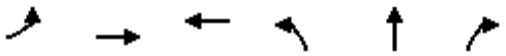


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1383	610	226	1108	165	486	446
v/c Ratio	0.93	0.78	0.72	0.53	0.31	0.93	0.84
Control Delay	37.5	21.0	47.6	15.6	27.9	58.5	41.8
Queue Delay	9.1	0.0	0.0	0.5	0.0	0.0	0.0
Total Delay	46.6	21.0	47.6	16.1	27.9	58.5	41.8
Queue Length 50th (ft)	439	205	78	221	83	306	226
Queue Length 95th (ft)	#610	392	m#118	294	141	#525	#406
Internal Link Dist (ft)	214			101		816	
Turn Bay Length (ft)			110		370		370
Base Capacity (vph)	1490	782	326	2080	537	532	539
Starvation Cap Reductn	107	2	0	499	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.00	0.78	0.69	0.70	0.31	0.91	0.83

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	430	818	800	393	794	310
v/c Ratio	0.75	0.40	0.65	0.76	0.79	0.56
Control Delay	62.4	10.0	30.6	40.5	36.8	17.1
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	62.4	10.2	30.6	40.5	36.8	17.1
Queue Length 50th (ft)	153	90	233	236	254	81
Queue Length 95th (ft)	m171	m111	309	356	331	173
Internal Link Dist (ft)		169	405		188	
Turn Bay Length (ft)	200					160
Base Capacity (vph)	635	2047	1231	563	1096	593
Starvation Cap Reductn	0	511	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.53	0.65	0.70	0.72	0.52

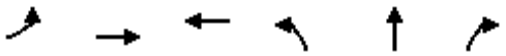
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	1828	438	1698	201	256
v/c Ratio	0.84	0.85	0.62	0.84	0.96
Control Delay	34.9	34.7	8.8	72.2	80.5
Queue Delay	0.0	3.8	40.8	0.0	0.0
Total Delay	34.9	38.5	49.5	72.2	80.5
Queue Length 50th (ft)	437	267	312	127	126
Queue Length 95th (ft)	m#524	m233	m316	#250	#285
Internal Link Dist (ft)	234		137	817	
Turn Bay Length (ft)					
Base Capacity (vph)	2181	626	2739	239	266
Starvation Cap Reductn	0	114	1170	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.84	0.86	1.08	0.84	0.96

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	NBL	NBT	NBR
Lane Group Flow (vph)	269	1110	1704	447	437	401
v/c Ratio	1.46	0.48	0.97	1.05	1.06	0.86
Control Delay	259.1	2.5	40.0	94.8	96.1	44.2
Queue Delay	0.0	1.3	22.1	5.2	6.6	0.0
Total Delay	259.1	3.8	62.1	100.0	102.7	44.2
Queue Length 50th (ft)	~228	7	523	~328	~325	187
Queue Length 95th (ft)	m#298	8	#713	#528	#537	#366
Internal Link Dist (ft)		58	142		820	
Turn Bay Length (ft)						500
Base Capacity (vph)	184	2314	1753	426	413	468
Starvation Cap Reductn	0	923	0	0	0	0
Spillback Cap Reductn	0	0	134	6	7	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.46	0.80	1.05	1.06	1.08	0.86

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Appendix D: Signal Warrant Worksheets

FEHR PEERS

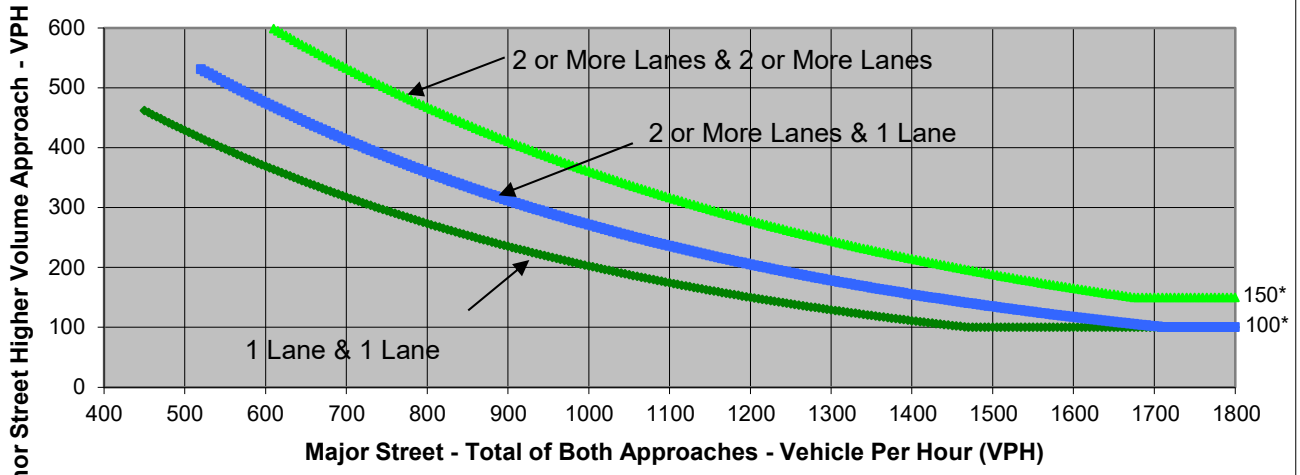
Major Street	Chapman Avenue	Project	Hub Fullerton
Minor Street	Chapman Driveway	Scenario	Future With Project
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	14	0
Through	0	0	1,102	2,101
Right	0	82	0	22
Total	0	82	1,116	2,123

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chapman Avenue	Chapman Driveway	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**3,239**	**82**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Major Street	Chapman Avenue	Project	Hub Fullerton
Minor Street	Chapman Driveway	Scenario	Future With Project
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	14	0
Through	0	0	1,102	2,101
Right	0	82	0	22
Total	0	82	1,116	2,123

Major Street Direction

	North/South
x	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	50.4
Approach with Worst Case Delay	SB
Total Vehicles on Approach	82

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Future With Project	**1.1**	**82**	**3,321**
Limiting Value	**4**	**100**	**650**
Condition Satisfied?	**Not Met**	**Not Met**	**Met**
Warrant Met	**NO**		

FEHR PEERS

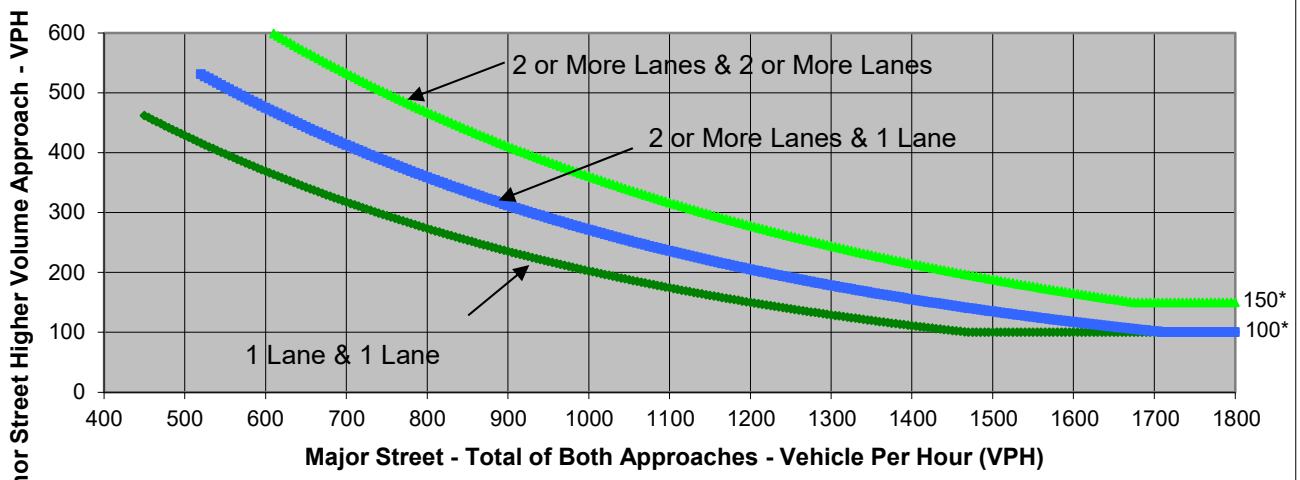
Major Street	Chapman Avenue	Project	Hub Fullerton
Minor Street	Chapman Driveway	Scenario	Future With Project
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	31	0
Through	0	0	1,786	1,811
Right	0	70	0	65
Total	0	70	1,817	1,876

Major Street Direction

	North/South
x	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Chapman Avenue	Chapman Driveway	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**3,693**	**70**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Project	Hub Fullerton
Major Street	Chapman Avenue
Scenario	Future With Project
Minor Street	Chapman Driveway
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	31	0
Through	0	0	1,786	1,811
Right	0	70	0	65
Total	0	70	1,817	1,876

Major Street Direction

	North/South
x	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	33.4
Approach with Worst Case Delay	SB
Total Vehicles on Approach	70

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Future With Project	**0.6**	**70**	**3,763**
Limiting Value	**4**	**100**	**650**
Condition Satisfied?	**Not Met**	**Not Met**	**Met**
Warrant Met	**NO**		