Appendix I: Transportation Supporting Information

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Revised Final

Scannell North Richmond Development TIA

Prepared for:
First Carbon Solutions
Contra Costa County

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Executive Summary

This report presents the results of the Transportation Impact Assessment (TIA) conducted for the proposed Scannell development in unincorporated Contra Costa County, California. The undeveloped project site is located at the northeast corner of the Richmond Parkway/Parr Boulevard intersection. The site would be developed with two buildings totaling approximately 327,200 square feet:

- **Building 1**, totaling about 121,300 square feet of gross floor area does not yet have a tenant identified. This second building is anticipated to be occupied by a tenant engaging in warehousing and distribution center uses.
- **Building 2**, totaling about 205,900 square feet of gross floor area, is anticipated to be occupied by a parcel delivery service operation

The proposed project's effects on vehicle-miles of travel (VMT) were estimated using trip length data based on location-based service (LBS) "Big Data" for nearby warehouse/distribution-focused buildings. As the project would develop vacant land, the project's effect on VMT is expected to be similar to the VMT generated after occupancy of the project. The project VMT generated was compared against data for other employment uses in the nine county Bay Area to assess the project's CEQA transportation impacts, consistent with SB 743.

Project effects on intersection operations at 18 study intersections were evaluated in a manner consistent with the Contra Costa Transportation Authority's (CCTA) technical guidelines. Intersection operations were evaluated under the following study scenarios:

- Existing Conditions
- Existing with Project Conditions
- Cumulative (Year 2040) without Project Conditions
- Cumulative (Year 2040) with Project Conditions

This analysis identifies the potential adverse effects of the proposed project on the surrounding transportation system and recommends measures to improve these effects. Recommendations for improvements to the project site plan are also provided.

Project Trip Generation

At buildout, the project is anticipated to add 405 new AM and 396 PM peak hour vehicle trips to the roadway network (vehicle trip values measured in passenger car equivalents, which considers how heavy trucks are

longer and accelerate more slowly than passenger cars). The proposed project is expected to generate approximately 585 daily truck trips, of which 109 would occur during the AM peak hour and 78 would occur during the PM peak hour.

Project Effect on Vehicle-Miles of Travel (VMT) – CEQA Analysis

The proposed project would result in the generation of about 40,760 total VMT per weekday. Because the project is located on vacant land and is anticipated to create new jobs, the project's effect on VMT would be similar to its VMT generated.

The State Office of Planning and Research's (OPR) interpretation of CEQA Guidelines §15064.3 suggests that VMT analysis in the Transportation section of a CEQA document should be focused on automobiles and light duty truck trips; for employment uses, most automobile and light duty truck trips are employee commute trips. Therefore, while the project is anticipated to generate about 40,760 total VMT per weekday, only a portion of this VMT generated is subject to the CEQA transportation analysis.

Based on location-based service (LBS) "Big Data," the average employee one-way commute trip length would be over 20 miles. Data from the CCTA travel demand model indicates that the nine-county Bay Area regional average commute VMT per employee per weekday is about 15.0 commute VMT per employee per weekday. Using the OPR's advisory CEQA threshold of 15 percent below the regional average, the threshold used in the analysis is 12.75 commute VMT per employee per weekday. Given that the LBS trip length is over 20 miles one-way, project commute VMT would be in excess of the threshold. Transportation Demand Management (TDM) measures could be implemented by the project applicant, but given the lack of a guarantee of the effectiveness of these measures, the impact of the project's effect on VMT would be ***significant and unavoidable.***

Project Effect on Intersection Operations

The determination of whether the project would result in a substantial adverse effect to intersection operations was determined using criteria from Contra Costa County. **Table E-1** provides a summary of this analysis by study intersection. Where substantial adverse effects were identified, improvement measures were proposed; these improvement measures are discussed later in this Executive Summary.

Table E-1: Summary of Project Effect on Intersection Operations

Intersection		Intersection Operations Substantially Affected Under Scenario?	
		Existing with Project	Cumulative with Project
1	Richmond Parkway/I-80 WB Ramps/Blume Drive	No	No
2	Richmond Parkway/San Pablo Avenue	No	No
3	Richmond Parkway/Atlas Road	No	No
4	Richmond Parkway/Hilltop Drive	No	No
5	Richmond Parkway/Goodrick Avenue	**Yes**	**Yes**
6	Richmond Parkway/Parr Boulevard	No	**Yes**
7	Fred Jackson Way/Parr Boulevard	No	No
8	Richmond Parkway/Pittsburg Avenue	No	**Yes**
9	Richmond Parkway/Gertrude Avenue	**Yes**	**Yes**
10	Castro Street/Hensley Street	No	**Yes**
11	Richmond Parkway/Hensley Street	No	**Yes**
12	Richmond Parkway/West Barrett Avenue	No	No
13	Richmond Parkway/West Macdonald Avenue	No	No
14	Richmond Pkwy/Canal Blvd/S. Garrard Blvd/W. Ohio Avenue	No	No
15	Canal Boulevard/I-580 WB Ramps	No	**Yes**
16	Canal Boulevard/I-580 EB Ramps	No	No
17	Castro Street/I-580 WB Ramps	No	No
18	Fred Jackson Way/Market Avenue	No	No

Source: Fehr & Peers, February 2020

The project's effects on intersection operations are ***less-than-significant***, consistent with CEQA Guidelines §15064.3, which notes that "a project's effect on automobile delay shall not constitute a significant environmental impact."

Pedestrian and Bicycle CEQA Impacts

The proposed project could result in increased pedestrian trips at the Richmond Parkway/Parr Boulevard intersection. Pedestrian impacts are ***less-than-significant*** as the project is not anticipated to degrade the off-site pedestrian network. The proposed project site plan includes construction of sidewalks along the Parr Boulevard frontage of the site, which will connect to the Richmond Parkway/Parr Boulevard intersection.

Bicycle access to the project site is primarily through an existing Class I bike path along Richmond Parkway. The project design would not eliminate bicycle facilities that connect to the area circulation system, and does not conflict with existing or planned bicycle facilities. Therefore, the impacts to bicyclists are ***less-than-significant.***

Transit CEQA Impacts

The project would generate new demand for the transit services and facilities that serve the area as described in **Chapter 2**. Fixed-route bus service operates near the site with stops located within walking distance of the proposed development. While the project would generate new demand for the transit services and facilities that serve the area, transit capacities are not expected to be exceeded. Therefore impacts to transit are ***less-than-significant***.

Neighborhood Cut-Through Traffic

In 2017, the Contra Costa County Public Works Department updated the North Richmond Area of Benefit (AOB) traffic mitigation fee program to require new developments within North Richmond to contribute towards traffic calming strategies in North Richmond to reduce cut-through truck traffic in the neighborhood. These improvements also have a parallel benefit of improving neighborhood aesthetics and promoting pedestrian and bicyclist safety. A project's contribution is calculated formulaically based on the type and size of the development.

The applicant shall construct one off-site traffic calming improvement intended to deter truck traffic from cutting through the local neighborhood to the south of the project site. These traffic calming measures may include, but are not limited to, improvements such as bulbouts, elevated crosswalks, speed tables, or chicane on the main routes of Fred Jackson Way, Market Avenue and Chesley Avenue. The application should develop the traffic calming measure(s) to the approval of the Public Works Department.

Installation of these off-site improvements would be in addition to any improvements made on the Fred Jackson Way or Brookside Drive project frontages resulting from the findings of other analyses in this report. The costs of constructing these improvements would be eligible for credit towards the AOB fee obligation.

Additionally, the following recommendation may discourage truck trips from traveling through the neighborhood:

- *Driveway Modifications*: The project site plan shall include modifications to the driveways and driveway access intersections along Parr Boulevard to include medians and curb bulb-outs that prohibit vehicles from turning left out of the project driveways onto eastbound Parr Boulevard

towards Fred Jackson Way (see Figure 2). Signage prohibiting the left turn movement out of the driveway should also be provided.

Site Access and Circulation Recommendations

Site access for automobiles, trucks, bicycles and pedestrians would be accommodated by two driveways that connect to Parr Boulevard. The following recommendations have been developed to improve site access and circulation:

- Stop signs (at the project driveways) and signage prohibiting trucks from turning left out of the project driveways should be provided in the final site plan;
- The final site plan should provide curb ramps where required at all of the pedestrian walkways, including the pedestrian walkway to the building on the east from Parr Boulevard. A crosswalk should be constructed along the north leg of the Richmond Parkway/Parr Boulevard intersection to connect the proposed sidewalk on the south project frontage to the Bay Trail (located along the west side of Richmond Parkway). Consider providing an accessible path between the two buildings; and
- To promote bicycle commuting for employees, it is recommended that long-term bicycle parking and other bicycle amenities (showers, changing rooms, bike repair tools/station, etc.) be provided in the final site plan.

Existing with Project Intersection Improvement Measures

The project is anticipated to cause substantial adverse effects to intersection operations at two intersections under Existing with Project Conditions in the PM peak hour: Richmond Parkway/Goodrick Avenue and Richmond Parkway/Gertrude Avenue. The following measures are recommended to improve intersection operations:

- Richmond Parkway/Goodrick Avenue
    - Fund signal timing adjustments at the intersection to be completed after full occupancy of the project
- Richmond Parkway/Gertrude Avenue
    - Fund signal timing adjustments at the intersection to be completed after full occupancy of the project

Implementation of these improvements would result in reducing the project effects to less-than-substantial levels. Therefore, the projects effect on the operation of these intersection is ***less-than-substantial with improvements***.

Cumulative with Project Intersection Improvement Measures

The project is anticipated to cause substantial adverse effects on operating conditions at the following intersections under Cumulative with Project Conditions:

- Intersection #5 – Richmond Parkway/Goodrick Avenue (PM peak hour)
- Intersection #6 – Richmond Parkway/Parr Boulevard (AM and PM peak hours)
- Intersection #8 – Richmond Parkway/Pittsburg Avenue (AM and PM peak hours)
- Intersection #9 – Richmond Parkway/ Gertrude Avenue (AM and PM peak hours)
- Intersection #10 – Castro Street/Hensley Street (PM peak hour)
- Intersection #11 – Richmond Parkway/Hensley Street (PM peak hour)
- Intersection #15 – Canal Boulevard/I-580 Westbound Ramps (PM peak hour)

Many of these intersections operate unacceptably with respect to the County's General Plan level of service (LOS) standard of LOS D or the City of Richmond's LOS standard of LOS D under Cumulative without Project Conditions. Large capacity-increasing improvements would be required to reduce the project's effect to less-than-substantial levels; these capacity-increasing projects may result in induced travel in the study area, thus reducing the effectiveness of the improvements. Based on conversations with County staff, a more holistic review of multimodal transportation opportunities and constraints may be more beneficial than pursuing large capacity-increasing improvements.

The identified improvement measure to address the project's substantial adverse effects on operating conditions at the noted intersections is to fund a corridor study for the Richmond Parkway and parallel corridors. The corridor study would evaluate total North Richmond development capacity, the effect of regional freeway projects, roadway and intersection capacity, transit and other multimodal options.

As part of its March 2021 comment letter, Contra Costa County staff noted that a fair share contribution of $618,000 should be made by the project applicant as part of this project. This amount is based on an estimate of $8,300,000 for potential improvements along Richmond Parkway and data from the traffic analysis provided in this report, which indicates that 7.43 percent of traffic volume at the Richmond Parkway/Parr Boulevard intersection would be generated by the project site in the Cumulative (Year 2040) condition. This fair share contribution will be deposited into the County's Road Trust Account (8192), which may be used to fund the West County Corridor Study of freight/goods movement, multimodal Richmond Parkway corridor improvements, environmental analysis, design and/or construction of the resulting capital improvement(s) resulting from the West County Corridor Study.

1. Introduction

This report presents the results of the Transportation Impact Assessment (TIA) for the proposed Scannell Development ("project") in unincorporated Contra Costa County, California.

The project site is undeveloped and is located at the northeast corner of the Richmond Parkway/Parr Boulevard intersection in the North Richmond area of unincorporated Contra Costa County, as shown on **Figure 1**. The site is proposed to be developed with two buildings. Building 1, with about 121,300 square feet of gross floor area, does not yet have a tenant identified, but is anticipated to be occupied by warehousing and distribution uses. Building 2, with about 205,900 square feet of gross floor area, is proposed to be operated as a parcel delivery processing center. The site plan showing both buildings is provided as **Figure 2**.

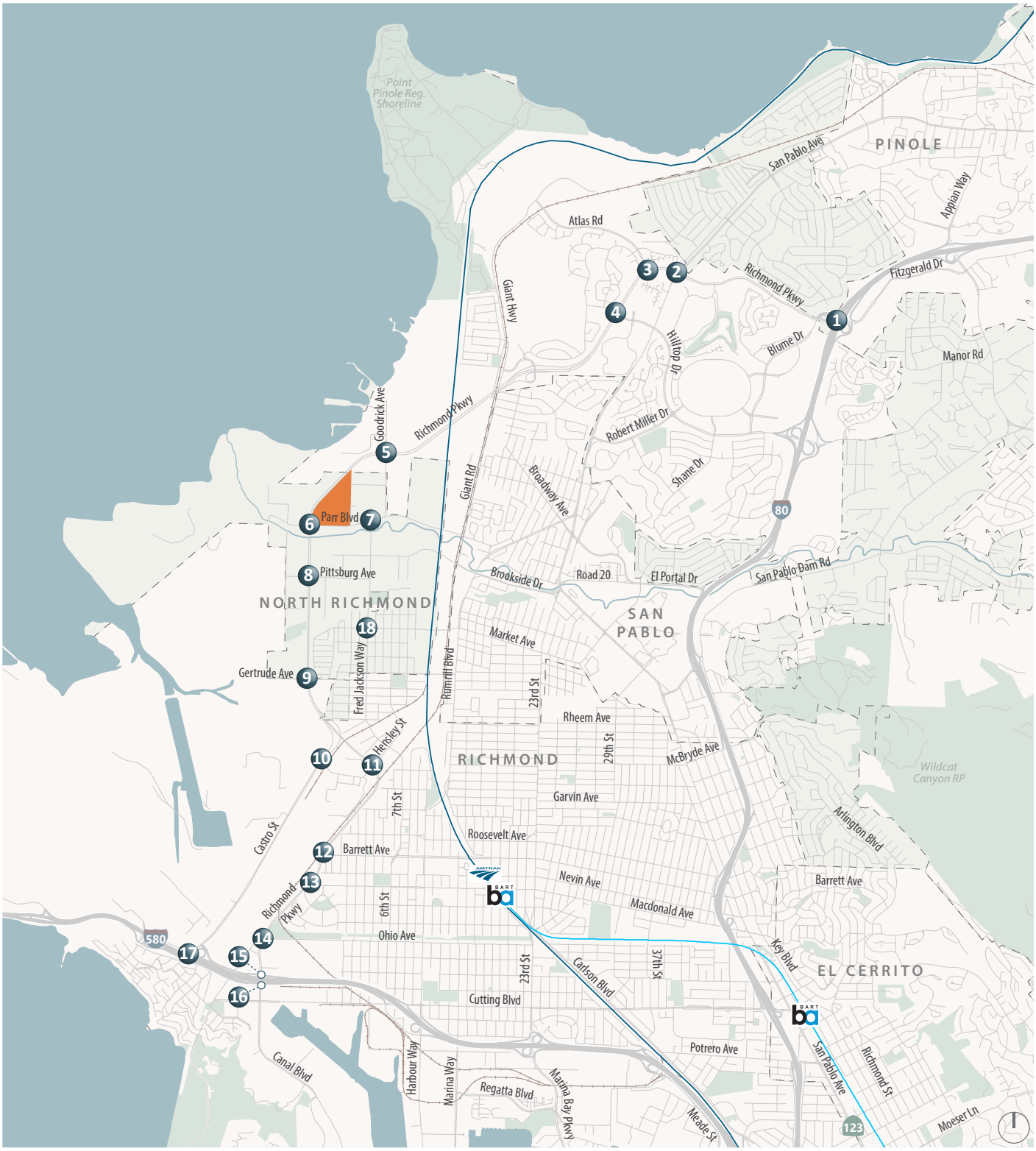
1.1 Intersection Analysis Study Area

The intersection analysis study area includes the area immediately adjacent to the project site, along with areas in the vicinity of the project site where the project may affect operations of the transportation network. Project effects on the study area roadway facilities were determined by measuring the effect that the addition of project traffic would have on intersection operations during the morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak commute periods. A total of 18 intersections were selected as study locations based on the Contra Costa Transportation Authority's guideline of studying signalized intersections where a project is estimated to add 50 or more AM or PM peak hour trips, as well as input from County staff.

1. Richmond Parkway/I-80 Westbound Ramps-Blume Drive[1]
2. Richmond Parkway/San Pablo Avenue[1]
3. Richmond Parkway/Atlas Road[1]
4. Richmond Parkway/Hilltop Drive[1]
5. Richmond Parkway/Goodrick Avenue[1]
6. Richmond Parkway/Parr Boulevard
7. Fred Jackson Way/Parr Boulevard[1]
8. Richmond Parkway/Pittsburg Avenue[1]
9. Richmond Parkway/Gertrude Avenue[1]
10. Castro Street/Hensley Street[1]
11. Richmond Parkway/Hensley Street[1]
12. Richmond Parkway/West Barrett Avenue[1]
13. Richmond Parkway/West Macdonald Avenue[1]
14. Richmond Parkway-Canal Boulevard/South Garrard Boulevard-West Ohio Avenue[1]
15. Canal Boulevard/I-580 Westbound Ramps[1]
16. Canal Boulevard/I-580 Eastbound Ramps[1]
17. Castro Street/I-580 Westbound Ramps[1]
18. Fred Jackson Way/Market Avenue[2]

[1] Under the Jurisdiction of the City of Richmond

[2] Under the jurisdiction of Contra Costa County.



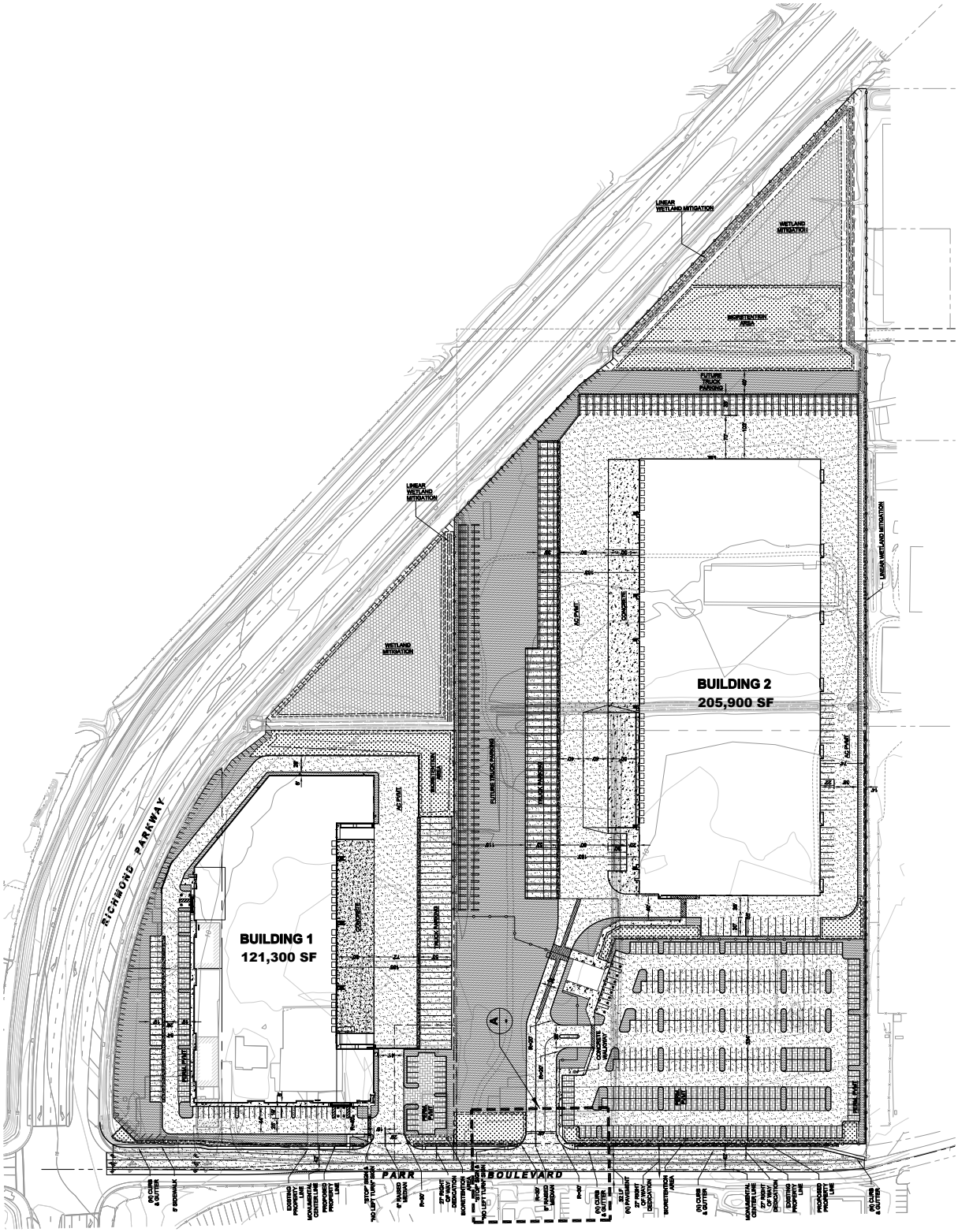
Project Site # Study Intersection

Figure 1

Scannell North Richmond

Project Location and Study Intersections

Scannell_WC19-3663.00_1_StudyArea


BUILDING 1
121,300 SF
BUILDING 2
205,900 SF
RICHMOND PARKWAY
PARK BOULEVARD
WETLAND MITIGATION
LINEAR WETLAND MITIGATION
BIORETENTION AREA
FUTURE TRUCK PARKING
FUTURE TRUCK CORRIDOR
TRUCK CORRIDOR
CONCRETE
AC PAVE
PROPOSED PROPERTY LINE
EXISTING PROPERTY LINE
MONUMENTAL CENTER LINE
27' RIGHT OF WAY DEDICATION
MONUMENTATION
STOP SIGN
NO LEFT TURN
6' RAISED MEDIAN
PROPOSED CURB & GUTTER
6' SIDEWALK
PROPOSED DRIVEWAY
PROPOSED DRIVEWAY
PROPOSED DRIVEWAY

1.2 Intersection Analysis Scenarios

Study intersections were evaluated for the following scenarios:

Scenario 1: *Existing Conditions* – Existing volumes obtained from intersection turning movement counts collected in June 2018 and October 2019. Intersection turning movement data from June 2018 were factored higher to bring the data into alignment with October 2019 conditions. This process resulted in the June 2018 volumes being factored higher by about five percent.

Scenario 2: *Existing with Project Conditions* – Scenario 1 volumes plus traffic generated by the proposed project. This scenario excludes traffic generated by the proposed CenterPoint project.

Scenario 3: *Cumulative (Year 2040) without Project Conditions* – Existing volumes plus traffic generated from regional growth anticipated to occur by Year 2040 based on Plan Bay Area projections per the CCTA travel demand model. This scenario also includes traffic generated by the proposed CenterPoint project, the proposed Shea Properties Eco-Industrial Center, and the approved 500 Pittsburg Avenue project[3].

Scenario 4: *Cumulative (Year 2040) with Project Conditions* – Scenario 3 volumes plus traffic generated by the proposed project.

1.3 Intersection Analysis Methodology

The operations of roadway facilities are described with the term level of service ("LOS", a qualitative description of traffic flow based on such factors as speed, travel time, delay, and freedom to maneuver). Six levels are defined from LOS A, as the best operating conditions, to LOS F, or the worst operating conditions. LOS E represents "at-capacity" operations. When traffic volumes exceed intersection capacity, stop-and-go conditions result, and operations are designated as LOS F.

[3] CenterPoint Project: 555,500 square feet of warehousing and distribution center uses located at the southeast corner of Fred Jackson Way/Brookside Drive and expected to generate 1,340 trips per day (measured in passenger car equivalents).
Shea Properties Eco-Industrial Center: 537,056 square feet of industrial uses located at the northeast corner of Richmond Parkway/Goodrick Avenue and expected to generate 540 trips per day (measured in passenger car equivalents)
500 Pittsburg Avenue Project: 493,000 square feet of warehousing and distribution center uses and 6,000 square feet of retail at the southeast corner of Richmond Parkway/Pittsburg Avenue and expected to generate 2,421 trips per day (measured in passenger car equivalents).

Signalized Intersections

Operations of signalized intersections were evaluated using the method from Transportation Research Board's *2010 Highway Capacity Manual* (HCM 2010), which uses various intersection characteristics (such as traffic volumes, lane geometry, and signal phasing) to estimate the average control delay experienced by motorists traveling through an intersection. Control delay incorporates delay associated with deceleration, acceleration, stopping, and moving up in the queue. **Table 1** summarizes the relationship between average delay per vehicle and LOS for signalized intersections. This method evaluates each intersection in isolation, and the effects of vehicle queue spillback are not considered in the analysis results. **Table 1** summarizes the relationship between delay and LOS for signalized intersections.

Table 1: Signalized Intersection LOS Definitions

Level of Service	Description	Delay in Seconds
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 influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume to capacity (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 by many agencies to be the limit of acceptable delay. 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: *Highway Capacity Manual*, 2010.

Unsignalized Intersections

Operations at unsignalized intersections were evaluated using the methods from the HCM 2010. With this method, operations are defined by the average control delay per vehicle (measured in seconds) for each movement that must yield the right-of-way. At two-way or side street stop-controlled intersections, the control delay (and LOS) is calculated for each controlled movement, the left-turn movement from the major street, and the entire intersection. For controlled approaches composed of a single lane, the control delay

is computed as the average of all movements in that lane. The delays for the entire intersection and for the movement or approach with the highest delay are reported. **Table 2** summarizes the relationship between delay and LOS for unsignalized intersections.

Table 2: Unsignalized Intersection LOS Criteria

Level of Service	Description	Delay in Seconds
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	Extreme traffic delays with intersection capacity exceeded	> 50.0

Source: *Highway Capacity Manual*, 2010.

1.4 Intersection Substantial Adverse Effect Criteria

The determination of whether the project results in a substantial adverse effect at a study location is based on applicable policies, regulations, goals, and guidelines defined by Contra Costa County. The detailed intersection operations substantial adverse effect criteria for this study are presented below.

Signalized Intersections

The project would result in a substantial adverse effect if one of the two following criteria are met:

- The addition of project traffic to an intersection results in the degradation of intersection operations from acceptable operations (LOS D or better) to unacceptable operations (LOS E or LOS F)
- The addition of project traffic to an intersection results in the exacerbation of unacceptable operations (LOS E or F) by increasing the average control delay at the intersection by more than 5.0 seconds.

Unsignalized Intersections

The project would result in a substantial adverse effect if both of the two following criteria are met:

- The addition of project traffic to an intersection results in the degradation of intersection operations from acceptable operations (LOS D or better) to unacceptable operations (LOS E or LOS F)
- The Peak Hour Signal Warrant (Warrant 3) is met under With Project conditions.

1.5 CEQA Transportation Impact Criteria

CEQA impacts are identified based on the project's effect on VMT and its effects to the pedestrian, bicycle and transit modes of travel. For land use projects, intersection operations impacts are excluded from CEQA consideration per CEQA Guidelines §15064.3 and SB 743. Specifically, CEQA Guidelines §15064.3 notes that *"Except as provided in subdivision (b)(2) below (regarding roadway capacity), a project's effect on automobile delay shall not constitute a significant environmental impact."*

The detailed CEQA Transportation section impact criteria are presented below.

Vehicle-Miles of Travel (VMT)

Contra Costa County has adopted VMT-based thresholds for the evaluation of CEQA impacts to the transportation system, which are documented in the *Contra Costa County Transportation Analysis Guidelines (June 2020)*. For employment-based projects (i.e. projects that are non-residential and non-retail/non-commercial service), the following VMT-based threshold is been applied to assess the CEQA significance of the project's effect on VMT and VMT generated by the project:

- The project would result in a significant impact related to VMT if the project's employee-based, home-based work (HBW) trip VMT per employee is greater than 15 percent below the nine-county MTC average for employment uses in the San Francisco Bay Area. As the existing average VMT for employment uses in the region is 15.0 VMT, the threshold value is 12.75 HBW trip VMT per employee.

As further described in **Section 2.4**, the average HBW trip VMT per employee in the nine-county MTC region is 15.0 HBW trip VMT per employee. Therefore, the threshold amount of HBW trip VMT per employee is 12.75 HBW trip VMT per employee.

It is noted that this threshold has been developed specifically for the evaluation of CEQA Transportation impacts for this project and excludes heavy-vehicle/truck VMT based on OPR's interpretation of CEQA Guidelines §15064.3(a). The County, in its capacity as the lead agency for environmental documents in the unincorporated portions of the County, may choose to adopt other thresholds for projects in the future,

including a threshold that incorporates all VMT generated by a project (e.g. VMT for heavy trucks, non-commute trips, etc.).

Pedestrian System

The project would create a significant impact related to the pedestrian system if any of the following criteria are met:

- The project design would not provide or would eliminate pedestrian facilities to connect to the area circulation system; or
- The project design would create hazardous conditions for pedestrians; or
- The project conflicts with existing or planned pedestrian facilities.

Bicycle System

The project would create a significant impact related to the bicycle system if any of the following criteria are met:

- The project design would not provide or would eliminate bicycle facilities that connect to the area circulation system; or
- The project design would create hazardous conditions for bicyclists; or
- The project conflicts with existing or planned bicycle facilities.

Transit System

The project would create a significant impact related to transit service if either of the following criteria are met:

- The project generates a substantial increase in transit riders that cannot be adequately served by existing transit services; or,
- The project conflicts with existing or planned transit facilities.

2. Existing Conditions

This chapter describes the existing transportation conditions in the study area, including the roadway network and the transit, pedestrian, and bicycle facilities in the vicinity of the project site.

2.1 Roadway System

Regional access to the project site is provided by I-80 and I-580. Local access to the site is provided by Richmond Parkway, Parr Boulevard, and Fred Jackson Way.

Interstate 80 (I-80) is an east-west freeway that connects San Francisco to the Nevada state line and beyond via Oakland, Richmond and Sacramento. I-80 is located east of the project site; project traffic would access I-80 through the Richmond Parkway/I-80 interchange. Near the project site, I-80 is an eight-lane freeway. The speed limit on the facility is 65 miles-per-hour (mph).

Interstate 580 (I-580) is an east-west freeway that connects US 101 in the west (via the Richmond-San Rafael Bridge) to Interstate 5 in the east. The Richmond-San Rafael Bridge recently opened the eastbound shoulder as a third lane during the PM peak period. I-580 is located south of the project site; project traffic would access I-580 through the Canal Boulevard/I-580 interchange and the Castro Street/I-580 interchange. Near the project site, the facility is a six-lane freeway. The speed limit on the facility is 65 mph.

Richmond Parkway is the main north-south roadway in the study area. Richmond Parkway connects I-80 in the northeast to I-580 in the southwest (via Canal Boulevard). Richmond Parkway is signed by Caltrans as the advised connecting route between I-80 north of Richmond and the I-580/Richmond-San Rafael Bridge corridor. Richmond Parkway is a four-lane access-controlled expressway in the vicinity of the project site, with signalized intersections at access points. The posted speed limits along Richmond Parkway in the vicinity of the project site are 50 mph between Sab Pablo Avenue and Hensley Street, and 45 mph south of Hensley Street to Ohio Avenue. Trucks are prohibited on Richmond Parkway between Castro Street and Ohio Avenue.

Parr Boulevard is an east-west two-lane road along the south frontage of the project site. It extends between the West County Waste Transfer Station in the west and Rumrill Boulevard in the east. The posted speed limit is 35 mph.

Fred Jackson Way is a north-south two-lane roadway parallel to Richmond Parkway between Parr Boulevard in the north and Hensley Street in the south. The roadway provides a connection (via Parr Boulevard) between the project site and the unincorporated residential community of North Richmond. The posted speed limit is 25 mph.

Rumrill Boulevard is a north-south two-lane road in the study area connecting San Pablo Avenue in the north-east and Costa Avenue in the south. The posted speed limit is 30 mph.

2.2 Transit Service

North Richmond is primarily served by two major transit providers: Bay Area Rapid Transit (BART) and AC Transit. BART provides commuter rail service and AC Transit provides local and regional bus service. Transit service and facilities—bus routes, major bus stops, BART lines, and the Richmond BART station—are shown on **Figure 3**.

BART operates commuter train service throughout the East Bay, San Francisco and northern San Mateo County. The City of Richmond is served by the Richmond-Fremont line and the Richmond-Millbrae line. The project site is located approximately 3.6 miles northwest of the Richmond BART station.

AC Transit operates several local bus lines from the Richmond BART station, with Routes 71, 76, and 376 operating closest to the project site. The closest bus stop for these routes is at the Fred Jackson Way/Market Avenue intersection, approximately 1.0 miles southeast of the project site.

Table 3 summarizes hours of operation and service frequencies for the routes near the project site.

Table 3: Existing Transit Services

Route	From	To	Weekdays		Saturdays		Sundays	
			Operating Hours	Peak Headway (min)	Operating Hours	Headway (min)	Operating Hours	Headway (min)
Bay Area Rapid Transit (BART)								
Richmond -Fremont	Richmond	Warm Springs	4:57 am – 1:34 am	15	5:48 am – 1:34 am	20	7:53 am – 1:35 am	20
Richmond -Millbrae	Richmond	Daly City/ Millbrae	5:00 am – 11:33 pm	15	8:45 am – 6:39 pm	20	No Service	
AC Transit								
71	El Cerrito Plaza BART	Richmond Parkway Transit Center	5:00 am – 8:43 pm	30	6:21 am – 9:35 pm	60	6:21 am – 9:35 pm	60
76	Hilltop Mall	El Cerrito Plaza BART	5:23am – 9:49 pm	30	6:29 am – 8:19 pm	30	6:29 am – 8:19 pm	30
376 (Overnight Service)	El Cerrito Del Norte BART	El Cerrito Del Norte BART	7:55 pm – 4:07 am	30	7:51 pm – 4:03 am	30	7:51 pm – 4:03 am	30

Sources: BART, AC Transit, 2020.

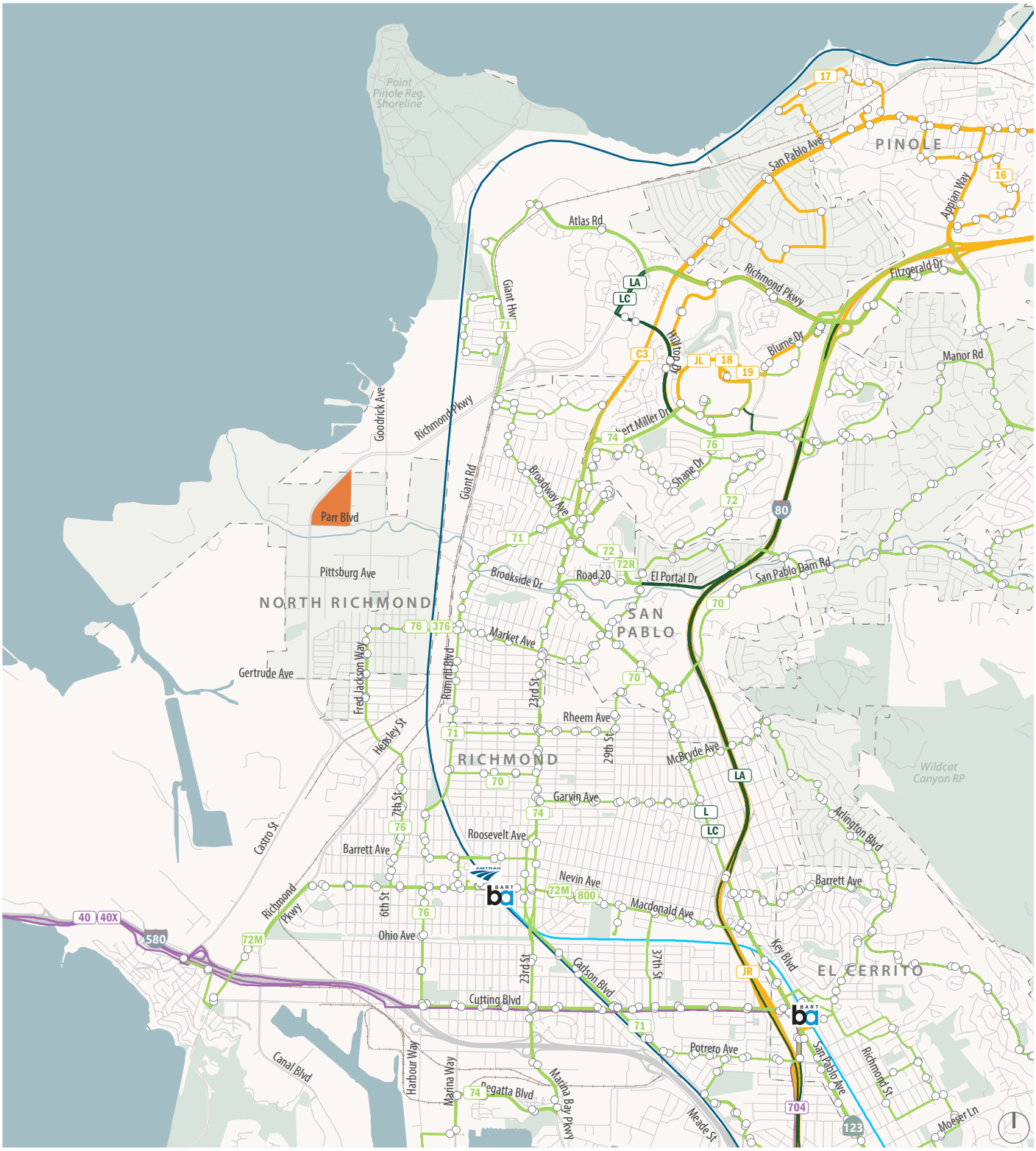


Figure 3

Local and Regional Transit Service

2.3 Pedestrian and Bicycle Facilities

This section presents the existing pedestrian and bicycle facilities in the vicinity of the project site.

Pedestrian Facilities

Pedestrian facilities include sidewalks, shared-use pathways, crosswalks, and pedestrian signals. There is a shared-use pathway along Richmond Parkway between Goodrick Avenue and West Ohio Avenue, and most study intersections include only one or two marked crosswalks in lieu of a full complement of crosswalks across all approaches. The Richmond Parkway/Parr Boulevard intersection provides a marked crosswalk with pedestrian signal heads across the eastbound approach. There are no sidewalks on the Richmond Parkway and Parr Boulevard frontages of the project site. **Figure 4** shows the existing pedestrian facilities in the study area.

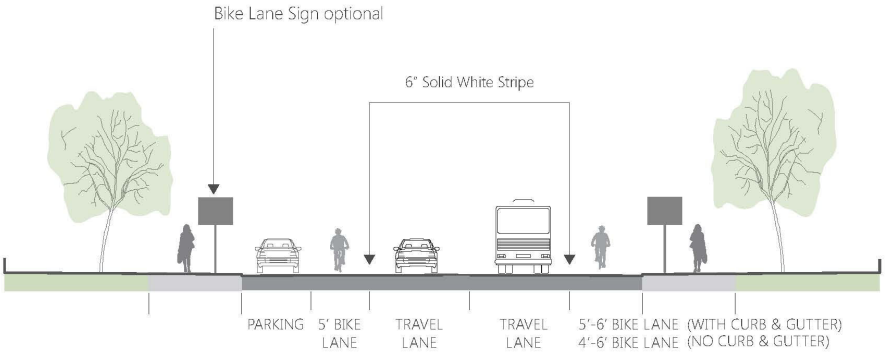
Bicycle Facilities

The CCTA Countywide Bicycle and Pedestrian Plan identifies the following four bikeway classifications from Chapter 1000 of the Caltrans *Highway Design Manual*:

- *Class I Bikeway (Bicycle Path)* provides a completely separate right-of-way and is designated for the exclusive use of bicycles and pedestrians with vehicle and pedestrian cross-flow minimized.

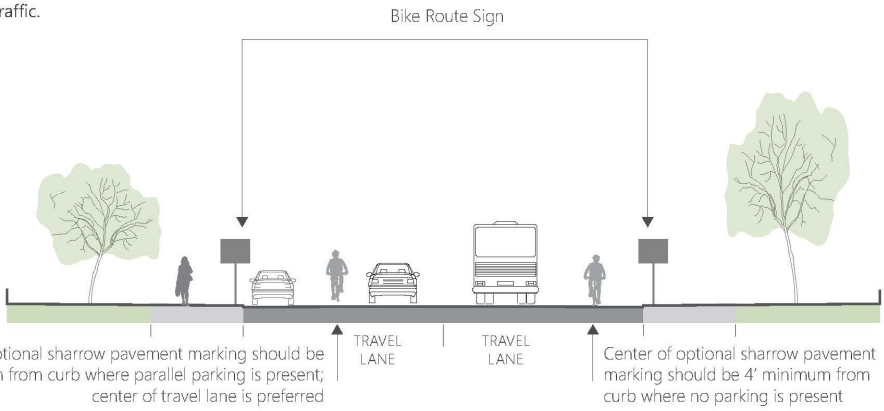
- *Class II Bikeway (Bicycle Lane)* provides a restricted right-of-way and is designated for the use of bicycles with a striped lane on a street or highway. Bicycle lanes are generally four to six feet wide. Adjacent vehicle parking and vehicle/pedestrian cross-flow are permitted.

Provides a striped lane for one-way bike travel on a street or highway.

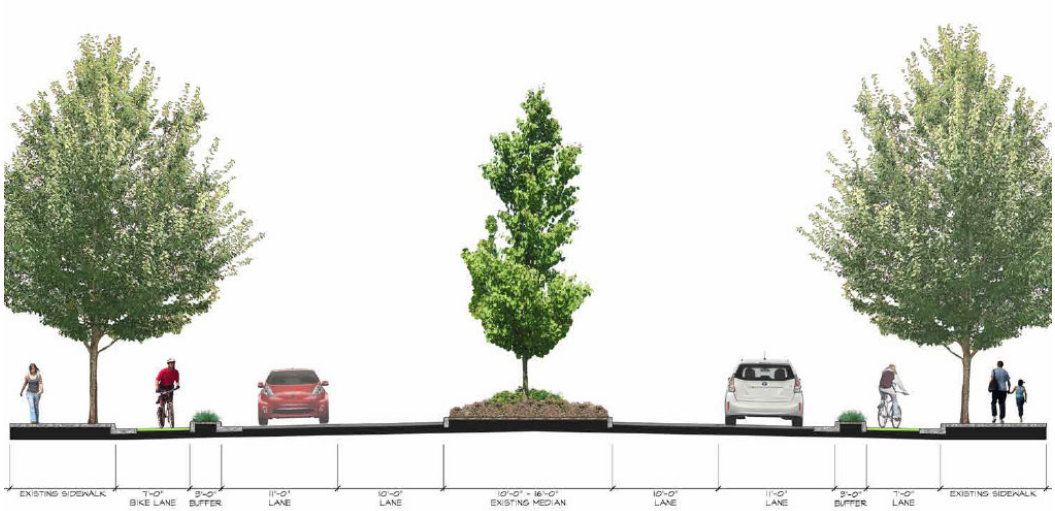


- *Class III Bikeway (Bicycle Route)* provides for a right-of-way designated by signs or pavement markings (sharrows) for shared use with pedestrians or motor vehicles. Sharrows are a type of pavement marking (bike and arrow stencil) placed to guide bicyclists to the best place to ride on the road, avoid car doors, and remind drivers to share the road with cyclists.

With Optional Sharrow Pavement Marking
Provides for shared use with motor vehicle traffic.

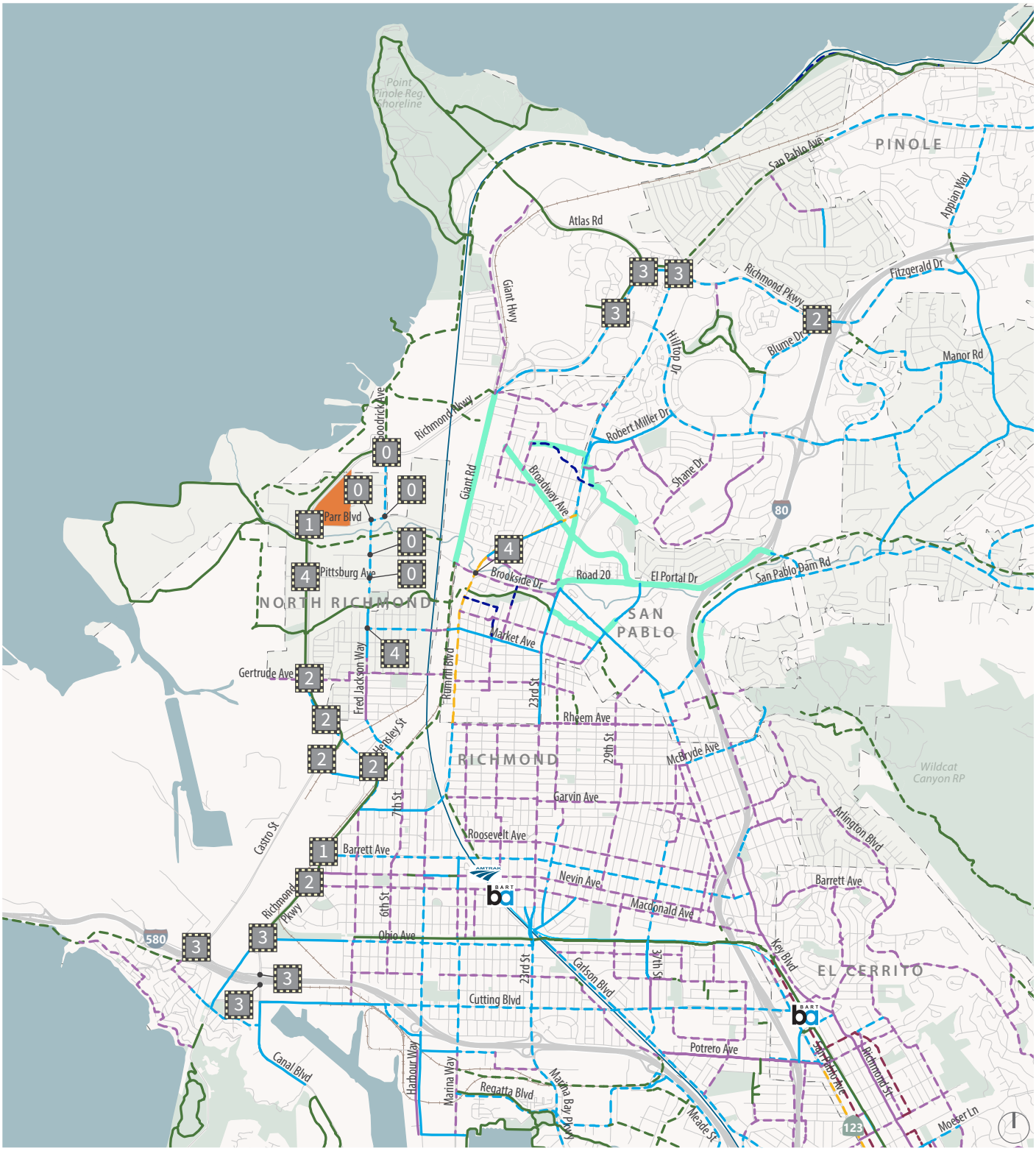


- *Class IV Bikeway*, also known as "cycle tracks" or "protected bike lanes," provide a right-of-way designated exclusively for bicycle travel within a roadway and which are protected from other vehicle traffic with devices, including, but not limited to, grade separation, flexible posts, inflexible physical barriers, or parked cars.



The Wildcat Creek Trail is a Class I bikeway along Richmond Parkway between Goodrick Avenue and West Ohio Avenue. There is also Class I bike trail to the south of Parr Boulevard that connects to the Bay Trail along the western waterfront. No other designated bicycle facilities are provided in the project vicinity.

Figure 4 shows the existing bicycle facilities in the study area.



Existing

- Class 1
- Class 2
- Class 3

Proposed

- Class 1
- Class 2
- Class 3
- Class 4
- Proposed Complete Streets Corridor Study

Project Site

Number of Crosswalks at Intersection

Figure 4

Scannell North Richmond

Pedestrian and Bicycle Facilities

2.4 Baseline VMT

The Contra Costa Transportation Authority's (CCTA) travel demand model covers the entire nine-county MTC region, and provides information regarding the characteristics of home-based work trips made by employees throughout the Bay Area. Given the project's location in Contra Costa County, and the high likelihood that the CCTA travel demand model will be used by the County in the future to evaluate project-by-project effects on VMT in the future, the CCTA travel demand model was chosen to assess baseline home-based work (HBW) trip lengths and average HBW trip VMT per worker in the Bay Area.

HBW trips were analyzed as, as the name home-based work implies, these trips are generally commute trips. As discussed in **Section 1.5**, CEQA Guidelines §15064.3 has generally been interpreted to mean that the VMT analysis in the CEQA Transportation section should be focused on employee commute trips for land uses that are employment-focused.

Data from the CCTA travel demand model indicates that the average nine-county MTC region HBW VMT per worker is 15.0 HBW trip VMT per worker. It is noted that this average takes into account all workers, including those who commute by automobile, as well as workers that commute (either in full or in part) by modes that do not generate automobile VMT, such as transit, walking, bicycling, or working from home in that these non-automobile commuters generate no HBW trip VMT but are included in the number of workers used in the calculation.

2.5 Location-Based Service Trip Length Data

The baseline VMT data prsented in **Section 2.4** represents an average over all employment uses in the nine-county MTC region, and does not account for variation in trip length due to location and land use type. To provide a basis for the estimation of project VMT generated, location-based service (LBS) "Big Data" was used to assess trip lengths for nearby similar land uses. The LBS data tracks the full length of trips (including trips in excess of 100 miles), and thus captures the effects of long-haul truck trips.

This data was analyzed for five sites:

- UPS distribution center (Atlas Road, Richmond)
- Amazon distribution center (Giant Road, Richmond)
- Goodrick Avenue industrial area (Goodrick Avenue corridor between Parr Boulevard and Richmond Parkway, Richmond)
- Wine Warehouse (Collins Avenue, Richmond)
- HelloFresh distribution center (Factory Street, Richmond)

The LBS data provides trip length data analysis yielded the following average one-way trip lengths by vehicle type:

- Automobiles and light-duty trucks: 20.53 miles
- Heavy trucks and other heavy vehicles: 28.61 miles

Given the physical location and transportation characteristics at the LBS sample locations, it was expected that the heavy truck/vehicle trip lengths would exceed the automobile/light-duty truck trip lengths. The automobile/light-duty truck trip lengths are indicative of commuter and local delivery trips, while the heavy truck/vehicle trip lengths are indicative of deliveries. A one-way trip length of 28.61 miles roughly corresponds to a trip between North Richmond and Concord or a trip between North Richmond and Daly City.

2.6 Existing Intersection Levels of Service

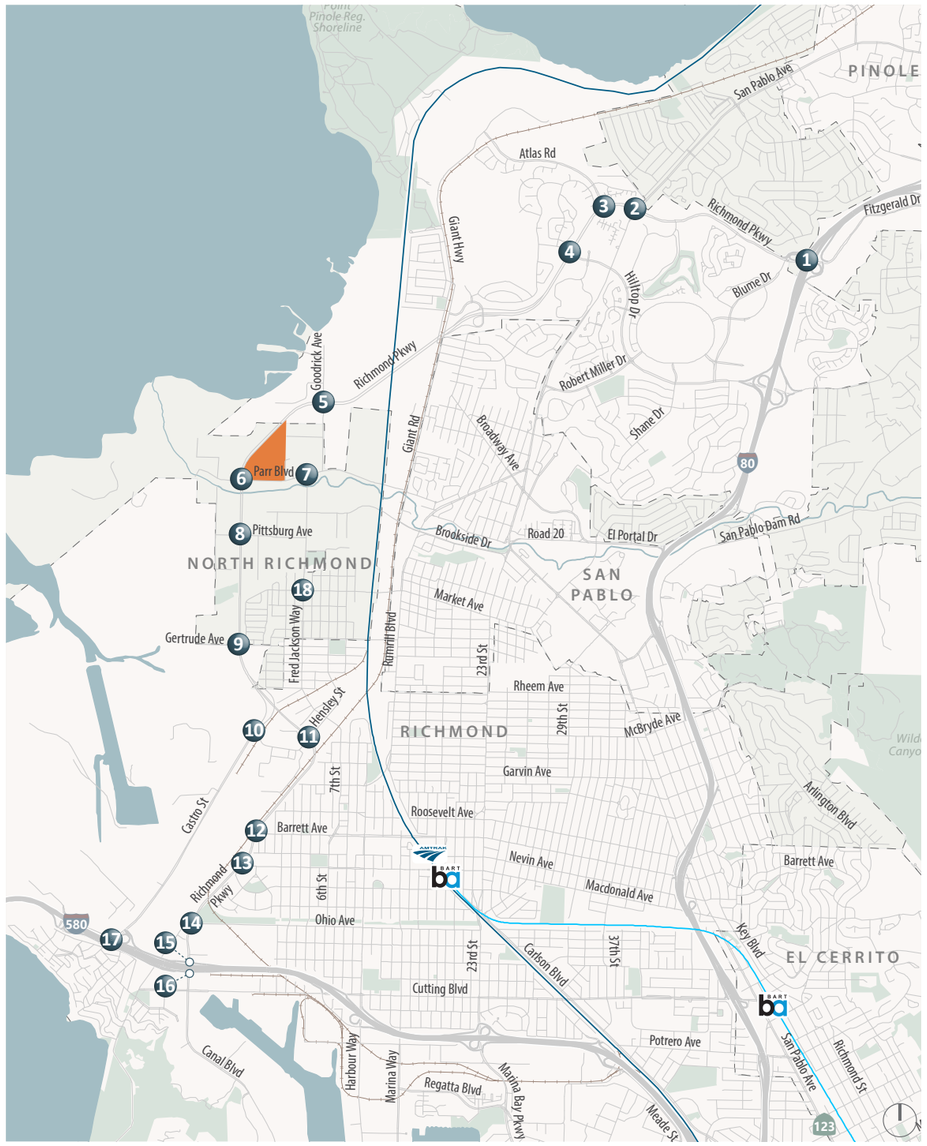
Weekday morning (7:00 AM to 9:00 AM) and evening (4:00 PM to 6:00 PM) peak period intersection turning movement counts were collected at study intersections in June 2018 and October 2019. These counts reflect the opening of the Richmond-San Rafael Bridge shoulder running lane project, which opened in April 2018. Since the June 2018 counts were collected during the summer, when schools are not in normal session, the counted traffic volumes were increased by five percent to reflect the generally higher traffic volumes when local schools are in normal session, based on the October 2019 data. The detailed traffic count worksheets are provided in **Appendix A**.

For each study intersection, the 60-minute period with the highest traffic volumes during both the AM and PM two-hour count periods were identified as the AM and PM peak hours of traffic. Observed peak hour factors were calculated for all intersections, and truck, pedestrian and bicycle activity was factored into the analysis. The AM and PM peak hour volumes are presented on **Figure 5**, along with the existing lane configuration and traffic control. Existing intersection operations were evaluated using the methodology described in **Chapter 1**. The results are summarized in **Table 4**; control delay values were converted to LOS based on the HCM 2010 definitions presented in **Section 1.3**.

Most of the study intersections operate at LOS D or better, except of the following intersections:

- Intersection #2 – Richmond Parkway/San Pablo Avenue: LOS E in the PM peak hour
- Intersection #5 - Richmond Parkway/Goodrick Avenue: LOS F in the PM peak hour
- Intersection #7 – Fred Jackson Way/Parr Boulevard: LOS E on worst movement in PM peak hour
- Intersection #9 - Richmond Parkway/Gertrude Avenue: LOS E in the PM peak hour
- Intersection #17 – Castro Street/I-580 Westbound Ramps: LOS E in the AM peak hour

Detailed intersection LOS calculation worksheets are provided in **Appendix B**.



XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Project Site

Study Intersection

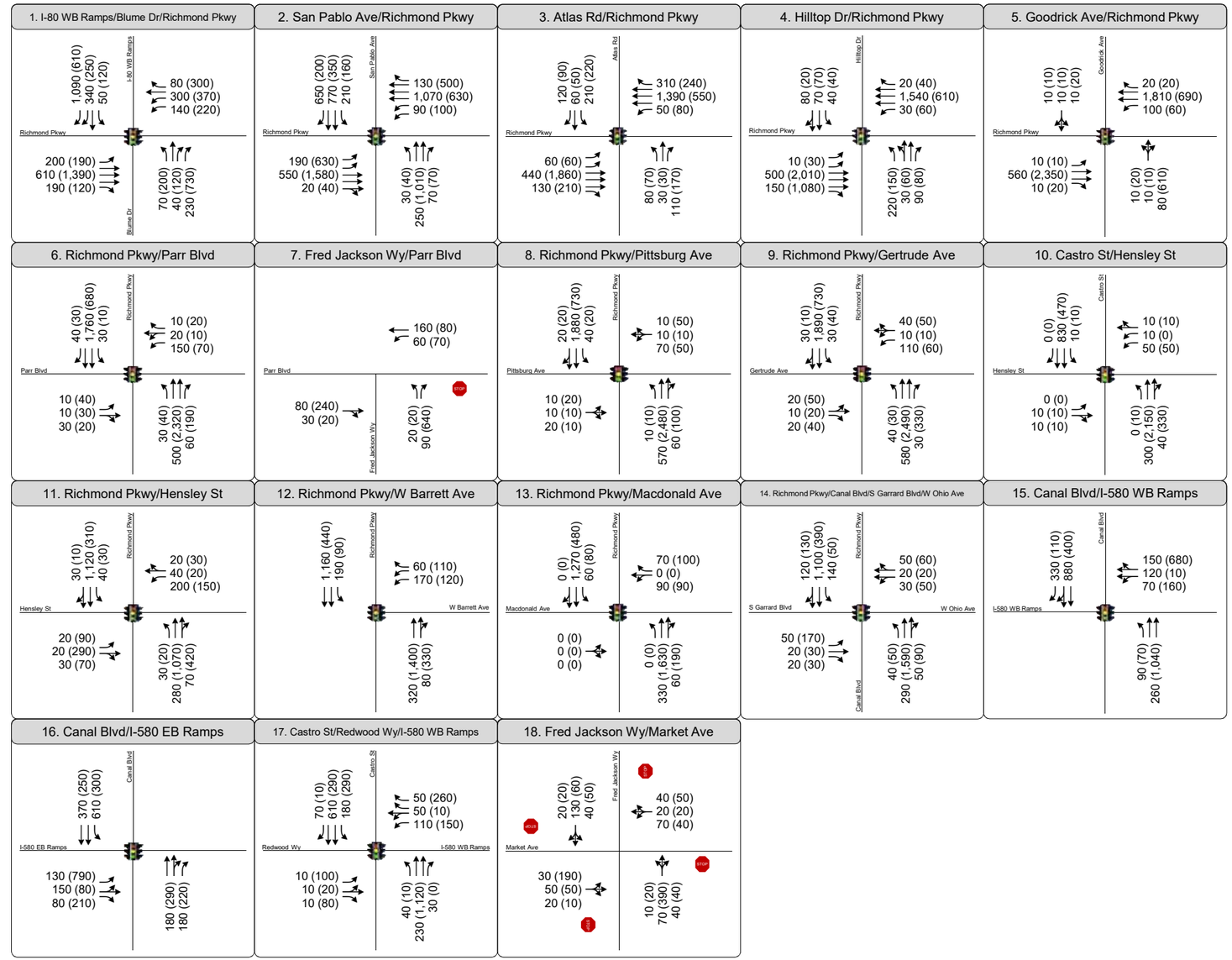


Figure 5

Scannell North Richmond Existing Peak Hour
Intersection Traffic Volumes, Lane Configurations and Traffic Controls

Table 4: Existing Conditions - Peak Hour Intersection Levels of Service

Intersection		Control	Peak Hour	Existing Conditions	
				Delay[1]	LOS[2]
1	Richmond Parkway/ I-80 WB Ramps-Blume Drive	Signalized	AM PM	54.4 42.4	D D
2	Richmond Parkway/ San Pablo Avenue	Signalized	AM PM	44.2 **61.9**	D **E**
3	Richmond Parkway/ Atlas Road	Signalized	AM PM	23.8 33.0	C C
4	Richmond Parkway/ Hilltop Drive	Signalized	AM PM	13.6 18.2	B B
5	Richmond Parkway/ Goodrick Avenue	Signalized	AM PM	6.5 **132.0**	A **F**
6	Richmond Parkway/ Parr Boulevard	Signalized	AM PM	16.4 17.9	B B
7	Fred Jackson Way/ Parr Boulevard	Side-Street Stop-Controlled	AM PM	3.6 (12.5) 24.4 **(39.5)**	A (B) C **(E)**
8	Richmond Parkway/ Pittsburg Avenue	Signalized	AM PM	9.7 30.1	A C
9	Richmond Parkway/ Gertrude Avenue	Signalized	AM PM	18.4 **79.6**	B **E**
10	Castro Street/ Hensley Street	Signalized	AM PM	5.7 28.8	A C
11	Richmond Parkway/ Hensley Street	Signalized	AM PM	15.5 34.4	B C
12	Richmond Parkway/ West Barrett Avenue	Signalized	AM PM	11.5 8.8	B A
13	Richmond Parkway/ West Macdonald Avenue	Signalized	AM PM	4.7 5.3	A A
14	Richmond Pkwy-Canal Blvd/ S. Garrard Blvd-W. Ohio Avenue	Signalized	AM PM	16.3 24.4	B C
15	Canal Boulevard/ I-580 WB Ramps	Signalized	AM PM	8.9 17.8	A B
16	Canal Boulevard/ I-580 EB Ramps	Signalized	AM PM	27.6 14.9	C B
17	Castro Street/ I-580 WB Ramps	Signalized	AM PM	**59.1** 22.2	**E** C
18	Fred Jackson Way/ Market Avenue	All-Way Stop-Controlled	AM PM	9.0 16.0	A C

Notes: **Bold** indicates unacceptable intersection operations.

1. For side-street stop-controlled intersections, delay is presented for intersection average (worst movement).
2. LOS = Level of Service per 2010 HCM methodologies

Source: Fehr & Peers, 2020.

2.7 Peak Hour Signal Warrant

The Peak Hour Signal Warrant (Warrants 3A and 3B) from the *California Manual on Uniform Traffic Control Devices* (CA MUTCD) was used to evaluate unsignalized intersections that operate unacceptably under Existing Conditions to determine if a traffic signal is warranted. Peak hour signal warrants conducted at the Fred Jackson Way/Parr Boulevard intersection (#7) in the Existing Conditions scenario indicates that both Warrants 3A and 3B are met at the intersection in the PM peak hour under Existing Conditions. Signal warrant worksheets are provided in **Appendix D**.

3. Project Trip Estimates

This chapter provides an overview of the proposed project components and addresses the proposed project trip generation, trip distribution, and trip assignment characteristics. These items allow for an evaluation of project effects on the surrounding roadway network. The amount of project traffic estimated to be added to the transportation system after completion of the project was estimated using a three-step process:

1. **Trip Generation** – The *amount* of vehicle traffic entering/exiting the site was estimated.
2. **Trip Distribution** – The *directions* of trips to compatible land uses and their general routes of approach/departure to the project site were identified.
3. **Trip Assignment** – Trips were then *assigned* to specific roadway segments and intersection turning movements based on likely paths of travel.

3.1 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. Project trip generation estimates are prepared for the one-hour peak period during the weekday morning and evening commute when traffic volumes on the adjacent streets are typically the highest. The trip generation analysis assumes no interaction between the two buildings, even though the two uses (warehousing/distribution center and parcel delivery hub) could interact with one another.

The trip generation estimates for Building 1 were prepared using data from the Institute of Transportation Engineers' *Trip Generation Manual, 10th Edition*. Based on the assumed warehouse/distribution center land use type, data from Land Use Code 154 – High-Cube Transload and Short-Term Storage Warehouse was used. This approach is consistent with other studies analyzing proposed warehouse/distribution center projects in the North Richmond area.

The project applicant provided operating characteristics for Building 2, shown in **Appendix C**. The project operating characteristics data is specific to operations at Building 2. The *ITE Trip Generation Manual, 10th Edition* notes that site-specific trip generation data should be used in cases where evidence exists that a site will include unique operations not reflected in the underlying trip generation dataset in the *Manual*. Although the Building 2 parcel delivery processing center does not plan to operate at full build out until after year 2025, the effect of the full build-out of the project is analyzed in this report. It is noted that the Building 2 trip generation rates are substantially higher than the trip generation rates for Building 1, which is a function of the pre-identified tenant for Building 2, versus the unknown tenant(s) for Building 1.

Truck and other heavy vehicle trips are expected to account for approximately 32.2 percent of daily vehicle trips[4] for Building 1. The number of heavy vehicle trips for Building 2 are based on the project operating characteristics data provided in **Attachment C**. As noted in the 2010 *Highway Capacity Manual*, truck and other heavy vehicle trips should be converted to passenger car equivalents (PCEs) using a factor of 2.0 PCEs per truck or heavy vehicle. For package and delivery vans (usually classified as a "medium truck"), a factor of 1.5 PCEs per package/delivery van was used as a conservative assumption; based on the performance characteristics (smaller vehicle size, better acceleration and deceleration performance, etc.) of these vehicles, a PCE equivalency factor lower than 1.5 is justified.

Vehicle trip generation estimates for the full build-out of the project are presented in **Table 5**. At buildout, the project is anticipated to add 2,295 weekday daily trips, 405 AM peak hour trips and 396 PM peak hour vehicle trips (all trip values measured in passenger car equivalents) to the roadway network. The proposed project is expected to generate approximately 585 daily truck trips, of which 109 would occur during the AM peak hour and 78 would occur during the PM peak hour. In the table below, the base value of the truck trips is included in the land use line item, while the additional PCEs required to be added to the trip generation calculation to reflect the trips are included in the PCE Adjustment line item. For example, Building 1 generates 170 total vehicle trips per day (as measured in absolute vehicles) and 225 PCEs.

[4] Truck data per *High Cube Warehouse Vehicle Trip Generation Analysis,* Institute of Transportation Engineers, October 2016

Table 5: Project Trip Generation

Vehicle Type	Daily	Weekday AM Peak Hour			Weekday PM Peak Hour		
		In	Out	Total	In	Out	Total
Building 1 – Warehouse/Distribution Uses (Estimated using ITE Trip Generation Manual 10th Edition[1])							
Total Vehicles (67.8% automobiles, 32.2% trucks)[1]	170	12	3	15	7	13	20
Passenger Car Equivalency Adjustment[2]	+55	4	1	5	3	4	7
Total Building 1 Net New Trips:	**225**	**16**	**4**	**20**	**10**	**17**	**27**
Building 2 – Parcel Distribution Center (Estimated using data from Project Applicant – See Attachment C)							
Automobiles	1,220	126	102	228	110	150	260
Package & Delivery Vans (PCE = 1.5)	420	37	67	104	67	0	67
Passenger Car Equivalency Adjustment[2]	+210	+19	+34	+53	+34	+0	+34
Spot Trailers (PCE = 2.0)	60	0	0	0	1	2	3
Passenger Car Equivalency Adjustment[2]	+60	+0	+0	+0	+1	+2	+3
Linehaul Trucks (PCE = 2.0)	50	0	0	0	1	0	1
Passenger Car Equivalency Adjustment[2]	+50	+0	+0	+0	+1	+0	+1
Total Building 2 Net New Trips:	**2,070**	**182**	**203**	**385**	**215**	**154**	**369**
Total Full Project Net New Trips:	***2,295***	***198***	***207***	***405***	***225***	***171***	***396***

Notes:

1. Trip generation and mode split estimated using data from the Institute of Transportation Engineers' *Trip Generation Manual, 10th Edition*, using Land Use Code 154 – High-Cube Transload and Short-Term Storage Warehouse
2. Passenger Car Equivalent (PCE) is a metric used to assess the impact of a mode as compared to a single car.
   Truck trips = 2.00 passenger car trips (*Highway Capacity Manual*).
   Package/Delivery van trips = 1.5 passenger car trips (used as a conservative assumption).

Source: Fehr & Peers, 2020; Project applicant, 2018.

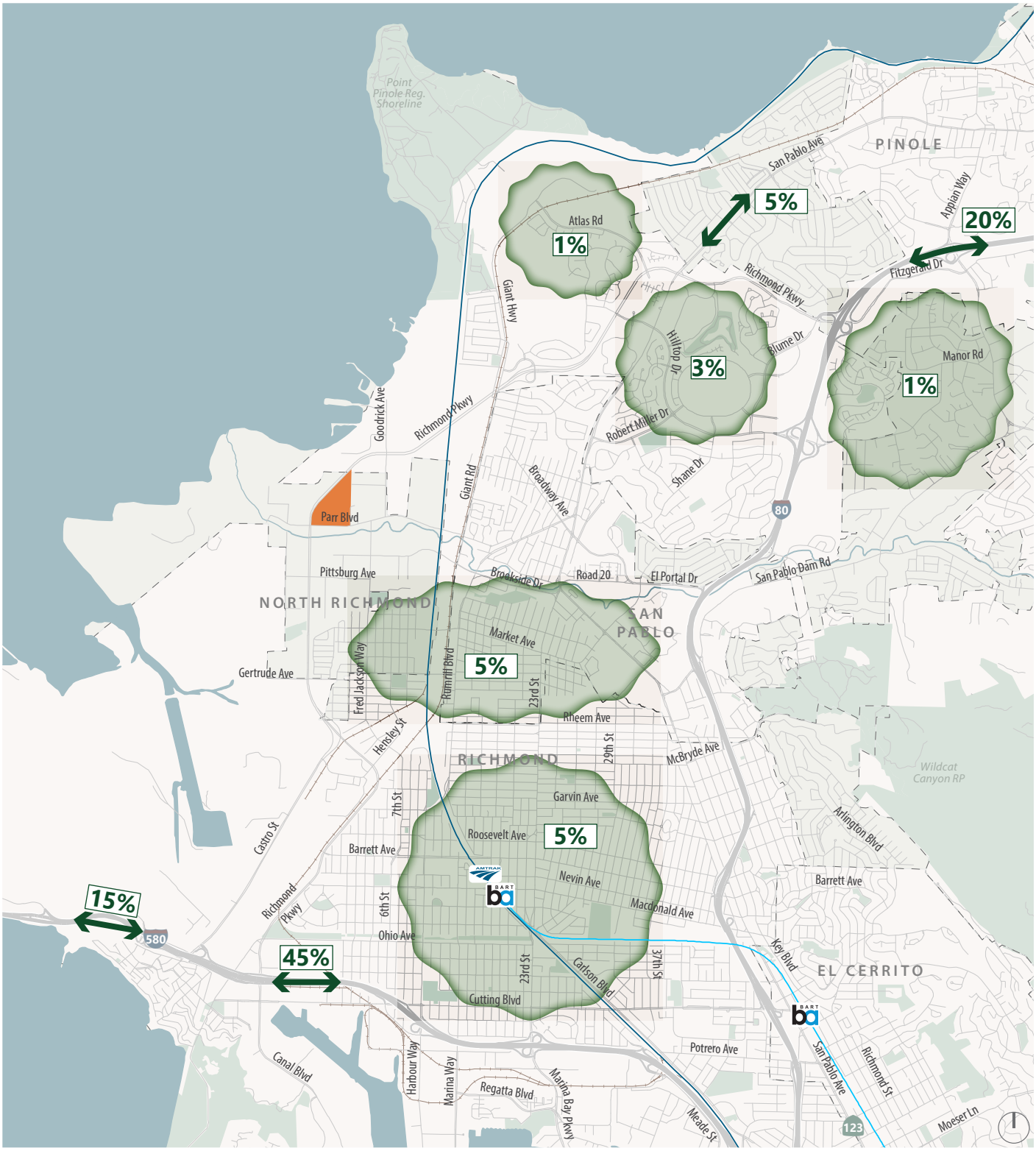
3.2 Project Trip Distribution & Assignment

Project trip distribution refers to the directions of approach and departure that vehicles would take to access and leave the site. A set of project trip distribution assumptions were developed based on existing travel patterns in the study area, the trip making characteristics of the proposed project, and the location of complementary land uses. The resulting trip distribution is shown on **Figure 6**. This trip distribution is similar to the trip distribution pattern assumed for other recently completed TIAs for distribution-related uses in the North Richmond industrial area.

While project trip distribution provides information regarding large-scale trip patterns, project trip assignment refers to project trip loading on specific roadway segments and intersection turning movements in the study area. As trucks account for a large percentage of the vehicle trip generation, the project trip assignment accounts for the designated truck routes in the area.

Truck access in California is regulated through Federal and State Law. The (Federal) Surface Transportation Assistance Act (STAA) governs the movement of trucks and trailers with specific combinations, lengths and widths. An STAA access application was approved by Caltrans as noted in an April 13, 2018 letter from Caltrans to the City of Richmond, deeming that that the I-80/Richmond Parkway interchange, the I-580 Castro Street interchange, the Richmond Parkway corridor between I-80 and I-580, and Parr Boulevard between Richmond Parkway and the project access points are geometrically adequate to accommodate STAA truck access. **Figure 7** presents the roadways that provide STAA and California Legal truck access. Through trucks are prohibited on Richmond Parkway between Castro Street and Ohio Avenue.

The PCE vehicle trips were used in the project trip assignment shown on **Figure 8**.



Project Site

X% Project Trip Distribution

Figure 6

Scannell North Richmond

Project Trip Distribution

Project Site

National Network (I-80 and I-580)

STAA Terminal Access

California Legal Routes

Trucks Prohibited

STAA Terminal Access Approved on 4/13/2018

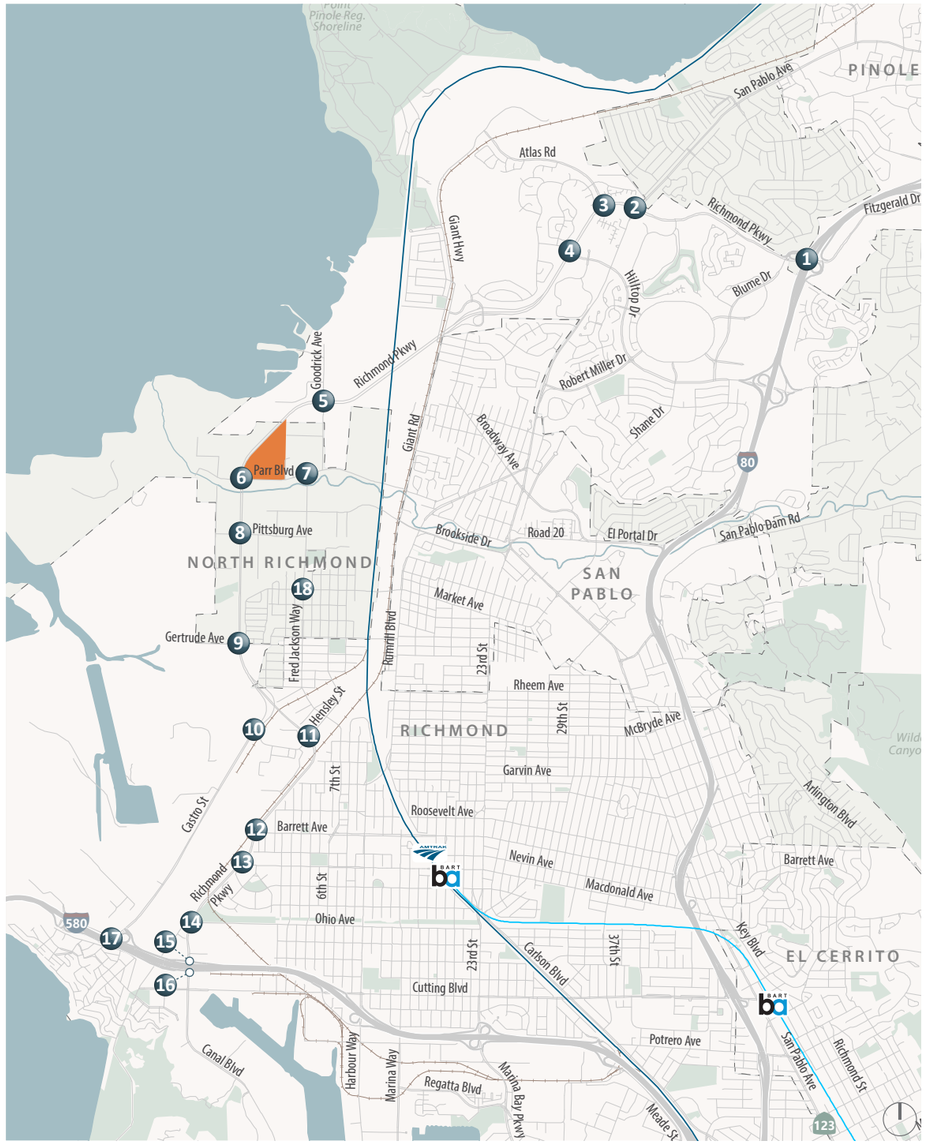
Through Trucks Restricted by Weight Limit

Figure 7

Scannell North Richmond

Project Truck Access, STAA Access and California Legal Through Truck Routes

Scannell_WC19-3663.00_7_TruckRts



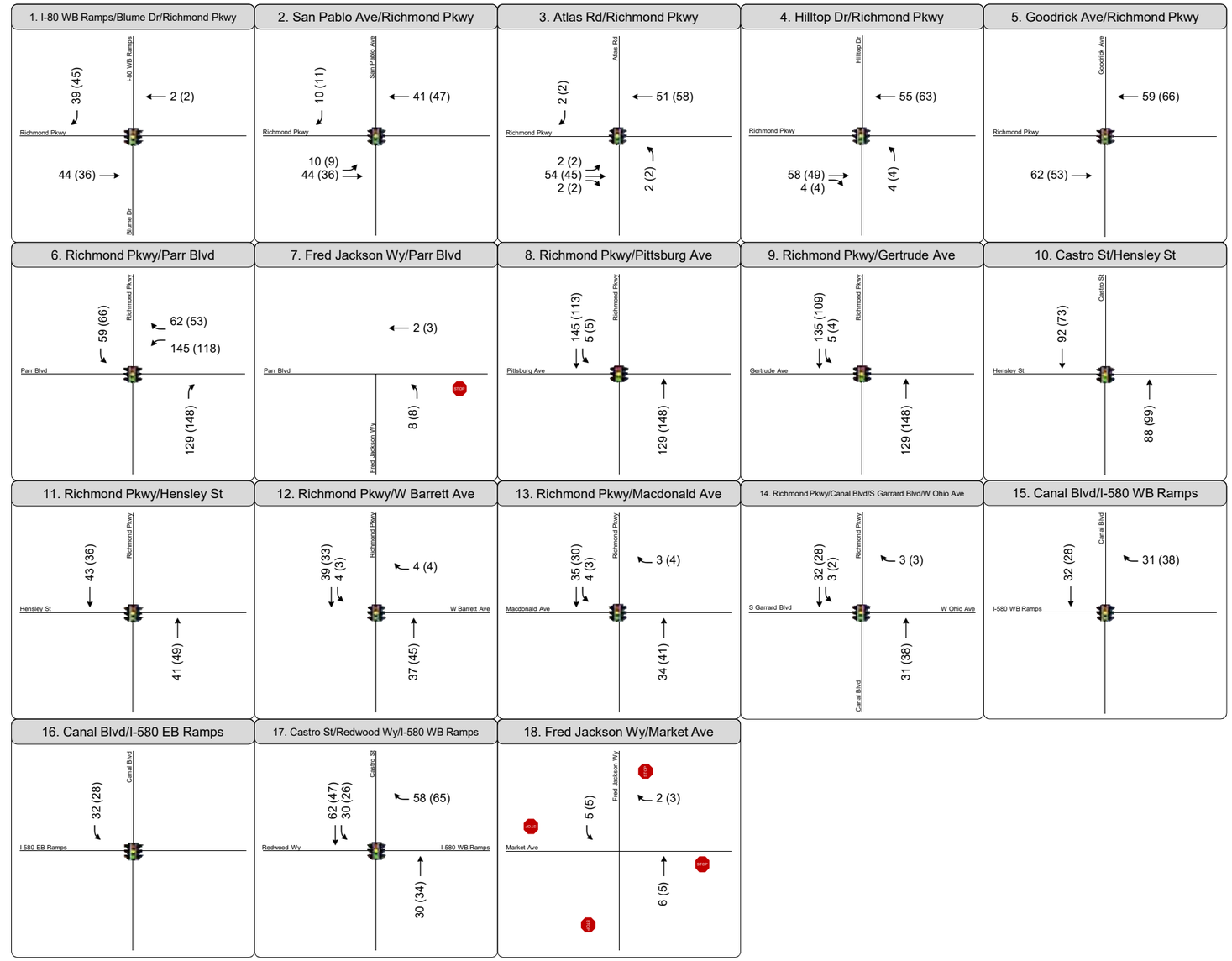
XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Project Site

Study Intersection



Note: Project trips are shown in units of passenger car equivalents (PCEs)

Figure 8

Scannell North Richmond Project Trip Assignment

4. Existing with Project Conditions

This chapter evaluates potential VMT and multimodal impacts under Existing with Project Conditions. This chapter also includes an evaluation of the project's effect on intersection operations under Existing with Project Conditions.

4.1 Project Effect on Vehicle-Miles Traveled

CEQA Guidelines §15064.3 and OPR's *Technical Advisory* provides guidance on the methodologies that could be used to assess a project's effect on VMT. The CCTA travel demand model was considered for use in the analysis of the project's effect on VMT. However, given the availability of LBS trip length data (presented in **Section 2.5**) and the project's location on an undeveloped parcel of land, it was determined that multiplying the weekday trip generation estimate in **Table 5** by the trip length data in **Section 2.5** would be a superior estimate of the project's effect on VMT. As the project site is located on an undeveloped parcel of land and the project will create new jobs, it is anticipated that the project's effect on VMT would be nearly identical to the VMT generated by the project.

Table 6 presents the results of the VMT calculation for the proposed project. The VMT calculation does not include a truck/PCE adjustment as the calculation is not used in the intersection operations analysis, and thus the trip values in **Table 6** vary from the estimates in **Table 5** that are used in the operations analysis.

Table 6: Project VMT Generated

Vehicle Type	Daily Trips[1]	Average Distance (One-Way)	VMT
Building 1 – Warehouse/Distribution Uses			
Automobiles	115	20.53	2,361
Heavy Vehicles	55	28.61	1,574
Total – Building 1 (Rounded)	**170**	--	**3,940**
Building 2 – Parcel Distribution Center			
Automobiles	1,220	20.53	25,050
Package and Delivery Vans	420	20.53	8,624
Spot Trailers	60	28.61	1,716
Linehauls	50	28.61	1,430
Total – Building 2 (Rounded)	**1,750**	**--**	**36,820**
Total Scannell Project	***1,920***	**--**	***40,760***

Notes:
1. Passenger car equivalency adjustment is not required for VMT calculation.
Source: Fehr & Peers, 2020

As noted in **Section 1.5**, the proposed project would result in a significant CEQA Transportation impact if the project's employee-based, home-based work (HBW) trip VMT per employee is greater than 15 percent below the nine-county MTC average for employment uses in the San Francisco Bay Area. As presented in **Section 1.5**, 15 percent below the average nine-county MTC average HBW VMT per worker is 12.75 HBW trip VMT per worker. Given that the LBS-estimated average one-way trip length for automobile trips generated by the project is over 20 miles, the project would be in excess of 15 percent below the nine-county MTC average, thus the project's effect on VMT would result in a **significant impact**. Mitigation measures to alleviate this impact are proposed in **Chapter 7**.

4.2 Transit Impacts

Fixed-route bus service operates about 1.0 miles away from the site; the nearest stop is beyond the typical walking distance for trips to/from a transit stop. While the project would generate new demand for the transit services and facilities that serve the area, transit system and vehicle capacities are not expected to be exceeded. Therefore impacts to transit are ***less-than-significant***.

4.3 Pedestrian and Bicycle Impacts

The proposed project would result in increased pedestrian trips at the Richmond Parkway/Pittsburg Avenue intersection. Pedestrian impacts are ***less-than-significant*** as the project is not anticipated to degrade the off-site pedestrian network. Recommendations to improve the on-site pedestrian network (including on the project frontages) are discussed in **Chapter 6**.

Bicycle access for the site is primarily through an existing Class I bike facility along Richmond Parkway. The project design would not eliminate bicycle facilities that connect to the area circulation system, does not conflict with existing or planned bicycle facilities, nor would it create a hazardous condition for bicyclists. Therefore, the impacts to bicyclists are ***less-than-significant.***

It is noted that the Fred Jackson Way First Mile/Last Mile Connection project was recently established by the County. The Project applicant shall coordinate with County Public Works staff to ensure that proposed plans do not conflict with this County project.

4.4 Intersection Level of Service

Existing with Project Conditions peak hour intersection turning movement volumes are shown on **Figure 9.** These volumes were derived by adding the Existing Conditions traffic volumes presented on **Figure 5** and the Project Trip Assignment volumes presented on **Figure 8**.

Existing traffic signal timings, peak hour factors, heavy vehicle percentages, and pedestrian and bicycle activity at the study intersections were assumed to remain the same as current conditions in the Existing

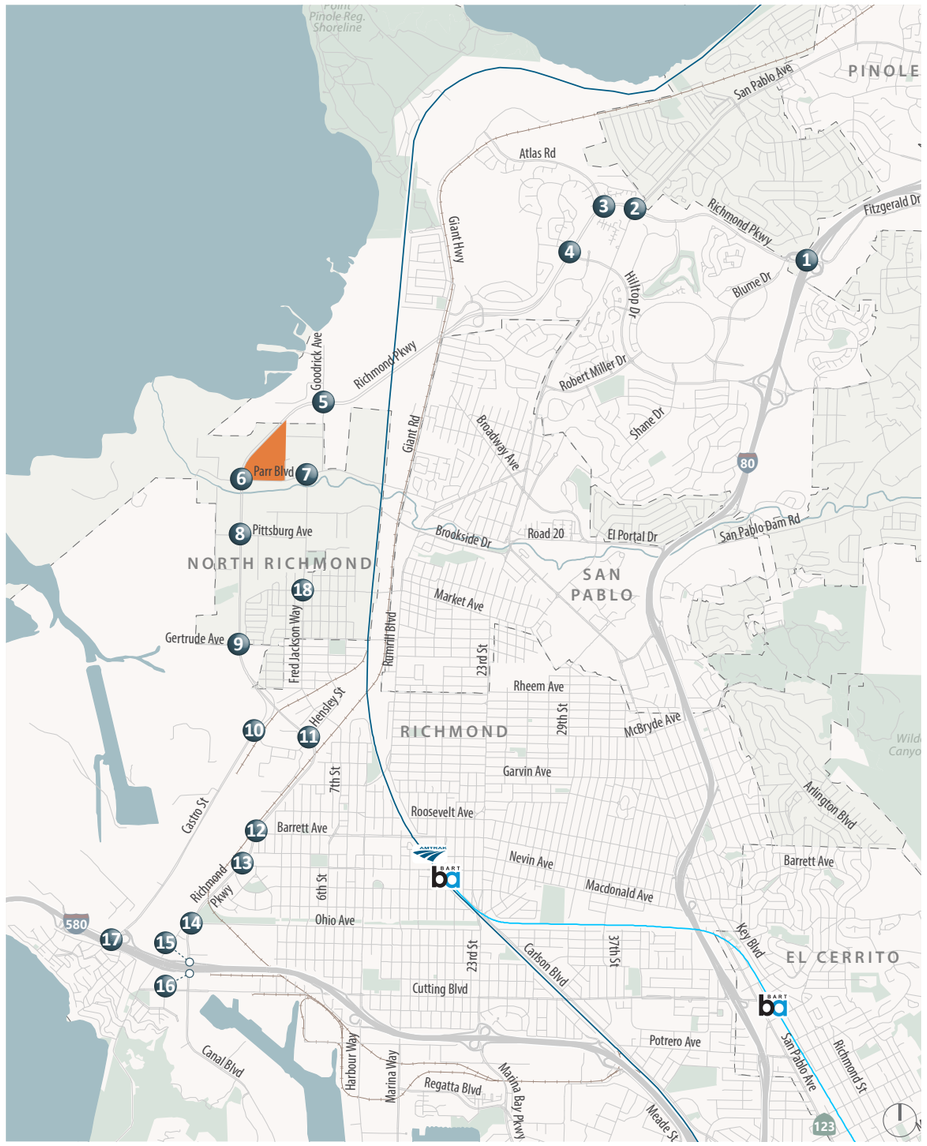
with Project Conditions scenario, except at Intersection #7. At Intersection #7 (Fred Jackson Way/Parr Boulevard), the project applicant has proposed the installation of a traffic signal at this location as part of the project. Therefore, the intersection analysis assumes the conversion of the intersection control device at this location from side-street stop-control to a signal as part of the project. The County Traffic Engineer must review and approve plans for this traffic signal prior to construction.

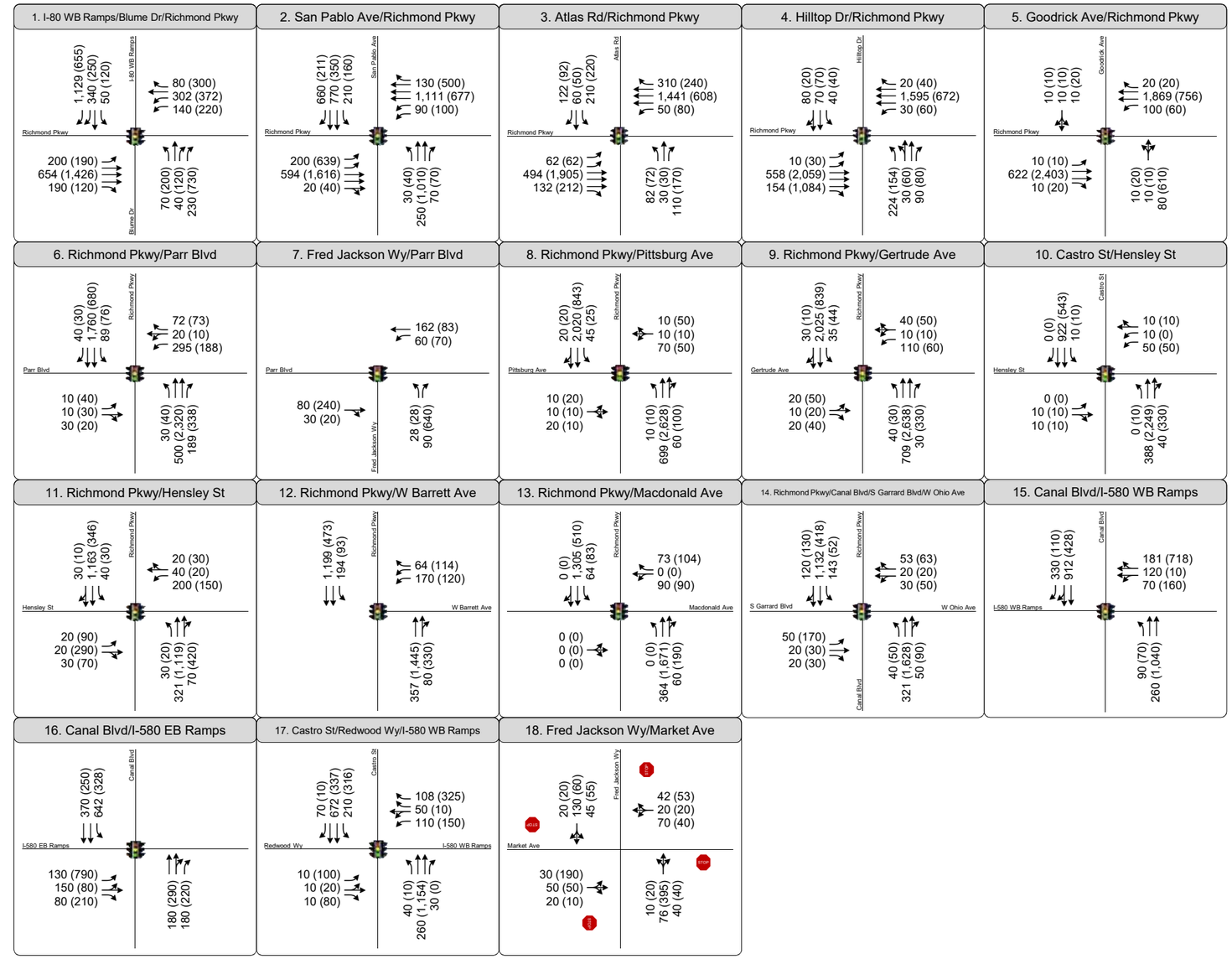
Table 7 presents the Existing with Project Conditions intersection LOS results. Detailed intersection LOS calculation worksheets are provided in **Appendix B**.

The results of the LOS calculations indicate that the majority of the study intersections would operate at acceptable LOS D or better with the addition of project traffic. The following four study intersections do not meet their respective LOS designation under Existing with Project Conditions.

- Intersection #2 – Richmond Parkway/San Pablo Avenue: LOS E in the PM peak hour
- Intersection #5 - Richmond Parkway/Goodrick Avenue: LOS F in the PM peak hour
- Intersection #9 - Richmond Parkway/Gertrude Avenue: LOS E in the PM peak hour
- Intersection #17 – Castro Street/I-580 Westbound Ramps: LOS E in the AM peak hour

The project would not result in any new deficiencies, but the project would cause a substantial adverse effect on intersection operations at two of these intersections, which are discussed in the next section. At the other two intersections, the project would increase the intersection delay by less than 5.0 seconds; therefore, the effect of the project at these intersections is not substantial**.**





XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Project Site

Study Intersection

Figure 9

Existing with Scannell Project Peak Hour
Intersection Traffic Volumes, Lane Configurations and Traffic Controls

Table 7: Existing with Project Conditions - Peak Hour Intersection Levels of Service

Intersection		Existing with Project Control	Peak Hour	Existing Conditions		Existing with Project Conditions		
				Delay[1]	LOS[2]	Delay[1]	LOS[2]	Δ Delay[3]
1	Richmond Parkway/ I-80 WB Ramps-Blume Drive	Signalized	AM PM	54.4 42.4	D D	54.1 42.4	D D	-0.3 +0.0
2	Richmond Parkway/ San Pablo Avenue	Signalized	AM PM	44.2 **61.9**	D **E**	45.3 **62.1**	D **E**	+1.1 **+0.2**
3	Richmond Parkway/ Atlas Road	Signalized	AM PM	23.8 33.0	C C	24.0 33.4	C C	+0.2 +0.4
4	Richmond Parkway/ Hilltop Drive	Signalized	AM PM	13.6 18.2	B B	13.7 18.4	B B	+0.1 +0.2
5	Richmond Parkway/ Goodrick Avenue	Signalized	AM PM	6.5 **132.0**	A **F**	6.8 **139.2**	A **F**	+0.3 **+7.2**
6	Richmond Parkway/ Parr Boulevard	Signalized	AM PM	16.4 17.9	B B	33.9 47.2	C D	+17.5 +29.3
7	Fred Jackson Way/ Parr Boulevard	Signalized[4]	AM PM	3.6 (12.5) **24.4 (39.5)**	A (B) **C (E)**	6.7 13.5	A B	N/A
8	Richmond Parkway/ Pittsburg Avenue	Signalized	AM PM	9.7 30.1	A C	11.0 42.5	B D	+1.3 +12.4
9	Richmond Parkway/ Gertrude Avenue	Signalized	AM PM	18.4 **79.6**	B **E**	24.1 **100.6**	C **F**	+5.7 **+21.0**
10	Castro Street/ Hensley Street	Signalized	AM PM	5.7 28.8	A C	5.4 37.8	A D	-0.3 +9.0
11	Richmond Parkway/ Hensley Street	Signalized	AM PM	15.5 34.4	B C	15.5 38.0	B D	+0.0 +3.6
12	Richmond Parkway/ West Barrett Avenue	Signalized	AM PM	11.5 8.8	B A	11.5 9.1	B A	+0.0 +0.3
13	Richmond Parkway/ West Macdonald Avenue	Signalized	AM PM	4.7 5.3	A A	4.7 5.1	A A	+0.0 -0.2

Table 7: Existing with Project Conditions - Peak Hour Intersection Levels of Service

Intersection		Existing with Project Control	Peak Hour	Existing Conditions		Existing with Project Conditions		
				Delay[1]	LOS[2]	Delay[1]	LOS[2]	Δ Delay[3]
14	Richmond Pkwy-Canal Blvd/ S. Garrard Blvd-W. Ohio Avenue	Signalized	AM PM	16.3 24.4	B C	16.5 25.2	B C	+0.2 +0.8
15	Canal Boulevard/ I-580 WB Ramps	Signalized	AM PM	8.9 17.8	A B	8.8 20.5	A C	-0.1 +2.7
16	Canal Boulevard/ I-580 EB Ramps	Signalized	AM PM	27.6 14.9	C B	34.5 15.9	C B	+6.9 +1.0
17	Castro Street/ I-580 WB Ramps	Signalized	AM PM	**59.1** 22.2	**E** C	**58.0** 23.9	**E** C	**-1.1** +1.7
18	Fred Jackson Way/ Market Avenue	All-Way Stop Controlled	AM PM	9.0 16.0	A C	9.0 16.3	A C	+0.0 +0.3

Note: **Bold** indicates unacceptable intersection operations. Results in **Bold and Highlighted** indicates a substantial adverse effect on intersection operations.

1. For side-street stop-controlled intersections, delay is presented for intersection average (worst movement).
2. LOS = Level of Service per 2010 HCM methodologies
3. Change in delay at intersection between Existing with Project and Existing Conditions
4. Intersection is proposed to be signalized by the project applicant as a project-sponsored improvement.

Source: Fehr & Peers, February 2020.

4.5 Intersection Substantial Adverse Effects

Based on the criteria listed in **Section 1.4**, the proposed project is projected to have a substantial adverse effect on intersection operations at two study intersections within the study area during the peak hours.

City of Richmond Intersections

- *Richmond Parkway/Goodrick Avenue (Intersection #5)* – The addition of project traffic under Existing with Project Conditions exacerbates unacceptable intersection operations (LOS F without the project) by increasing the average delay at the study intersection by more than 5.0 seconds during the PM peak hour. Therefore the project causes a **substantial adverse effect**.

Improvement measures to alleviate the substantial adverse effect are presented in **Chapter 7**.

- *Richmond Parkway/Gertrude Avenue (Intersection #9)* – The addition of project traffic under Existing with Project Conditions exacerbates unacceptable intersection operations (LOS E without the project) by increasing the average delay at the study intersection by more than 5.0 seconds during the PM peak hour. Therefore the project causes a **substantial adverse effect**.

Improvement measures to alleviate the substantial adverse effect are presented in **Chapter 7**.

Intersections not Substantially Adversely Affected

All other study intersections operate acceptably after the addition of project trips or, for locations that operate unacceptably under Existing Conditions, the increase in delay at the intersection after the addition of project trips would be less than 5.0 seconds; therefore, the effect of the project at these intersections is not substantial based on the evaluation criteria**.**

4.6 Neighborhood Cut-Through Traffic

Signage on the roadways in the neighborhood prohibit trucks on residential streets in North Richmond. Residents of the neighborhood have expressed concern with regards to truck traffic cutting through the neighborhood. The proposed project would result in approximately 585 daily truck trips, and, while countermeasures have been proposed to prevent truck trips traveling through the neighborhood, some trucks may use local streets rather than the designated truck routes to reach their destination. In general, trips to/from I-80 and I-580 are expected to use Richmond Parkway, which is a high speed roadway (50 mph expressway) with shorter travel times using alternative routes through the residential streets.

In 2017, the Contra Costa County Public Works Department updated the North Richmond Area of Benefit (AOB) traffic mitigation fee program to require new developments within North Richmond to contribute towards traffic calming strategies in North Richmond to reduce cut-through truck traffic in the neighborhood. These improvements also have a parallel benefit of improving neighborhood aesthetics and promoting pedestrian and bicyclist safety. A project's contribution is calculated formulaically based on the type and size of the development.

Based on the entitlements process for other projects in the North Richmond area, the project would be required to pay the AOB fee. This payment would go towards the completion of eleven proposed projects. The project applicant must pay the AOB fee and/or construct agreed-upon safety improvements prior to occupancy of the project. Consistent with other recently-approved projects in the North Richmond area, the project shall construct one off-site traffic calming device in the North Richmond area to deter cut-through traffic in the residential neighborhood. The cost of the off-site traffic calming device would be eligible as work completed in lieu of fee obligations for the AOB fee (i.e. the project application would be provided credit towards the fee obligation).

The applicant shall construct one off-site traffic calming improvement intended to deter truck traffic from cutting through the local neighborhood to the south of the project site. These traffic calming measures may include, but are not limited to, improvements such as bulbouts, elevated crosswalks, speed tables, or chicane on the main routes of Fred Jackson Way, Market Avenue and Chesley Avenue. The application should develop the traffic calming measure(s) to the approval of the Public Works Department.

Installation of these off-site improvements would be in addition to any improvements made on the Parr Boulevard or Richmond Parkway project frontages resulting from the findings of other analyses in this report.

Additionally, the following recommendation may discourage truck trips from traveling through the neighborhood:

- *Driveway Modifications*: The project site plan shall include modifications to the driveways and driveway access intersections along Parr Boulevard to include medians and curb bulb-outs that physically prohibit vehicles from turning left out of the project driveways onto eastbound Parr Boulevard towards Fred Jackson Way (see **Figure 2**). Signage prohibiting the left turn movement out of the driveway shall also be provided.

5. Cumulative Conditions

This chapter presents the results of the intersection LOS calculations under Cumulative without Project and Cumulative with Project Conditions in addition to CEQA impacts to the multimodal transportation system. Cumulative without Project Conditions are defined as existing volumes plus traffic generated by planned local and regional growth to occur by 2040 that would affect the transportation system in the study area. The basis for the growth projections are the Year 2040 employment and housing projections from Plan Bay Area. Cumulative with Project Conditions are defined as Cumulative without Project Conditions plus traffic generated by the proposed project.

5.1 Cumulative Forecasts and Assumptions

Cumulative without Project traffic volumes were calculated based on data extracted from the Contra Costa Transportation Authority (CCTA) travel demand model. An annual linear growth rate was calculated for the AM and PM peak hours based on a comparison between the 2018 (after the Richmond-San Rafael Bridge shoulder running lane project opened) and 2040 CCTA travel demand models. The study area roadway network was segmented based on regional roadway termini, and annual linear growth rates were estimated for each of the following segments for the AM and PM peak hours:

1. Richmond Parkway between I-80 and San Pablo Avenue (2.0%/1.0% per year (AM/PM))
2. Richmond Parkway between San Pablo Avenue and Castro Street (1.0%/2.0% per year)
3. Richmond Parkway between Castro Street and I-580 (1.0%/1.5% per year)
4. Castro Street between Richmond Parkway and I-580 (0.5%/1.5% per year)
5. San Pablo Avenue north of Richmond Parkway (0.5%/1.0% per year)
6. San Pablo Avenue south of Richmond Parkway (2.0%/0.5% per year)
7. Fred Jackson Way and Rumrill Boulevard (1.0%/1.0% per year)

In addition to the traffic volume growth as estimated by the CCTA travel demand model, trips from the following recently approved and pending local area projects were added to the forecasts as these local area projects were not represented in the model:

- 500 Pittsburg Avenue: Approximately 500,000 square feet of warehouse/distribution center
- Shea Properties Eco-Industrial Center: Approximately 537,000 square feet of office at the northeast corner of Richmond Parkway/Goodrick Avenue
- CenterPoint project: Approximately 522,700 square feet of warehouse/distribution center located at the southeast corner of Fred Jackson Way/Brookside Drive

Similar to the analysis of the Scannell project, the passenger car equivalent (PCE) trips for these three projects were analyzed.

The Cumulative scenarios include one future roadway improvement at the Richmond Parkway/Goodrick Avenue intersection (#5) that is currently under construction. The improvement would restripe the northbound Goodrick Avenue approach to one shared left turn-through lane and one right-turn pocket with a right-turn overlap phase.

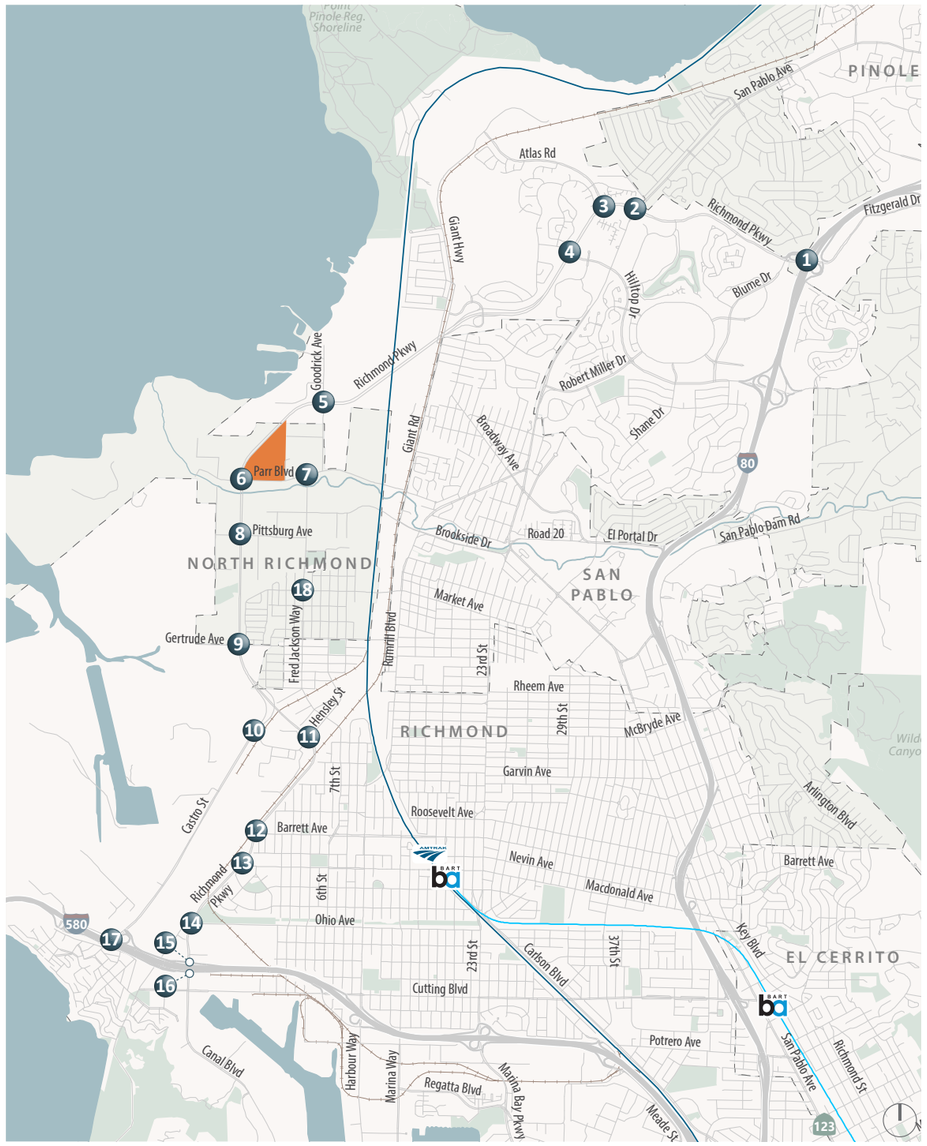
Cumulative without Project Conditions peak hour intersection turning movement volumes are shown on **Figure 10**. Cumulative with Project Conditions peak hour intersection turning movement volumes are shown on **Figure 11**.

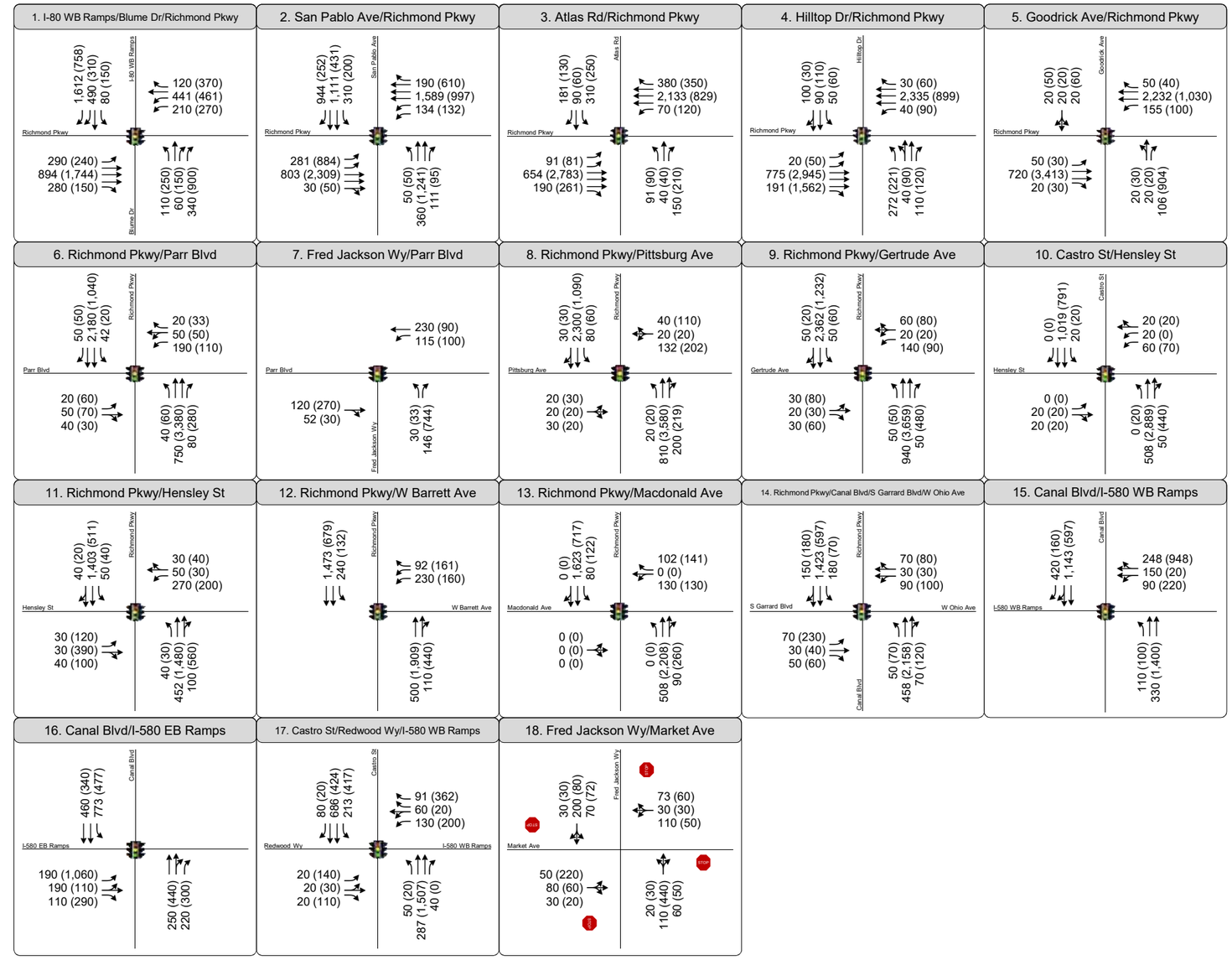
5.2 Intersection Level of Service

Existing heavy vehicle percentages, and pedestrian and bicycle activity at the study intersections are assumed to remain consistent in the Cumulative without Project and Cumulative with Project scenarios.

Consistent with previous studies in the North Richmond area, traffic signal timings were optimized at intersections where the Cumulative without Project Conditions analysis indicated LOS E or LOS F operations; signal timings for intersections near capacity are regularly updated to better accommodate actual travel demand. Peak hour factors at intersections operating near or at capacity were increased to 0.98. **Table 8** presents the Cumulative without Project and Cumulative with Project intersection level of service results. Detailed intersection LOS calculation worksheets are provided in **Appendix B**.

The results of the LOS calculations indicate that the majority of the study intersections will not operate at acceptable LOS D or better.





XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

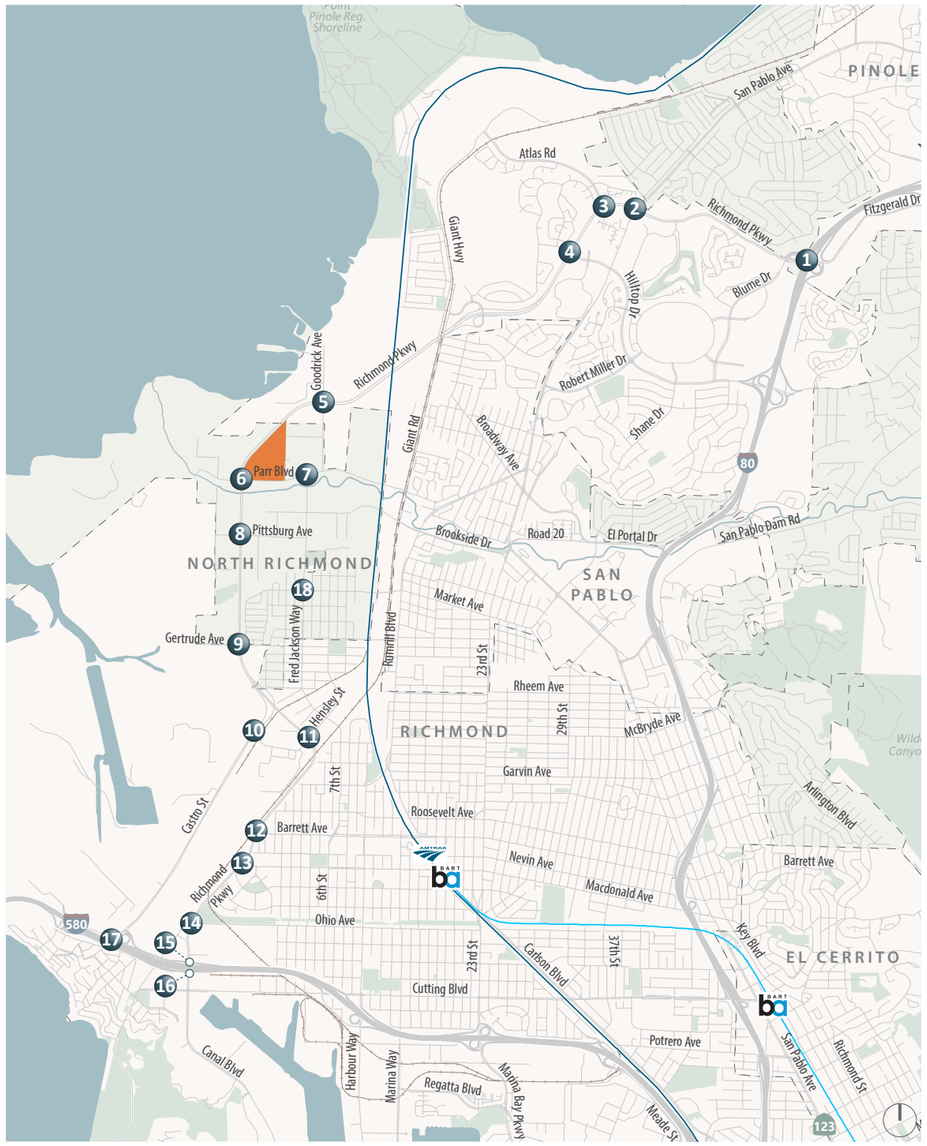
Stop Sign

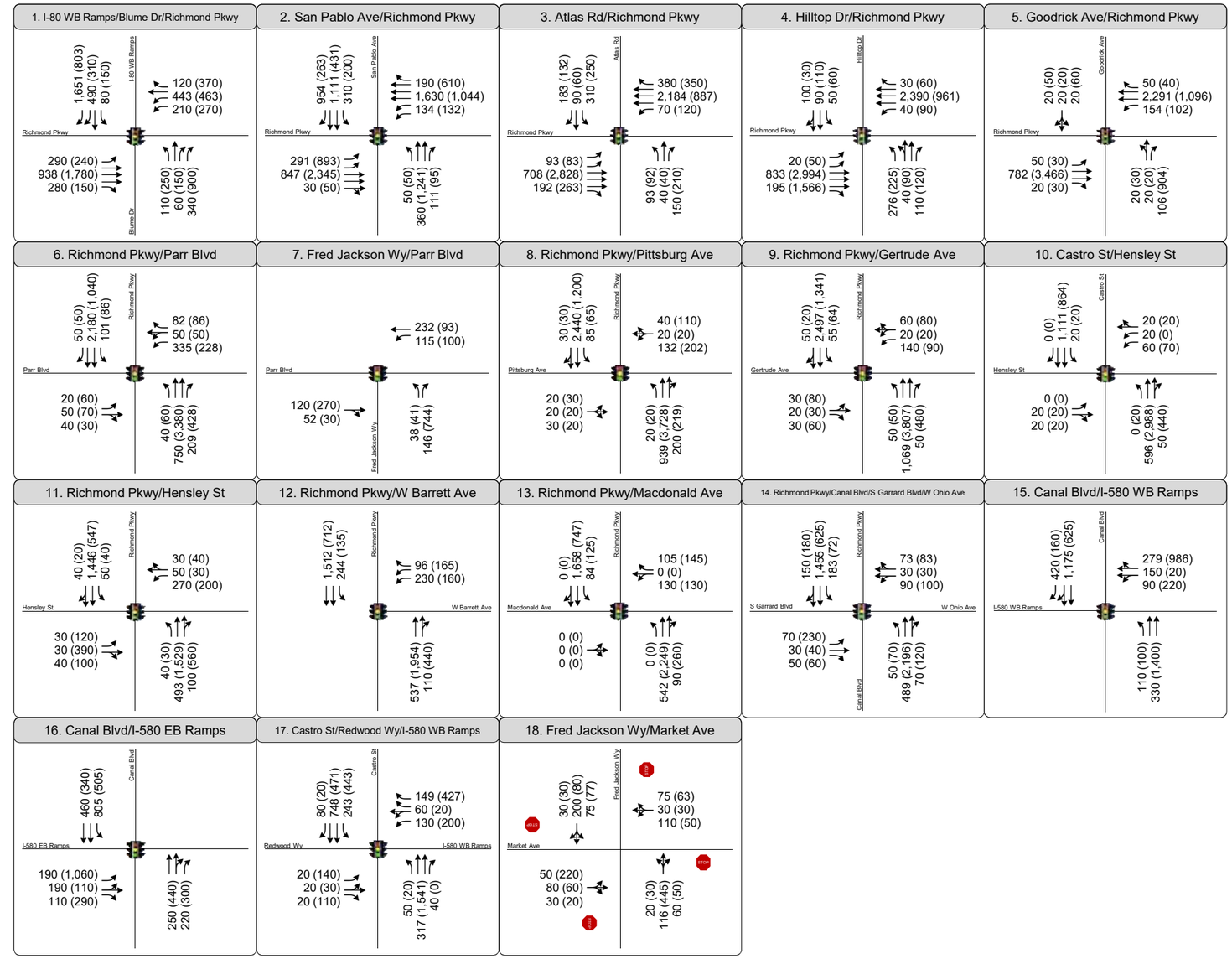
Project Site

Study Intersection

Figure 10

Cumulative without Scannell Project Peak Hour
Intersection Traffic Volumes, Lane Configurations and Traffic Controls





XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

Project Site

Study Intersection

Figure 11

Cumulative with Scannell Project Peak Hour
Intersection Traffic Volumes, Lane Configurations and Traffic Controls

Table 8: Cumulative Conditions - Peak Hour Intersection Levels of Service

Intersection		Control	Peak Hour	Cumulative without Project Conditions		Cumulative with Project Conditions		
				Delay[1]	LOS	Delay[1]	LOS[2]	Δ Delay[3]
1	Richmond Parkway/ I-80 WB Ramps/Blume Drive	Signalized	AM	**88.8**	**F**	**93.6**	**F**	**+4.8**
			PM	52.0	D	52.2	D	+0.2
2	Richmond Parkway/ San Pablo Avenue	Signalized	AM	**121.6**	**F**	**123.8**	**F**	**+2.2**
			PM	**96.6**	**F**	**97.2**	**F**	**+0.6**
3	Richmond Parkway/ Atlas Road	Signalized	AM	44.5	D	45.6	D	+1.1
			PM	**116.0**	**F**	**120.7**	**F**	**+4.7**
4	Richmond Parkway/ Hilltop Drive	Signalized	AM	20.6	C	21.5	C	+0.9
			PM	**66.2**	**E**	**67.7**	**E**	**+1.5**
5	Richmond Parkway/ Goodrick Avenue	Signalized	AM	21.5	C	26.6	C	+5.1
			PM	**355.7**	**F**	**355.7****	**F**	**
6	Richmond Parkway/ Parr Boulevard	Signalized	AM	**67.8**	**E**	**82.1**	**F**	**+14.3**
			PM	**119.3**	**F**	**148.2**	**F**	**+28.9**
7	Fred Jackson Way/ Parr Boulevard	Signalized	AM	9.4	A	9.4	A	+0.0
			PM	22.3	C	22.2	C	-0.1
8	Richmond Parkway/ Pittsburg Avenue	Signalized	AM	44.5	D	**57.9**	**E**	**+13.4**
			PM	**256.2**	**F**	**274.7**	**F**	**
9	Richmond Parkway/ Gertrude Avenue	Signalized	AM	36.0	D	44.7	D	+8.7
			PM	**138.2**	**F**	**153.3**	**F**	**+15.1**
10	Castro Street/ Hensley Street	Signalized	AM	7.2	A	7.1	A	-0.1
			PM	**112.8**	**F**	**124.4**	**F**	**+11.6**
11	Richmond Parkway/ Hensley Street	Signalized	AM	23.3	C	24.2	C	+0.9
			PM	**121.5**	**F**	**129.2**	**F**	**+7.7**
12	Richmond Parkway/ West Barrett Avenue	Signalized	AM	12.6	B	12.8	B	+0.2
			PM	29.3	C	32.5	C	+3.2

Table 8: Cumulative Conditions - Peak Hour Intersection Levels of Service

Intersection		Control	Peak Hour	Cumulative without Project Conditions		Cumulative with Project Conditions		
				Delay[1]	LOS	Delay[1]	LOS[2]	Δ Delay[3]
13	Richmond Parkway/ West Macdonald Avenue	Signalized	AM	5.8	A	5.9	A	+0.1
			PM	27.5	C	31.8	C	+4.3
14	Richmond Pkwy/Canal Blvd/ S. Garrard Blvd/W. Ohio Avenue	Signalized	AM	25.5	C	25.9	C	+0.4
			PM	52.1	D	54.9	D	+2.8
15	Canal Boulevard/ I-580 WB Ramps	Signalized	AM	11.2	B	11.4	B	+0.2
			PM	**73.9**	**E**	**81.3**	**F**	**+7.4**
16	Canal Boulevard/ I-580 EB Ramps	Signalized	AM	35.0	D	41.8	D	+6.8
			PM	32.6	C	35.4	D	+2.8
17	Castro Street/ I-580 WB Ramps	Signalized	AM	**58.9**	**E**	**59.7**	**E**	+0.8
			PM	49.1	D	53.9	D	+4.8
18	Fred Jackson Way/ Market Avenue	All-Way Stop Controlled	AM	12.0	B	12.1	B	+0.1
			PM	28.4	D	29.8	D	+1.4

Notes: **Bold** indicates unacceptable intersection operations. Results in **Bold and Highlighted** indicates a substantial adverse effect on intersection operations.

1. For side-street stop-controlled intersections, delay is presented for intersection average (worst movement).
2. LOS = Level of Service per 2010 HCM methodologies
3. Change in delay at intersection between Cumulative with Project and Cumulative without Project Conditions

** indicates supersaturated/extremely congested operations in the Synchro model. The delay calculation may not be completely capturing additional delay at the intersection after the addition of project trips. Based on the limitations of the Synchro model and the amount of project trips added at the intersection, these locations have been identified as a location with a substantial adverse effect because the delay change is likely greater than 5.0 seconds.

Source: Fehr & Peers, 2020

5.3 Intersection Substantial Adverse Effects

Based on the criteria listed in **Section 1.4**, the proposed project is projected to have a substantial adverse effect on intersection operations at seven study intersections within the study area during the peak hours in the cumulative condition.

City of Richmond Intersections

- *Richmond Parkway/Goodrick Avenue (Intersection #5)* – The addition of project traffic under Cumulative with Project Conditions exacerbates unacceptable intersection operations (LOS F without the project) by increasing the average delay at the study intersection by more than 5.0 seconds during the PM peak hour. Therefore, the project causes a **substantial adverse effect**.
- *Richmond Parkway/Parr Boulevard (Intersection #6)* – The addition of project traffic under Cumulative with Project Conditions exacerbates unacceptable intersection operations (LOS F without the project) by increasing the average delay at the study intersection by more than 5.0 seconds during both the AM and PM peak hours. Therefore the project causes a **substantial adverse effect**.
- *Richmond Parkway/Pittsburg Avenue (Intersection #8)* – The addition of project traffic under Cumulative with Project Conditions exacerbates unacceptable intersection operations (LOS F without the project) by increasing the average delay at the study intersection by more than 5.0 seconds during the PM peak hour. Additionally, in the AM peak hour, the addition of project generated traffic results in operations degrading from an acceptable LOS D to an unacceptable LOS E. Therefore the project causes a **substantial adverse effect**.
- *Richmond Parkway/Gertrude Avenue (Intersection #9)* – The addition of project traffic under Cumulative with Project Conditions exacerbates unacceptable intersection operations (LOS F without the project) by increasing the average delay at the study intersection by more than 5.0 seconds during both the AM and PM peak hours. Therefore the project causes a **substantial adverse effect**.
- *Castro Street/Hensley Street (Intersection #10)* – The addition of project traffic under Cumulative with Project Conditions exacerbates unacceptable intersection operations (LOS F without the project) by increasing the average delay at the study intersection by more than 5.0 seconds during the PM peak hour. Therefore, the project causes a **substantial adverse effect**.
- *Richmond Parkway/Hensley Street (Intersection #11)* – The addition of project traffic under Cumulative with Project Conditions exacerbates unacceptable intersection operations (LOS F without the project) by increasing the average delay at the study intersection by more than 5.0 seconds during the PM peak hour. Therefore, the project causes a **substantial adverse effect**.

- *Canal Boulevard/I-580 Westbound Ramps (Intersection #15)* – The addition of project traffic under Cumulative with Project Conditions exacerbates unacceptable intersection operations (LOS E without the project) by increasing the average delay at the study intersection by more than 5.0 seconds during the PM peak hour. Therefore, the project causes a **substantial adverse effect**.

Improvement measures to alleviate the substantial adverse effects are presented in **Chapter 7**.

Intersections not Substantially Adversely Affected

All other study intersections operate acceptably after the addition of project trips or, for locations that operate unacceptably under Cumulative without Project Conditions, the increase in delay at the intersection after the addition of project trips would be less than 5.0 seconds; therefore, the effect of the project at these intersections is not substantial based on the evaluation criteria**.**

5.4 Project Effect on Vehicle-Miles Traveled

The amount of VMT generated by the proposed project is not anticipated to change versus Existing with Project Conditions. As noted previously, given the project's location on an undeveloped parcel of land, it is anticipated that the project's effect on VMT would be nearly identical to the VMT generated by the project. While current interpretations of SB 743 and CEQA Guidelines §15064.3 suggest that VMT should be analyzed using a near-term baseline, it is also anticipate that the project's effect on VMT would be a **significant impact** under the Cumulative with Project scenario due to the lack of transit within walking distance, and anticipated decreases in HBW trip VMT per worker associated with the implementation of the regional land use and transportation framework as envisioned in Plan Bay Area (the RTP/SCS for the Bay Area).

5.5 Transit, Pedestrian, and Bicycle Impacts

The project's impact to pedestrian, bicycle, and transit facilities are discussed in the **Chapter 4** (Existing with Project Conditions). Similar to Existing with Project conditions, the impacts to pedestrian, bicycle and transit modes are expected to be ***less-than-significant*** under Cumulative with Project conditions.

6. Site Access and Circulation

This chapter analyzes site access and internal circulation for vehicles, pedestrians, and bicycles. These recommendations are in addition to those related to reducing North Richmond neighborhood cut-through trips presented in **Section 4.6**. Recommendations presented address potential deficiencies in the on-site transportation network presented in the preliminary site plan (**Figure 2**). Ultimately, the final site plan should be reviewed to identify and improve potential deficiencies before the project is constructed. It is also noted that the proposed project must comply with the following provisions of the County Ordinance Code:

- Section 74-4.006 - Amendments to CGBSC – Electric Vehicle ("EV") Charging
- Chapter 82-16 – Off-Street Parking
- Chapter 82-32 – Transportation Demand Management

6.1 Site Access and Vehicular Circulation

Vehicular access to the project site is provided by two driveways on Parr Boulevard. Each driveway provides access to the loading docks on the east and west sides of the two buildings, respectively, with no direct vehicular access between the two buildings. For example, trucks using the Building 1 driveway may only circulate to access the loading docks and truck parking at Building 1 and have no access to loading docks at Building 2.

The project driveways on Parr Boulevard would include medians and curb bulb-outs to prohibit vehicles from turning left from the project driveways onto eastbound Parr Boulevard towards Fred Jackson Way.

> **Recommendation:** Install stop signs at the project driveways and signage prohibiting vehicles from turning left out of the project driveways should be provided in the final site plan.

6.2 Pedestrian Access and Circulation

The proposed site plan (**Figure 2**) shows two pedestrian paths between Parr Boulevard and the project site on the south frontage of the project, adjacent to the two driveways. There is no accessible path between the two buildings. The site plan also notes the provision of a 5-foot sidewalk spanning the length of the project frontage.

> **Recommendation**: The final site plan should provide curb ramps where required at all pedestrian walkways. Consider providing an accessible path between the two buildings.

The proposed frontage sidewalk will connect to the northeast corner of the Richmond Parkway/Parr Boulevard intersection. Based on available aerial and ground-level imagery, a striped crosswalk is not provided across the north leg of the Richmond Parkway/Parr Boulevard intersection, which denies an efficient connection between the proposed sidewalk and the Bay Trail running along the west side of Richmond Parkway.

> **Recommendation:** Construct a striped crosswalk across the north leg of the Richmond Parkway/Parr Boulevard intersection, and install pedestrian countdown signal heads to serve movements at the crossing.

Project frontage improvements should consider design elements from the County's Green Infrastructure (GI) Plan, which listed the Parr Boulevard corridor as a potential project location.

6.3 Bicycle Access and Parking

Bicyclists are anticipated access the site using the project driveways on Parr Boulevard. The site plan (**Figure 2**) appears to include a striped shoulder space along the extent of the southern project frontage which bicyclists could use to travel outside of the main travel lanes (although this shoulder area is not proposed to be striped as a Class II bike lane at this time). There are also existing Class I trails to the south of Parr Boulevard and along Richmond Parkway.

> **Recommendation:** To promote bicycle commuting it is recommended that long-term bicycle parking and other bicycle amenities (showers, changing rooms, bike repair tools/station, etc.) be provided in the final site plan.

Bicyclists can circulate on-site using the internal roadways that encompass the two buildings.

6.4 Truck Access and Loading

The project would provide 66 loading docks, with 21 on the west side of Building 1 and 45 on the east side of Building 2. Truck parking is provided across from the loading docks.

6.5 Emergency Vehicle Access

Factors such as the number of access points, roadway width, and proximity to fire stations determine whether a project provides sufficient emergency access. Emergency vehicle access is provided by the project driveways and the internal roadways. The internal roadways encompass all sides of both Buildings 1 and 2, providing direct access in case of emergencies.

The fire station most likely to serve the site is Richmond Fire Station No. 62 located on the northwest corner of the Hensley Street/7th Street intersection, about 1.8 miles south of the project site. Emergency vehicles would travel southwest along Hensley Street and north along Richmond Parkway to access the project site.

6.6 Overall Recommendations

The final site plan should consider the following recommendations:

- Stop signs (at the project driveways) and signage prohibiting trucks from turning left out of the project driveways should be provided in the final site plan;
- The final site plan should provide curb ramps where required at all of the pedestrian walkways. Consider providing an accessible path between the two buildings; and
- To promote bicycle commuting for the distribution center it is recommended that long-term bicycle parking and other bicycle amenities (showers, changing rooms, bike repair tools/station, etc.) be provided in the final site plan.
- Implement recommendations in **Section 4.6** related to medians and bulb-outs at project driveways.

7. CEQA Mitigation and Intersection Improvement Measures

This chapter details the measures to mitigate the CEQA impact related to VMT and the substantial intersection operations effects of the project under the Existing with Project and Cumulative with Project scenarios. VMT mitigation measures include measures designed to reduce the number and length of trips. Intersection improvement measures include capacity enhancements such as adding new lanes, revising striping, modifying driveway access points, adding traffic signals or other traffic control devices, and revising traffic signal operations.

7.1 CEQA VMT Mitigation Measures

Mitigation measures designed to reduce VMT typically focus on reducing the number of vehicle trips generated by a project and/or by reducing the length of vehicle trips generated by a project. Typically, this is done by either changing the mix and density of land uses on site (a project description-based approach), or by implementing Transportation Demand Management (TDM) strategies. As the proposed project is not anticipated to incorporate other land uses that may reduce VMT by increasing the interaction between land uses on-site (i.e. residential and retail), the mitigation measures developed for this project have been focused on TDM strategies.

Table 9 presents a listing of TDM strategies designed to home-based work ("commuter") VMT that could be implemented as part of the project. These strategies are focused on increasing bicycle commuting, community by carpool and vanpool, and better connecting the project site to transit options. The proposed project is located near Class I multiuse paths that may encourage the usage of walking and bicycling to/from the site by employees. The project site is also located about 3.6 miles away from the Richmond BART station and about 1.0 miles away from the nearest AC Transit stop. Proximity to the AC Transit stops suggests that employer-sponsored transit passes could be a suitable option (versus other projects in the North Richmond area that are farther away from AC Transit stops).

While the strategies in **Table 9** would reduce VMT, the level of VMT reduction is uncertain due to a lack of research on the topic. As noted in **Section 4.1**, the average one-way trip length of over 20 miles for the project suggests that, even with the incorporation of all feasible TDM measures, the project's average HBW VMT per employee would remain in excess of 12.75 HBW trip VMT per employee, and thus the impact is ***significant and unavoidable.***

Table 9: Menu of VMT-Reducing Transportation Demand Management Strategies

Strategy	Description
Commute Trip Reduction Program	Implement a multi-strategy program that encompasses a combination of individual measures, designed to discourage single-occupancy vehicle trips and encourage alternate modes such as carpooling, transit, walking, and biking. The program should include: - Carpooling encouragement - Ride-matching assistance - Preferential carpool parking - Flexible work schedules for carpools - Half time transportation coordinator - Vanpool assistance - Bicycle end-trip facilities (parking, showers and lockers) - Employer-sponsored AC Transit passes
Ride-sharing Program	Increasing vehicle occupancy by ride sharing will result in fewer cars driving the same trip, and thus a decrease in VMT. The project will promote ride-sharing programs through a multi-faceted approach such as: - Designating a certain percentage of parking spaces for ride-sharing vehicles - Designating passenger loading, unloading, and waiting areas for ride-sharing vehicles - Providing a web site or message board for coordinating rides - Promoting ride-matching apps such as Waze Carpool, Carma, or the 511 program.
End of Trip Facilities	Provide "end-of-trip" facilities for bicycle riders including showers, secure bicycle lockers, and changing spaces. End-of-trip facilities encourage the use of bicycling as a viable form of travel to destinations, and provide the added convenience and security needed to encourage bicycle commuting.
New Employee Commute Orientation	Incorporate information on commute alternatives and benefits into orientation and new-hire packets for employees.
Preferential Parking Program	Provide preferential parking in convenient locations (such as near building front doors) in terms of free or reduced parking fees, priority parking, or reserved parking for employees who carpool or vanpool.
Employer-Sponsored Vanpool/Shuttle	Implement an employer-sponsored vanpool to service employees' commute to work. Employer-sponsored vanpool programs entail an employer purchasing or leasing vans for employee use, and often subsidizing the cost of program administration, if not more. The driver usually receives personal use of the van, often for a mileage fee. Scheduling is within the employer's purview, and rider charges are normally set based on vehicle and operating cost.
Transportation Network Company (TNC) Partnership	Subsidize pooled TNC trips to/from transit stops and stations and to major destinations.

7.2 Existing with Project Intersection Improvement Measures

As determined in **Chapter 4**, the project results in substantial adverse effects to intersection operations at the following locations:

City of Richmond Intersections

- Intersection #5 – Richmond Parkway/Goodrick Avenue (PM peak hour)

Intersection Improvement Measure #1: Richmond Parkway/Goodrick Avenue is a signalized intersection that operates at unacceptable LOS F in the PM peak hour under Existing Conditions and Existing with Project Conditions. The improvement measure is to fund signal timing adjustments at the intersection to be completed after occupancy of the project.

Adjusting the signal timing at the intersection would reduce the intersection average delay to 129.9 seconds (LOS F). A net decrease in delay versus Existing Conditions would occur; therefore, adjusting the signal timing results in the project effects on operations at the intersection being ***less-than-substantial with improvements***. The intersection is anticipated to operate at acceptable LOS A in the AM peak hour without further signal timing adjustments, but adjustments made as part of this process may also improve AM peak hour intersection operations.

- Intersection #9 – Richmond Parkway/Gertrude Avenue (PM peak hour)

Intersection Improvement Measure #2: Richmond Parkway/Gertrude Avenue is a signalized intersection that operates unacceptable LOS E in the PM peak hour under Existing Conditions and LOS F in the PM peak hour under Existing with Project Conditions. The improvement measure is to fund signal timing adjustments at the intersection to be completed after occupancy of the project.

Adjusting the signal timing at the intersection would result in an intersection delay value of 57.4 seconds (LOS E). A net decrease in delay versus Existing Conditions would occur; therefore, adjusting the signal timing results in the project effects on operations at the intersection being ***less-than-substantial with improvements***. The intersection is anticipated to operate at acceptable LOS C in the AM peak hour without further signal timing adjustments, but adjustments made as part of this process may further improve AM peak hour intersection operations as a parallel benefit.

7.3 Cumulative with Project Intersection Improvement Measures

As determined in **Chapter 5**, the project results in substantial adverse effects to intersection operations at the following locations:

City of Richmond Intersections

- Intersection #5 – Richmond Parkway/Goodrick Avenue (PM peak hour)
- Intersection #6 – Richmond Parkway/Parr Boulevard (AM and PM peak hours)
- Intersection #8 – Richmond Parkway/Pittsburg Avenue (AM and PM peak hours)
- Intersection #9 – Richmond Parkway/Gertrude Avenue (AM and PM peak hours)
- Intersection #10 – Castro Street/Hensley Street (PM peak hour)
- Intersection #11 – Richmond Parkway/Hensley Street (PM peak hour)
- Intersection #15 – Canal Boulevard/I-580 Westbound Ramps (PM peak hour)

Cumulative with Project Improvement Measure

As noted in **Chapter 5**, nearly all intersections along the Richmond Parkway, Castro Street and Canal Boulevard corridors operate deficiently in the PM peak hour under the Cumulative without Project Conditions scenario, indicating that the future background growth in traffic volumes supersaturate the corridor with demand. This indicates that intersection-by-intersection improvements may not fully alleviate congestion along the corridor, nor would they potentially alleviate the project's substantial effects. For example, a review of potential intersection improvements indicates that the addition of a third northbound lane along Richmond Parkway between the Castro Street interchange and the Giant Highway viaduct would be needed to reduce the project's effect on PM peak hour operations along the Richmond Parkway corridor between Gertrude Avenue and Goodrick Avenue to less-than-substantial levels. Adding corridor capacity could induce additional travel demand in the Richmond Parkway corridor (consistent with the concept of induced VMT as recognized by SB 743), thus reducing the effectiveness of the added capacity and potentially worsening operations at other intersections between I-80 and I-580 that would have otherwise operated acceptably. Providing increased capacity without corresponding investments in transit, bicycle and pedestrian infrastructure may lead to more driving, which could be considered a secondary CEQA impact to VMT.

Based on discussions with County staff about these environmental considerations, a holistic review of future operations and improvement opportunities in the corridor would best alleviate the future operations deficiencies along the Richmond Parkway, Castro Street and Canal Boulevard corridors.

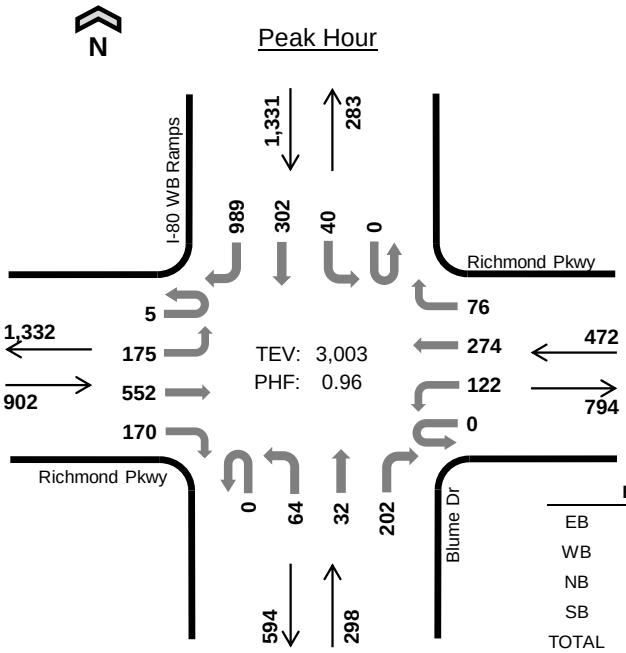
Intersection Improvement Measure #3: The project applicant shall contribute funds towards the preparation of a corridor study for Richmond Parkway and parallel local and regional routes, which will evaluate roadway and intersection capacity, transit and other multimodal options to improve future operations along the Richmond Parkway corridor. The corridor study will evaluate how the total development capacity in the North Richmond area, as well as regional travel effects associated with planned regional freeway projects, will influence operations along Richmond Parkway and parallel routes. A focus of the study will be to reduce automobile and truck diversion into local communities of concern (i.e. AB 617 neighborhoods) by providing additional traffic calming devices and truck restrictions.

As part of its March 2021 comment letter, Contra Costa County staff noted that a fair share contribution of $618,000 should be made by the project applicant as part of this project. This amount is based on an estimate of $8,300,000 for potential improvements along Richmond Parkway and data from the traffic analysis provided in this report, which indicates that 7.43 percent of traffic volume at the Richmond Parkway/Parr Boulevard intersection would be generated by the project site in the Cumulative (Year 2040) condition. This fair share contribution will be deposited into the County's Road Trust Account (8192), which may be used to fund the West County Corridor Study of freight/goods movement, multimodal Richmond Parkway corridor improvements, environmental analysis, design and/or construction of the resulting capital improvement(s) resulting from the West County Corridor Study.

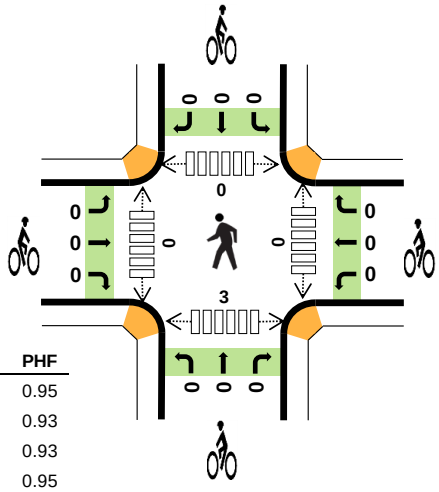
Appendix A: Traffic Counts

I-80 WB Ramps/Blume Dr
Richmond Pkwy

Date: 06-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:45 AM to 8:45 AM



	HV %:	PHF
EB	8.2%	0.95
WB	8.5%	0.93
NB	6.0%	0.93
SB	6.6%	0.95
TOTAL	7.3%	0.96



Two-Hour Count Summaries

Interval Start		Richmond Pkwy Eastbound UT	LT	TH	RT	Richmond Pkwy Westbound UT	LT	TH	RT	Blume Dr Northbound UT	LT	TH	RT	I-80 WB Ramps Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM		2	33	111	39	0	12	60	9	1	8	4	55	0	3	31	190	558	0
7:15 AM		2	45	120	40	0	26	63	14	0	10	3	39	0	3	54	210	629	0
7:30 AM		4	46	145	49	2	31	55	15	1	13	4	51	0	8	64	228	716	0
7:45 AM		**1**	**49**	**120**	**48**	**0**	**28**	**73**	**13**	**0**	**17**	**4**	**55**	**0**	**9**	**70**	**250**	**737**	2,640
8:00 AM		**1**	**43**	**137**	**44**	**0**	**39**	**61**	**18**	**0**	**11**	**8**	**45**	**0**	**4**	**79**	**243**	**733**	2,815
8:15 AM		**1**	**47**	**147**	**42**	**0**	**28**	**70**	**15**	**0**	**20**	**7**	**51**	**0**	**10**	**82**	**259**	**779**	2,965
8:30 AM		**2**	**36**	**148**	**36**	**0**	**27**	**70**	**30**	**0**	**16**	**13**	**51**	**0**	**17**	**71**	**237**	**754**	**3,003**
8:45 AM		2	29	140	26	0	23	77	25	0	11	7	45	0	18	67	218	688	2,954
Count Total		15	328	1,068	324	2	214	529	139	2	106	50	392	0	72	518	1,835	5,594	0
Peak Hour	**All**	**5**	**175**	**552**	**170**	**0**	**122**	**274**	**76**	**0**	**64**	**32**	**202**	**0**	**40**	**302**	**989**	**3,003**	**0**
	HV	**0**	**7**	**56**	**11**	**0**	**12**	**22**	**6**	**0**	**4**	**2**	**12**	**0**	**0**	**3**	**85**	**220**	**0**
	HV%	**0%**	**4%**	**10%**	**6%**	**-**	**10%**	**8%**	**8%**	**-**	**6%**	**6%**	**6%**	**-**	**0%**	**1%**	**9%**	**7%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	18	6	9	18	*51*	0	0	0	0	*0*	0	0	0	2	*2*
7:15 AM	25	10	5	19	*59*	0	0	0	0	*0*	0	0	0	0	*0*
7:30 AM	22	9	7	17	*55*	0	0	0	0	*0*	1	0	0	0	*1*
7:45 AM	**26**	**8**	**5**	**22**	***61***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	*1*
8:00 AM	**16**	**12**	**3**	**25**	***56***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**2**	*2*
8:15 AM	**14**	**8**	**4**	**19**	***45***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:30 AM	**18**	**12**	**6**	**22**	***58***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
8:45 AM	20	6	8	28	*62*	0	0	0	0	*0*	1	0	0	0	*1*
Count Total	159	71	47	170	*447*	0	0	0	0	*0*	2	0	0	5	*7*
Peak Hour	**74**	**40**	**18**	**88**	***220***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**3**	***3***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Richmond Pkwy				Richmond Pkwy				Blume Dr				I-80 WB Ramps				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	15	2	0	1	3	2	0	1	0	8	0	0	0	18	51	0
7:15 AM	0	3	18	4	0	0	9	1	0	1	0	4	0	0	1	18	59	0
7:30 AM	0	0	19	3	0	3	5	1	0	0	0	7	0	0	0	17	55	0
7:45 AM	**0**	**4**	**20**	**2**	**0**	**2**	**5**	**1**	**0**	**2**	**1**	**2**	**0**	**0**	**0**	**22**	**61**	226
8:00 AM	**0**	**2**	**10**	**4**	**0**	**5**	**5**	**2**	**0**	**0**	**1**	**2**	**0**	**0**	**1**	**24**	**56**	231
8:15 AM	**0**	**0**	**11**	**3**	**0**	**1**	**7**	**0**	**0**	**1**	**0**	**3**	**0**	**0**	**0**	**19**	**45**	217
8:30 AM	**0**	**1**	**15**	**2**	**0**	**4**	**5**	**3**	**0**	**1**	**0**	**5**	**0**	**0**	**2**	**20**	**58**	**220**
8:45 AM	1	1	15	3	0	1	4	1	0	3	1	4	0	1	0	27	62	221
Count Total	1	12	123	23	0	17	43	11	0	9	3	35	0	1	4	165	447	0
Peak Hour	**0**	**7**	**56**	**11**	**0**	**12**	**22**	**6**	**0**	**4**	**2**	**12**	**0**	**0**	**3**	**85**	**220**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Richmond Pkwy			Richmond Pkwy			Blume Dr			I-80 WB Ramps			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

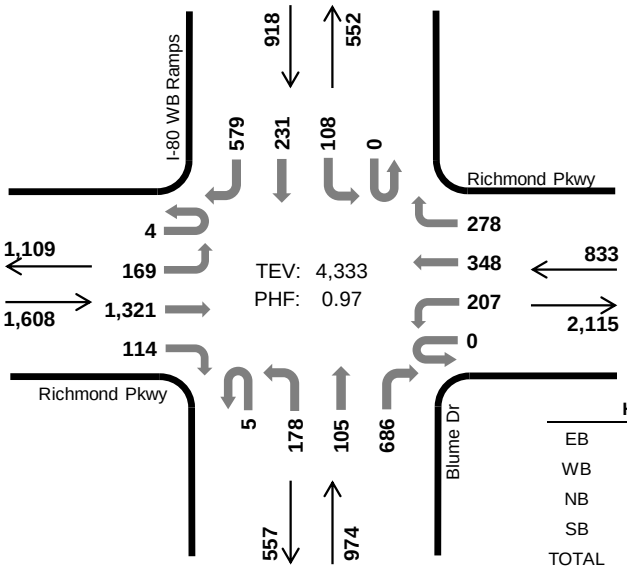
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

I-80 WB Ramps/Blume Dr
Richmond Pkwy

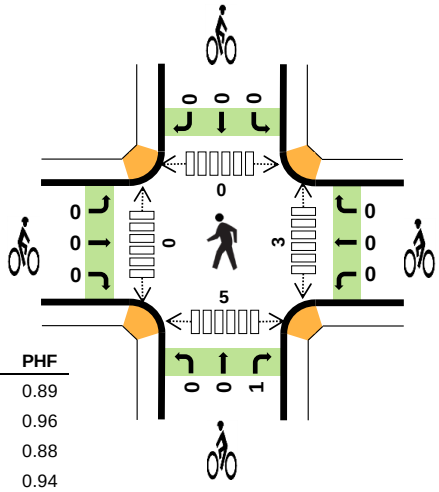
Date: 06-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM

N

Peak Hour



	HV %:	PHF
EB	2.1%	0.89
WB	2.3%	0.96
NB	2.1%	0.88
SB	3.3%	0.94
TOTAL	2.4%	0.97



Two-Hour Count Summaries

Interval Start		Richmond Pkwy Eastbound UT	LT	TH	RT	Richmond Pkwy Westbound UT	LT	TH	RT	Blume Dr Northbound UT	LT	TH	RT	I-80 WB Ramps Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM		1	59	360	29	0	59	88	68	1	42	28	168	0	17	60	140	1,120	0
4:15 PM		0	47	304	37	0	54	67	75	4	40	26	164	0	19	51	133	1,021	0
4:30 PM		**0**	**46**	**375**	**32**	**0**	**54**	**99**	**64**	**2**	**32**	**25**	**170**	**0**	**25**	**46**	**143**	**1,113**	0
4:45 PM		**0**	**37**	**322**	**28**	**0**	**46**	**67**	**79**	**1**	**48**	**23**	**176**	**0**	**24**	**64**	**155**	**1,070**	4,324
5:00 PM		**0**	**45**	**331**	**30**	**0**	**59**	**82**	**65**	**0**	**35**	**28**	**156**	**0**	**20**	**57**	**149**	**1,057**	4,261
5:15 PM		**4**	**41**	**293**	**24**	**0**	**48**	**100**	**70**	**2**	**63**	**29**	**184**	**0**	**39**	**64**	**132**	**1,093**	**4,333**
5:30 PM		2	48	288	42	0	61	72	75	1	54	17	200	0	33	49	114	1,056	4,276
5:45 PM		1	46	366	45	1	52	115	72	1	39	21	140	0	16	56	128	1,099	4,305
Count Total		8	369	2,639	267	1	433	690	568	12	353	197	1,358	0	193	447	1,094	8,629	0
Peak Hour	**All**	**4**	**169**	**1,321**	**114**	**0**	**207**	**348**	**278**	**5**	**178**	**105**	**686**	**0**	**108**	**231**	**579**	**4,333**	**0**
	HV	**0**	**2**	**25**	**6**	**0**	**13**	**4**	**2**	**0**	**7**	**3**	**10**	**0**	**0**	**2**	**28**	**102**	**0**
	HV%	**0%**	**1%**	**2%**	**5%**	**-**	**6%**	**1%**	**1%**	**0%**	**4%**	**3%**	**1%**	**-**	**0%**	**1%**	**5%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	12	5	5	9	*31*	0	0	0	0	*0*	0	0	0	2	*2*
4:15 PM	10	4	9	17	*40*	0	0	0	0	*0*	1	0	0	1	*2*
4:30 PM	**11**	**4**	**3**	**6**	***24***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**0**	*2*
4:45 PM	**4**	**3**	**9**	**11**	***27***	**0**	**0**	**1**	**0**	***1***	**1**	**0**	**0**	**2**	*3*
5:00 PM	**7**	**5**	**3**	**8**	***23***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**2**	*2*
5:15 PM	**11**	**7**	**5**	**5**	***28***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	***1***
5:30 PM	6	6	8	9	*29*	0	0	0	0	*0*	1	0	0	0	*1*
5:45 PM	16	0	7	17	*40*	0	0	0	0	*0*	2	0	0	1	*3*
Count Total	77	34	49	82	*242*	0	0	1	0	*1*	7	0	0	9	*16*
Peak Hour	**33**	**19**	**20**	**30**	***102***	**0**	**0**	**1**	**0**	***1***	**3**	**0**	**0**	**5**	***8***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Richmond Pkwy				Richmond Pkwy				Blume Dr				I-80 WB Ramps				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	3	7	2	0	4	1	0	0	1	0	4	0	0	0	9	31	0
4:15 PM	0	3	7	0	0	3	1	0	0	1	2	6	0	0	0	17	40	0
4:30 PM	**0**	**0**	**8**	**3**	**0**	**4**	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**6**	**24**	0
4:45 PM	**0**	**1**	**2**	**1**	**0**	**1**	**1**	**1**	**0**	**3**	**2**	**4**	**0**	**0**	**2**	**9**	**27**	122
5:00 PM	**0**	**0**	**6**	**1**	**0**	**2**	**3**	**0**	**0**	**1**	**1**	**1**	**0**	**0**	**0**	**8**	**23**	114
5:15 PM	**0**	**1**	**9**	**1**	**0**	**6**	**0**	**1**	**0**	**2**	**0**	**3**	**0**	**0**	**0**	**5**	**28**	**102**
5:30 PM	0	1	5	0	0	5	1	0	0	2	0	6	0	0	2	7	29	107
5:45 PM	0	2	11	3	0	0	0	0	0	1	0	6	0	0	0	17	40	120
Count Total	0	11	55	11	0	25	7	2	0	12	5	32	0	0	4	78	242	0
Peak Hour	**0**	**2**	**25**	**6**	**0**	**13**	**4**	**2**	**0**	**7**	**3**	**10**	**0**	**0**	**2**	**28**	**102**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Richmond Pkwy			Richmond Pkwy			Blume Dr			I-80 WB Ramps			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	1
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	1	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**

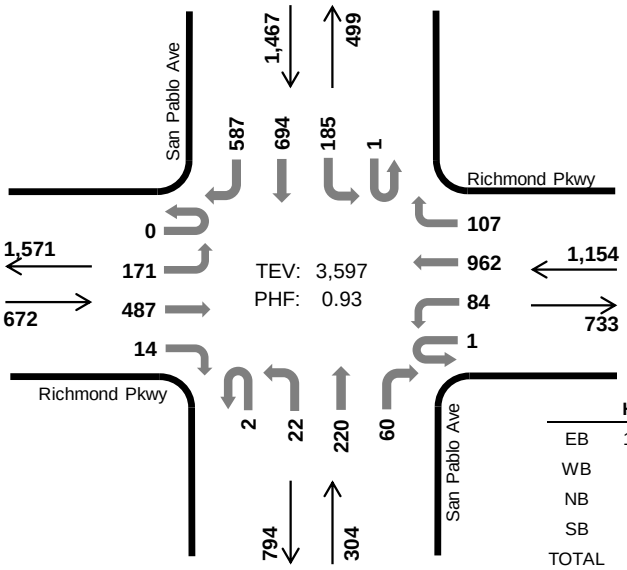
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

San Pablo Ave
Richmond Pkwy

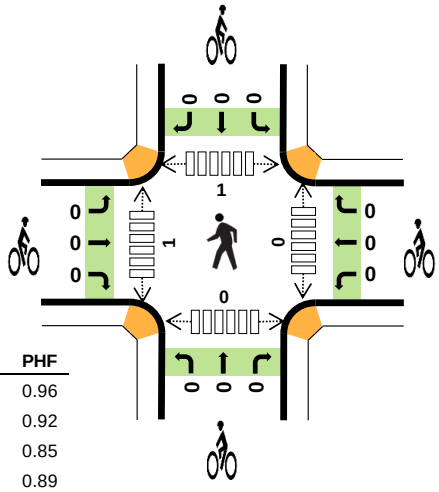
Date: 06-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM

N

Peak Hour



	HV %:	PHF
EB	10.6%	0.96
WB	9.4%	0.92
NB	4.3%	0.85
SB	2.3%	0.89
TOTAL	6.3%	0.93



Two-Hour Count Summaries

Interval Start		Richmond Pkwy Eastbound UT	LT	TH	RT	Richmond Pkwy Westbound UT	LT	TH	RT	San Pablo Ave Northbound UT	LT	TH	RT	San Pablo Ave Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM		0	17	104	1	0	20	222	26	0	3	35	3	0	39	165	141	776	0
7:15 AM		0	31	122	3	0	18	217	28	0	3	22	8	0	52	143	144	791	0
7:30 AM		**0**	**33**	**126**	**1**	**1**	**17**	**215**	**21**	**0**	**8**	**39**	**10**	**1**	**53**	**187**	**167**	**879**	0
7:45 AM		**0**	**47**	**109**	**6**	**0**	**27**	**248**	**40**	**1**	**3**	**57**	**17**	**0**	**49**	**196**	**165**	**965**	3,411
8:00 AM		**0**	**41**	**129**	**5**	**0**	**23**	**240**	**25**	**0**	**4**	**71**	**14**	**0**	**45**	**163**	**139**	**899**	3,534
8:15 AM		**0**	**50**	**123**	**2**	**0**	**17**	**259**	**21**	**1**	**7**	**53**	**19**	**0**	**38**	**148**	**116**	**854**	**3,597**
8:30 AM		0	37	126	3	1	10	259	30	0	4	67	17	0	39	103	116	812	3,530
8:45 AM		0	44	131	3	0	20	189	36	0	5	41	22	0	46	98	84	719	3,284
Count Total		0	300	970	24	2	152	1,849	227	2	37	385	110	1	361	1,203	1,072	6,695	0
Peak Hour	**All**	**0**	**171**	**487**	**14**	**1**	**84**	**962**	**107**	**2**	**22**	**220**	**60**	**1**	**185**	**694**	**587**	**3,597**	**0**
	HV	**0**	**4**	**66**	**1**	**0**	**4**	**97**	**8**	**1**	**1**	**9**	**2**	**0**	**6**	**9**	**19**	**227**	**0**
	HV%	**-**	**2%**	**14%**	**7%**	**0%**	**5%**	**10%**	**7%**	**50%**	**5%**	**4%**	**3%**	**0%**	**3%**	**1%**	**3%**	**6%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	18	25	2	6	*51*	0	0	0	0	*0*	0	1	0	0	*1*
7:15 AM	31	28	1	11	*71*	0	0	0	0	*0*	1	1	0	2	*4*
7:30 AM	**19**	**23**	**6**	**6**	***54***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**24**	**30**	**2**	**8**	***64***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**1**	**0**	*2*
8:00 AM	**15**	**27**	**2**	**8**	***52***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:15 AM	**13**	**29**	**3**	**12**	***57***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
8:30 AM	15	28	4	17	*64*	0	0	0	0	*0*	0	1	0	2	*3*
8:45 AM	20	30	2	9	*61*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	155	220	22	77	*474*	0	0	0	0	*0*	1	4	1	4	*10*
Peak Hour	**71**	**109**	**13**	**34**	***227***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**1**	**0**	***2***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Richmond Pkwy				Richmond Pkwy				San Pablo Ave				San Pablo Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	17	0	0	3	20	2	0	0	2	0	0	2	2	2	51	0
7:15 AM	0	3	27	1	0	1	23	4	0	0	1	0	0	2	2	7	71	0
7:30 AM	**0**	**1**	**18**	**0**	**0**	**1**	**22**	**0**	**0**	**0**	**4**	**2**	**0**	**3**	**2**	**1**	**54**	0
7:45 AM	**0**	**1**	**22**	**1**	**0**	**2**	**23**	**5**	**0**	**0**	**2**	**0**	**0**	**0**	**5**	**3**	**64**	240
8:00 AM	**0**	**0**	**15**	**0**	**0**	**0**	**25**	**2**	**0**	**0**	**2**	**0**	**0**	**2**	**1**	**5**	**52**	241
8:15 AM	**0**	**2**	**11**	**0**	**0**	**1**	**27**	**1**	**1**	**1**	**1**	**0**	**0**	**1**	**1**	**10**	**57**	**227**
8:30 AM	0	0	15	0	0	0	26	2	0	0	4	0	0	4	3	10	64	237
8:45 AM	0	4	16	0	0	0	27	3	0	0	1	1	0	2	3	4	61	234
Count Total	0	12	141	2	0	8	193	19	1	1	17	3	0	16	19	42	474	0
Peak Hour	**0**	**4**	**66**	**1**	**0**	**4**	**97**	**8**	**1**	**1**	**9**	**2**	**0**	**6**	**9**	**19**	**227**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Richmond Pkwy			Richmond Pkwy			San Pablo Ave			San Pablo Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

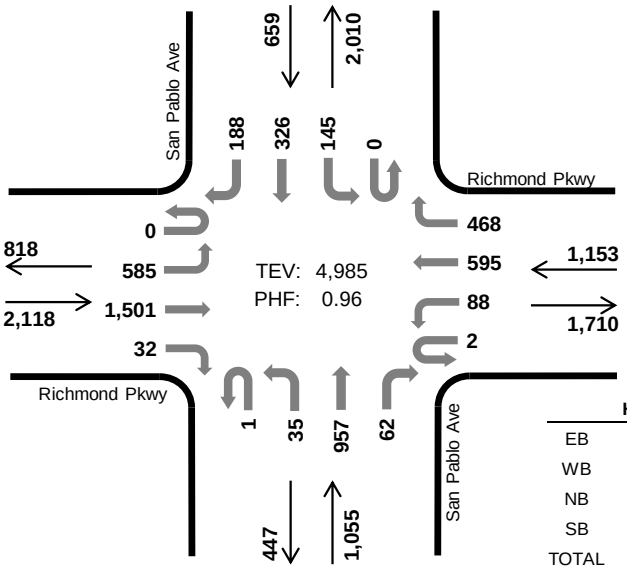
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

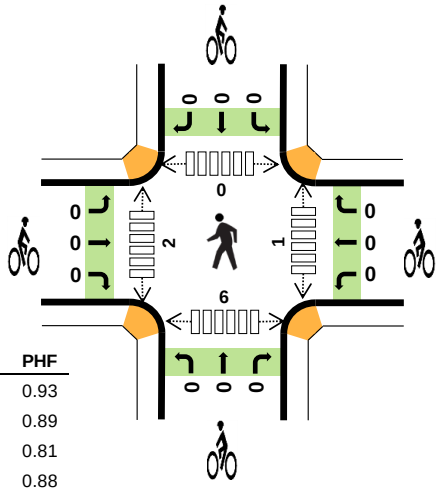
San Pablo Ave
Richmond Pkwy

Date: 06-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM

N

Peak Hour





	HV %:	PHF
EB	1.9%	0.93
WB	4.0%	0.89
NB	1.1%	0.81
SB	2.4%	0.88
TOTAL	2.3%	0.96

Two-Hour Count Summaries

Interval Start		Richmond Pkwy Eastbound				Richmond Pkwy Westbound				San Pablo Ave Northbound				San Pablo Ave Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	100	344	6	1	29	155	88	1	4	205	18	0	40	67	40	1,098	0
4:15 PM		0	130	319	5	0	28	122	88	0	4	259	25	0	31	71	39	1,121	0
4:30 PM		**0**	**139**	**422**	**9**	**1**	**22**	**162**	**114**	**1**	**6**	**256**	**20**	**0**	**37**	**63**	**46**	**1,298**	0
4:45 PM		**0**	**152**	**362**	**6**	**1**	**17**	**143**	**101**	**0**	**10**	**302**	**12**	**0**	**30**	**86**	**44**	**1,266**	4,783
5:00 PM		**0**	**171**	**366**	**9**	**0**	**20**	**141**	**106**	**0**	**10**	**195**	**15**	**0**	**38**	**84**	**44**	**1,199**	4,884
5:15 PM		**0**	**123**	**351**	**8**	**0**	**29**	**149**	**147**	**0**	**9**	**204**	**15**	**0**	**40**	**93**	**54**	**1,222**	**4,985**
5:30 PM		0	117	308	8	0	26	132	118	0	8	278	17	0	32	69	46	1,159	4,846
5:45 PM		0	127	320	6	0	22	134	141	0	1	247	24	0	27	88	31	1,168	4,748
Count Total		0	1,059	2,792	57	3	193	1,138	903	2	52	1,946	146	0	275	621	344	9,531	0
Peak Hour	**All**	**0**	**585**	**1,501**	**32**	**2**	**88**	**595**	**468**	**1**	**35**	**957**	**62**	**0**	**145**	**326**	**188**	**4,985**	**0**
	HV	**0**	**9**	**30**	**1**	**0**	**1**	**39**	**6**	**0**	**1**	**11**	**0**	**0**	**5**	**5**	**6**	**114**	**0**
	HV%	**-**	**2%**	**2%**	**3%**	**0%**	**1%**	**7%**	**1%**	**0%**	**3%**	**1%**	**0%**	**-**	**3%**	**2%**	**3%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	18	13	2	7	*40*	0	0	0	0	*0*	0	3	0	2	*5*
4:15 PM	9	15	5	2	*31*	0	0	0	0	*0*	0	0	0	3	*3*
4:30 PM	**8**	**13**	**5**	**3**	***29***	**0**	**0**	**0**	**0**	***0***	**1**	**1**	**0**	**0**	*2*
4:45 PM	**12**	**8**	**2**	**4**	***26***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**2**	*3*
5:00 PM	**10**	**14**	**3**	**4**	***31***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**2**	*2*
5:15 PM	**10**	**11**	**2**	**5**	***28***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**2**	***2***
5:30 PM	11	10	3	7	*31*	0	0	0	0	*0*	0	0	0	0	*0*
5:45 PM	9	20	3	2	*34*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	87	104	25	34	*250*	0	0	0	0	*0*	1	5	0	11	*17*
Peak Hour	**40**	**46**	**12**	**16**	***114***	**0**	**0**	**0**	**0**	***0***	**1**	**2**	**0**	**6**	***9***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Richmond Pkwy				Richmond Pkwy				San Pablo Ave				San Pablo Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	1	16	1	0	1	11	1	0	1	1	0	0	2	3	2	40	0
4:15 PM	0	0	9	0	0	0	14	1	0	0	5	0	0	1	1	0	31	0
4:30 PM	**0**	**0**	**8**	**0**	**0**	**0**	**12**	**1**	**0**	**1**	**4**	**0**	**0**	**1**	**2**	**0**	**29**	0
4:45 PM	**0**	**4**	**8**	**0**	**0**	**0**	**7**	**1**	**0**	**0**	**2**	**0**	**0**	**2**	**1**	**1**	**26**	126
5:00 PM	**0**	**3**	**6**	**1**	**0**	**1**	**11**	**2**	**0**	**0**	**3**	**0**	**0**	**1**	**0**	**3**	**31**	117
5:15 PM	**0**	**2**	**8**	**0**	**0**	**0**	**9**	**2**	**0**	**0**	**2**	**0**	**0**	**1**	**2**	**2**	**28**	**114**
5:30 PM	0	2	9	0	0	1	7	2	0	0	3	0	0	3	1	3	31	116
5:45 PM	0	2	7	0	0	0	20	0	0	0	3	0	0	1	1	0	34	124
Count Total	0	14	71	2	0	3	91	10	0	2	23	0	0	12	11	11	250	0
Peak Hour	**0**	**9**	**30**	**1**	**0**	**1**	**39**	**6**	**0**	**1**	**11**	**0**	**0**	**5**	**5**	**6**	**114**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Richmond Pkwy			Richmond Pkwy			San Pablo Ave			San Pablo Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

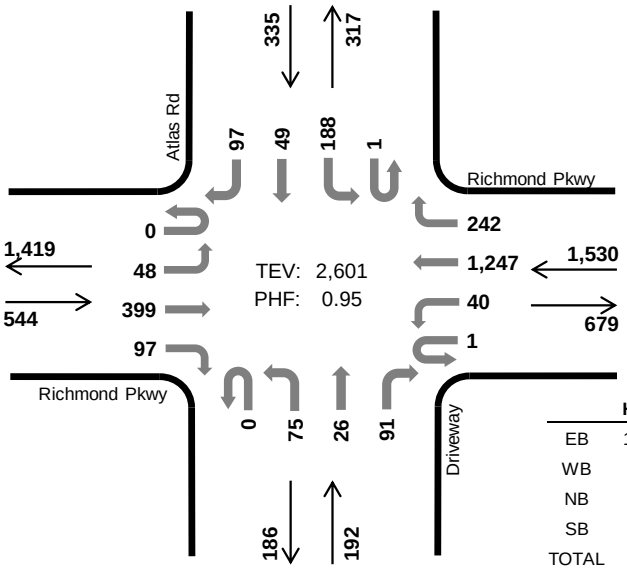
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Richmond Pkwy
Atlas Rd

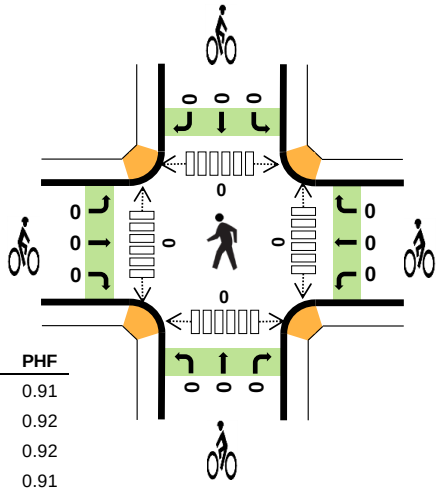
Date: 06-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM

N

Peak Hour



	HV %:	PHF
EB	11.6%	0.91
WB	7.6%	0.92
NB	2.1%	0.92
SB	6.9%	0.91
TOTAL	8.0%	0.95



Two-Hour Count Summaries

Interval Start		Richmond Pkwy Eastbound UT	LT	TH	RT	Richmond Pkwy Westbound UT	LT	TH	RT	Driveway Northbound UT	LT	TH	RT	Atlas Rd Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM		1	10	73	16	0	17	283	43	0	21	7	17	0	34	8	21	551	0
7:15 AM		0	18	93	15	0	11	300	32	0	27	2	19	0	29	11	25	582	0
7:30 AM		**0**	**13**	**99**	**30**	**0**	**7**	**330**	**59**	**0**	**17**	**7**	**28**	**1**	**47**	**13**	**31**	**682**	0
7:45 AM		**0**	**11**	**79**	**21**	**1**	**13**	**328**	**72**	**0**	**16**	**9**	**21**	**0**	**61**	**11**	**20**	**663**	2,478
8:00 AM		**0**	**11**	**114**	**24**	**0**	**12**	**276**	**47**	**0**	**21**	**3**	**23**	**0**	**37**	**17**	**25**	**610**	2,537
8:15 AM		**0**	**13**	**107**	**22**	**0**	**8**	**313**	**64**	**0**	**21**	**7**	**19**	**0**	**43**	**8**	**21**	**646**	**2,601**
8:30 AM		0	10	109	21	0	11	289	50	0	13	6	17	0	42	10	21	599	2,518
8:45 AM		0	8	128	19	0	9	242	36	0	13	5	17	0	50	14	22	563	2,418
Count Total		1	94	802	168	1	88	2,361	403	0	149	46	161	1	343	92	186	4,896	0
Peak Hour	**All**	**0**	**48**	**399**	**97**	**1**	**40**	**1,247**	**242**	**0**	**75**	**26**	**91**	**1**	**188**	**49**	**97**	**2,601**	**0**
	HV	**0**	**5**	**54**	**4**	**0**	**1**	**86**	**30**	**0**	**0**	**0**	**4**	**0**	**15**	**0**	**8**	**207**	**0**
	HV%	**-**	**10%**	**14%**	**4%**	**0%**	**3%**	**7%**	**12%**	**-**	**0%**	**0%**	**4%**	**0%**	**8%**	**0%**	**8%**	**8%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	16	22	0	11	*49*	0	0	0	0	*0*	1	0	0	0	*1*
7:15 AM	28	24	2	7	*61*	0	0	0	0	*0*	0	0	1	1	*2*
7:30 AM	**21**	**28**	**2**	**7**	***58***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**14**	**24**	**2**	**6**	***46***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:00 AM	**15**	**27**	**0**	**3**	***45***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:15 AM	**13**	**38**	**0**	**7**	***58***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
8:30 AM	11	32	2	3	*48*	0	0	0	0	*0*	1	0	0	0	*1*
8:45 AM	18	30	0	11	*59*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	136	225	8	55	*424*	0	0	0	0	*0*	2	0	1	1	*4*
Peak Hour	**63**	**117**	**4**	**23**	***207***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Richmond Pkwy				Richmond Pkwy				Driveway				Atlas Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	14	1	0	1	17	4	0	0	0	0	0	4	0	7	49	0
7:15 AM	0	4	22	2	0	0	15	9	0	0	1	1	0	6	0	1	61	0
7:30 AM	**0**	**0**	**18**	**3**	**0**	**0**	**18**	**10**	**0**	**0**	**0**	**2**	**0**	**4**	**0**	**3**	**58**	0
7:45 AM	**0**	**0**	**14**	**0**	**0**	**0**	**15**	**9**	**0**	**0**	**0**	**2**	**0**	**4**	**0**	**2**	**46**	214
8:00 AM	**0**	**1**	**14**	**0**	**0**	**0**	**23**	**4**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**45**	210
8:15 AM	**0**	**4**	**8**	**1**	**0**	**1**	**30**	**7**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**2**	**58**	**207**
8:30 AM	0	0	10	1	0	1	28	3	0	0	1	1	0	3	0	0	48	197
8:45 AM	0	2	15	1	0	0	22	8	0	0	0	0	0	4	1	6	59	210
Count Total	0	12	115	9	0	3	168	54	0	0	2	6	0	32	1	22	424	0
Peak Hour	**0**	**5**	**54**	**4**	**0**	**1**	**86**	**30**	**0**	**0**	**0**	**4**	**0**	**15**	**0**	**8**	**207**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Richmond Pkwy			Richmond Pkwy			Driveway			Atlas Rd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

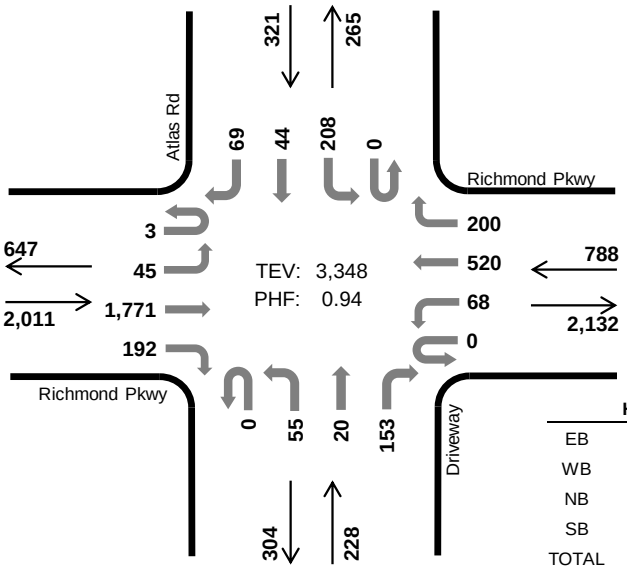
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Richmond Pkwy
Atlas Rd

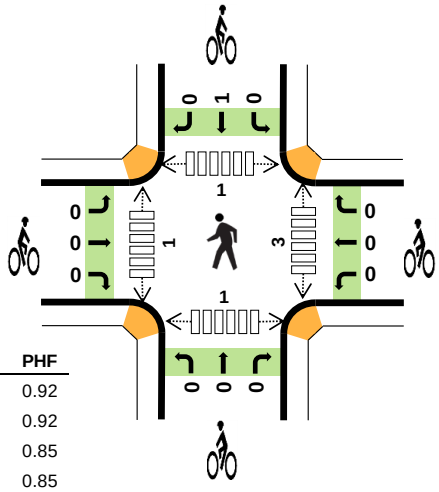
Date: 06-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM

N

Peak Hour



	HV %:	PHF
EB	1.3%	0.92
WB	6.3%	0.92
NB	0.9%	0.85
SB	6.2%	0.85
TOTAL	2.9%	0.94



Two-Hour Count Summaries

Interval Start		Richmond Pkwy Eastbound UT	LT	TH	RT	Richmond Pkwy Westbound UT	LT	TH	RT	Driveway Northbound UT	LT	TH	RT	Atlas Rd Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM		0	17	407	29	0	14	120	39	0	21	5	34	0	62	7	11	766	0
4:15 PM		**0**	**6**	**444**	**50**	**0**	**20**	**133**	**40**	**0**	**12**	**1**	**27**	**0**	**51**	**11**	**12**	**807**	0
4:30 PM		**2**	**10**	**412**	**44**	**0**	**14**	**134**	**40**	**0**	**8**	**7**	**43**	**0**	**59**	**12**	**23**	**808**	0
4:45 PM		**0**	**16**	**471**	**61**	**0**	**25**	**141**	**48**	**0**	**20**	**6**	**37**	**0**	**45**	**6**	**15**	**891**	3,272
5:00 PM		**1**	**13**	**444**	**37**	**0**	**9**	**112**	**72**	**0**	**15**	**6**	**46**	**0**	**53**	**15**	**19**	**842**	**3,348**
5:15 PM		0	14	337	54	0	12	112	54	0	19	8	35	0	67	17	28	757	3,298
5:30 PM		1	14	339	46	0	22	132	37	0	15	5	49	0	71	20	29	780	3,270
5:45 PM		1	10	354	46	0	10	102	42	0	12	14	42	0	41	18	25	717	3,096
Count Total		5	100	3,208	367	0	126	986	372	0	122	52	313	0	449	106	162	6,368	0
Peak Hour	**All**	**3**	**45**	**1,771**	**192**	**0**	**68**	**520**	**200**	**0**	**55**	**20**	**153**	**0**	**208**	**44**	**69**	**3,348**	**0**
	HV	**0**	**2**	**23**	**1**	**0**	**2**	**35**	**13**	**0**	**1**	**0**	**1**	**0**	**11**	**1**	**8**	**98**	**0**
	HV%	**0%**	**4%**	**1%**	**1%**	**-**	**3%**	**7%**	**7%**	**-**	**2%**	**0%**	**1%**	**-**	**5%**	**2%**	**12%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	10	12	1	7	*30*	0	0	0	0	*0*	1	0	1	1	*3*
4:15 PM	**4**	**16**	**1**	**4**	***25***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**1**	**1**	*4*
4:30 PM	**7**	**11**	**0**	**6**	***24***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	*1*
4:45 PM	**7**	**11**	**1**	**3**	***22***	**0**	**0**	**0**	**1**	***1***	**0**	**1**	**0**	**0**	*1*
5:00 PM	**8**	**12**	**0**	**7**	***27***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
5:15 PM	7	13	2	6	*28*	0	0	0	0	*0*	2	0	0	0	*2*
5:30 PM	10	7	1	2	*20*	0	0	0	0	*0*	3	0	3	0	*6*
5:45 PM	9	19	2	2	*32*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	62	101	8	37	*208*	0	0	0	1	*1*	9	1	5	2	*17*
Peak Hour	**26**	**50**	**2**	**20**	***98***	**0**	**0**	**0**	**1**	***1***	**3**	**1**	**1**	**1**	***6***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Richmond Pkwy				Richmond Pkwy				Driveway				Atlas Rd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	1	9	0	0	0	10	2	0	0	0	1	0	4	0	3	30	0
4:15 PM	**0**	**0**	**4**	**0**	**0**	**1**	**11**	**4**	**0**	**0**	**0**	**1**	**0**	**3**	**0**	**1**	**25**	0
4:30 PM	**0**	**2**	**5**	**0**	**0**	**1**	**8**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	**1**	**3**	**24**	0
4:45 PM	**0**	**0**	**7**	**0**	**0**	**0**	**7**	**4**	**0**	**1**	**0**	**0**	**0**	**3**	**0**	**0**	**22**	101
5:00 PM	**0**	**0**	**7**	**1**	**0**	**0**	**9**	**3**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**4**	**27**	**98**
5:15 PM	0	0	5	2	0	0	7	6	0	0	1	1	0	5	0	1	28	101
5:30 PM	0	0	9	1	0	0	6	1	0	0	0	1	0	1	0	1	20	97
5:45 PM	0	2	7	0	0	0	15	4	0	0	1	1	0	0	1	1	32	107
Count Total	0	5	53	4	0	2	73	26	0	1	2	5	0	21	2	14	208	0
Peak Hour	**0**	**2**	**23**	**1**	**0**	**2**	**35**	**13**	**0**	**1**	**0**	**1**	**0**	**11**	**1**	**8**	**98**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Richmond Pkwy			Richmond Pkwy			Driveway			Atlas Rd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	1
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	1	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**

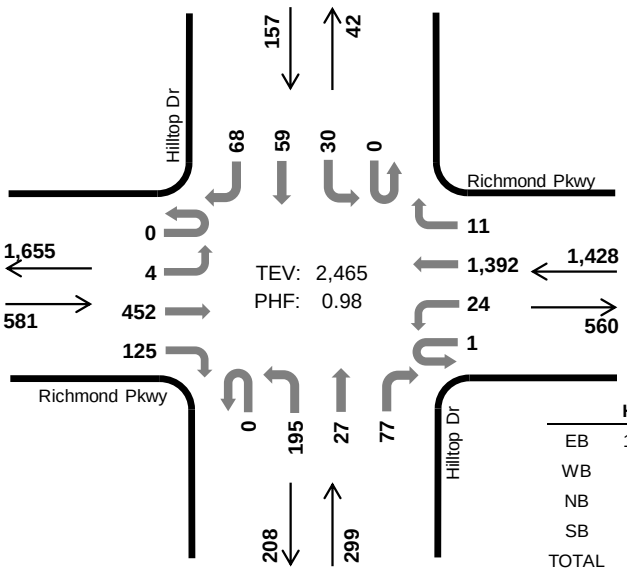
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Hilltop Dr
Richmond Pkwy

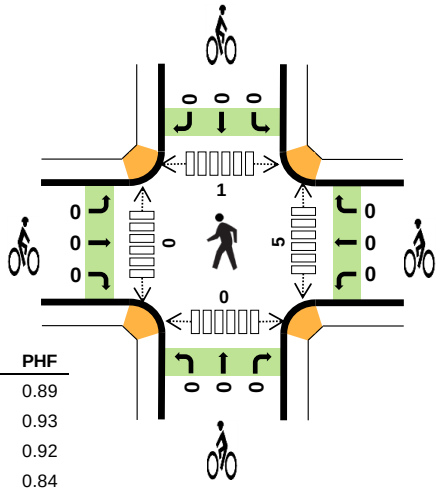
Date: 06-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM

N

Peak Hour



	HV %:	PHF
EB	12.4%	0.89
WB	6.8%	0.93
NB	2.0%	0.92
SB	0.0%	0.84
TOTAL	7.1%	0.98



Two-Hour Count Summaries

Interval Start		Richmond Pkwy Eastbound UT	LT	TH	RT	Richmond Pkwy Westbound UT	LT	TH	RT	Hilltop Dr Northbound UT	LT	TH	RT	Hilltop Dr Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM		0	0	78	24	0	3	318	4	1	42	8	15	0	6	20	11	530	0
7:15 AM		0	1	106	24	0	4	338	4	0	47	8	24	0	7	14	17	594	0
7:30 AM		**0**	**1**	**109**	**27**	**1**	**9**	**370**	**3**	**0**	**43**	**7**	**25**	**0**	**7**	**8**	**20**	**630**	0
7:45 AM		**0**	**0**	**85**	**33**	**0**	**8**	**342**	**2**	**0**	**54**	**6**	**21**	**0**	**8**	**17**	**15**	**591**	2,345
8:00 AM		**0**	**1**	**137**	**25**	**0**	**6**	**334**	**3**	**0**	**48**	**7**	**17**	**0**	**11**	**18**	**18**	**625**	2,440
8:15 AM		**0**	**2**	**121**	**40**	**0**	**1**	**346**	**3**	**0**	**50**	**7**	**14**	**0**	**4**	**16**	**15**	**619**	**2,465**
8:30 AM		0	1	117	24	0	6	314	3	0	49	8	23	0	9	20	10	584	2,419
8:45 AM		0	0	120	41	0	10	255	5	0	46	6	15	0	11	16	5	530	2,358
Count Total		0	6	873	238	1	47	2,617	27	1	379	57	154	0	63	129	111	4,703	0
Peak Hour	**All**	**0**	**4**	**452**	**125**	**1**	**24**	**1,392**	**11**	**0**	**195**	**27**	**77**	**0**	**30**	**59**	**68**	**2,465**	**0**
	HV	**0**	**0**	**62**	**10**	**0**	**0**	**97**	**0**	**0**	**3**	**1**	**2**	**0**	**0**	**0**	**0**	**175**	**0**
	HV%	**-**	**0%**	**14%**	**8%**	**0%**	**0%**	**7%**	**0%**	**-**	**2%**	**4%**	**3%**	**-**	**0%**	**0%**	**0%**	**7%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	17	24	3	0	*44*	0	0	0	0	*0*	5	0	1	0	*6*
7:15 AM	29	15	3	0	*47*	0	0	0	0	*0*	3	0	0	0	*3*
7:30 AM	**27**	**20**	**4**	**0**	***51***	**0**	**0**	**0**	**0**	***0***	**3**	**0**	**0**	**0**	*3*
7:45 AM	**16**	**15**	**0**	**0**	***31***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	*1*
8:00 AM	**15**	**28**	**1**	**0**	***44***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	*1*
8:15 AM	**14**	**34**	**1**	**0**	***49***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	***1***
8:30 AM	15	29	1	0	*45*	0	0	0	0	*0*	0	0	0	0	*0*
8:45 AM	15	26	2	0	*43*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	148	191	15	0	*354*	0	0	0	0	*0*	13	0	2	0	*15*
Peak Hour	**72**	**97**	**6**	**0**	***175***	**0**	**0**	**0**	**0**	***0***	**5**	**0**	**1**	**0**	***6***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Richmond Pkwy				Richmond Pkwy				Hilltop Dr				Hilltop Dr				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	14	3	0	0	24	0	0	2	0	1	0	0	0	0	44	0
7:15 AM	0	0	27	2	0	0	15	0	0	1	0	2	0	0	0	0	47	0
7:30 AM	**0**	**0**	**21**	**6**	**0**	**0**	**20**	**0**	**0**	**2**	**1**	**1**	**0**	**0**	**0**	**0**	**51**	0
7:45 AM	**0**	**0**	**14**	**2**	**0**	**0**	**15**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**31**	173
8:00 AM	**0**	**0**	**15**	**0**	**0**	**0**	**28**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**44**	173
8:15 AM	**0**	**0**	**12**	**2**	**0**	**0**	**34**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**49**	**175**
8:30 AM	0	0	13	2	0	0	29	0	0	0	0	1	0	0	0	0	45	169
8:45 AM	0	0	14	1	0	0	26	0	0	2	0	0	0	0	0	0	43	181
Count Total	0	0	130	18	0	0	191	0	0	8	1	6	0	0	0	0	354	0
Peak Hour	**0**	**0**	**62**	**10**	**0**	**0**	**97**	**0**	**0**	**3**	**1**	**2**	**0**	**0**	**0**	**0**	**175**	**0**

Two-Hour Count Summaries - Bikes

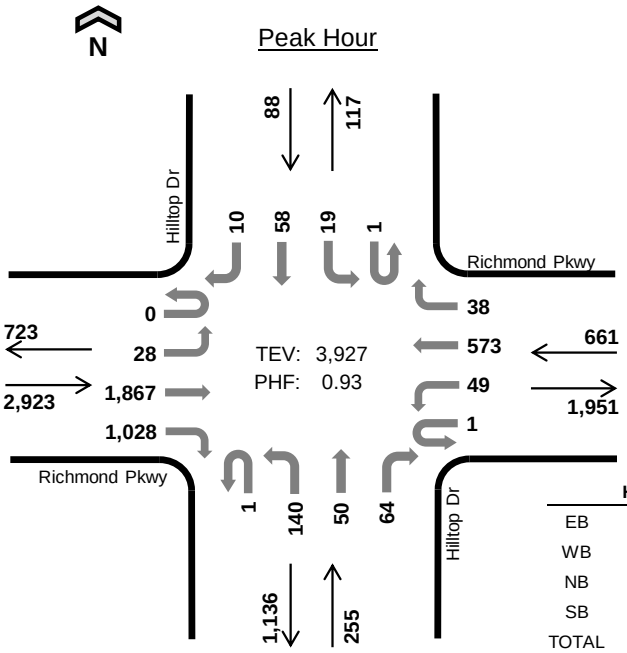
Interval Start	Richmond Pkwy			Richmond Pkwy			Hilltop Dr			Hilltop Dr			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

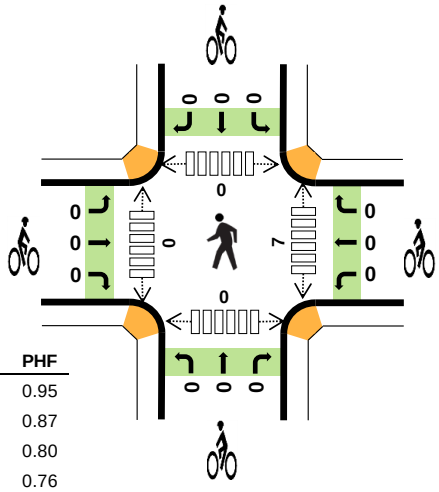
Hilltop Dr
Richmond Pkwy

Date: 06-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM

Peak Hour



	HV %:	PHF
EB	1.5%	0.95
WB	6.5%	0.87
NB	3.9%	0.80
SB	0.0%	0.76
TOTAL	2.5%	0.93



Two-Hour Count Summaries

Interval Start		Richmond Pkwy Eastbound UT	LT	TH	RT	Richmond Pkwy Westbound UT	LT	TH	RT	Hilltop Dr Northbound UT	LT	TH	RT	Hilltop Dr Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM		0	2	470	217	1	8	147	11	0	46	12	8	0	4	11	1	938	0
4:15 PM		0	11	466	261	0	9	129	12	0	26	11	14	1	4	16	2	962	0
4:30 PM		0	5	456	268	0	17	127	10	0	33	9	16	0	6	20	3	970	0
4:45 PM		0	10	475	282	0	15	170	5	1	35	18	26	0	5	11	4	1,057	3,927
5:00 PM		0	12	440	245	0	14	117	5	0	34	15	20	0	4	14	2	922	3,911
5:15 PM		0	15	434	249	0	14	147	10	0	28	18	27	0	4	16	0	962	3,911
5:30 PM		0	12	426	270	1	18	152	12	0	30	28	13	0	1	20	3	986	3,927
5:45 PM		0	26	337	277	0	22	116	5	0	27	20	13	0	4	21	2	870	3,740
Count Total		0	93	3,504	2,069	2	117	1,105	70	1	259	131	137	1	32	129	17	7,667	0
Peak Hour	All	0	28	1,867	1,028	1	49	573	38	1	140	50	64	1	19	58	10	3,927	0
	HV	0	0	28	17	0	4	39	0	0	10	0	0	0	0	0	0	98	0
	HV%	-	0%	1%	2%	0%	8%	7%	0%	0%	7%	0%	0%	0%	0%	0%	0%	2%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	12	12	4	0	*28*	0	0	0	0	*0*	2	0	0	0	*2*
4:15 PM	11	13	0	0	*24*	0	0	0	0	*0*	0	0	0	0	*0*
4:30 PM	13	10	4	0	*27*	0	0	0	0	*0*	5	0	0	0	*5*
4:45 PM	9	8	2	0	*19*	0	0	0	0	*0*	0	0	0	0	*0*
5:00 PM	11	13	4	0	*28*	0	0	0	0	*0*	2	0	0	0	*2*
5:15 PM	6	7	4	1	*18*	0	0	0	0	*0*	1	0	0	0	*1*
5:30 PM	14	8	1	0	*23*	0	0	0	0	*0*	4	0	0	0	*4*
5:45 PM	16	16	2	1	*35*	0	0	0	0	*0*	5	0	0	0	*5*
Count Total	92	87	21	2	*202*	0	0	0	0	*0*	19	0	0	0	*19*
Peak Hour	45	43	10	0	*98*	0	0	0	0	*0*	7	0	0	0	*7*

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Richmond Pkwy				Richmond Pkwy				Hilltop Dr				Hilltop Dr				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**0**	**8**	**4**	**0**	**0**	**12**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**28**	0
4:15 PM	**0**	**0**	**5**	**6**	**0**	**1**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**24**	0
4:30 PM	**0**	**0**	**10**	**3**	**0**	**1**	**9**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**27**	0
4:45 PM	**0**	**0**	**5**	**4**	**0**	**2**	**6**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**19**	**98**
5:00 PM	0	0	6	5	0	1	12	0	0	2	0	2	0	0	0	0	28	98
5:15 PM	0	0	4	2	0	0	6	1	0	1	1	2	0	0	1	0	18	92
5:30 PM	0	0	10	4	0	1	7	0	0	1	0	0	0	0	0	0	23	88
5:45 PM	0	0	9	7	0	2	14	0	0	1	0	1	0	1	0	0	35	104
Count Total	0	0	57	35	0	8	78	1	0	15	1	5	0	1	1	0	202	0
Peak Hour	**0**	**0**	**28**	**17**	**0**	**4**	**39**	**0**	**0**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**98**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Richmond Pkwy			Richmond Pkwy			Hilltop Dr			Hilltop Dr			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

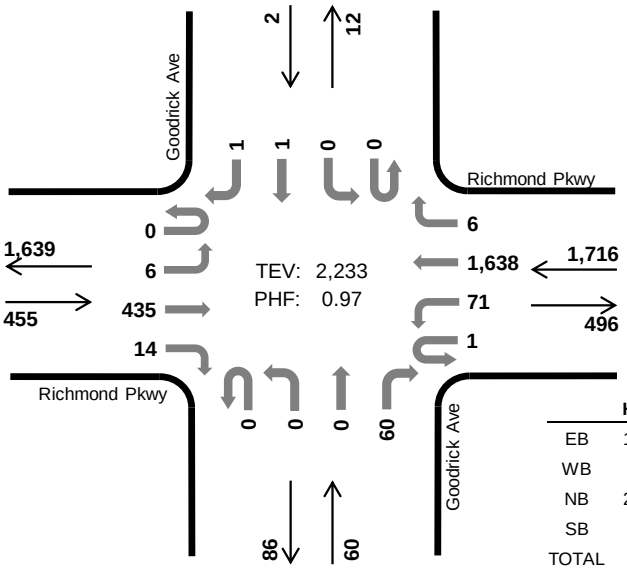
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Goodrick Ave
Richmond Pkwy

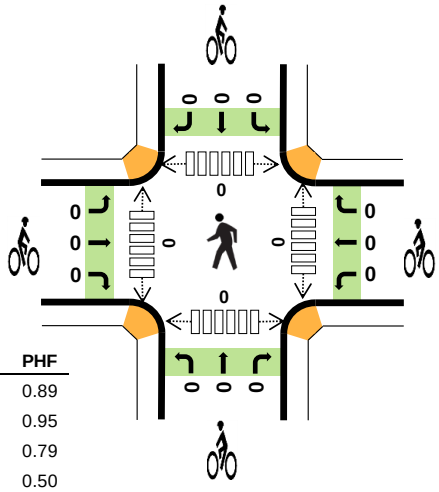
Date: 06-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM

N

Peak Hour



	HV %:	PHF
EB	11.9%	0.89
WB	5.7%	0.95
NB	20.0%	0.79
SB	0.0%	0.50
TOTAL	7.3%	0.97



Two-Hour Count Summaries

Interval Start		Richmond Pkwy Eastbound UT	LT	TH	RT	Richmond Pkwy Westbound UT	LT	TH	RT	Goodrick Ave Northbound UT	LT	TH	RT	Goodrick Ave Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM		0	1	86	7	3	23	369	3	0	4	0	13	0	0	0	0	509	0
7:15 AM		0	1	95	2	1	29	382	3	0	3	0	28	0	0	0	2	546	0
7:30 AM		**0**	**2**	**91**	**4**	**0**	**15**	**436**	**0**	**0**	**0**	**0**	**19**	**0**	**0**	**0**	**0**	**567**	0
7:45 AM		**0**	**2**	**99**	**4**	**0**	**19**	**414**	**3**	**0**	**0**	**0**	**18**	**0**	**0**	**0**	**0**	**559**	2,181
8:00 AM		**0**	**0**	**122**	**3**	**1**	**23**	**370**	**2**	**0**	**0**	**0**	**10**	**0**	**0**	**1**	**0**	**532**	2,204
8:15 AM		**0**	**2**	**123**	**3**	**0**	**14**	**418**	**1**	**0**	**0**	**0**	**13**	**0**	**0**	**0**	**1**	**575**	**2,233**
8:30 AM		0	0	118	0	0	18	332	0	0	2	1	15	0	2	0	2	490	2,156
8:45 AM		0	0	129	1	2	17	316	1	1	3	0	15	0	0	0	0	485	2,082
Count Total		0	8	863	24	7	158	3,037	13	1	12	1	131	0	2	1	5	4,263	0
Peak Hour	**All**	**0**	**6**	**435**	**14**	**1**	**71**	**1,638**	**6**	**0**	**0**	**0**	**60**	**0**	**0**	**1**	**1**	**2,233**	**0**
	HV	**0**	**0**	**49**	**5**	**0**	**9**	**89**	**0**	**0**	**0**	**0**	**12**	**0**	**0**	**0**	**0**	**164**	**0**
	HV%	**-**	**0%**	**11%**	**36%**	**0%**	**13%**	**5%**	**0%**	**-**	**-**	**-**	**20%**	**-**	**-**	**0%**	**0%**	**7%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	11	29	6	0	*46*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	17	17	11	0	*45*	0	0	0	0	*0*	0	0	0	0	*0*
7:30 AM	**16**	**25**	**6**	**0**	***47***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**10**	**14**	**4**	**0**	***28***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:00 AM	**14**	**26**	**1**	**0**	***41***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:15 AM	**14**	**33**	**1**	**0**	***48***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
8:30 AM	13	28	3	0	*44*	0	0	0	0	*0*	0	0	0	0	*0*
8:45 AM	16	25	3	0	*44*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	111	197	35	0	*343*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hour	**54**	**98**	**12**	**0**	***164***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Richmond Pkwy				Richmond Pkwy				Goodrick Ave				Goodrick Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	10	1	0	2	27	0	0	2	0	4	0	0	0	0	46	0
7:15 AM	0	0	17	0	0	0	17	0	0	1	0	10	0	0	0	0	45	0
7:30 AM	**0**	**0**	**15**	**1**	**0**	**3**	**22**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**47**	0
7:45 AM	**0**	**0**	**10**	**0**	**0**	**1**	**13**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**28**	166
8:00 AM	**0**	**0**	**12**	**2**	**0**	**2**	**24**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**41**	161
8:15 AM	**0**	**0**	**12**	**2**	**0**	**3**	**30**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**48**	**164**
8:30 AM	0	0	13	0	0	8	20	0	0	1	0	2	0	0	0	0	44	161
8:45 AM	0	0	15	1	0	6	19	0	0	1	0	2	0	0	0	0	44	177
Count Total	0	0	104	7	0	25	172	0	0	5	0	30	0	0	0	0	343	0
Peak Hour	**0**	**0**	**49**	**5**	**0**	**9**	**89**	**0**	**0**	**0**	**0**	**12**	**0**	**0**	**0**	**0**	**164**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Richmond Pkwy			Richmond Pkwy			Goodrick Ave			Goodrick Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

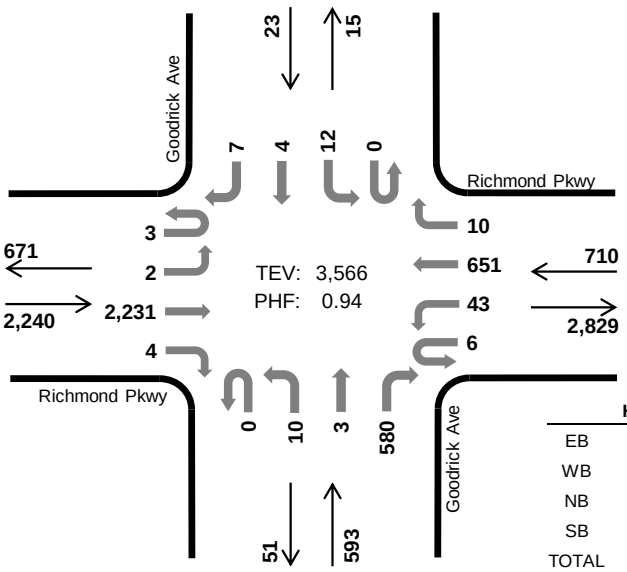
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Goodrick Ave
Richmond Pkwy

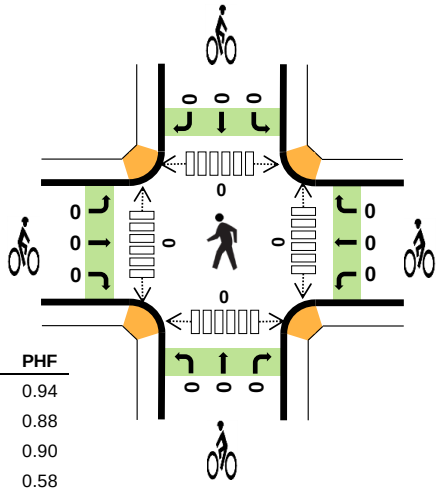
Date: 06-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM

N

Peak Hour



	HV %:	PHF
EB	1.5%	0.94
WB	6.1%	0.88
NB	1.3%	0.90
SB	0.0%	0.58
TOTAL	2.4%	0.94



Two-Hour Count Summaries

Interval Start		Richmond Pkwy Eastbound UT	LT	TH	RT	Richmond Pkwy Westbound UT	LT	TH	RT	Goodrick Ave Northbound UT	LT	TH	RT	Goodrick Ave Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM		0	3	535	1	2	15	142	0	0	5	1	129	0	1	0	1	835	0
4:15 PM		**0**	**0**	**581**	**1**	**2**	**11**	**148**	**4**	**0**	**6**	**0**	**122**	**0**	**6**	**1**	**3**	**885**	0
4:30 PM		**2**	**0**	**553**	**1**	**1**	**13**	**163**	**3**	**0**	**4**	**2**	**149**	**0**	**2**	**2**	**2**	**897**	0
4:45 PM		**1**	**1**	**593**	**0**	**2**	**12**	**187**	**1**	**0**	**0**	**1**	**145**	**0**	**3**	**1**	**1**	**948**	3,565
5:00 PM		**0**	**1**	**504**	**2**	**1**	**7**	**153**	**2**	**0**	**0**	**0**	**164**	**0**	**1**	**0**	**1**	**836**	**3,566**
5:15 PM		0	1	545	0	2	7	154	0	0	0	1	119	0	0	0	0	829	3,510
5:30 PM		0	0	569	4	6	5	189	0	0	0	0	106	0	3	0	4	886	3,499
5:45 PM		0	0	566	0	1	11	123	3	0	1	0	48	0	3	2	0	758	3,309
Count Total		3	6	4,446	9	17	81	1,259	13	0	16	5	982	0	19	6	12	6,874	0
Peak Hour	**All**	**3**	**2**	**2,231**	**4**	**6**	**43**	**651**	**10**	**0**	**10**	**3**	**580**	**0**	**12**	**4**	**7**	**3,566**	**0**
	HV	**0**	**0**	**32**	**1**	**1**	**5**	**37**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**84**	**0**
	HV%	**0%**	**0%**	**1%**	**25%**	**17%**	**12%**	**6%**	**0%**	**-**	**0%**	**0%**	**1%**	**-**	**0%**	**0%**	**0%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	10	14	2	0	*26*	0	0	0	0	*0*	0	0	0	0	*0*
4:15 PM	**8**	**9**	**2**	**0**	***19***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:30 PM	**8**	**13**	**4**	**0**	***25***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**8**	**9**	**2**	**0**	***19***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:00 PM	**9**	**12**	**0**	**0**	***21***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
5:15 PM	2	6	0	0	*8*	0	0	0	0	*0*	0	0	0	0	*0*
5:30 PM	9	7	7	0	*23*	0	0	0	0	*0*	0	0	0	0	*0*
5:45 PM	13	11	1	0	*25*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	67	81	18	0	*166*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hour	**33**	**43**	**8**	**0**	***84***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Richmond Pkwy				Richmond Pkwy				Goodrick Ave				Goodrick Ave				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	9	1	0	5	9	0	0	1	0	1	0	0	0	0	26	0
4:15 PM	**0**	**0**	**8**	**0**	**1**	**0**	**8**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**19**	0
4:30 PM	**0**	**0**	**7**	**1**	**0**	**2**	**11**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**25**	0
4:45 PM	**0**	**0**	**8**	**0**	**0**	**2**	**7**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**19**	89
5:00 PM	**0**	**0**	**9**	**0**	**0**	**1**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**21**	**84**
5:15 PM	0	0	2	0	0	0	6	0	0	0	0	0	0	0	0	0	8	73
5:30 PM	0	0	9	0	0	1	6	0	0	0	0	7	0	0	0	0	23	71
5:45 PM	0	0	13	0	0	3	8	0	0	0	0	1	0	0	0	0	25	77
Count Total	0	0	65	2	1	14	66	0	0	1	0	17	0	0	0	0	166	0
Peak Hour	**0**	**0**	**32**	**1**	**1**	**5**	**37**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**84**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Richmond Pkwy			Richmond Pkwy			Goodrick Ave			Goodrick Ave			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

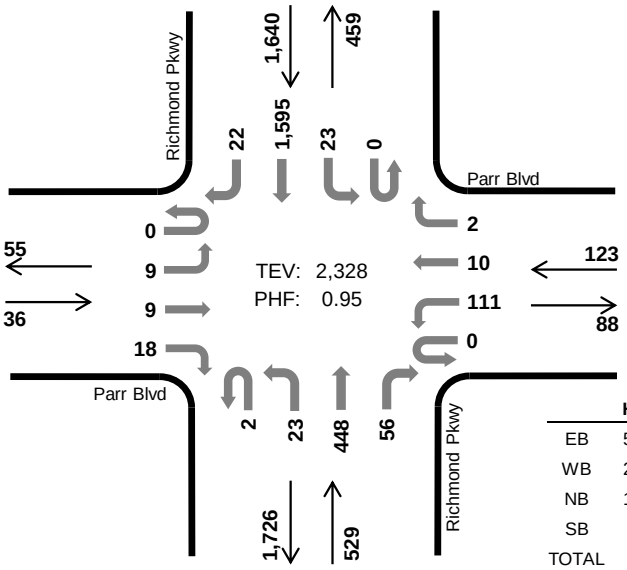
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Richmond Pkwy
Parr Blvd

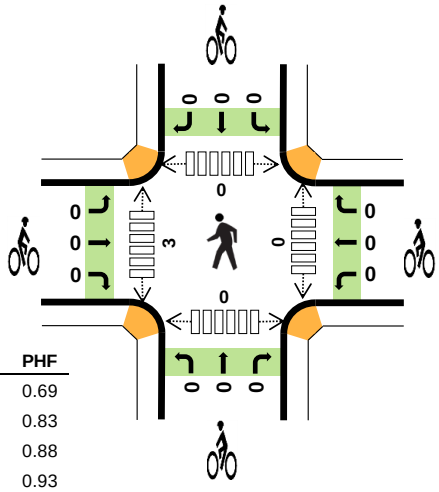
Date: 06-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM

N

Peak Hour



	HV %:	PHF
EB	52.8%	0.69
WB	26.0%	0.83
NB	12.5%	0.88
SB	5.2%	0.93
TOTAL	8.7%	0.95



Two-Hour Count Summaries

Interval Start		Parr Blvd Eastbound				Parr Blvd Westbound				Richmond Pkwy Northbound				Richmond Pkwy Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	3	3	8	0	24	4	0	1	8	89	8	0	5	376	9	538	0
7:15 AM		0	4	5	8	0	27	5	2	1	6	91	10	0	4	351	5	519	0
7:30 AM		**0**	**4**	**2**	**7**	**0**	**37**	**0**	**0**	**0**	**8**	**102**	**12**	**0**	**2**	**427**	**7**	**608**	0
7:45 AM		**0**	**4**	**2**	**6**	**0**	**31**	**4**	**0**	**1**	**5**	**92**	**16**	**0**	**7**	**394**	**5**	**567**	2,232
8:00 AM		**0**	**0**	**3**	**4**	**0**	**24**	**4**	**2**	**1**	**4**	**124**	**22**	**0**	**9**	**340**	**6**	**543**	2,237
8:15 AM		**0**	**1**	**2**	**1**	**0**	**19**	**2**	**0**	**0**	**6**	**130**	**6**	**0**	**5**	**434**	**4**	**610**	**2,328**
8:30 AM		0	5	2	11	0	31	1	1	2	6	122	15	0	3	346	6	551	2,271
8:45 AM		0	1	4	4	0	12	5	1	0	2	116	20	0	3	302	5	475	2,179
Count Total		0	22	23	49	0	205	25	6	6	45	866	109	0	38	2,970	47	4,411	0
Peak Hour	**All**	**0**	**9**	**9**	**18**	**0**	**111**	**10**	**2**	**2**	**23**	**448**	**56**	**0**	**23**	**1,595**	**22**	**2,328**	**0**
	HV	**0**	**4**	**6**	**9**	**0**	**24**	**7**	**1**	**0**	**8**	**52**	**6**	**0**	**2**	**79**	**4**	**202**	**0**
	HV%	**-**	**44%**	**67%**	**50%**	**-**	**22%**	**70%**	**50%**	**0%**	**35%**	**12%**	**11%**	**-**	**9%**	**5%**	**18%**	**9%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	2	6	14	28	*50*	0	0	0	0	*0*	0	1	0	0	*1*
7:15 AM	6	7	19	16	*48*	0	0	0	0	*0*	0	1	0	0	*1*
7:30 AM	**9**	**6**	**19**	**20**	***54***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**2**	**9**	**12**	**15**	***38***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	*1*
8:00 AM	**4**	**12**	**17**	**23**	***56***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**0**	**0**	*2*
8:15 AM	**4**	**5**	**18**	**27**	***54***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
8:30 AM	10	6	20	22	*58*	0	0	0	0	*0*	0	2	0	0	*2*
8:45 AM	4	3	17	23	*47*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	41	54	136	174	*405*	0	0	0	0	*0*	0	7	0	0	*7*
Peak Hour	**19**	**32**	**66**	**85**	***202***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**0**	**0**	***3***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Parr Blvd				Parr Blvd				Richmond Pkwy				Richmond Pkwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	0	1	0	4	2	0	0	4	9	1	0	0	25	3	50	0
7:15 AM	0	1	2	3	0	4	1	2	0	2	15	2	0	1	15	0	48	0
7:30 AM	**0**	**2**	**1**	**6**	**0**	**6**	**0**	**0**	**0**	**3**	**14**	**2**	**0**	**0**	**19**	**1**	**54**	0
7:45 AM	**0**	**1**	**1**	**0**	**0**	**6**	**3**	**0**	**0**	**1**	**9**	**2**	**0**	**2**	**13**	**0**	**38**	190
8:00 AM	**0**	**0**	**2**	**2**	**0**	**7**	**4**	**1**	**0**	**1**	**14**	**2**	**0**	**0**	**22**	**1**	**56**	196
8:15 AM	**0**	**1**	**2**	**1**	**0**	**5**	**0**	**0**	**0**	**3**	**15**	**0**	**0**	**0**	**25**	**2**	**54**	**202**
8:30 AM	0	3	1	6	0	6	0	0	0	5	11	4	0	1	18	3	58	206
8:45 AM	0	0	2	2	0	1	2	0	0	0	14	3	0	2	19	2	47	215
Count Total	0	9	11	21	0	39	12	3	0	19	101	16	0	6	156	12	405	0
Peak Hour	**0**	**4**	**6**	**9**	**0**	**24**	**7**	**1**	**0**	**8**	**52**	**6**	**0**	**2**	**79**	**4**	**202**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Parr Blvd			Parr Blvd			Richmond Pkwy			Richmond Pkwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

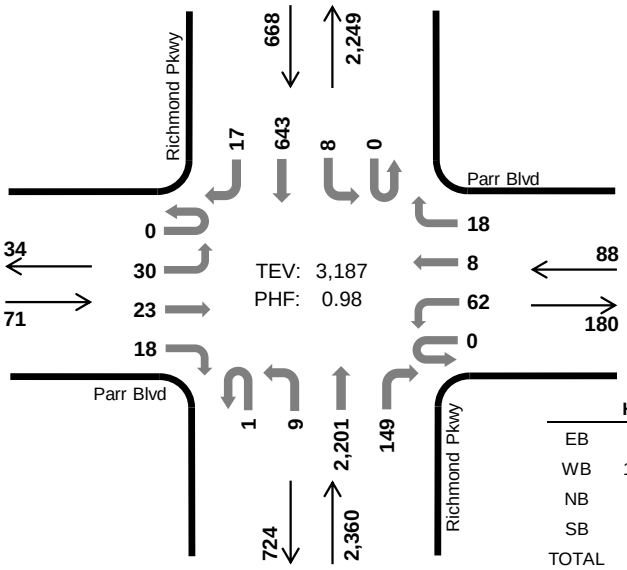
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Richmond Pkwy
Parr Blvd

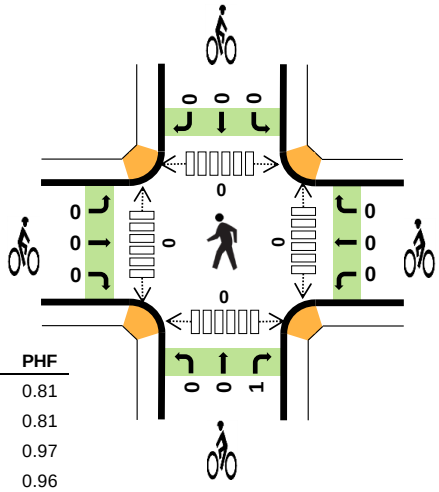
Date: 06-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM

N

Peak Hour



	HV %:	PHF
EB	5.6%	0.81
WB	10.2%	0.81
NB	2.3%	0.97
SB	5.5%	0.96
TOTAL	3.3%	0.98



Two-Hour Count Summaries

Interval Start		Parr Blvd Eastbound UT	LT	TH	RT	Parr Blvd Westbound UT	LT	TH	RT	Richmond Pkwy Northbound UT	LT	TH	RT	Richmond Pkwy Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM		0	3	5	7	0	24	7	1	0	3	535	39	0	0	134	3	761	0
4:15 PM		**0**	**7**	**2**	**4**	**0**	**14**	**6**	**1**	**1**	**2**	**557**	**31**	**0**	**2**	**157**	**2**	**786**	0
4:30 PM		**0**	**7**	**7**	**5**	**0**	**20**	**2**	**5**	**0**	**2**	**562**	**31**	**0**	**1**	**156**	**8**	**806**	0
4:45 PM		**0**	**7**	**6**	**4**	**0**	**9**	**0**	**9**	**0**	**4**	**558**	**46**	**0**	**3**	**159**	**6**	**811**	3,164
5:00 PM		**0**	**9**	**8**	**5**	**0**	**19**	**0**	**3**	**0**	**1**	**524**	**41**	**0**	**2**	**171**	**1**	**784**	**3,187**
5:15 PM		0	4	3	3	0	15	0	5	0	5	540	46	0	1	157	1	780	3,181
5:30 PM		0	11	4	8	0	8	0	1	0	0	545	43	0	0	171	0	791	3,166
5:45 PM		0	6	3	3	0	10	1	0	0	0	529	58	0	2	134	2	748	3,103
Count Total		0	54	38	39	0	119	16	25	1	17	4,350	335	0	11	1,239	23	6,267	0
Peak Hour	**All**	**0**	**30**	**23**	**18**	**0**	**62**	**8**	**18**	**1**	**9**	**2,201**	**149**	**0**	**8**	**643**	**17**	**3,187**	**0**
	HV	**0**	**0**	**4**	**0**	**0**	**6**	**2**	**1**	**0**	**5**	**30**	**20**	**0**	**4**	**22**	**11**	**105**	**0**
	HV%	**-**	**0%**	**17%**	**0%**	**-**	**10%**	**25%**	**6%**	**0%**	**56%**	**1%**	**13%**	**-**	**50%**	**3%**	**65%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	2	6	18	10	*36*	0	0	0	0	*0*	0	0	0	0	*0*
4:15 PM	**0**	**4**	**9**	**6**	***19***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:30 PM	**2**	**1**	**14**	**12**	***29***	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**1**	**2**	**16**	**9**	***28***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:00 PM	**1**	**2**	**16**	**10**	***29***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
5:15 PM	0	0	9	7	*16*	0	0	0	0	*0*	0	0	0	0	*0*
5:30 PM	0	1	11	5	*17*	0	0	0	0	*0*	0	0	0	0	*0*
5:45 PM	0	1	18	9	*28*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	6	17	111	68	*202*	0	0	1	0	*1*	0	0	0	0	*0*
Peak Hour	**4**	**9**	**55**	**37**	***105***	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Parr Blvd				Parr Blvd				Richmond Pkwy				Richmond Pkwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	2	0	0	2	4	0	0	2	10	6	0	0	8	2	36	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**2**	**2**	**0**	**0**	**0**	**6**	**3**	**0**	**1**	**4**	**1**	**19**	0
4:30 PM	**0**	**0**	**2**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**7**	**6**	**0**	**0**	**6**	**6**	**29**	0
4:45 PM	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**1**	**0**	**3**	**7**	**6**	**0**	**1**	**5**	**3**	**28**	112
5:00 PM	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**10**	**5**	**0**	**2**	**7**	**1**	**29**	**105**
5:15 PM	0	0	0	0	0	0	0	0	0	2	4	3	0	1	5	1	16	102
5:30 PM	0	0	0	0	0	1	0	0	0	0	10	1	0	0	5	0	17	90
5:45 PM	0	0	0	0	0	1	0	0	0	0	11	7	0	0	7	2	28	90
Count Total	0	0	6	0	0	10	6	1	0	9	65	37	0	5	47	16	202	0
Peak Hour	**0**	**0**	**4**	**0**	**0**	**6**	**2**	**1**	**0**	**5**	**30**	**20**	**0**	**4**	**22**	**11**	**105**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Parr Blvd			Parr Blvd			Richmond Pkwy			Richmond Pkwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	1	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**

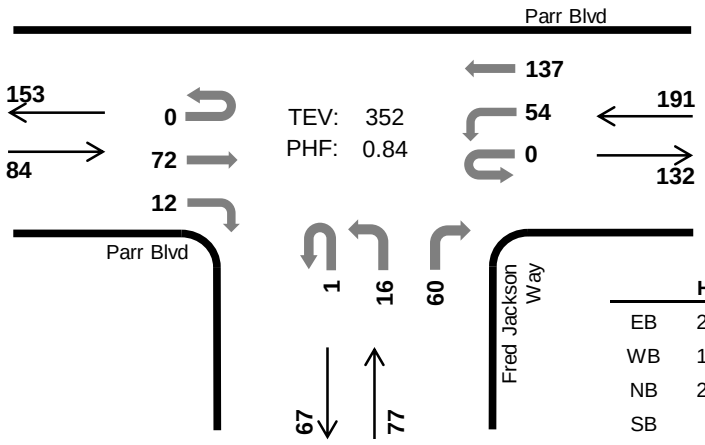
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Fred Jackson Way
Parr Blvd

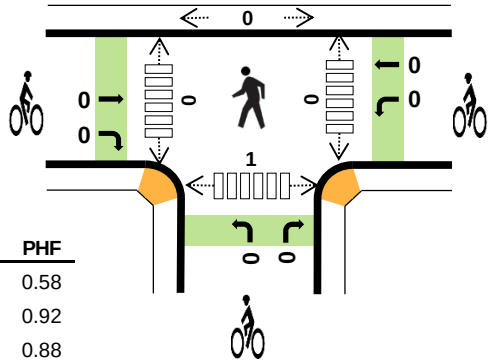
N

Peak Hour

Date: 06-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:15 AM to 8:15 AM



	HV %:	PHF
EB	23.8%	0.58
WB	13.6%	0.92
NB	23.4%	0.88
SB	-	-
TOTAL	18.2%	0.84



Two-Hour Count Summaries

Interval Start		Parr Blvd Eastbound UT	LT	TH	RT	Parr Blvd Westbound UT	LT	TH	RT	Fred Jackson Way Northbound UT	LT	TH	RT	0 Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM		0	0	11	1	0	13	33	0	0	2	0	11	0	0	0	0	71	0
7:15 AM		**0**	**0**	**12**	**2**	**0**	**17**	**35**	**0**	**0**	**5**	**0**	**16**	**0**	**0**	**0**	**0**	**87**	0
7:30 AM		**0**	**0**	**13**	**0**	**0**	**13**	**34**	**0**	**1**	**1**	**0**	**11**	**0**	**0**	**0**	**0**	**73**	0
7:45 AM		**0**	**0**	**20**	**1**	**0**	**9**	**35**	**0**	**0**	**3**	**0**	**19**	**0**	**0**	**0**	**0**	**87**	318
8:00 AM		**0**	**0**	**27**	**9**	**0**	**15**	**33**	**0**	**0**	**7**	**0**	**14**	**0**	**0**	**0**	**0**	**105**	**352**
8:15 AM		0	0	5	4	0	7	25	0	0	1	0	13	0	0	0	0	55	320
8:30 AM		0	0	18	5	0	7	31	0	0	4	0	11	0	0	0	0	76	323
8:45 AM		0	0	18	3	0	7	16	0	0	4	0	15	0	0	0	0	63	299
Count Total		0	0	124	25	0	88	242	0	1	27	0	110	0	0	0	0	617	0
Peak Hour	**All**	**0**	**0**	**72**	**12**	**0**	**54**	**137**	**0**	**1**	**16**	**0**	**60**	**0**	**0**	**0**	**0**	**352**	**0**
	HV	**0**	**0**	**16**	**4**	**0**	**7**	**19**	**0**	**1**	**9**	**0**	**8**	**0**	**0**	**0**	**0**	**64**	**0**
	HV%	**-**	**-**	**22%**	**33%**	**-**	**13%**	**14%**	**-**	**100%**	**56%**	**-**	**13%**	**-**	**-**	**-**	**-**	**18%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	2	7	4	0	*13*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	**4**	**5**	**6**	**0**	***15***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:30 AM	**5**	**7**	**3**	**0**	***15***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**3**	**7**	**6**	**0**	***16***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	*1*
8:00 AM	**8**	**7**	**3**	**0**	***18***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
8:15 AM	1	7	1	0	*9*	0	0	0	0	*0*	0	0	0	0	*0*
8:30 AM	5	2	2	0	*9*	0	0	0	0	*0*	0	1	0	1	*2*
8:45 AM	7	1	5	0	*13*	0	0	0	0	*0*	1	0	0	0	*1*
Count Total	35	43	30	0	*108*	0	0	0	0	*0*	1	1	0	2	*4*
Peak Hr	**20**	**26**	**18**	**0**	***64***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	***1***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Parr Blvd				Parr Blvd				Fred Jackson Way				0				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	1	1	0	1	6	0	0	1	0	3	0	0	0	0	13	0
7:15 AM	**0**	**0**	**4**	**0**	**0**	**2**	**3**	**0**	**0**	**4**	**0**	**2**	**0**	**0**	**0**	**0**	**15**	0
7:30 AM	**0**	**0**	**5**	**0**	**0**	**4**	**3**	**0**	**1**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**15**	0
7:45 AM	**0**	**0**	**2**	**1**	**0**	**0**	**7**	**0**	**0**	**2**	**0**	**4**	**0**	**0**	**0**	**0**	**16**	59
8:00 AM	**0**	**0**	**5**	**3**	**0**	**1**	**6**	**0**	**0**	**2**	**0**	**1**	**0**	**0**	**0**	**0**	**18**	**64**
8:15 AM	0	0	0	1	0	0	7	0	0	1	0	0	0	0	0	0	9	58
8:30 AM	0	0	4	1	0	1	1	0	0	1	0	1	0	0	0	0	9	52
8:45 AM	0	0	5	2	0	0	1	0	0	3	0	2	0	0	0	0	13	49
Count Total	0	0	26	9	0	9	34	0	1	15	0	14	0	0	0	0	108	0
Peak Hour	**0**	**0**	**16**	**4**	**0**	**7**	**19**	**0**	**1**	**9**	**0**	**8**	**0**	**0**	**0**	**0**	**64**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Parr Blvd			Parr Blvd			Fred Jackson Way			0			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

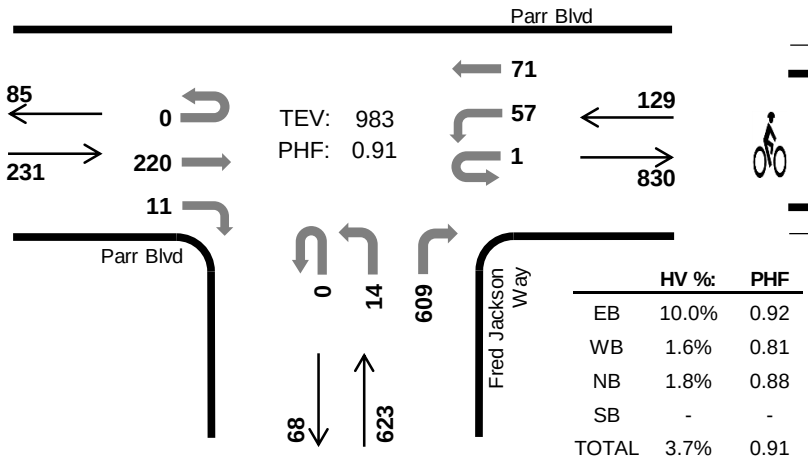
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Fred Jackson Way
Parr Blvd

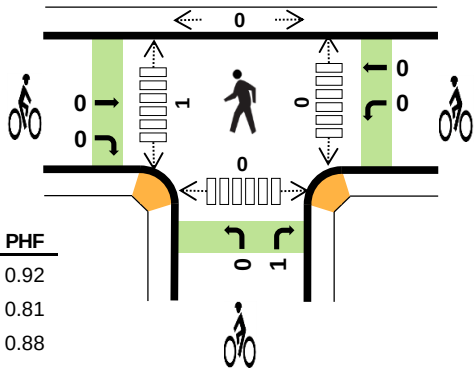
N

Peak Hour

Date: 06-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM



	HV %:	PHF
EB	10.0%	0.92
WB	1.6%	0.81
NB	1.8%	0.88
SB	-	-
TOTAL	3.7%	0.91



Two-Hour Count Summaries

Interval Start		Parr Blvd Eastbound UT	LT	TH	RT	Parr Blvd Westbound UT	LT	TH	RT	Fred Jackson Way Northbound UT	LT	TH	RT	0 Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM		0	0	45	2	0	19	32	0	0	2	0	144	0	0	0	0	244	0
4:15 PM		0	0	36	2	0	15	17	0	0	3	0	127	0	0	0	0	200	0
4:30 PM		**0**	**0**	**53**	**3**	**1**	**17**	**22**	**0**	**0**	**2**	**0**	**148**	**0**	**0**	**0**	**0**	**246**	0
4:45 PM		**0**	**0**	**57**	**6**	**0**	**11**	**20**	**0**	**0**	**6**	**0**	**171**	**0**	**0**	**0**	**0**	**271**	961
5:00 PM		**0**	**0**	**62**	**1**	**0**	**16**	**14**	**0**	**0**	**2**	**0**	**154**	**0**	**0**	**0**	**0**	**249**	966
5:15 PM		**0**	**0**	**48**	**1**	**0**	**13**	**15**	**0**	**0**	**4**	**0**	**136**	**0**	**0**	**0**	**0**	**217**	**983**
5:30 PM		0	0	52	3	0	10	8	0	0	2	0	129	0	0	0	0	204	941
5:45 PM		0	0	56	4	0	15	12	0	0	0	0	55	0	0	0	0	142	812
Count Total		0	0	409	22	1	116	140	0	0	21	0	1,064	0	0	0	0	1,773	0
Peak Hour	**All**	**0**	**0**	**220**	**11**	**1**	**57**	**71**	**0**	**0**	**14**	**0**	**609**	**0**	**0**	**0**	**0**	**983**	**0**
	HV	**0**	**0**	**19**	**4**	**0**	**1**	**1**	**0**	**0**	**4**	**0**	**7**	**0**	**0**	**0**	**0**	**36**	**0**
	HV%	**-**	**-**	**9%**	**36%**	**0%**	**2%**	**1%**	**-**	**-**	**29%**	**-**	**1%**	**-**	**-**	**-**	**-**	**4%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	5	7	1	0	*13*	0	0	0	0	*0*	0	1	0	0	*1*
4:15 PM	5	5	6	0	*16*	0	0	0	0	*0*	0	0	0	0	*0*
4:30 PM	**5**	**2**	**2**	**0**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	*1*
4:45 PM	**9**	**0**	**4**	**0**	***13***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:00 PM	**7**	**0**	**1**	**0**	***8***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:15 PM	**2**	**0**	**4**	**0**	***6***	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***
5:30 PM	4	1	8	0	*13*	0	0	0	0	*0*	0	0	0	0	*0*
5:45 PM	4	2	1	0	*7*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	41	17	27	0	*85*	0	0	1	0	*1*	0	2	0	0	*2*
Peak Hr	**23**	**2**	**11**	**0**	***36***	**0**	**0**	**1**	**0**	***1***	**0**	**1**	**0**	**0**	***1***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Parr Blvd				Parr Blvd				Fred Jackson Way				0				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	4	1	0	2	5	0	0	1	0	0	0	0	0	0	13	0
4:15 PM	0	0	3	2	0	1	4	0	0	0	0	6	0	0	0	0	16	0
4:30 PM	**0**	**0**	**4**	**1**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**9**	0
4:45 PM	**0**	**0**	**7**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	**0**	**0**	**0**	**0**	**13**	51
5:00 PM	**0**	**0**	**6**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**8**	46
5:15 PM	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	**0**	**0**	**0**	**0**	**6**	**36**
5:30 PM	0	0	2	2	0	0	1	0	0	2	0	6	0	0	0	0	13	40
5:45 PM	0	0	2	2	0	1	1	0	0	0	0	1	0	0	0	0	7	34
Count Total	0	0	30	11	0	5	12	0	0	7	0	20	0	0	0	0	85	0
Peak Hour	**0**	**0**	**19**	**4**	**0**	**1**	**1**	**0**	**0**	**4**	**0**	**7**	**0**	**0**	**0**	**0**	**36**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Parr Blvd			Parr Blvd			Fred Jackson Way			0			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**1**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	0	0	0	1	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**

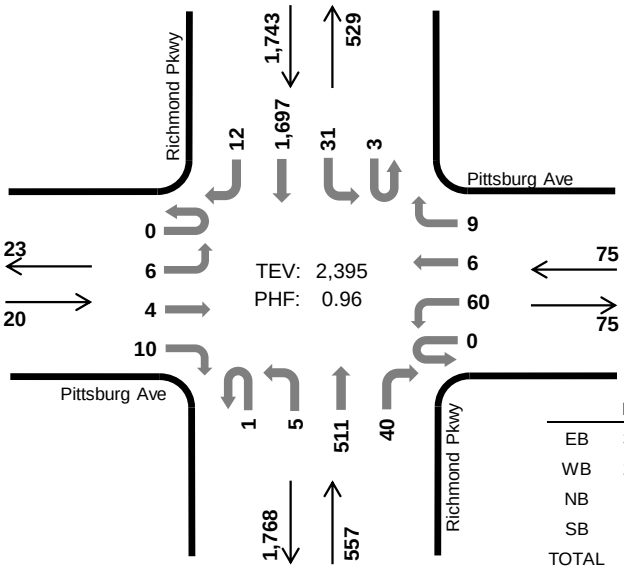
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Richmond Pkwy
Pittsburg Ave

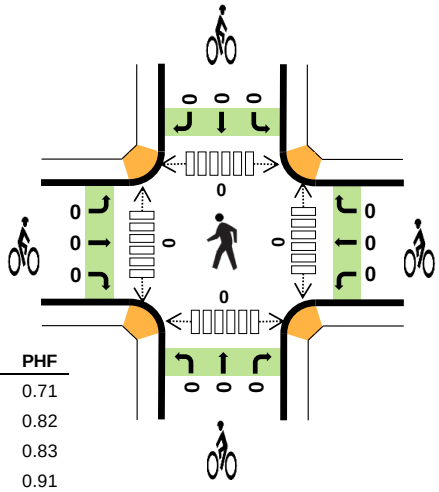
Date: 06-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM

N

Peak Hour



	HV %:	PHF
EB	30.0%	0.71
WB	28.0%	0.82
NB	10.4%	0.83
SB	6.5%	0.91
TOTAL	8.3%	0.96



Two-Hour Count Summaries

Interval Start		Pittsburg Ave Eastbound UT	LT	TH	RT	Pittsburg Ave Westbound UT	LT	TH	RT	Richmond Pkwy Northbound UT	LT	TH	RT	Richmond Pkwy Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM		0	0	0	3	0	15	0	2	1	6	105	10	0	5	415	2	564	0
7:15 AM		0	0	0	2	0	14	2	3	0	1	105	11	1	5	380	2	526	0
7:30 AM		**0**	**1**	**0**	**3**	**0**	**13**	**2**	**1**	**1**	**2**	**109**	**11**	**2**	**11**	**464**	**4**	**624**	0
7:45 AM		**0**	**2**	**2**	**0**	**0**	**10**	**1**	**4**	**0**	**0**	**113**	**10**	**1**	**4**	**422**	**5**	**574**	2,288
8:00 AM		**0**	**1**	**1**	**3**	**0**	**20**	**1**	**0**	**0**	**1**	**155**	**11**	**0**	**6**	**374**	**1**	**574**	2,298
8:15 AM		**0**	**2**	**1**	**4**	**0**	**17**	**2**	**4**	**0**	**2**	**134**	**8**	**0**	**10**	**437**	**2**	**623**	**2,395**
8:30 AM		0	3	0	1	0	15	0	6	1	0	130	14	0	11	382	3	566	2,337
8:45 AM		0	0	2	3	0	17	1	3	0	1	146	13	0	6	315	3	510	2,273
Count Total		0	9	6	19	0	121	9	23	3	13	997	88	4	58	3,189	22	4,561	0
Peak Hour	**All**	**0**	**6**	**4**	**10**	**0**	**60**	**6**	**9**	**1**	**5**	**511**	**40**	**3**	**31**	**1,697**	**12**	**2,395**	**0**
	HV	**0**	**3**	**1**	**2**	**0**	**14**	**3**	**4**	**0**	**1**	**55**	**2**	**0**	**5**	**108**	**1**	**199**	**0**
	HV%	**-**	**50%**	**25%**	**20%**	**-**	**23%**	**50%**	**44%**	**0%**	**20%**	**11%**	**5%**	**0%**	**16%**	**6%**	**8%**	**8%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	1	6	16	32	*55*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	0	5	21	22	*48*	0	0	0	0	*0*	1	0	0	0	*1*
7:30 AM	**2**	**2**	**18**	**30**	***52***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**2**	**5**	**10**	**20**	***37***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:00 AM	**2**	**7**	**16**	**32**	***57***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:15 AM	**0**	**7**	**14**	**32**	***53***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
8:30 AM	1	4	18	31	*54*	0	0	0	0	*0*	0	0	0	0	*0*
8:45 AM	2	4	20	21	*47*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	10	40	133	220	*403*	0	0	0	0	*0*	1	0	0	0	*1*
Peak Hour	**6**	**21**	**58**	**114**	***199***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Pittsburg Ave				Pittsburg Ave				Richmond Pkwy				Richmond Pkwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	1	0	5	0	1	0	0	14	2	0	0	31	1	55	0
7:15 AM	0	0	0	0	0	3	0	2	0	0	17	4	0	1	20	1	48	0
7:30 AM	**0**	**1**	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**1**	**16**	**1**	**0**	**2**	**28**	**0**	**52**	0
7:45 AM	**0**	**2**	**0**	**0**	**0**	**2**	**1**	**2**	**0**	**0**	**10**	**0**	**0**	**0**	**19**	**1**	**37**	192
8:00 AM	**0**	**0**	**1**	**1**	**0**	**6**	**1**	**0**	**0**	**0**	**15**	**1**	**0**	**1**	**31**	**0**	**57**	194
8:15 AM	**0**	**0**	**0**	**0**	**0**	**4**	**1**	**2**	**0**	**0**	**14**	**0**	**0**	**2**	**30**	**0**	**53**	**199**
8:30 AM	0	1	0	0	0	1	0	3	0	0	14	4	0	0	31	0	54	201
8:45 AM	0	0	0	2	0	3	0	1	0	0	20	0	0	2	18	1	47	211
Count Total	0	4	1	5	0	26	3	11	0	1	120	12	0	8	208	4	403	0
Peak Hour	**0**	**3**	**1**	**2**	**0**	**14**	**3**	**4**	**0**	**1**	**55**	**2**	**0**	**5**	**108**	**1**	**199**	**0**

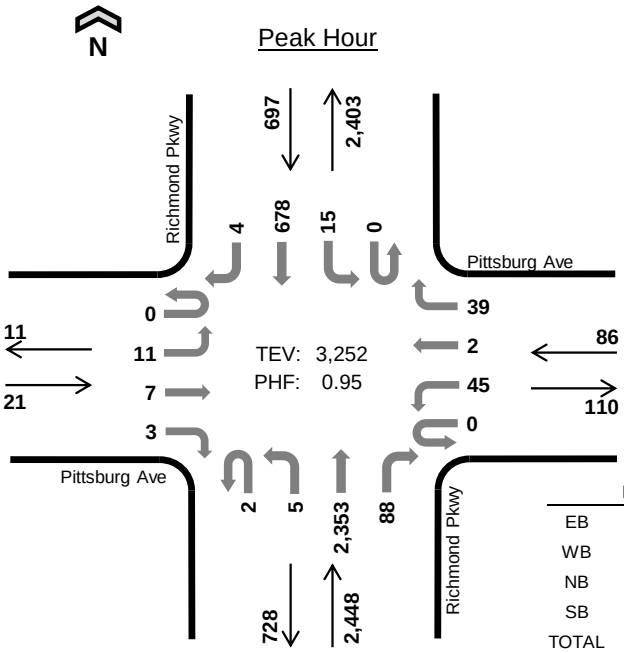
Two-Hour Count Summaries - Bikes

Interval Start	Pittsburg Ave			Pittsburg Ave			Richmond Pkwy			Richmond Pkwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

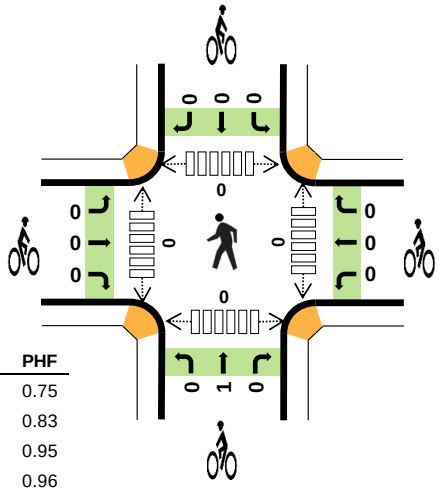
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Richmond Pkwy
Pittsburg Ave

Date: 06-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM



	HV %:	PHF
EB	0.0%	0.75
WB	11.6%	0.83
NB	2.5%	0.95
SB	4.2%	0.96
TOTAL	3.0%	0.95



Two-Hour Count Summaries

Interval Start		Pittsburg Ave Eastbound				Pittsburg Ave Westbound				Richmond Pkwy Northbound				Richmond Pkwy Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		**0**	**3**	**1**	**3**	**0**	**14**	**2**	**5**	**0**	**1**	**567**	**16**	**0**	**4**	**156**	**0**	**772**	0
4:15 PM		**0**	**4**	**3**	**0**	**0**	**17**	**0**	**5**	**2**	**1**	**614**	**26**	**0**	**1**	**178**	**1**	**852**	0
4:30 PM		**0**	**0**	**0**	**0**	**0**	**7**	**0**	**10**	**0**	**3**	**578**	**26**	**0**	**4**	**176**	**2**	**806**	0
4:45 PM		**0**	**4**	**3**	**0**	**0**	**7**	**0**	**19**	**0**	**0**	**594**	**20**	**0**	**6**	**168**	**1**	**822**	**3,252**
5:00 PM		0	2	3	2	0	14	1	27	0	2	493	17	0	1	195	0	757	3,237
5:15 PM		0	4	1	1	0	20	0	11	0	1	582	22	0	1	172	3	818	3,203
5:30 PM		0	0	1	2	0	7	0	4	0	0	566	20	0	3	187	0	790	3,187
5:45 PM		0	1	0	2	0	7	0	1	0	2	605	33	0	0	146	1	798	3,163
Count Total		0	18	12	10	0	93	3	82	2	10	4,599	180	0	20	1,378	8	6,415	0
Peak Hour	**All**	**0**	**11**	**7**	**3**	**0**	**45**	**2**	**39**	**2**	**5**	**2,353**	**88**	**0**	**15**	**678**	**4**	**3,252**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**3**	**1**	**6**	**0**	**1**	**51**	**8**	**0**	**3**	**25**	**1**	**99**	**0**
	HV%	**-**	**0%**	**0%**	**0%**	**-**	**7%**	**50%**	**15%**	**0%**	**20%**	**2%**	**9%**	**-**	**20%**	**4%**	**25%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	**0**	**4**	**16**	**10**	***30***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:15 PM	**0**	**3**	**11**	**6**	***20***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:30 PM	**0**	**1**	**19**	**7**	***27***	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**0**	**2**	**14**	**6**	***22***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
5:00 PM	1	1	11	9	*22*	0	0	0	0	*0*	0	0	1	0	*1*
5:15 PM	0	2	8	5	*15*	0	0	0	0	*0*	0	0	0	0	*0*
5:30 PM	1	1	13	6	*21*	0	0	0	0	*0*	0	0	0	0	*0*
5:45 PM	0	0	23	8	*31*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	2	14	115	57	*188*	0	0	1	0	*1*	0	0	1	0	*1*
Peak Hour	**0**	**10**	**60**	**29**	***99***	**0**	**0**	**1**	**0**	***1***	**0**	**0**	**0**	**0**	***0***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Pittsburg Ave				Pittsburg Ave				Richmond Pkwy				Richmond Pkwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**2**	**0**	**0**	**15**	**1**	**0**	**0**	**10**	**0**	**30**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**0**	**0**	**9**	**2**	**0**	**1**	**5**	**0**	**20**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**13**	**5**	**0**	**1**	**5**	**1**	**27**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**14**	**0**	**0**	**1**	**5**	**0**	**22**	**99**
5:00 PM	0	0	1	0	0	0	0	1	0	0	11	0	0	0	9	0	22	91
5:15 PM	0	0	0	0	0	0	0	2	0	1	6	1	0	0	4	1	15	86
5:30 PM	0	0	1	0	0	1	0	0	0	0	12	1	0	0	6	0	21	80
5:45 PM	0	0	0	0	0	0	0	0	0	0	17	6	0	0	8	0	31	89
Count Total	0	0	2	0	0	4	1	9	0	2	97	16	0	3	52	2	188	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**3**	**1**	**6**	**0**	**1**	**51**	**8**	**0**	**3**	**25**	**1**	**99**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Pittsburg Ave			Pittsburg Ave			Richmond Pkwy			Richmond Pkwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	1	0	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**

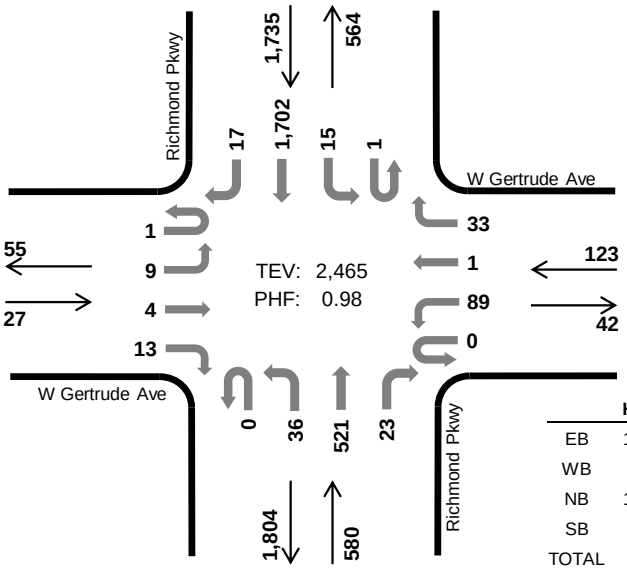
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Richmond Pkwy
W Gertrude Ave

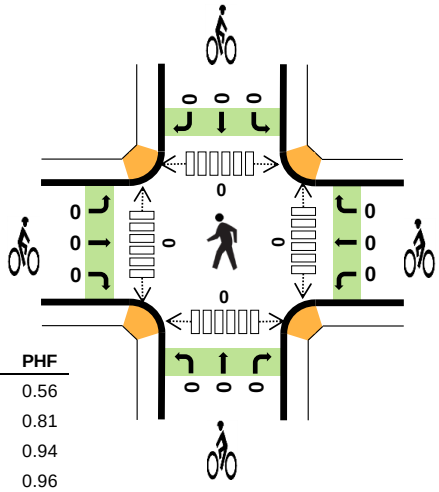
Date: 06-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:30 AM to 8:30 AM

N

Peak Hour



	HV %:	PHF
EB	18.5%	0.56
WB	0.8%	0.81
NB	10.7%	0.94
SB	6.8%	0.96
TOTAL	7.5%	0.98



Two-Hour Count Summaries

Interval Start		W Gertrude Ave Eastbound				W Gertrude Ave Westbound				Richmond Pkwy Northbound				Richmond Pkwy Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	4	0	4	0	26	0	8	0	2	114	8	1	1	441	2	611	0
7:15 AM		0	3	0	3	0	31	0	4	1	5	109	10	0	2	369	2	539	0
7:30 AM		**1**	**2**	**2**	**7**	**0**	**28**	**1**	**9**	**0**	**10**	**110**	**5**	**1**	**1**	**448**	**3**	**628**	0
7:45 AM		**0**	**2**	**2**	**2**	**0**	**25**	**0**	**5**	**0**	**16**	**128**	**10**	**0**	**5**	**434**	**3**	**632**	2,410
8:00 AM		**0**	**3**	**0**	**3**	**0**	**20**	**0**	**7**	**0**	**2**	**148**	**4**	**0**	**3**	**415**	**11**	**616**	2,415
8:15 AM		**0**	**2**	**0**	**1**	**0**	**16**	**0**	**12**	**0**	**8**	**135**	**4**	**0**	**6**	**405**	**0**	**589**	**2,465**
8:30 AM		0	1	0	1	0	16	0	6	0	2	146	7	0	4	414	0	597	2,434
8:45 AM		0	3	0	26	0	17	1	15	0	3	131	5	1	3	324	1	530	2,332
Count Total		1	20	4	47	0	179	2	66	1	48	1,021	53	3	25	3,250	22	4,742	0
Peak Hour	**All**	**1**	**9**	**4**	**13**	**0**	**89**	**1**	**33**	**0**	**36**	**521**	**23**	**1**	**15**	**1,702**	**17**	**2,465**	**0**
	HV	**0**	**0**	**1**	**4**	**0**	**1**	**0**	**0**	**0**	**2**	**59**	**1**	**0**	**0**	**116**	**2**	**186**	**0**
	HV%	**0%**	**0%**	**25%**	**31%**	**-**	**1%**	**0%**	**0%**	**-**	**6%**	**11%**	**4%**	**0%**	**0%**	**7%**	**12%**	**8%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	4	0	15	42	*61*	0	0	0	0	*0*	2	0	2	0	*4*
7:15 AM	2	0	20	23	*45*	0	0	0	0	*0*	0	0	0	0	*0*
7:30 AM	**4**	**0**	**18**	**29**	***51***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**0**	**0**	**13**	**22**	***35***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:00 AM	**1**	**1**	**14**	**36**	***52***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:15 AM	**0**	**0**	**17**	**31**	***48***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
8:30 AM	0	2	22	31	*55*	0	0	0	0	*0*	0	0	0	0	*0*
8:45 AM	4	2	20	27	*53*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	15	5	139	241	*400*	0	0	0	0	*0*	2	0	2	0	*4*
Peak Hour	**5**	**1**	**62**	**118**	***186***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	W Gertrude Ave				W Gertrude Ave				Richmond Pkwy				Richmond Pkwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	0	3	0	0	0	0	0	0	15	0	0	0	41	1	61	0
7:15 AM	0	2	0	0	0	0	0	0	0	2	18	0	0	0	22	1	45	0
7:30 AM	**0**	**0**	**1**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**18**	**0**	**0**	**0**	**29**	**0**	**51**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	**1**	**0**	**0**	**22**	**0**	**35**	192
8:00 AM	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**14**	**0**	**0**	**0**	**34**	**2**	**52**	183
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**15**	**0**	**0**	**0**	**31**	**0**	**48**	**186**
8:30 AM	0	0	0	0	0	2	0	0	0	1	20	1	0	0	31	0	55	190
8:45 AM	0	1	0	3	0	1	0	1	0	1	19	0	0	0	27	0	53	208
Count Total	0	4	1	10	0	4	0	1	0	6	131	2	0	0	237	4	400	0
Peak Hour	**0**	**0**	**1**	**4**	**0**	**1**	**0**	**0**	**0**	**2**	**59**	**1**	**0**	**0**	**116**	**2**	**186**	**0**

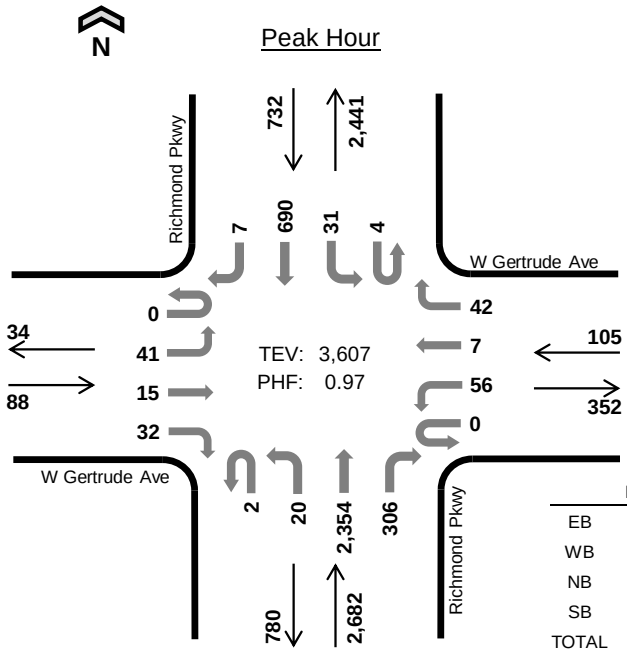
Two-Hour Count Summaries - Bikes

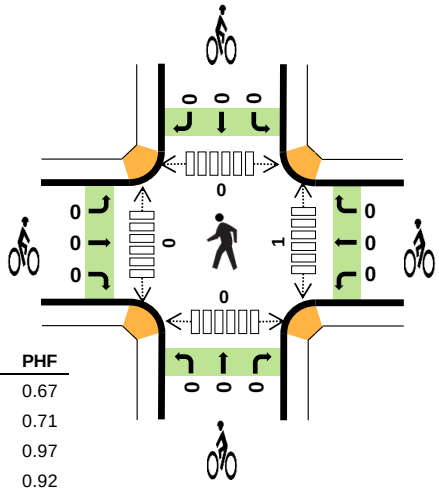
Interval Start	W Gertrude Ave			W Gertrude Ave			Richmond Pkwy			Richmond Pkwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Richmond Pkwy
W Gertrude Ave

Date: 06-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM





	HV %:	PHF
EB	2.3%	0.67
WB	1.0%	0.71
NB	2.6%	0.97
SB	4.0%	0.92
TOTAL	2.8%	0.97

Two-Hour Count Summaries

Interval Start		W Gertrude Ave Eastbound				W Gertrude Ave Westbound				Richmond Pkwy Northbound				Richmond Pkwy Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		**0**	**19**	**4**	**9**	**0**	**19**	**3**	**15**	**0**	**9**	**551**	**88**	**0**	**7**	**162**	**2**	**888**	0
4:15 PM		**0**	**13**	**5**	**15**	**0**	**17**	**2**	**9**	**1**	**4**	**605**	**69**	**1**	**9**	**178**	**2**	**930**	0
4:30 PM		**0**	**2**	**2**	**4**	**0**	**11**	**0**	**7**	**0**	**3**	**599**	**88**	**2**	**10**	**186**	**1**	**915**	0
4:45 PM		**0**	**7**	**4**	**4**	**0**	**9**	**2**	**11**	**1**	**4**	**599**	**61**	**1**	**5**	**164**	**2**	**874**	**3,607**
5:00 PM		0	2	3	2	0	10	2	14	0	2	540	78	0	7	192	0	852	3,571
5:15 PM		0	0	5	1	0	16	2	15	0	3	550	86	0	4	178	5	865	3,506
5:30 PM		0	4	4	6	0	11	2	13	0	5	552	57	0	12	193	2	861	3,452
5:45 PM		0	3	6	5	0	9	3	13	1	5	575	42	1	3	149	3	818	3,396
Count Total		0	50	33	46	0	102	16	97	3	35	4,571	569	5	57	1,402	17	7,003	0
Peak Hour	**All**	**0**	**41**	**15**	**32**	**0**	**56**	**7**	**42**	**2**	**20**	**2,354**	**306**	**4**	**31**	**690**	**7**	**3,607**	**0**
	HV	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**4**	**63**	**2**	**0**	**0**	**27**	**2**	**101**	**0**
	HV%	**-**	**2%**	**0%**	**3%**	**-**	**2%**	**0%**	**0%**	**0%**	**20%**	**3%**	**1%**	**0%**	**0%**	**4%**	**29%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	**1**	**0**	**17**	**11**	***29***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:15 PM	**0**	**0**	**16**	**8**	***24***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:30 PM	**1**	**1**	**18**	**5**	***25***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	*1*
4:45 PM	**0**	**0**	**18**	**5**	***23***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
5:00 PM	0	0	16	9	*25*	0	0	0	0	*0*	0	0	0	0	*0*
5:15 PM	1	0	9	3	*13*	0	0	0	0	*0*	0	0	0	0	*0*
5:30 PM	0	0	15	6	*21*	0	0	0	0	*0*	0	0	1	0	*1*
5:45 PM	0	0	22	9	*31*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	3	1	131	56	*191*	0	0	0	0	*0*	1	0	1	0	*2*
Peak Hour	**2**	**1**	**69**	**29**	***101***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	***1***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	W Gertrude Ave				W Gertrude Ave				Richmond Pkwy				Richmond Pkwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**15**	**1**	**0**	**0**	**10**	**1**	**29**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**0**	**0**	**0**	**8**	**0**	**24**	0
4:30 PM	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**1**	**16**	**1**	**0**	**0**	**5**	**0**	**25**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**16**	**0**	**0**	**0**	**4**	**1**	**23**	**101**
5:00 PM	0	0	0	0	0	0	0	0	0	2	11	3	0	0	9	0	25	97
5:15 PM	0	0	0	1	0	0	0	0	0	1	8	0	0	0	3	0	13	86
5:30 PM	0	0	0	0	0	0	0	0	0	0	15	0	0	0	5	1	21	82
5:45 PM	0	0	0	0	0	0	0	0	0	4	18	0	0	0	7	2	31	90
Count Total	0	1	0	2	0	1	0	0	0	11	115	5	0	0	51	5	191	0
Peak Hour	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**4**	**63**	**2**	**0**	**0**	**27**	**2**	**101**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	W Gertrude Ave			W Gertrude Ave			Richmond Pkwy			Richmond Pkwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

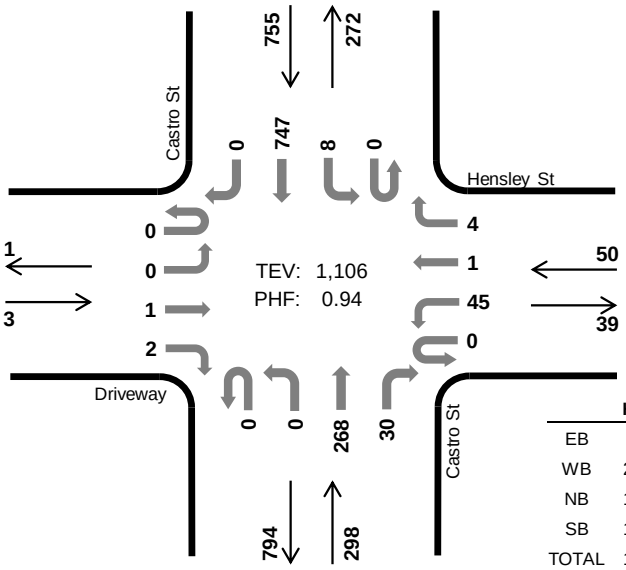
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Castro St
Hensley St

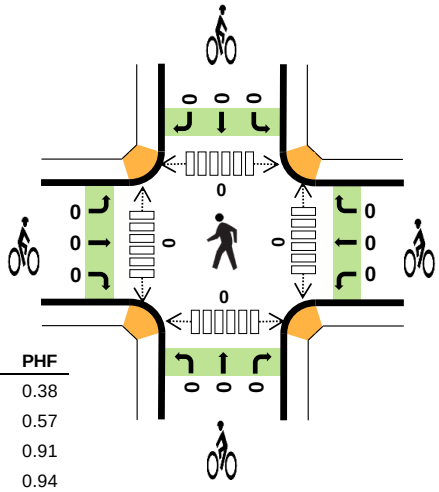
Date: 06-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:15 AM to 8:15 AM

N

Peak Hour



	HV %:	PHF
EB	0.0%	0.38
WB	26.0%	0.57
NB	17.1%	0.91
SB	11.7%	0.94
TOTAL	13.7%	0.94



Two-Hour Count Summaries

Interval Start		Driveway				Hensley St				Castro St				Castro St				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	1	0	0	12	1	2	0	0	52	10	0	3	190	0	271	0
7:15 AM		**0**	**0**	**1**	**0**	**0**	**21**	**0**	**1**	**0**	**0**	**65**	**10**	**0**	**4**	**181**	**0**	**283**	0
7:30 AM		**0**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**55**	**10**	**0**	**1**	**199**	**0**	**272**	0
7:45 AM		**0**	**0**	**0**	**2**	**0**	**5**	**1**	**0**	**0**	**0**	**72**	**4**	**0**	**2**	**172**	**0**	**258**	1,084
8:00 AM		**0**	**0**	**0**	**0**	**0**	**12**	**0**	**3**	**0**	**0**	**76**	**6**	**0**	**1**	**195**	**0**	**293**	**1,106**
8:15 AM		0	0	0	0	0	9	0	0	0	2	78	7	0	3	172	0	271	1,094
8:30 AM		0	0	0	0	0	5	0	0	0	0	65	9	0	3	171	1	254	1,076
8:45 AM		0	0	0	1	0	11	0	0	0	0	82	13	0	1	159	0	267	1,085
Count Total		0	0	2	3	0	82	2	6	0	2	545	69	0	18	1,439	1	2,169	0
Peak Hour	**All**	**0**	**0**	**1**	**2**	**0**	**45**	**1**	**4**	**0**	**0**	**268**	**30**	**0**	**8**	**747**	**0**	**1,106**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**13**	**0**	**0**	**0**	**0**	**47**	**4**	**0**	**1**	**87**	**0**	**152**	**0**
	HV%	**-**	**-**	**0%**	**0%**	**-**	**29%**	**0%**	**0%**	**-**	**-**	**18%**	**13%**	**-**	**13%**	**12%**	**-**	**14%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	5	7	27	*39*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	**0**	**7**	**19**	**21**	***47***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:30 AM	**0**	**1**	**15**	**25**	***41***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**0**	**1**	**9**	**14**	***24***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:00 AM	**0**	**4**	**8**	**28**	***40***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
8:15 AM	0	6	18	24	*48*	0	0	0	0	*0*	1	0	0	0	*1*
8:30 AM	0	1	21	24	*46*	0	0	0	0	*0*	0	0	0	0	*0*
8:45 AM	1	5	23	23	*52*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	1	30	120	186	*337*	0	0	0	0	*0*	1	0	0	0	*1*
Peak Hour	**0**	**13**	**51**	**88**	***152***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Driveway				Hensley St				Castro St				Castro St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	4	0	1	0	0	5	2	0	1	26	0	39	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**0**	**17**	**2**	**0**	**1**	**20**	**0**	**47**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**13**	**2**	**0**	**0**	**25**	**0**	**41**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**14**	**0**	**24**	151
8:00 AM	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**28**	**0**	**40**	**152**
8:15 AM	0	0	0	0	0	6	0	0	0	0	16	2	0	1	23	0	48	153
8:30 AM	0	0	0	0	0	1	0	0	0	0	16	5	0	2	21	1	46	158
8:45 AM	0	0	0	1	0	5	0	0	0	0	17	6	0	0	23	0	52	186
Count Total	0	0	0	1	0	29	0	1	0	0	101	19	0	5	180	1	337	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**13**	**0**	**0**	**0**	**0**	**47**	**4**	**0**	**1**	**87**	**0**	**152**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Driveway			Hensley St			Castro St			Castro St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

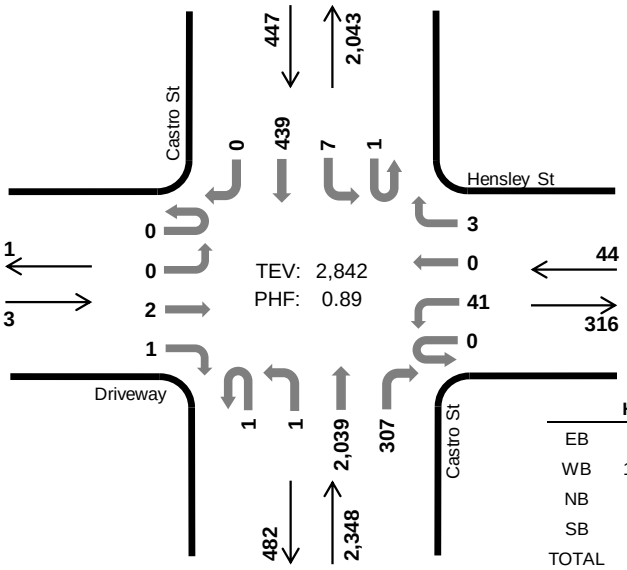
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Castro St
Hensley St

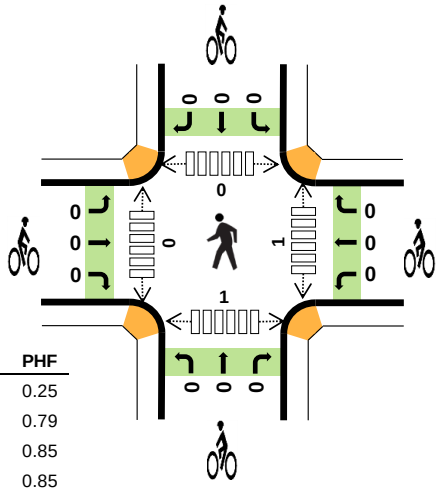
Date: 06-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM

N

Peak Hour



	HV %:	PHF
EB	0.0%	0.25
WB	13.6%	0.79
NB	2.6%	0.85
SB	3.8%	0.85
TOTAL	3.0%	0.89



Two-Hour Count Summaries

Interval Start		Driveway				Hensley St				Castro St				Castro St				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		**0**	**0**	**0**	**0**	**0**	**11**	**0**	**1**	**0**	**0**	**562**	**83**	**0**	**1**	**86**	**0**	**744**	0
4:15 PM		**0**	**0**	**2**	**1**	**0**	**14**	**0**	**0**	**0**	**1**	**393**	**68**	**1**	**4**	**126**	**0**	**610**	0
4:30 PM		**0**	**0**	**0**	**0**	**0**	**8**	**0**	**1**	**0**	**0**	**618**	**69**	**0**	**1**	**103**	**0**	**800**	0
4:45 PM		**0**	**0**	**0**	**0**	**0**	**8**	**0**	**1**	**1**	**0**	**466**	**87**	**0**	**1**	**124**	**0**	**688**	**2,842**
5:00 PM		0	0	0	0	0	10	0	1	0	0	447	96	0	0	123	0	677	2,775
5:15 PM		0	0	0	0	0	8	0	3	0	0	416	89	0	0	103	0	619	2,784
5:30 PM		0	0	0	0	0	7	1	2	0	0	308	19	0	1	102	0	440	2,424
5:45 PM		0	0	0	0	0	6	0	0	0	0	452	16	0	1	101	0	576	2,312
Count Total		0	0	2	1	0	72	1	9	1	1	3,662	527	1	9	868	0	5,154	0
Peak Hour	**All**	**0**	**0**	**2**	**1**	**0**	**41**	**0**	**3**	**1**	**1**	**2,039**	**307**	**1**	**7**	**439**	**0**	**2,842**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**1**	**0**	**52**	**8**	**0**	**2**	**15**	**0**	**84**	**0**
	HV%	**-**	**-**	**0%**	**0%**	**-**	**15%**	**-**	**0%**	**100%**	**0%**	**3%**	**3%**	**0%**	**29%**	**3%**	**-**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	**0**	**2**	**13**	**3**	***18***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:15 PM	**0**	**2**	**13**	**6**	***21***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:30 PM	**0**	**1**	**16**	**5**	***22***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**1**	*2*
4:45 PM	**0**	**1**	**19**	**3**	***23***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
5:00 PM	0	3	12	5	*20*	0	0	0	0	*0*	0	0	0	1	*1*
5:15 PM	0	2	12	3	*17*	0	0	0	0	*0*	1	0	0	0	*1*
5:30 PM	0	3	16	1	*20*	0	0	0	0	*0*	1	0	0	0	*1*
5:45 PM	0	0	17	5	*22*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	0	14	118	31	*163*	0	0	0	0	*0*	3	0	0	2	*5*
Peak Hour	**0**	**6**	**61**	**17**	***84***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**1**	***2***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Driveway				Hensley St				Castro St				Castro St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**11**	**2**	**0**	**1**	**2**	**0**	**18**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**11**	**2**	**0**	**1**	**5**	**0**	**21**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**14**	**2**	**0**	**0**	**5**	**0**	**22**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**16**	**2**	**0**	**0**	**3**	**0**	**23**	**84**
5:00 PM	0	0	0	0	0	3	0	0	0	0	10	2	0	0	5	0	20	86
5:15 PM	0	0	0	0	0	2	0	0	0	0	6	6	0	0	3	0	17	82
5:30 PM	0	0	0	0	0	2	0	1	0	0	14	2	0	0	1	0	20	80
5:45 PM	0	0	0	0	0	0	0	0	0	0	14	3	0	0	5	0	22	79
Count Total	0	0	0	0	0	13	0	1	1	0	96	21	0	2	29	0	163	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**1**	**0**	**52**	**8**	**0**	**2**	**15**	**0**	**84**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Driveway			Hensley St			Castro St			Castro St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

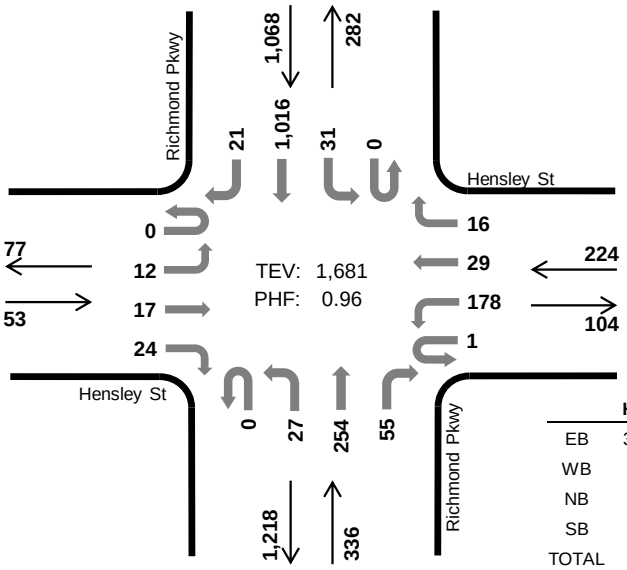
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Richmond Pkwy
Hensley St

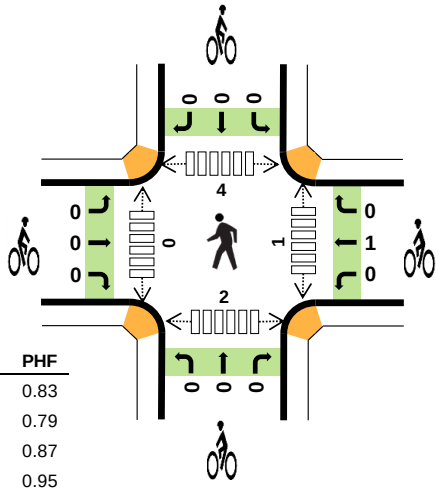
Date: 06-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM

N

Peak Hour



	HV %:	PHF
EB	30.2%	0.83
WB	4.5%	0.79
NB	6.5%	0.87
SB	3.3%	0.95
TOTAL	4.9%	0.96



Two-Hour Count Summaries

Interval Start		Hensley St Eastbound UT	LT	TH	RT	Hensley St Westbound UT	LT	TH	RT	Richmond Pkwy Northbound UT	LT	TH	RT	Richmond Pkwy Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM		0	6	3	7	0	57	7	7	0	5	55	10	0	7	259	5	428	0
7:15 AM		0	1	9	5	0	47	11	4	0	12	54	11	0	4	243	5	406	0
7:30 AM		0	2	3	5	0	37	4	1	0	6	77	9	0	8	253	3	408	0
7:45 AM		0	3	2	7	1	37	7	4	0	4	68	25	0	12	261	8	439	1,681
8:00 AM		0	2	7	1	0	39	11	9	0	10	65	14	0	5	263	2	428	1,681
8:15 AM		0	2	2	5	0	25	2	7	0	1	64	16	0	8	231	3	366	1,641
8:30 AM		0	1	4	2	0	37	4	9	0	5	80	19	0	5	245	3	414	1,647
8:45 AM		0	1	7	0	0	17	2	3	0	3	54	20	1	7	222	2	339	1,547
Count Total		0	18	37	32	1	296	48	44	0	46	517	124	1	56	1,977	31	3,228	0
Peak Hour	All	0	12	17	24	1	178	29	16	0	27	254	55	0	31	1,016	21	1,681	0
	HV	0	8	4	4	0	3	6	1	0	3	17	2	0	3	30	2	83	0
	HV%	-	67%	24%	17%	0%	2%	21%	6%	-	11%	7%	4%	-	10%	3%	10%	5%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	4	3	10	16	*33*	0	1	0	0	*1*	0	0	1	0	*1*
7:15 AM	6	4	3	6	*19*	0	0	0	0	*0*	0	0	2	1	*3*
7:30 AM	2	2	6	6	*16*	0	0	0	0	*0*	1	0	1	1	*3*
7:45 AM	4	1	3	7	*15*	0	0	0	0	*0*	0	0	0	0	*0*
8:00 AM	2	4	7	5	*18*	0	0	1	0	*1*	0	0	0	1	*1*
8:15 AM	3	2	4	9	*18*	0	0	0	0	*0*	0	0	0	1	*1*
8:30 AM	1	0	6	7	*14*	0	0	0	0	*0*	0	0	0	0	*0*
8:45 AM	3	1	3	8	*15*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	25	17	42	64	*148*	0	1	1	0	*2*	1	0	4	4	*9*
Peak Hour	16	10	22	35	*83*	0	1	0	0	*1*	1	0	4	2	*7*

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Hensley St				Hensley St				Richmond Pkwy				Richmond Pkwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	**0**	**3**	**1**	**0**	**0**	**1**	**2**	**0**	**0**	**1**	**8**	**1**	**0**	**2**	**13**	**1**	**33**	0
7:15 AM	**0**	**1**	**3**	**2**	**0**	**0**	**3**	**1**	**0**	**2**	**1**	**0**	**0**	**0**	**6**	**0**	**19**	0
7:30 AM	**0**	**2**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**5**	**1**	**0**	**0**	**6**	**0**	**16**	0
7:45 AM	**0**	**2**	**0**	**2**	**0**	**1**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**1**	**5**	**1**	**15**	**83**
8:00 AM	0	1	0	1	0	2	2	0	0	1	5	1	0	0	5	0	18	68
8:15 AM	0	1	1	1	0	1	1	0	0	0	3	1	0	0	7	2	18	67
8:30 AM	0	0	1	0	0	0	0	0	0	1	5	0	0	1	6	0	14	65
8:45 AM	0	1	2	0	0	0	1	0	0	0	1	2	0	2	5	1	15	65
Count Total	0	11	8	6	0	6	10	1	0	5	31	6	0	6	53	5	148	0
Peak Hour	**0**	**8**	**4**	**4**	**0**	**3**	**6**	**1**	**0**	**3**	**17**	**2**	**0**	**3**	**30**	**2**	**83**	**0**

Two-Hour Count Summaries - Bikes

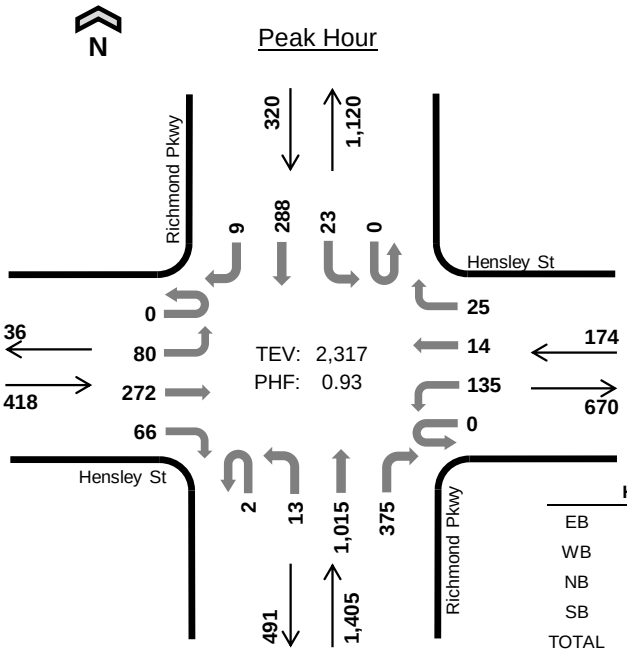
Interval Start	Hensley St			Hensley St			Richmond Pkwy			Richmond Pkwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	1	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	1	0	0	0	1	0	0	0	2	0
Peak Hour	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

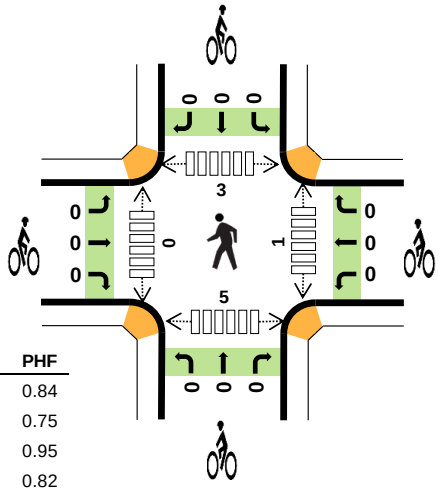
Richmond Pkwy
Hensley St

Date: 06-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM

Peak Hour



	HV %:	PHF
EB	1.9%	0.84
WB	5.7%	0.75
NB	1.4%	0.95
SB	3.1%	0.82
TOTAL	2.0%	0.93



Two-Hour Count Summaries

Interval Start		Hensley St Eastbound UT	LT	TH	RT	Hensley St Westbound UT	LT	TH	RT	Richmond Pkwy Northbound UT	LT	TH	RT	Richmond Pkwy Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM		0	22	54	25	0	29	4	13	2	2	257	83	0	4	75	2	572	0
4:15 PM		0	15	59	16	0	24	5	2	0	2	270	94	0	11	85	4	587	0
4:30 PM		**0**	**8**	**48**	**14**	**0**	**48**	**4**	**6**	**0**	**4**	**265**	**93**	**0**	**5**	**75**	**4**	**574**	0
4:45 PM		**0**	**34**	**70**	**21**	**0**	**25**	**2**	**4**	**2**	**3**	**235**	**94**	**0**	**5**	**64**	**4**	**563**	2,296
5:00 PM		**0**	**15**	**80**	**15**	**0**	**26**	**5**	**8**	**0**	**3**	**235**	**102**	**0**	**7**	**58**	**1**	**555**	2,279
5:15 PM		**0**	**23**	**74**	**16**	**0**	**36**	**3**	**7**	**0**	**3**	**280**	**86**	**0**	**6**	**91**	**0**	**625**	**2,317**
5:30 PM		0	16	15	14	0	22	1	4	0	0	271	81	0	12	86	3	525	2,268
5:45 PM		0	9	15	7	0	25	3	3	0	3	153	42	0	6	67	1	334	2,039
Count Total		0	142	415	128	0	235	27	47	4	20	1,966	675	0	56	601	19	4,335	0
Peak Hour	**All**	**0**	**80**	**272**	**66**	**0**	**135**	**14**	**25**	**2**	**13**	**1,015**	**375**	**0**	**23**	**288**	**9**	**2,317**	**0**
	HV	**0**	**1**	**5**	**2**	**0**	**4**	**4**	**2**	**0**	**0**	**16**	**3**	**0**	**1**	**9**	**0**	**47**	**0**
	HV%	**-**	**1%**	**2%**	**3%**	**-**	**3%**	**29%**	**8%**	**0%**	**0%**	**2%**	**1%**	**-**	**4%**	**3%**	**0%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	4	3	7	4	*18*	0	0	0	0	*0*	1	0	1	0	*2*
4:15 PM	4	3	8	4	*19*	0	0	0	0	*0*	0	0	0	0	*0*
4:30 PM	**3**	**2**	**7**	**4**	***16***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**1**	*2*
4:45 PM	**2**	**0**	**3**	**1**	***6***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:00 PM	**1**	**4**	**3**	**2**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**2**	**1**	*3*
5:15 PM	**2**	**4**	**6**	**3**	***15***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**3**	***4***
5:30 PM	2	1	7	2	*12*	0	0	0	0	*0*	0	0	0	1	*1*
5:45 PM	2	1	3	2	*8*	0	0	0	0	*0*	0	0	0	1	*1*
Count Total	20	18	44	22	*104*	0	0	0	0	*0*	2	0	4	7	*13*
Peak Hour	**8**	**10**	**19**	**10**	***47***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**3**	**5**	***9***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Hensley St				Hensley St				Richmond Pkwy				Richmond Pkwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	1	3	0	0	1	1	1	0	0	6	1	0	0	4	0	18	0
4:15 PM	0	1	3	0	0	2	1	0	0	0	6	2	0	0	3	1	19	0
4:30 PM	**0**	**0**	**2**	**1**	**0**	**1**	**1**	**0**	**0**	**0**	**5**	**2**	**0**	**1**	**3**	**0**	**16**	0
4:45 PM	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**1**	**0**	**6**	59
5:00 PM	**0**	**0**	**0**	**1**	**0**	**1**	**2**	**1**	**0**	**0**	**3**	**0**	**0**	**0**	**2**	**0**	**10**	51
5:15 PM	**0**	**0**	**2**	**0**	**0**	**2**	**1**	**1**	**0**	**0**	**5**	**1**	**0**	**0**	**3**	**0**	**15**	**47**
5:30 PM	0	1	0	1	0	0	0	1	0	0	5	2	0	0	1	1	12	43
5:45 PM	0	0	2	0	0	1	0	0	0	0	3	0	0	0	1	1	8	45
Count Total	0	4	13	3	0	8	6	4	0	0	36	8	0	1	18	3	104	0
Peak Hour	**0**	**1**	**5**	**2**	**0**	**4**	**4**	**2**	**0**	**0**	**16**	**3**	**0**	**1**	**9**	**0**	**47**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Hensley St			Hensley St			Richmond Pkwy			Richmond Pkwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

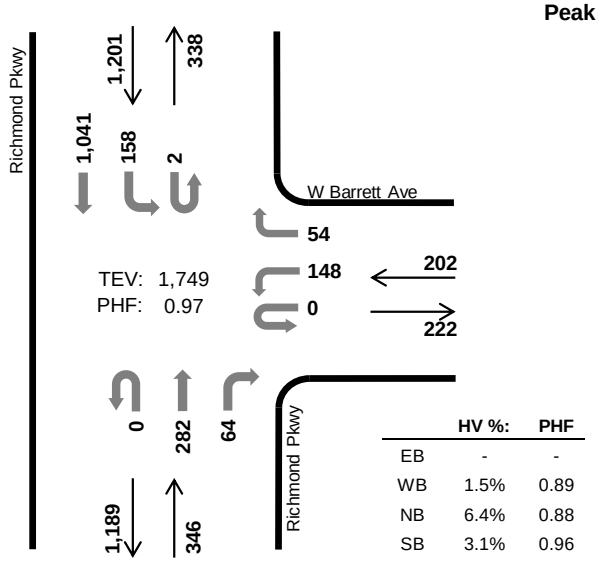
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Richmond Pkwy
W Barrett Ave

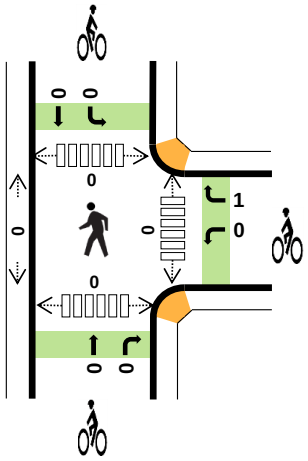
Date: 06-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM

N

Peak Hour



	HV %:	PHF
EB	-	-
WB	1.5%	0.89
NB	6.4%	0.88
SB	3.1%	0.96
TOTAL	3.5%	0.97



Two-Hour Count Summaries

Interval Start		0				W Barrett Ave				Richmond Pkwy				Richmond Pkwy				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		**0**	**0**	**0**	**0**	**0**	**37**	**0**	**16**	**0**	**0**	**50**	**13**	**0**	**39**	**275**	**0**	**430**	0
7:15 AM		**0**	**0**	**0**	**0**	**0**	**35**	**0**	**13**	**0**	**0**	**73**	**20**	**1**	**33**	**256**	**0**	**431**	0
7:30 AM		**0**	**0**	**0**	**0**	**0**	**32**	**0**	**12**	**0**	**0**	**78**	**14**	**0**	**40**	**262**	**0**	**438**	0
7:45 AM		**0**	**0**	**0**	**0**	**0**	**44**	**0**	**13**	**0**	**0**	**81**	**17**	**1**	**46**	**248**	**0**	**450**	**1,749**
8:00 AM		0	0	0	0	0	22	0	11	0	0	74	17	0	44	261	0	429	1,748
8:15 AM		0	0	0	0	0	33	0	17	0	0	66	17	0	36	215	0	384	1,701
8:30 AM		0	0	0	0	0	28	0	19	0	0	77	11	1	31	255	0	422	1,685
8:45 AM		0	0	0	0	0	33	0	18	0	0	63	14	0	31	207	0	366	1,601
Count Total		0	0	0	0	0	264	0	119	0	0	562	123	3	300	1,979	0	3,350	0
Peak Hour	**All**	**0**	**0**	**0**	**0**	**0**	**148**	**0**	**54**	**0**	**0**	**282**	**64**	**2**	**158**	**1,041**	**0**	**1,749**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**0**	**0**	**21**	**1**	**1**	**6**	**30**	**0**	**62**	**0**
	HV%	**-**	**-**	**-**	**-**	**-**	**1%**	**-**	**2%**	**-**	**-**	**7%**	**2%**	**50%**	**4%**	**3%**	**-**	**4%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	**0**	**1**	**10**	**15**	***26***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:15 AM	**0**	**1**	**2**	**7**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:30 AM	**0**	**0**	**6**	**7**	***13***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**0**	**1**	**4**	**8**	***13***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***
8:00 AM	0	1	5	9	*15*	0	0	0	0	*0*	0	0	0	0	*0*
8:15 AM	0	2	4	8	*14*	0	0	0	0	*0*	0	0	0	0	*0*
8:30 AM	0	3	4	9	*16*	0	0	0	0	*0*	1	0	0	0	*1*
8:45 AM	0	2	3	4	*9*	0	0	0	0	*0*	2	0	0	0	*2*
Count Total	0	11	38	67	*116*	0	1	0	0	*1*	3	0	0	0	*3*
Peak Hr	**0**	**3**	**22**	**37**	***62***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	0				W Barrett Ave				Richmond Pkwy				Richmond Pkwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**9**	**1**	**0**	**3**	**12**	**0**	**26**	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**1**	**5**	**0**	**10**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**7**	**0**	**13**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**2**	**6**	**0**	**13**	**62**
8:00 AM	0	0	0	0	0	0	0	1	0	0	5	0	0	2	7	0	15	51
8:15 AM	0	0	0	0	0	1	0	1	0	0	3	1	0	0	8	0	14	55
8:30 AM	0	0	0	0	0	1	0	2	0	0	3	1	0	1	8	0	16	58
8:45 AM	0	0	0	0	0	1	0	1	0	0	2	1	0	1	3	0	9	54
Count Total	0	0	0	0	0	5	0	6	0	0	34	4	1	10	56	0	116	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**0**	**0**	**21**	**1**	**1**	**6**	**30**	**0**	**62**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	0			W Barrett Ave			Richmond Pkwy			Richmond Pkwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	1	0	0	0	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**

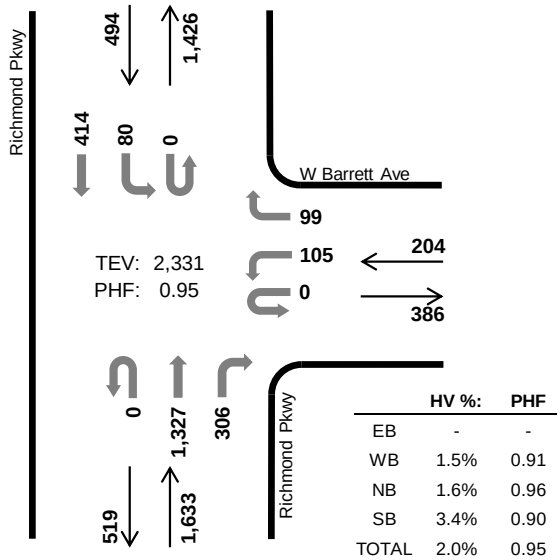
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Richmond Pkwy
W Barrett Ave

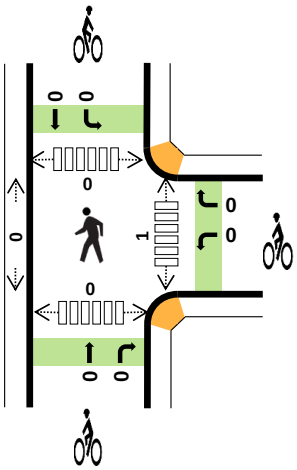
Date: 06-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM

N

Peak Hour



	HV %:	PHF
EB	-	-
WB	1.5%	0.91
NB	1.6%	0.96
SB	3.4%	0.90
TOTAL	2.0%	0.95



Two-Hour Count Summaries

Interval Start		0				W Barrett Ave				Richmond Pkwy				Richmond Pkwy				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		**0**	**0**	**0**	**0**	**0**	**27**	**0**	**28**	**0**	**0**	**337**	**89**	**0**	**20**	**110**	**0**	**611**	0
4:15 PM		**0**	**0**	**0**	**0**	**0**	**21**	**0**	**19**	**0**	**0**	**318**	**71**	**0**	**23**	**103**	**0**	**555**	0
4:30 PM		**0**	**0**	**0**	**0**	**0**	**26**	**0**	**30**	**0**	**0**	**341**	**66**	**0**	**22**	**115**	**0**	**600**	0
4:45 PM		**0**	**0**	**0**	**0**	**0**	**31**	**0**	**22**	**0**	**0**	**331**	**80**	**0**	**15**	**86**	**0**	**565**	**2,331**
5:00 PM		0	0	0	0	0	27	0	23	0	0	338	84	0	23	86	0	581	2,301
5:15 PM		0	0	0	0	0	17	0	26	0	0	309	90	0	24	117	0	583	2,329
5:30 PM		0	0	0	0	0	18	0	42	0	0	324	63	0	21	102	0	570	2,299
5:45 PM		0	0	0	0	0	35	0	27	1	0	134	26	0	19	80	0	322	2,056
Count Total		0	0	0	0	0	202	0	217	1	0	2,432	569	0	167	799	0	4,387	0
Peak Hour	**All**	**0**	**0**	**0**	**0**	**0**	**105**	**0**	**99**	**0**	**0**	**1,327**	**306**	**0**	**80**	**414**	**0**	**2,331**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**25**	**1**	**0**	**0**	**17**	**0**	**46**	**0**
	HV%	**-**	**-**	**-**	**-**	**-**	**1%**	**-**	**2%**	**-**	**-**	**2%**	**0%**	**-**	**0%**	**4%**	**-**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	**0**	**0**	**8**	**5**	***13***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:15 PM	**0**	**2**	**6**	**5**	***13***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:30 PM	**0**	**1**	**7**	**6**	***14***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**0**	**0**	**5**	**1**	***6***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	***1***
5:00 PM	0	1	4	5	*10*	0	0	0	0	*0*	0	0	0	0	*0*
5:15 PM	0	0	8	4	*12*	0	0	0	0	*0*	0	0	0	0	*0*
5:30 PM	0	2	4	1	*7*	0	0	0	0	*0*	1	0	0	0	*1*
5:45 PM	0	2	2	3	*7*	0	0	0	0	*0*	1	0	1	0	*2*
Count Total	0	8	44	30	*82*	0	0	0	0	*0*	3	0	1	0	*4*
Peak Hr	**0**	**3**	**26**	**17**	***46***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	***1***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	0				W Barrett Ave				Richmond Pkwy				Richmond Pkwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**1**	**0**	**0**	**5**	**0**	**13**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**6**	**0**	**0**	**0**	**5**	**0**	**13**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**7**	**0**	**0**	**0**	**6**	**0**	**14**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**1**	**0**	**6**	**46**
5:00 PM	0	0	0	0	0	0	0	1	0	0	3	1	0	0	5	0	10	43
5:15 PM	0	0	0	0	0	0	0	0	0	0	7	1	0	2	2	0	12	42
5:30 PM	0	0	0	0	0	1	0	1	0	0	4	0	0	0	1	0	7	35
5:45 PM	0	0	0	0	0	1	0	1	0	0	2	0	0	1	2	0	7	36
Count Total	0	0	0	0	0	3	0	5	0	0	41	3	0	3	27	0	82	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**25**	**1**	**0**	**0**	**17**	**0**	**46**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	0			W Barrett Ave			Richmond Pkwy			Richmond Pkwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

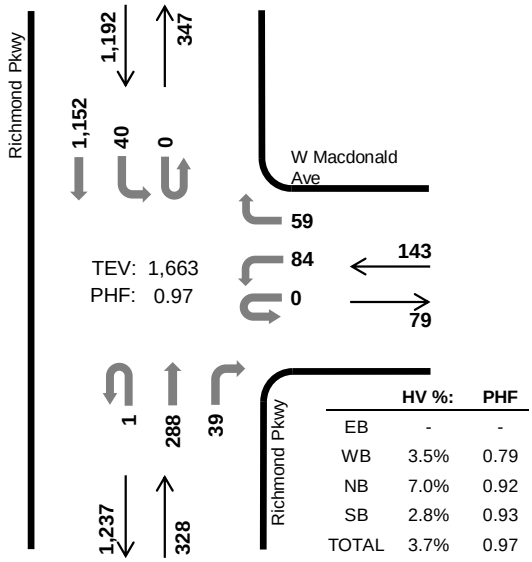
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Richmond Pkwy
W Macdonald Ave

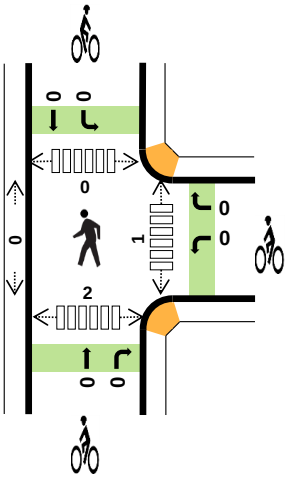
Date: 06-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM

N

Peak Hour



	HV %:	PHF
EB	-	-
WB	3.5%	0.79
NB	7.0%	0.92
SB	2.8%	0.93
TOTAL	3.7%	0.97



Two-Hour Count Summaries

Interval Start		0				W Macdonald Ave				Richmond Pkwy				Richmond Pkwy				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		**0**	**0**	**0**	**0**	**0**	**25**	**0**	**11**	**0**	**0**	**57**	**11**	**0**	**9**	**312**	**0**	**425**	0
7:15 AM		**0**	**0**	**0**	**0**	**0**	**17**	**0**	**13**	**1**	**0**	**73**	**9**	**0**	**7**	**284**	**0**	**404**	0
7:30 AM		**0**	**0**	**0**	**0**	**0**	**18**	**0**	**14**	**0**	**0**	**77**	**12**	**0**	**7**	**278**	**0**	**406**	0
7:45 AM		**0**	**0**	**0**	**0**	**0**	**24**	**0**	**21**	**0**	**0**	**81**	**7**	**0**	**17**	**278**	**0**	**428**	**1,663**
8:00 AM		0	0	0	0	0	22	0	17	0	0	76	12	0	19	264	0	410	1,648
8:15 AM		0	0	0	0	0	19	0	16	0	0	69	15	0	20	224	0	363	1,607
8:30 AM		0	0	0	0	0	22	0	14	0	0	77	11	0	12	269	0	405	1,606
8:45 AM		0	0	0	0	0	23	0	12	0	0	56	16	0	9	220	0	336	1,514
Count Total		0	0	0	0	0	170	0	118	1	0	566	93	0	100	2,129	0	3,177	0
Peak Hour	**All**	**0**	**0**	**0**	**0**	**0**	**84**	**0**	**59**	**1**	**0**	**288**	**39**	**0**	**40**	**1,152**	**0**	**1,663**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**3**	**0**	**0**	**19**	**4**	**0**	**0**	**33**	**0**	**61**	**0**
	HV%	**-**	**-**	**-**	**-**	**-**	**2%**	**-**	**5%**	**0%**	**-**	**7%**	**10%**	**-**	**0%**	**3%**	**-**	**4%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	**0**	**3**	**11**	**11**	***25***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**2**	*3*
7:15 AM	**0**	**0**	**1**	**6**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:30 AM	**0**	**2**	**7**	**9**	***18***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**0**	**0**	**4**	**7**	***11***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
8:00 AM	0	1	7	5	*13*	0	0	0	0	*0*	0	0	0	0	*0*
8:15 AM	0	1	5	8	*14*	0	0	0	0	*0*	0	0	0	0	*0*
8:30 AM	0	1	3	7	*11*	0	0	0	0	*0*	0	0	0	0	*0*
8:45 AM	0	1	3	6	*10*	0	0	0	0	*0*	2	0	0	0	*2*
Count Total	0	9	41	59	*109*	0	0	0	0	*0*	3	0	0	2	*5*
Peak Hr	**0**	**5**	**23**	**33**	***61***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**2**	***3***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	0				W Macdonald Ave				Richmond Pkwy				Richmond Pkwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**10**	**1**	**0**	**0**	**11**	**0**	**25**	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**6**	**0**	**7**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**6**	**1**	**0**	**0**	**9**	**0**	**18**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**1**	**0**	**0**	**7**	**0**	**11**	**61**
8:00 AM	0	0	0	0	0	1	0	0	0	0	7	0	0	0	5	0	13	49
8:15 AM	0	0	0	0	0	1	0	0	0	0	4	1	0	0	8	0	14	56
8:30 AM	0	0	0	0	0	0	0	1	0	0	3	0	0	0	7	0	11	49
8:45 AM	0	0	0	0	0	1	0	0	0	0	2	1	0	1	5	0	10	48
Count Total	0	0	0	0	0	5	0	4	0	0	35	6	0	1	58	0	109	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**3**	**0**	**0**	**19**	**4**	**0**	**0**	**33**	**0**	**61**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	0			W Macdonald Ave			Richmond Pkwy			Richmond Pkwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

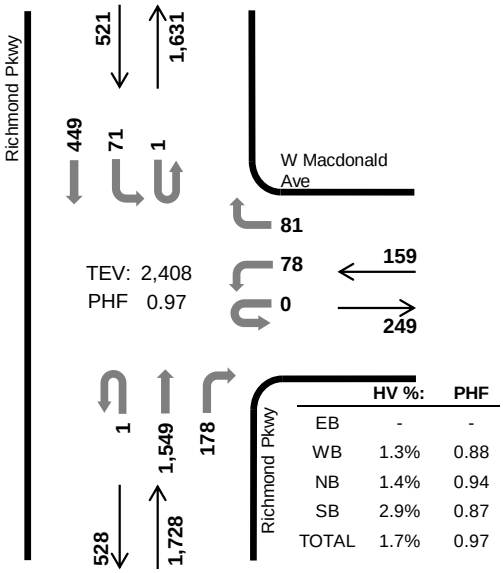
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Richmond Pkwy
W Macdonald Ave

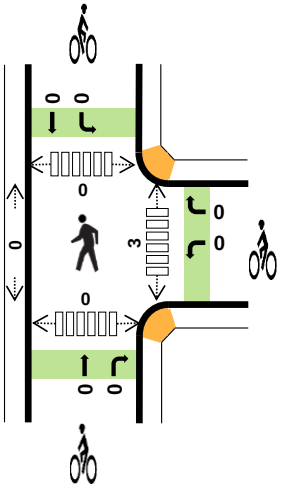
N

Peak Hour

Date: 06-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM



	HV %:	PHF
EB	-	-
WB	1.3%	0.88
NB	1.4%	0.94
SB	2.9%	0.87
TOTAL	1.7%	0.97



Two-Hour Count Summaries

Interval Start		0				W Macdonald Ave				Richmond Pkwy				Richmond Pkwy				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	0	0	0	23	0	20	2	0	393	31	0	24	118	0	611	0
4:15 PM		0	0	0	0	0	24	0	21	0	0	372	42	0	16	100	0	575	0
4:30 PM		**0**	**0**	**0**	**0**	**0**	**19**	**0**	**26**	**1**	**0**	**380**	**31**	**1**	**20**	**129**	**0**	**607**	0
4:45 PM		**0**	**0**	**0**	**0**	**0**	**21**	**0**	**20**	**0**	**0**	**387**	**52**	**0**	**13**	**101**	**0**	**594**	2,387
5:00 PM		**0**	**0**	**0**	**0**	**0**	**20**	**0**	**22**	**0**	**0**	**405**	**56**	**0**	**11**	**107**	**0**	**621**	2,397
5:15 PM		**0**	**0**	**0**	**0**	**0**	**18**	**0**	**13**	**0**	**0**	**377**	**39**	**0**	**27**	**112**	**0**	**586**	**2,408**
5:30 PM		0	0	0	0	0	15	0	17	0	0	389	51	0	17	97	0	586	2,387
5:45 PM		0	0	0	0	1	29	0	31	0	0	138	17	0	15	97	0	328	2,121
Count Total		0	0	0	0	1	169	0	170	3	0	2,841	319	1	143	861	0	4,508	0
Peak Hour	**All**	**0**	**0**	**0**	**0**	**0**	**78**	**0**	**81**	**1**	**0**	**1,549**	**178**	**1**	**71**	**449**	**0**	**2,408**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**21**	**3**	**0**	**0**	**15**	**0**	**41**	**0**
	HV%	**-**	**-**	**-**	**-**	**-**	**3%**	**-**	**0%**	**0%**	**-**	**1%**	**2%**	**0%**	**0%**	**3%**	**-**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	1	10	4	*15*	0	0	0	0	*0*	1	0	0	0	*1*
4:15 PM	0	0	5	7	*12*	0	0	0	0	*0*	0	0	0	0	*0*
4:30 PM	**0**	**0**	**8**	**6**	***14***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**0**	**1**	**5**	**1**	***7***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	*1*
5:00 PM	**0**	**0**	**4**	**5**	***9***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**0**	*2*
5:15 PM	**0**	**1**	**7**	**3**	***11***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
5:30 PM	0	0	7	0	*7*	0	0	0	0	*0*	1	0	0	0	*1*
5:45 PM	0	1	1	5	*7*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	0	4	47	31	*82*	0	0	0	0	*0*	5	0	0	0	*5*
Peak Hr	**0**	**2**	**24**	**15**	***41***	**0**	**0**	**0**	**0**	***0***	**3**	**0**	**0**	**0**	***3***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	0				W Macdonald Ave				Richmond Pkwy				Richmond Pkwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	1	0	0	0	0	10	0	0	0	4	0	15	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	7	0	12	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**1**	**0**	**0**	**6**	**0**	**14**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**4**	**1**	**0**	**0**	**1**	**0**	**7**	48
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**5**	**0**	**9**	42
5:15 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**6**	**1**	**0**	**0**	**3**	**0**	**11**	**41**
5:30 PM	0	0	0	0	0	0	0	0	0	0	6	1	0	0	0	0	7	34
5:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	0	0	5	0	7	34
Count Total	0	0	0	0	0	3	0	1	0	0	43	4	0	0	31	0	82	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**21**	**3**	**0**	**0**	**15**	**0**	**41**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	0			W Macdonald Ave			Richmond Pkwy			Richmond Pkwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

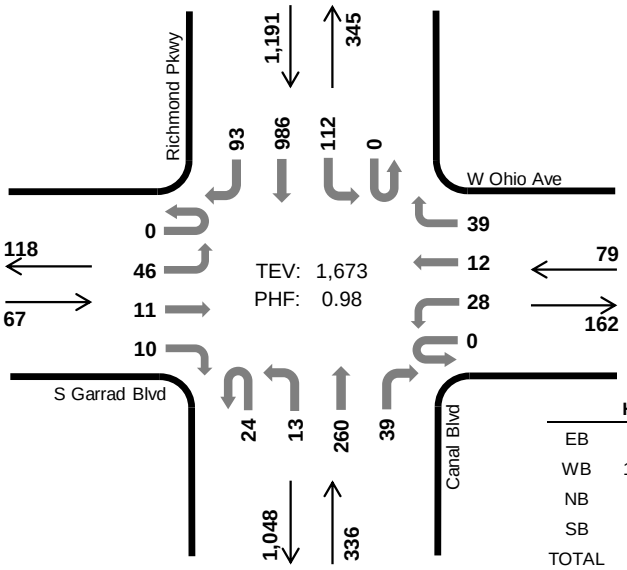
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Richmond Pkwy
W Ohio Ave

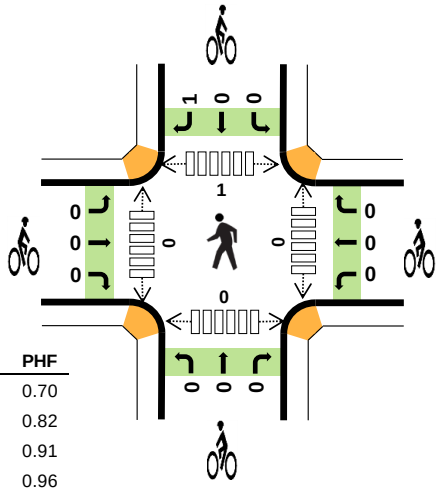
Date: 06-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:15 AM to 8:15 AM

N

Peak Hour



	HV %:	PHF
EB	4.5%	0.70
WB	12.7%	0.82
NB	7.7%	0.91
SB	2.2%	0.96
TOTAL	3.9%	0.98



Two-Hour Count Summaries

Interval Start		S Garrad Blvd				W Ohio Ave				Canal Blvd				Richmond Pkwy				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	11	2	3	0	5	3	7	3	3	47	3	0	34	278	24	423	0
7:15 AM		**0**	**16**	**4**	**4**	**0**	**4**	**0**	**9**	**7**	**3**	**64**	**8**	**0**	**25**	**268**	**16**	**428**	0
7:30 AM		**0**	**12**	**1**	**2**	**0**	**5**	**5**	**11**	**6**	**1**	**60**	**5**	**0**	**27**	**236**	**24**	**395**	0
7:45 AM		**0**	**8**	**3**	**2**	**0**	**9**	**5**	**10**	**7**	**5**	**68**	**10**	**0**	**35**	**237**	**25**	**424**	1,670
8:00 AM		**0**	**10**	**3**	**2**	**0**	**10**	**2**	**9**	**4**	**4**	**68**	**16**	**0**	**25**	**245**	**28**	**426**	**1,673**
8:15 AM		0	22	6	4	0	7	4	4	5	5	64	11	0	13	203	25	373	1,618
8:30 AM		0	12	5	5	0	4	4	5	4	6	60	9	0	20	254	24	412	1,635
8:45 AM		0	15	2	3	0	5	5	7	4	10	55	6	0	9	194	28	343	1,554
Count Total		0	106	26	25	0	49	28	62	40	37	486	68	0	188	1,915	194	3,224	0
Peak Hour	**All**	**0**	**46**	**11**	**10**	**0**	**28**	**12**	**39**	**24**	**13**	**260**	**39**	**0**	**112**	**986**	**93**	**1,673**	**0**
	HV	**0**	**2**	**1**	**0**	**0**	**8**	**1**	**1**	**6**	**1**	**14**	**5**	**0**	**5**	**19**	**2**	**65**	**0**
	HV%	**-**	**4%**	**9%**	**0%**	**-**	**29%**	**8%**	**3%**	**25%**	**8%**	**5%**	**13%**	**-**	**4%**	**2%**	**2%**	**4%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	1	1	10	11	*23*	0	0	0	0	*0*	1	0	1	1	*3*
7:15 AM	**1**	**1**	**7**	**5**	***14***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:30 AM	**1**	**2**	**8**	**8**	***19***	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**1**	**4**	**5**	**6**	***16***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:00 AM	**0**	**3**	**6**	**7**	***16***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**1**	**0**	***1***
8:15 AM	2	3	6	9	*20*	0	0	0	0	*0*	5	1	0	4	*10*
8:30 AM	0	2	4	6	*12*	0	0	0	0	*0*	0	0	0	1	*1*
8:45 AM	2	1	7	3	*13*	1	0	0	0	*1*	2	0	1	2	*5*
Count Total	8	17	53	55	*133*	1	0	0	1	*2*	8	1	3	8	*20*
Peak Hour	**3**	**10**	**26**	**26**	***65***	**0**	**0**	**0**	**1**	***1***	**0**	**0**	**1**	**0**	***1***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	S Garrad Blvd				W Ohio Ave				Canal Blvd				Richmond Pkwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	1	0	0	0	0	0	1	2	0	8	0	0	2	8	1	23	0
7:15 AM	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**4**	**1**	**1**	**1**	**0**	**1**	**4**	**0**	**14**	0
7:30 AM	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**6**	**2**	**0**	**2**	**4**	**2**	**19**	0
7:45 AM	**0**	**1**	**0**	**0**	**0**	**3**	**1**	**0**	**1**	**0**	**4**	**0**	**0**	**2**	**4**	**0**	**16**	72
8:00 AM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**1**	**0**	**3**	**2**	**0**	**0**	**7**	**0**	**16**	**65**
8:15 AM	0	2	0	0	0	2	1	0	2	1	3	0	0	1	7	1	20	71
8:30 AM	0	0	0	0	0	1	0	1	1	1	2	0	0	0	6	0	12	64
8:45 AM	0	1	0	1	0	1	0	0	2	1	4	0	0	1	1	1	13	61
Count Total	0	6	1	1	0	12	2	3	13	4	31	5	0	9	41	5	133	0
Peak Hour	**0**	**2**	**1**	**0**	**0**	**8**	**1**	**1**	**6**	**1**	**14**	**5**	**0**	**5**	**19**	**2**	**65**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	S Garrad Blvd			W Ohio Ave			Canal Blvd			Richmond Pkwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	1
Count Total	0	1	0	0	0	0	0	0	0	0	0	1	2	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**

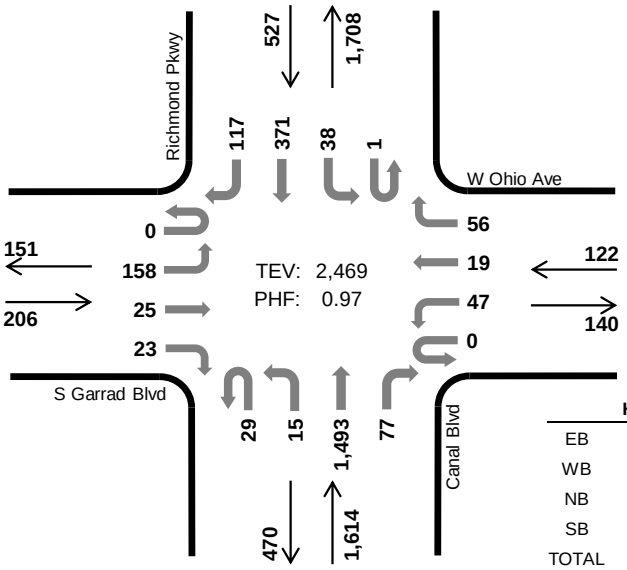
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Richmond Pkwy
W Ohio Ave

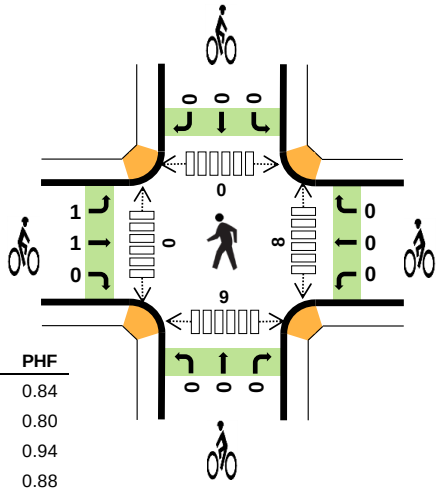
Date: 06-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM

N

Peak Hour



	HV %:	PHF
EB	1.5%	0.84
WB	3.3%	0.80
NB	1.7%	0.94
SB	2.3%	0.88
TOTAL	1.9%	0.97



Two-Hour Count Summaries

Interval Start		S Garrad Blvd				W Ohio Ave				Canal Blvd				Richmond Pkwy				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	40	3	7	0	10	3	17	9	4	361	20	0	10	109	26	619	0
4:15 PM		0	40	4	11	0	5	8	20	7	6	334	16	0	9	94	21	575	0
4:30 PM		**0**	**36**	**5**	**7**	**0**	**13**	**6**	**19**	**5**	**4**	**369**	**16**	**0**	**13**	**108**	**29**	**630**	0
4:45 PM		**0**	**45**	**10**	**6**	**0**	**12**	**1**	**12**	**4**	**2**	**365**	**20**	**0**	**9**	**84**	**28**	**598**	2,422
5:00 PM		**0**	**39**	**6**	**5**	**0**	**11**	**5**	**16**	**7**	**5**	**368**	**19**	**1**	**7**	**85**	**32**	**606**	2,409
5:15 PM		**0**	**38**	**4**	**5**	**0**	**11**	**7**	**9**	**13**	**4**	**391**	**22**	**0**	**9**	**94**	**28**	**635**	**2,469**
5:30 PM		0	27	6	8	0	6	5	6	7	4	381	30	0	10	86	16	592	2,431
5:45 PM		0	18	8	10	0	12	7	7	19	3	102	38	0	5	35	13	277	2,110
Count Total		0	283	46	59	0	80	42	106	71	32	2,671	181	1	72	695	193	4,532	0
Peak Hour	**All**	**0**	**158**	**25**	**23**	**0**	**47**	**19**	**56**	**29**	**15**	**1,493**	**77**	**1**	**38**	**371**	**117**	**2,469**	**0**
	HV	**0**	**3**	**0**	**0**	**0**	**3**	**0**	**1**	**2**	**0**	**20**	**6**	**0**	**0**	**10**	**2**	**47**	**0**
	HV%	**-**	**2%**	**0%**	**0%**	**-**	**6%**	**0%**	**2%**	**7%**	**0%**	**1%**	**8%**	**0%**	**0%**	**3%**	**2%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	1	9	5	*15*	0	0	0	1	*1*	1	0	0	3	*4*
4:15 PM	1	3	9	7	*20*	0	0	0	0	*0*	0	0	0	0	*0*
4:30 PM	**1**	**0**	**5**	**4**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**1**	**0**	**6**	**2**	***9***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**1**	*1*
5:00 PM	**0**	**2**	**6**	**2**	***10***	**0**	**0**	**0**	**0**	***0***	**7**	**0**	**0**	**6**	*13*
5:15 PM	**1**	**2**	**11**	**4**	***18***	**2**	**0**	**0**	**0**	***2***	**1**	**0**	**0**	**2**	***3***
5:30 PM	0	1	6	1	*8*	0	2	0	0	*2*	2	0	0	3	*5*
5:45 PM	1	0	1	4	*6*	2	0	0	0	*2*	1	0	0	0	*1*
Count Total	5	9	53	29	*96*	4	2	0	1	*7*	12	0	0	15	*27*
Peak Hour	**3**	**4**	**28**	**12**	***47***	**2**	**0**	**0**	**0**	***2***	**8**	**0**	**0**	**9**	***17***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	S Garrad Blvd				W Ohio Ave				Canal Blvd				Richmond Pkwy				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	1	0	0	8	1	0	0	2	3	15	0
4:15 PM	0	1	0	0	0	2	0	1	0	0	7	2	0	0	7	0	20	0
4:30 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**1**	**0**	**0**	**4**	**0**	**10**	0
4:45 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**4**	**1**	**0**	**0**	**1**	**1**	**9**	54
5:00 PM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**1**	**0**	**4**	**1**	**0**	**0**	**2**	**0**	**10**	49
5:15 PM	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**8**	**3**	**0**	**0**	**3**	**1**	**18**	**47**
5:30 PM	0	0	0	0	0	1	0	0	0	0	4	2	0	0	1	0	8	45
5:45 PM	0	1	0	0	0	0	0	0	0	0	1	0	0	0	4	0	6	42
Count Total	0	5	0	0	0	6	0	3	2	0	40	11	0	0	24	5	96	0
Peak Hour	**0**	**3**	**0**	**0**	**0**	**3**	**0**	**1**	**2**	**0**	**20**	**6**	**0**	**0**	**10**	**2**	**47**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	S Garrad Blvd			W Ohio Ave			Canal Blvd			Richmond Pkwy			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:15 PM	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**2**
5:30 PM	0	0	0	2	0	0	0	0	0	0	0	0	2	4
5:45 PM	1	1	0	0	0	0	0	0	0	0	0	0	2	6
Count Total	2	2	0	2	0	0	0	0	0	0	0	1	7	0
Peak Hour	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**

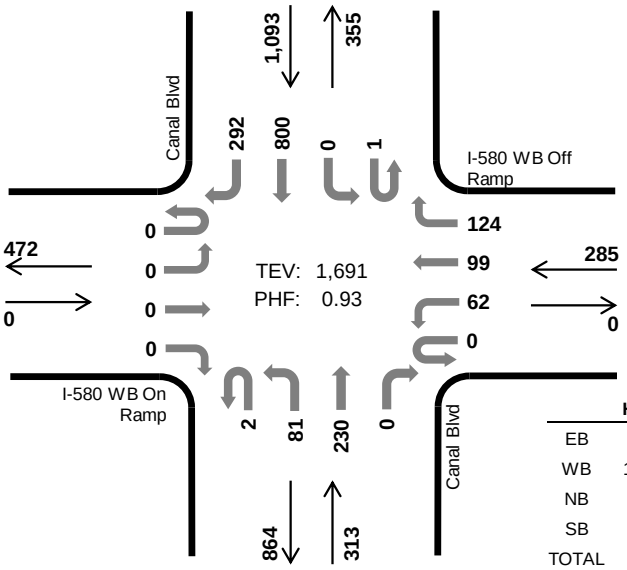
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Canal Blvd
I-580 WB On Ramp

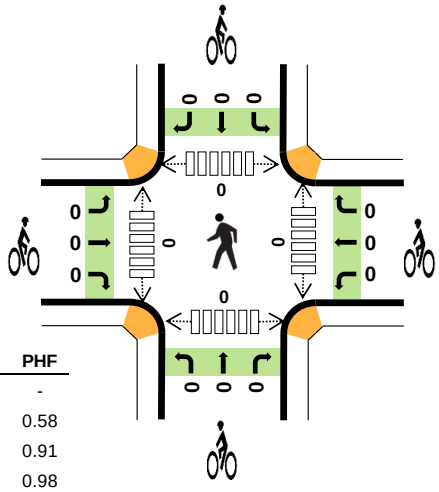
Date: 06-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM

N

Peak Hour



	HV %:	PHF
EB	-	-
WB	10.2%	0.58
NB	8.0%	0.91
SB	3.6%	0.98
TOTAL	5.5%	0.93



Two-Hour Count Summaries

Interval Start		I-580 WB On Ramp				I-580 WB Off Ramp				Canal Blvd				Canal Blvd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	0	0	0	10	18	17	1	27	55	0	0	0	193	86	407	0
7:15 AM		0	0	0	0	0	8	25	24	1	25	60	0	0	0	211	62	416	0
7:30 AM		0	0	0	0	0	7	24	30	0	19	56	0	0	0	214	61	411	0
7:45 AM		0	0	0	0	0	37	32	53	0	10	59	0	1	0	182	83	457	1,691
8:00 AM		0	0	0	0	0	37	10	45	0	17	41	0	1	0	169	77	397	1,681
8:15 AM		0	0	0	0	0	39	4	49	0	11	44	0	0	0	129	97	373	1,638
8:30 AM		0	0	0	0	0	38	1	55	1	18	36	0	0	0	154	106	409	1,636
8:45 AM		0	0	0	0	0	48	0	47	0	17	45	0	0	0	133	78	368	1,547
Count Total		0	0	0	0	0	224	114	320	3	144	396	0	2	0	1,385	650	3,238	0
Peak Hour	All	0	0	0	0	0	62	99	124	2	81	230	0	1	0	800	292	1,691	0
	HV	0	0	0	0	0	9	12	8	0	11	14	0	0	0	31	8	93	0
	HV%	-	-	-	-	-	15%	12%	6%	0%	14%	6%	-	0%	-	4%	3%	5%	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	7	11	12	*30*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	0	6	5	8	*19*	0	0	0	0	*0*	0	0	0	0	*0*
7:30 AM	0	6	6	9	*21*	0	0	0	0	*0*	0	0	0	0	*0*
7:45 AM	0	10	3	10	*23*	0	0	0	0	*0*	0	0	0	0	*0*
8:00 AM	0	10	4	9	*23*	0	0	0	0	*0*	0	0	0	0	*0*
8:15 AM	0	3	3	10	*16*	0	0	0	0	*0*	1	0	0	0	*1*
8:30 AM	0	7	8	10	*25*	0	0	0	0	*0*	0	0	0	0	*0*
8:45 AM	0	5	8	6	*19*	0	0	0	0	*0*	0	1	0	0	*1*
Count Total	0	54	48	74	*176*	0	0	0	0	*0*	1	1	0	0	*2*
Peak Hour	0	29	25	39	*93*	0	0	0	0	*0*	0	0	0	0	*0*

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	I-580 WB On Ramp				I-580 WB Off Ramp				Canal Blvd				Canal Blvd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	**0**	**0**	**0**	**0**	**0**	**3**	**2**	**2**	**0**	**5**	**6**	**0**	**0**	**0**	**11**	**1**	**30**	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**2**	**3**	**1**	**0**	**4**	**1**	**0**	**0**	**0**	**6**	**2**	**19**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**2**	**0**	**1**	**5**	**0**	**0**	**0**	**7**	**2**	**21**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**4**	**3**	**3**	**0**	**1**	**2**	**0**	**0**	**0**	**7**	**3**	**23**	**93**
8:00 AM	0	0	0	0	0	4	0	6	0	4	0	0	0	0	8	1	23	86
8:15 AM	0	0	0	0	0	2	0	1	0	2	1	0	0	0	8	2	16	83
8:30 AM	0	0	0	0	0	2	0	5	1	5	2	0	0	0	7	3	25	87
8:45 AM	0	0	0	0	0	3	0	2	0	5	3	0	0	0	5	1	19	83
Count Total	0	0	0	0	0	20	12	22	1	27	20	0	0	0	59	15	176	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**9**	**12**	**8**	**0**	**11**	**14**	**0**	**0**	**0**	**31**	**8**	**93**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	I-580 WB On Ramp			I-580 WB Off Ramp			Canal Blvd			Canal Blvd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

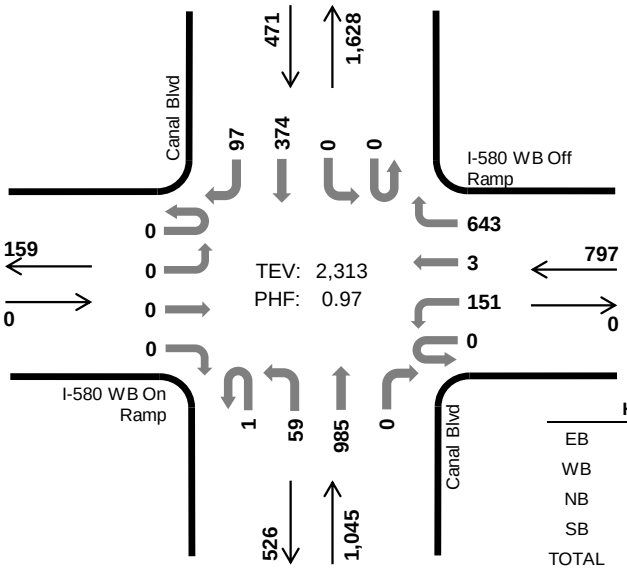
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

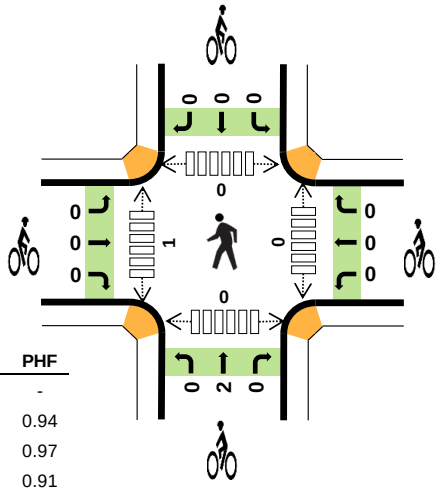
Canal Blvd
I-580 WB On Ramp

Date: 06-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM

N

Peak Hour





	HV %:	PHF
EB	-	-
WB	3.8%	0.94
NB	1.9%	0.97
SB	3.6%	0.91
TOTAL	2.9%	0.97

Two-Hour Count Summaries

Interval Start		I-580 WB On Ramp				I-580 WB Off Ramp				Canal Blvd				Canal Blvd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	0	0	0	0	34	0	148	1	29	255	0	0	0	102	32	601	0
4:15 PM		0	0	0	0	0	40	1	139	0	17	203	0	0	0	92	23	515	0
4:30 PM		**0**	**0**	**0**	**0**	**0**	**45**	**1**	**167**	**0**	**14**	**243**	**0**	**0**	**0**	**106**	**23**	**599**	0
4:45 PM		**0**	**0**	**0**	**0**	**0**	**36**	**0**	**148**	**0**	**13**	**256**	**0**	**0**	**0**	**79**	**26**	**558**	2,273
5:00 PM		**0**	**0**	**0**	**0**	**0**	**35**	**1**	**164**	**1**	**20**	**245**	**0**	**0**	**0**	**87**	**26**	**579**	2,251
5:15 PM		**0**	**0**	**0**	**0**	**0**	**35**	**1**	**164**	**0**	**12**	**241**	**0**	**0**	**0**	**102**	**22**	**577**	**2,313**
5:30 PM		0	0	0	0	0	37	0	164	0	21	246	0	0	0	81	27	576	2,290
5:45 PM		0	0	0	0	0	55	13	99	11	17	136	0	0	0	47	26	404	2,136
Count Total		0	0	0	0	0	317	17	1,193	13	143	1,825	0	0	0	696	205	4,409	0
Peak Hour	**All**	**0**	**0**	**0**	**0**	**0**	**151**	**3**	**643**	**1**	**59**	**985**	**0**	**0**	**0**	**374**	**97**	**2,313**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**21**	**0**	**2**	**18**	**0**	**0**	**0**	**15**	**2**	**67**	**0**
	HV%	**-**	**-**	**-**	**-**	**-**	**6%**	**0%**	**3%**	**0%**	**3%**	**2%**	**-**	**-**	**-**	**4%**	**2%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	11	8	2	*21*	0	0	0	0	*0*	1	0	0	0	*1*
4:15 PM	0	6	8	11	*25*	0	0	0	0	*0*	0	0	0	0	*0*
4:30 PM	**0**	**7**	**6**	**5**	***18***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**0**	**9**	**5**	**2**	***16***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:00 PM	**0**	**5**	**4**	**6**	***15***	**0**	**0**	**2**	**0**	***2***	**0**	**1**	**0**	**0**	*1*
5:15 PM	**0**	**9**	**5**	**4**	***18***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
5:30 PM	0	7	3	1	*11*	0	0	0	2	*2*	0	0	0	0	*0*
5:45 PM	0	7	3	4	*14*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	0	61	42	35	*138*	0	0	2	2	*4*	1	1	0	0	*2*
Peak Hour	**0**	**30**	**20**	**17**	***67***	**0**	**0**	**2**	**0**	***2***	**0**	**1**	**0**	**0**	***1***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	I-580 WB On Ramp				I-580 WB Off Ramp				Canal Blvd				Canal Blvd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	6	0	5	0	2	6	0	0	0	2	0	21	0
4:15 PM	0	0	0	0	0	2	0	4	0	5	3	0	0	0	11	0	25	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**4**	**0**	**1**	**5**	**0**	**0**	**0**	**5**	**0**	**18**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**6**	**0**	**1**	**4**	**0**	**0**	**0**	**2**	**0**	**16**	80
5:00 PM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**3**	**0**	**0**	**4**	**0**	**0**	**0**	**5**	**1**	**15**	74
5:15 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**8**	**0**	**0**	**5**	**0**	**0**	**0**	**3**	**1**	**18**	**67**
5:30 PM	0	0	0	0	0	3	0	4	0	2	1	0	0	0	0	1	11	60
5:45 PM	0	0	0	0	0	5	0	2	0	2	1	0	0	0	3	1	14	58
Count Total	0	0	0	0	0	25	0	36	0	13	29	0	0	0	31	4	138	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**21**	**0**	**2**	**18**	**0**	**0**	**0**	**15**	**2**	**67**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	I-580 WB On Ramp			I-580 WB Off Ramp			Canal Blvd			Canal Blvd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	2
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
5:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	4
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Count Total	0	0	0	0	0	0	0	2	0	0	2	0	4	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**0**

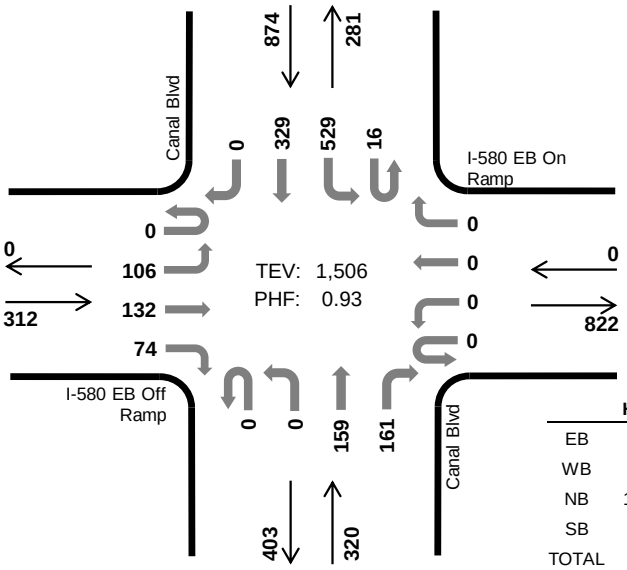
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Canal Blvd
I-580 EB Off Ramp

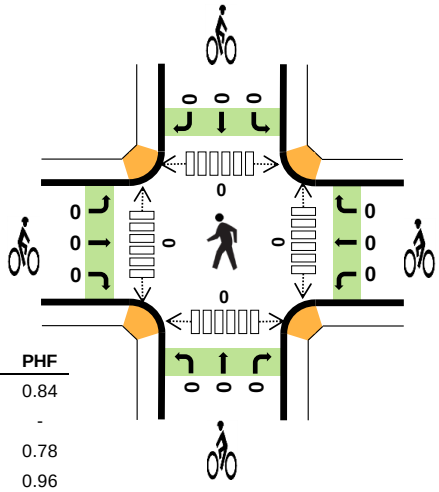
Date: 06-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:15 AM to 8:15 AM

N

Peak Hour



	HV %:	PHF
EB	6.1%	0.84
WB	-	-
NB	16.9%	0.78
SB	4.6%	0.96
TOTAL	7.5%	0.93



Two-Hour Count Summaries

Interval Start		I-580 EB Off Ramp				I-580 EB On Ramp				Canal Blvd				Canal Blvd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	25	15	18	0	0	0	0	0	0	52	49	5	133	63	0	360	0
7:15 AM		**0**	**30**	**28**	**14**	**0**	**0**	**0**	**0**	**0**	**0**	**51**	**52**	**4**	**149**	**75**	**0**	**403**	0
7:30 AM		**0**	**21**	**29**	**21**	**0**	**0**	**0**	**0**	**0**	**0**	**47**	**40**	**5**	**137**	**74**	**0**	**374**	0
7:45 AM		**0**	**31**	**35**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**30**	**34**	**5**	**119**	**97**	**0**	**361**	1,498
8:00 AM		**0**	**24**	**40**	**29**	**0**	**0**	**0**	**0**	**0**	**0**	**31**	**35**	**2**	**124**	**83**	**0**	**368**	**1,506**
8:15 AM		0	23	27	17	0	0	0	0	0	0	29	42	1	100	75	0	314	1,417
8:30 AM		0	14	22	21	0	0	0	0	0	0	33	45	7	92	84	0	318	1,361
8:45 AM		0	22	29	27	0	0	0	0	0	0	27	30	14	86	80	0	315	1,315
Count Total		0	190	225	157	0	0	0	0	0	0	300	327	43	940	631	0	2,813	0
Peak Hour	**All**	**0**	**106**	**132**	**74**	**0**	**0**	**0**	**0**	**0**	**0**	**159**	**161**	**16**	**529**	**329**	**0**	**1,506**	**0**
	HV	**0**	**3**	**2**	**14**	**0**	**0**	**0**	**0**	**0**	**0**	**19**	**35**	**0**	**23**	**17**	**0**	**113**	**0**
	HV%	**-**	**3%**	**2%**	**19%**	**-**	**-**	**-**	**-**	**-**	**-**	**12%**	**22%**	**0%**	**4%**	**5%**	**-**	**8%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	6	0	10	12	*28*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	**5**	**0**	**17**	**9**	***31***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:30 AM	**5**	**0**	**17**	**7**	***29***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**3**	**0**	**11**	**11**	***25***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
8:00 AM	**6**	**0**	**9**	**13**	***28***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
8:15 AM	5	0	7	10	*22*	0	0	0	0	*0*	1	0	0	0	*1*
8:30 AM	7	0	11	10	*28*	0	0	0	0	*0*	0	0	0	0	*0*
8:45 AM	10	0	3	8	*21*	0	0	0	0	*0*	0	1	0	0	*1*
Count Total	47	0	85	80	*212*	0	0	0	0	*0*	1	1	0	0	*2*
Peak Hour	**19**	**0**	**54**	**40**	***113***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	I-580 EB Off Ramp				I-580 EB On Ramp				Canal Blvd				Canal Blvd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	4	0	2	0	0	0	0	0	0	7	3	0	8	4	0	28	0
7:15 AM	**0**	**1**	**1**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**11**	**0**	**5**	**4**	**0**	**31**	0
7:30 AM	**0**	**1**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**11**	**0**	**4**	**3**	**0**	**29**	0
7:45 AM	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**8**	**0**	**7**	**4**	**0**	**25**	113
8:00 AM	**0**	**1**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**5**	**0**	**7**	**6**	**0**	**28**	**113**
8:15 AM	0	1	1	3	0	0	0	0	0	0	1	6	0	6	4	0	22	104
8:30 AM	0	3	0	4	0	0	0	0	0	0	5	6	0	6	4	0	28	103
8:45 AM	0	3	0	7	0	0	0	0	0	0	3	0	1	3	4	0	21	99
Count Total	0	14	3	30	0	0	0	0	0	0	35	50	1	46	33	0	212	0
Peak Hour	**0**	**3**	**2**	**14**	**0**	**0**	**0**	**0**	**0**	**0**	**19**	**35**	**0**	**23**	**17**	**0**	**113**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	I-580 EB Off Ramp			I-580 EB On Ramp			Canal Blvd			Canal Blvd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

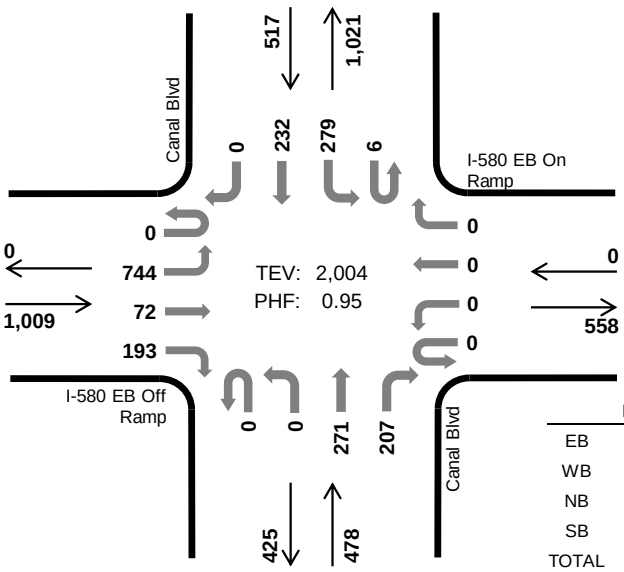
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Canal Blvd
I-580 EB Off Ramp

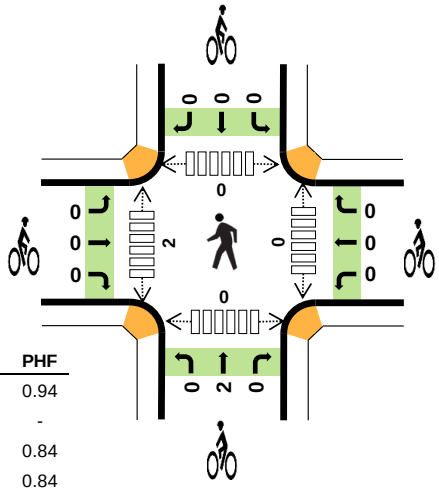
Date: 06-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM

N

Peak Hour



	HV %:	PHF
EB	2.1%	0.94
WB	-	-
NB	4.8%	0.84
SB	4.6%	0.84
TOTAL	3.4%	0.95



Two-Hour Count Summaries

Interval Start		I-580 EB Off Ramp				I-580 EB On Ramp				Canal Blvd				Canal Blvd				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM		0	193	16	22	0	0	0	0	0	0	95	51	3	75	61	0	516	0
4:15 PM		0	160	30	29	0	0	0	0	0	0	60	53	0	68	59	0	459	0
4:30 PM		**0**	**169**	**18**	**62**	**0**	**0**	**0**	**0**	**0**	**0**	**78**	**47**	**3**	**87**	**63**	**0**	**527**	0
4:45 PM		**0**	**199**	**16**	**53**	**0**	**0**	**0**	**0**	**0**	**0**	**72**	**42**	**1**	**62**	**50**	**0**	**495**	1,997
5:00 PM		**0**	**179**	**20**	**50**	**0**	**0**	**0**	**0**	**0**	**0**	**74**	**69**	**1**	**62**	**60**	**0**	**515**	1,996
5:15 PM		**0**	**197**	**18**	**28**	**0**	**0**	**0**	**0**	**0**	**0**	**47**	**49**	**1**	**68**	**59**	**0**	**467**	**2,004**
5:30 PM		0	185	21	14	0	0	0	0	0	0	90	68	0	49	76	0	503	1,980
5:45 PM		0	136	31	23	0	0	0	0	0	0	39	44	0	47	67	0	387	1,872
Count Total		0	1,418	170	281	0	0	0	0	0	0	555	423	9	518	495	0	3,869	0
Peak Hour	**All**	**0**	**744**	**72**	**193**	**0**	**0**	**0**	**0**	**0**	**0**	**271**	**207**	**6**	**279**	**232**	**0**	**2,004**	**0**
	HV	**0**	**8**	**3**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**14**	**1**	**11**	**12**	**0**	**68**	**0**
	HV%	**-**	**1%**	**4%**	**5%**	**-**	**-**	**-**	**-**	**-**	**-**	**3%**	**7%**	**17%**	**4%**	**5%**	**-**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	9	0	5	8	*22*	0	0	0	0	*0*	2	0	0	0	*2*
4:15 PM	3	0	7	13	*23*	0	0	0	0	*0*	0	0	0	0	*0*
4:30 PM	**4**	**0**	**5**	**8**	***17***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	*1*
4:45 PM	**7**	**0**	**8**	**5**	***20***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	*1*
5:00 PM	**5**	**0**	**5**	**7**	***17***	**0**	**0**	**2**	**0**	***2***	**0**	**0**	**0**	**0**	*0*
5:15 PM	**5**	**0**	**5**	**4**	***14***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
5:30 PM	1	0	5	4	*10*	0	0	0	2	*2*	0	0	0	0	*0*
5:45 PM	4	0	2	8	*14*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	38	0	42	57	*137*	0	0	2	2	*4*	2	2	0	0	*4*
Peak Hour	**21**	**0**	**23**	**24**	***68***	**0**	**0**	**2**	**0**	***2***	**0**	**2**	**0**	**0**	***2***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	I-580 EB Off Ramp				I-580 EB On Ramp				Canal Blvd				Canal Blvd				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	5	0	4	0	0	0	0	0	0	4	1	0	2	6	0	22	0
4:15 PM	0	2	0	1	0	0	0	0	0	0	5	2	0	8	5	0	23	0
4:30 PM	**0**	**1**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**2**	**1**	**3**	**4**	**0**	**17**	0
4:45 PM	**0**	**4**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**7**	**0**	**2**	**3**	**0**	**20**	82
5:00 PM	**0**	**1**	**1**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**3**	**0**	**4**	**3**	**0**	**17**	77
5:15 PM	**0**	**2**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**2**	**0**	**2**	**2**	**0**	**14**	**68**
5:30 PM	0	0	0	1	0	0	0	0	0	0	4	1	0	0	4	0	10	61
5:45 PM	0	1	1	2	0	0	0	0	0	0	2	0	0	2	6	0	14	55
Count Total	0	16	4	18	0	0	0	0	0	0	24	18	1	23	33	0	137	0
Peak Hour	**0**	**8**	**3**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**14**	**1**	**11**	**12**	**0**	**68**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	I-580 EB Off Ramp			I-580 EB On Ramp			Canal Blvd			Canal Blvd			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	2
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
5:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	4
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Count Total	0	0	0	0	0	0	0	2	0	0	2	0	4	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**0**

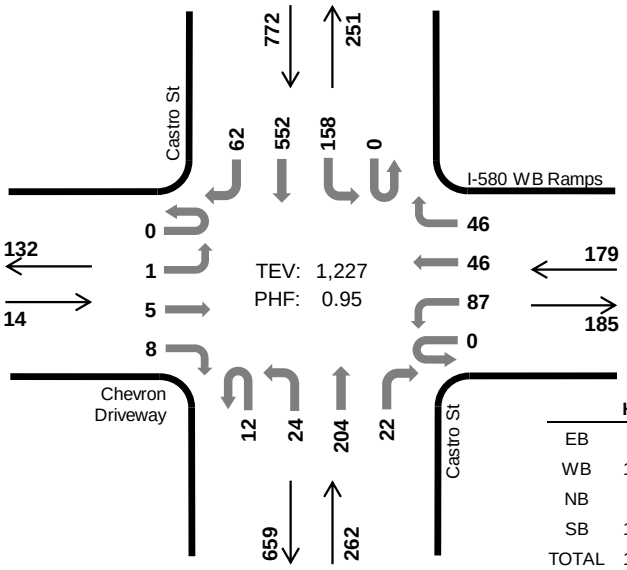
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Castro St
I-580 WB Ramps

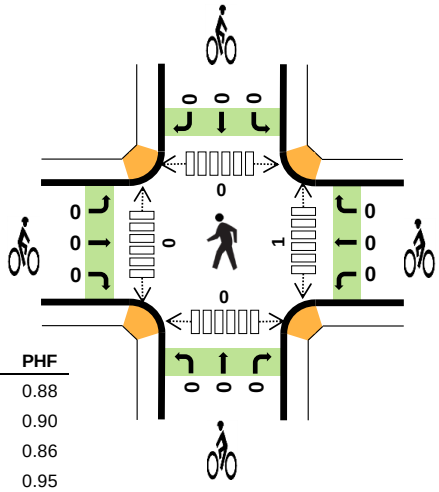
Date: 06-26-2018
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM

N

Peak Hour



	HV %:	PHF
EB	7.1%	0.88
WB	16.8%	0.90
NB	6.9%	0.86
SB	13.9%	0.95
TOTAL	12.7%	0.95



Two-Hour Count Summaries

Interval Start		Chevron Driveway				I-580 WB Ramps				Castro St				Castro St				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		**0**	**0**	**2**	**2**	**0**	**25**	**13**	**11**	**1**	**6**	**37**	**13**	**0**	**37**	**140**	**17**	**304**	0
7:15 AM		**0**	**0**	**1**	**3**	**0**	**26**	**14**	**10**	**3**	**6**	**60**	**7**	**0**	**34**	**138**	**17**	**319**	0
7:30 AM		**0**	**1**	**1**	**2**	**0**	**15**	**10**	**10**	**2**	**3**	**49**	**1**	**0**	**41**	**131**	**14**	**280**	0
7:45 AM		**0**	**0**	**1**	**1**	**0**	**21**	**9**	**15**	**6**	**9**	**58**	**1**	**0**	**46**	**143**	**14**	**324**	**1,227**
8:00 AM		0	1	0	3	0	16	6	17	2	5	69	1	0	41	129	9	299	1,222
8:15 AM		0	0	1	4	0	13	15	28	1	6	58	0	0	44	115	9	294	1,197
8:30 AM		0	0	0	10	0	20	14	23	0	3	40	0	0	74	92	17	293	1,210
8:45 AM		0	0	0	5	0	29	10	21	5	5	61	0	0	104	66	18	324	1,210
Count Total		0	2	6	30	0	165	91	135	20	43	432	23	0	421	954	115	2,437	0
Peak Hour	**All**	**0**	**1**	**5**	**8**	**0**	**87**	**46**	**46**	**12**	**24**	**204**	**22**	**0**	**158**	**552**	**62**	**1,227**	**0**
	HV	**0**	**0**	**0**	**1**	**0**	**3**	**0**	**27**	**0**	**0**	**18**	**0**	**0**	**30**	**76**	**1**	**156**	**0**
	HV%	**-**	**0%**	**0%**	**13%**	**-**	**3%**	**0%**	**59%**	**0%**	**0%**	**9%**	**0%**	**-**	**19%**	**14%**	**2%**	**13%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	**0**	**3**	**3**	**26**	***32***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:15 AM	**1**	**9**	**8**	**32**	***50***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:30 AM	**0**	**8**	**3**	**27**	***38***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
7:45 AM	**0**	**10**	**4**	**22**	***36***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	***1***
8:00 AM	0	5	3	23	*31*	0	0	0	0	*0*	0	0	0	0	*0*
8:15 AM	1	9	7	33	*50*	0	1	0	0	*1*	0	0	0	0	*0*
8:30 AM	0	10	4	29	*43*	0	0	0	0	*0*	0	0	0	0	*0*
8:45 AM	2	11	11	29	*53*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	4	65	43	221	*333*	0	1	0	0	*1*	1	0	0	0	*1*
Peak Hour	**1**	**30**	**18**	**107**	***156***	**0**	**0**	**0**	**0**	***0***	**1**	**0**	**0**	**0**	***1***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Chevron Driveway				I-580 WB Ramps				Castro St				Castro St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**3**	**0**	**0**	**4**	**22**	**0**	**32**	0
7:15 AM	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**8**	**0**	**0**	**8**	**0**	**0**	**9**	**23**	**0**	**50**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**3**	**0**	**0**	**10**	**17**	**0**	**38**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**8**	**0**	**0**	**4**	**0**	**0**	**7**	**14**	**1**	**36**	**156**
8:00 AM	0	0	0	0	0	0	0	5	0	0	3	0	0	5	17	1	31	155
8:15 AM	0	0	0	1	0	0	0	9	0	0	7	0	0	12	21	0	50	155
8:30 AM	0	0	0	0	0	0	0	10	0	0	4	0	0	12	16	1	43	160
8:45 AM	0	0	0	2	0	0	0	11	2	0	9	0	0	13	15	1	53	177
Count Total	0	0	0	4	0	3	0	62	2	0	41	0	0	72	145	4	333	0
Peak Hour	**0**	**0**	**0**	**1**	**0**	**3**	**0**	**27**	**0**	**0**	**18**	**0**	**0**	**30**	**76**	**1**	**156**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Chevron Driveway			I-580 WB Ramps			Castro St			Castro St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
7:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	0	1	0	0	0	0	0	0	1	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

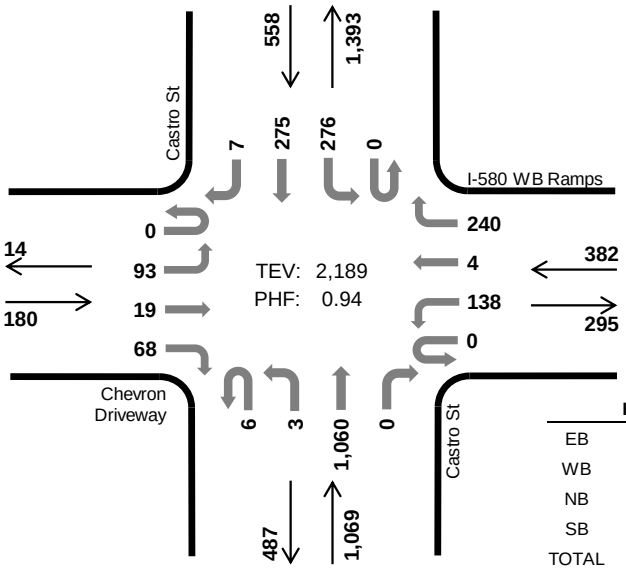
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

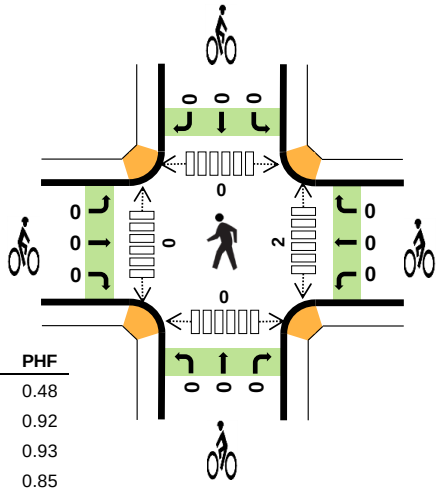
Castro St
I-580 WB Ramps

Date: 06-26-2018
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM

N

Peak Hour





	HV %:	PHF
EB	0.0%	0.48
WB	7.9%	0.92
NB	2.4%	0.93
SB	4.3%	0.85
TOTAL	3.7%	0.94

Two-Hour Count Summaries

Interval Start	Chevron Driveway (Eastbound)				I-580 WB Ramps (Westbound)				Castro St (Northbound)				Castro St (Southbound)				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	17	3	21	0	30	0	59	2	2	249	0	0	62	59	5	509	0
4:15 PM	0	11	5	13	0	27	2	46	1	2	207	0	0	79	69	1	463	0
4:30 PM	**0**	**52**	**8**	**33**	**0**	**24**	**1**	**57**	**2**	**1**	**259**	**0**	**0**	**67**	**77**	**4**	**585**	0
4:45 PM	**0**	**19**	**3**	**17**	**0**	**39**	**0**	**54**	**1**	**0**	**285**	**0**	**0**	**67**	**65**	**2**	**552**	2,109
5:00 PM	**0**	**9**	**3**	**7**	**0**	**26**	**2**	**76**	**1**	**0**	**272**	**0**	**0**	**68**	**96**	**0**	**560**	2,160
5:15 PM	**0**	**13**	**5**	**11**	**0**	**49**	**1**	**53**	**2**	**2**	**244**	**0**	**0**	**74**	**37**	**1**	**492**	**2,189**
5:30 PM	0	12	3	15	0	36	1	89	1	1	197	0	0	67	30	0	452	2,056
5:45 PM	0	9	5	13	0	38	0	121	0	0	311	0	0	64	26	2	589	2,093
Count Total	0	142	35	130	0	269	7	555	10	8	2,024	0	0	548	459	15	4,202	0
Peak Hour All	**0**	**93**	**19**	**68**	**0**	**138**	**4**	**240**	**6**	**3**	**1,060**	**0**	**0**	**276**	**275**	**7**	**2,189**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**28**	**0**	**0**	**26**	**0**	**0**	**5**	**19**	**0**	**80**	**0**
Peak Hour HV%	**-**	**0%**	**0%**	**0%**	**-**	**1%**	**0%**	**12%**	**0%**	**0%**	**2%**	**-**	**-**	**2%**	**7%**	**0%**	**4%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	9	7	7	*23*	0	0	0	0	*0*	2	0	0	0	*2*
4:15 PM	1	10	7	7	*25*	0	0	0	0	*0*	1	0	0	0	*1*
4:30 PM	**0**	**13**	**6**	**9**	***28***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**0**	**9**	**10**	**7**	***26***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:00 PM	**0**	**6**	**6**	**4**	***16***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:15 PM	**0**	**2**	**4**	**4**	***10***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**0**	***2***
5:30 PM	0	10	6	3	*19*	0	0	0	0	*0*	0	0	0	0	*0*
5:45 PM	0	10	10	3	*23*	0	0	0	0	*0*	1	0	0	0	*1*
Count Total	1	69	56	44	*170*	0	0	0	0	*0*	6	0	0	0	*6*
Peak Hour	**0**	**30**	**26**	**24**	***80***	**0**	**0**	**0**	**0**	***0***	**2**	**0**	**0**	**0**	***2***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Chevron Driveway				I-580 WB Ramps				Castro St				Castro St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	1	0	8	0	0	7	0	0	2	5	0	23	0
4:15 PM	0	1	0	0	0	1	0	9	0	1	6	0	0	3	4	0	25	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**12**	**0**	**0**	**6**	**0**	**0**	**1**	**8**	**0**	**28**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**10**	**0**	**0**	**2**	**5**	**0**	**26**	102
5:00 PM	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**5**	**0**	**0**	**6**	**0**	**0**	**1**	**3**	**0**	**16**	95
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**4**	**0**	**0**	**1**	**3**	**0**	**10**	**80**
5:30 PM	0	0	0	0	0	1	0	9	0	0	6	0	0	0	3	0	19	71
5:45 PM	0	0	0	0	0	0	0	10	0	0	10	0	0	2	1	0	23	68
Count Total	0	1	0	0	0	5	0	64	0	1	55	0	0	12	32	0	170	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**28**	**0**	**0**	**26**	**0**	**0**	**5**	**19**	**0**	**80**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Chevron Driveway			I-580 WB Ramps			Castro St			Castro St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Int.18 Fred Jackson Way/Market Ave

Two-Hour Count Summaries

Interval Start	Market Ave Eastbound UT	LT	TH	RT	Market Ave Westbound UT	LT	TH	RT	Fred Jackson Way Northbound UT	LT	TH	RT	Fred Jackson Way Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	0	13	4	1	0	4	0	2	0	1	24	6	0	4	9	2	70	0
4:15 PM	0	35	14	3	0	9	5	6	0	2	48	8	0	9	11	2	152	0
4:30 PM	**0**	**26**	**12**	**1**	**0**	**13**	**5**	**3**	**0**	**2**	**57**	**7**	**0**	**10**	**11**	**1**	**148**	**0**
4:45 PM	**0**	**44**	**12**	**1**	**0**	**9**	**1**	**3**	**0**	**4**	**60**	**9**	**0**	**12**	**17**	**3**	**175**	**545**
5:00 PM	**0**	**23**	**11**	**3**	**0**	**6**	**7**	**9**	**0**	**1**	**60**	**9**	**0**	**5**	**7**	**3**	**144**	**619**
5:15 PM	**0**	**40**	**12**	**1**	**0**	**6**	**2**	**9**	**0**	**9**	**62**	**6**	**0**	**4**	**10**	**2**	**163**	**630**
5:30 PM	0	17	4	0	0	0	2	2	0	0	36	14	0	3	6	1	85	567
5:45 PM	0	16	4	0	0	1	0	0	0	0	33	10	0	0	0	0	64	456
Count Total	0	214	73	10	0	48	22	34	0	19	380	69	0	47	71	14	36	0
Peak Hour All	**0**	**133**	**47**	**6**	**0**	**34**	**15**	**24**	**0**	**16**	**239**	**31**	**0**	**31**	**45**	**9**	**630**	**0**
Peak Hour HV	**0**	**1**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**5**	**0**
Peak Hour HV%	**-**	**1%**	**2%**	**0%**	**-**	**3%**	**0%**	**0%**	**-**	**0%**	**0%**	**3%**	**-**	**3%**	**0%**	**0%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	0	0	2	2	*4*	0	0	0	0	*0*	0	1	0	0	*1*
4:15 PM	4	2	2	1	*9*	3	0	0	0	*3*	0	0	0	0	*0*
4:30 PM	**1**	**1**	**1**	**0**	***3***	**1**	**0**	**2**	**0**	***3***	**0**	**0**	**0**	**0**	***0***
4:45 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**2**	***2***
5:00 PM	**1**	**0**	**0**	**1**	***2***	**2**	**0**	**0**	**1**	***3***	**0**	**0**	**0**	**0**	***0***
5:15 PM	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**1**	**2**	***3***
5:30 PM	0	0	0	0	*0*	1	1	0	0	*2*	0	0	0	0	*0*
5:45 PM	0	0	1	0	*1*	1	0	0	0	*1*	0	0	0	1	*1*
Count Total	6	3	6	4	19	8	2	2	1	13	0	1	1	5	*7*
Peak Hour	**2**	**1**	**1**	**1**	***5***	**3**	**1**	**2**	**1**	***7***	**0**	**0**	**1**	**4**	***5***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Market Ave Eastbound UT	LT	TH	RT	Market Ave Westbound UT	LT	TH	RT	Fred Jackson Way Northbound UT	LT	TH	RT	Fred Jackson Way Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	1	4	0
4:15 PM	0	3	0	1	0	0	0	2	0	0	2	0	0	0	1	0	9	0
4:30 PM	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**3**	**0**
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**16**
5:00 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**14**
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	3
Count Total	0	4	1	1	0	1	0	2	0	0	5	1	0	1	2	1	19	0
Peak Hour	**0**	**1**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**5**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Market Ave Eastbound LT	TH	RT	Market Ave Westbound LT	TH	RT	Fred Jackson Way Northbound LT	TH	RT	Fred Jackson Way Southbound LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	3	0	0	0	0	0	0	0	0	0	0	0	3	0
4:30 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**3**	**0**
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**
5:00 PM	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	**9**
5:15 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**7**
5:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	2	6
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	7
Count Total	4	3	1	0	2	0	0	2	0	0	1	0	13	0
Peak Hour	**1**	**2**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**1**	**0**	**7**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

ALL TRAFFIC DATA

City of Richmond

(916) 771-8700
orders@atdtraffic.com

File Name : 19-08557-001
Date : 10/30/2019

Unshifted Count = All Vehicles & Uturns

	Goodrick Ave Southbound					Richmond Pkwy Westbound					Goodrick Ave Northbound					Richmond Pkwy Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	0	0	0	0	22	409	1	0	432	1	0	16	0	17	0	78	3	0	81	530	0
7:15	0	0	0	0	0	23	378	1	0	402	2	0	10	0	12	1	105	5	0	111	525	0
7:30	1	1	0	0	2	16	522	2	0	540	1	1	19	0	21	0	123	2	0	125	688	0
7:45	0	0	2	0	2	30	453	3	0	486	1	1	22	0	24	0	154	3	0	157	669	0
Total	1	1	2	0	4	91	1762	7	0	1860	5	2	67	0	74	1	460	13	0	474	2412	0
8:00	0	0	0	0	0	28	402	5	0	435	1	0	13	0	14	0	148	5	0	153	602	0
8:15	1	2	1	0	4	20	429	4	1	454	3	0	22	0	25	2	135	0	0	137	620	1
8:30	1	0	0	0	1	22	361	3	0	386	2	0	14	0	16	1	123	0	0	124	527	0
8:45	0	0	0	0	0	32	371	4	1	408	1	2	11	0	14	2	115	7	0	124	546	1
Total	2	2	1	0	5	102	1563	16	2	1683	7	2	60	0	69	5	521	12	0	538	2295	2
16:00	0	1	2	0	3	12	152	3	0	167	4	2	44	0	50	0	522	3	0	525	745	0
16:15	6	1	0	0	7	11	137	4	0	152	2	2	39	0	43	0	573	2	0	575	777	0
16:30	2	0	0	0	2	5	172	1	1	179	4	2	58	0	64	1	595	0	0	596	841	1
16:45	2	2	0	0	4	11	155	6	0	172	0	3	89	0	92	1	553	2	0	556	824	0
Total	10	4	2	0	16	39	616	14	1	670	10	9	230	0	249	2	2243	7	0	2252	3187	1
17:00	3	0	1	0	4	8	148	0	0	156	2	0	59	0	61	2	483	1	0	486	707	0
17:15	1	2	1	0	4	8	137	1	0	146	0	1	52	0	53	1	565	3	0	569	772	0
17:30	1	1	1	0	3	4	159	2	0	165	0	0	31	0	31	1	568	0	0	569	768	0
17:45	0	0	4	0	4	10	108	3	1	122	1	3	16	0	20	2	451	2	0	455	601	1
Total	5	3	7	0	15	30	552	6	1	589	3	4	158	0	165	6	2067	6	0	2079	2848	1
Grand Total	18	10	12	0	40	262	4493	43	4	4802	25	17	515	0	557	14	5291	38	0	5343	10742	4
Apprch %	45.0%	25.0%	30.0%	0.0%		5.5%	93.6%	0.9%	0.1%		4.5%	3.1%	92.5%	0.0%		0.3%	99.0%	0.7%	0.0%			
Total %	0.2%	0.1%	0.1%	0.0%	0.4%	2.4%	41.8%	0.4%	0.0%	44.7%	0.2%	0.2%	4.8%	0.0%	5.2%	0.1%	49.3%	0.4%	0.0%	49.7%	100.0%	

AM PEAK HOUR	Goodrick Ave Southbound					Richmond Pkwy Westbound					Goodrick Ave Northbound					Richmond Pkwy Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	1	1	0	0	2	16	522	2	0	540	1	1	19	0	21	0	123	2	0	125	688
7:45	0	0	2	0	2	30	453	3	0	486	1	1	22	0	24	0	154	3	0	157	669
8:00	0	0	0	0	0	28	402	5	0	435	1	0	13	0	14	0	148	5	0	153	602
8:15	1	2	1	0	4	20	429	4	1	454	3	0	22	0	25	2	135	0	0	137	620
Total Volume	2	3	3	0	8	94	1806	14	1	1915	6	2	76	0	84	2	560	10	0	572	2579
% App Total	25.0%	37.5%	37.5%	0.0%		4.9%	94.3%	0.7%	0.1%		7.1%	2.4%	90.5%	0.0%		0.3%	97.9%	1.7%	0.0%		
PHF	.500	.375	.375	.000	.500	.783	.865	.700	.250	.887	.500	.500	.864	.000	.840	.250	.909	.500	.000	.911	.937

PM PEAK HOUR	Goodrick Ave Southbound					Richmond Pkwy Westbound					Goodrick Ave Northbound					Richmond Pkwy Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	0	1	2	0	3	12	152	3	0	167	4	2	44	0	50	0	522	3	0	525	745
16:15	6	1	0	0	7	11	137	4	0	152	2	2	39	0	43	0	573	2	0	575	777
16:30	2	0	0	0	2	5	172	1	1	179	4	2	58	0	64	1	595	0	0	596	841
16:45	2	2	0	0	4	11	155	6	0	172	0	3	89	0	92	1	553	2	0	556	824
Total Volume	10	4	2	0	16	39	616	14	1	670	10	9	230	0	249	2	2243	7	0	2252	3187
% App Total	62.5%	25.0%	12.5%	0.0%		5.8%	91.9%	2.1%	0.1%		4.0%	3.6%	92.4%	0.0%		0.1%	99.6%	0.3%	0.0%		
PHF	.417	.500	.250	.000	.571	.813	.895	.583	.250	.936	.625	.750	.646	.000	.677	.500	.942	.583	.000	.945	.947

Appendix B: LOS Worksheets

EXISTING CONDITIONS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	610	190	140	300	80	70	40	230	50	340	1090
Future Volume (veh/h)	200	610	190	140	300	80	70	40	230	50	340	1090
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1759	1759	1759	1759	1792	1792	1792	1776	1776	1776
Adj Flow Rate, veh/h	208	635	90	146	312	0	73	42	58	52	354	418
Adj No. of Lanes	1	3	1	2	1	1	1	1	2	1	1	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	8	8	6	6	6	7	7	7
Cap, veh/h	164	2281	709	291	821	698	167	495	740	62	382	571
Arrive On Green	0.10	0.47	0.47	0.09	0.47	0.00	0.10	0.28	0.28	0.04	0.21	0.21
Sat Flow, veh/h	1675	4803	1493	3250	1759	1495	1707	1792	2682	1691	1776	2656
Grp Volume(v), veh/h	208	635	90	146	312	0	73	42	58	52	354	418
Grp Sat Flow(s),veh/h/ln	1675	1601	1493	1625	1759	1495	1707	1792	1341	1691	1776	1328
Q Serve(g_s), s	12.7	10.4	4.4	5.6	14.9	0.0	5.2	2.3	2.1	4.0	25.4	19.1
Cycle Q Clear(g_c), s	12.7	10.4	4.4	5.6	14.9	0.0	5.2	2.3	2.1	4.0	25.4	19.1
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	164	2281	709	291	821	698	167	495	740	62	382	571
V/C Ratio(X)	1.27	0.28	0.13	0.50	0.38	0.00	0.44	0.08	0.08	0.84	0.93	0.73
Avail Cap(c_a), veh/h	164	2281	709	368	821	698	219	637	953	139	590	883
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.7	20.7	19.1	56.4	22.5	0.0	55.3	34.9	34.8	62.2	50.0	47.6
Incr Delay (d2), s/veh	160.9	0.3	0.4	0.5	1.3	0.0	0.7	0.0	0.0	10.6	11.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.2	4.7	1.9	2.5	7.6	0.0	2.5	1.1	0.8	2.0	13.7	7.0
LnGrp Delay(d),s/veh	219.6	21.0	19.4	56.9	23.8	0.0	56.0	34.9	34.9	72.8	61.8	48.2
LnGrp LOS	F	C	B	E	C		E	C	C	E	E	D
Approach Vol, veh/h		933			458			173			824	
Approach Delay, s/veh		65.1			34.4			43.8			55.6	
Approach LOS		E			C			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.6	65.7	16.7	31.9	16.7	64.7	8.8	39.9
Change Period (Y+Rc), s	3.7	5.1	3.7	* 4.2	3.7	5.1	3.7	* 4.2
Max Green Setting (Gmax), s	15.0	38.3	17.0	* 43	13.0	40.3	11.0	* 46
Max Q Clear Time (g_c+I1), s	7.6	12.4	7.2	27.4	14.7	16.9	6.0	4.3
Green Ext Time (p_c), s	0.0	0.8	0.0	0.3	0.0	0.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	54.4
HCM 2010 LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	550	20	90	1070	130	30	250	70	210	770	650
Future Volume (veh/h)	190	550	20	90	1070	130	30	250	70	210	770	650
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1712	1712	1900	1743	1743	1743	1827	1827	1827	1863	1863	1863
Adj Flow Rate, veh/h	204	591	19	97	1151	0	32	269	9	226	828	546
Adj No. of Lanes	2	3	0	2	3	1	1	2	1	1	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	11	11	11	9	9	9	4	4	4	2	2	2
Cap, veh/h	316	2016	65	222	1914	596	69	711	318	283	1150	514
Arrive On Green	0.10	0.43	0.41	0.07	0.40	0.00	0.04	0.20	0.20	0.16	0.32	0.32
Sat Flow, veh/h	3163	4652	149	3221	4759	1482	1740	3471	1553	1774	3539	1582
Grp Volume(v), veh/h	204	395	215	97	1151	0	32	269	9	226	828	546
Grp Sat Flow(s),veh/h/ln	1581	1558	1685	1610	1586	1482	1740	1736	1553	1774	1770	1582
Q Serve(g_s), s	7.4	9.9	10.0	3.5	22.9	0.0	2.2	8.0	0.6	14.7	24.7	39.0
Cycle Q Clear(g_c), s	7.4	9.9	10.0	3.5	22.9	0.0	2.2	8.0	0.6	14.7	24.7	39.0
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	316	1350	730	222	1914	596	69	711	318	283	1150	514
V/C Ratio(X)	0.65	0.29	0.29	0.44	0.60	0.00	0.47	0.38	0.03	0.80	0.72	1.06
Avail Cap(c_a), veh/h	316	1350	730	242	1914	596	128	711	318	441	1150	514
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.0	22.1	22.2	53.6	28.3	0.0	56.4	41.1	38.2	48.6	35.7	40.5
Incr Delay (d2), s/veh	3.9	0.5	1.0	1.0	1.4	0.0	3.6	0.6	0.1	5.6	2.6	57.2
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	8.4	4.3	4.8	1.6	10.3	0.0	1.1	3.9	0.2	7.7	12.5	25.2
LnGrp Delay(d),s/veh	55.8	22.6	23.2	54.6	29.7	0.0	60.0	41.7	38.2	54.1	38.2	97.7
LnGrp LOS	E	C	C	D	C		E	D	D	D	D	F
Approach Vol, veh/h		814			1248			310			1600	
Approach Delay, s/veh		31.1			31.6			43.5			60.8	
Approach LOS		C			C			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	56.0	8.7	43.0	16.0	52.3	23.2	28.6
Change Period (Y+Rc), s	7.0	7.2	6.0	7.0	7.0	7.2	6.0	7.0
Max Green Setting (Gmax), s	6.0	44.0	6.8	36.0	9.0	41.0	27.8	15.0
Max Q Clear Time (g_c+I1), s	15.5	12.0	4.2	41.0	9.4	24.9	16.7	10.0
Green Ext Time (p_c), s	0.0	6.4	0.0	0.0	0.0	9.9	0.4	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	44.2
HCM 2010 LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	440	130	50	1390	310	80	30	110	210	60	120
Future Volume (veh/h)	60	440	130	50	1390	310	80	30	110	210	60	120
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1696	1696	1696	1759	1759	1759	1863	1863	1863	1776	1776	1776
Adj Flow Rate, veh/h	63	463	66	53	1463	169	84	32	7	221	63	19
Adj No. of Lanes	2	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	12	12	12	8	8	8	2	2	2	7	7	7
Cap, veh/h	213	2171	676	116	2257	703	165	204	174	326	372	316
Arrive On Green	0.07	0.47	0.47	0.07	0.47	0.47	0.09	0.11	0.11	0.19	0.21	0.21
Sat Flow, veh/h	3134	4631	1442	1675	4803	1495	1774	1863	1583	1691	1776	1509
Grp Volume(v), veh/h	63	463	66	53	1463	169	84	32	7	221	63	19
Grp Sat Flow(s),veh/h/ln	1567	1544	1442	1675	1601	1495	1774	1863	1583	1691	1776	1509
Q Serve(g_s), s	1.9	5.9	2.6	3.0	23.2	6.8	4.5	1.6	0.4	12.2	2.9	1.0
Cycle Q Clear(g_c), s	1.9	5.9	2.6	3.0	23.2	6.8	4.5	1.6	0.4	12.2	2.9	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	213	2171	676	116	2257	703	165	204	174	326	372	316
V/C Ratio(X)	0.30	0.21	0.10	0.46	0.65	0.24	0.51	0.16	0.04	0.68	0.17	0.06
Avail Cap(c_a), veh/h	1049	2914	907	469	3022	941	585	614	522	904	585	497
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	44.4	15.7	14.8	44.8	20.2	15.9	43.3	40.4	39.9	37.5	32.4	31.7
Incr Delay (d2), s/veh	0.3	0.1	0.1	1.0	0.5	0.2	5.2	0.5	0.1	5.2	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	2.5	1.0	1.4	10.3	2.8	2.5	0.8	0.2	6.1	1.5	0.4
LnGrp Delay(d),s/veh	44.7	15.8	14.9	45.8	20.7	16.1	48.4	40.9	40.0	42.7	32.7	31.8
LnGrp LOS	D	B	B	D	C	B	D	D	D	D	C	C
Approach Vol, veh/h		592			1685			123			303	
Approach Delay, s/veh		18.7			21.0			46.0			40.0	
Approach LOS		B			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	50.9	13.3	25.0	10.8	51.1	23.3	15.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.5	7.0	7.5	7.0
Max Green Setting (Gmax), s	25.0	60.0	30.0	30.0	30.0	60.0	50.0	30.0
Max Q Clear Time (g_c+I1), s	5.0	7.9	6.5	4.9	3.9	25.2	14.2	3.6
Green Ext Time (p_c), s	0.0	4.9	0.4	0.5	0.1	18.8	1.7	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	23.8
HCM 2010 LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	500	150	30	1540	20	220	30	90	40	70	80
Future Volume (veh/h)	10	500	150	30	1540	20	220	30	90	40	70	80
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1696	1696	1696	1776	1776	1776	1863	1863	1863	1900	1900	1900
Adj Flow Rate, veh/h	10	510	73	31	1571	10	224	31	15	41	71	6
Adj No. of Lanes	2	3	1	1	3	1	2	1	1	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	12	12	12	7	7	7	2	2	2	0	0	0
Cap, veh/h	32	2389	744	44	2578	802	459	241	203	161	300	25
Arrive On Green	0.01	0.52	0.52	0.03	0.53	0.53	0.13	0.13	0.13	0.09	0.09	0.08
Sat Flow, veh/h	3134	4631	1442	1691	4848	1508	3548	1863	1565	1810	3374	282
Grp Volume(v), veh/h	10	510	73	31	1571	10	224	31	15	41	38	39
Grp Sat Flow(s),veh/h/ln	1567	1544	1442	1691	1616	1508	1774	1863	1565	1810	1805	1850
Q Serve(g_s), s	0.2	4.0	1.7	1.2	15.0	0.2	3.9	1.0	0.6	1.4	1.3	1.3
Cycle Q Clear(g_c), s	0.2	4.0	1.7	1.2	15.0	0.2	3.9	1.0	0.6	1.4	1.3	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	32	2389	744	44	2578	802	459	241	203	161	160	164
V/C Ratio(X)	0.31	0.21	0.10	0.70	0.61	0.01	0.49	0.13	0.07	0.26	0.23	0.24
Avail Cap(c_a), veh/h	939	3241	1009	887	3392	1055	1361	714	600	694	692	710
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	8.8	8.2	32.2	10.8	7.4	27.0	25.7	25.5	28.3	28.3	28.4
Incr Delay (d2), s/veh	2.1	0.1	0.1	7.2	0.3	0.0	1.1	0.3	0.2	0.3	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.7	0.7	0.6	6.6	0.1	2.0	0.5	0.3	0.7	0.7	0.7
LnGrp Delay(d),s/veh	34.9	8.9	8.3	39.4	11.2	7.4	28.1	26.1	25.8	28.7	28.6	28.6
LnGrp LOS	C	A	A	D	B	A	C	C	C	C	C	C
Approach Vol, veh/h		593			1612			270			118	
Approach Delay, s/veh		9.2			11.7			27.8			28.6	
Approach LOS		A			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.7	38.4		9.9	4.7	39.5		12.6
Change Period (Y+Rc), s	4.0	5.7		4.6	4.0	5.7		4.6
Max Green Setting (Gmax), s	35.0	45.0		25.0	20.0	45.0		25.0
Max Q Clear Time (g_c+I1), s	3.2	6.0		3.4	2.2	17.0		5.9
Green Ext Time (p_c), s	0.0	5.3		0.2	0.0	16.8		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	13.6
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
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)	10	560	10	100	1810	20	10	10	80	10	10	10
Future Volume (veh/h)	10	560	10	100	1810	20	10	10	80	10	10	10
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1696	1696	1696	1792	1792	1792	1900	1583	1900	1900	1900	1900
Adj Flow Rate, veh/h	10	577	6	103	1866	15	10	10	6	10	10	1
Adj No. of Lanes	1	2	1	1	2	1	0	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	12	12	12	6	6	6	20	20	20	0	0	0
Cap, veh/h	33	2131	953	131	2443	1093	112	13	8	126	21	2
Arrive On Green	0.02	0.66	0.66	0.08	0.72	0.72	0.02	0.02	0.02	0.02	0.02	0.02
Sat Flow, veh/h	1616	3223	1442	1707	3406	1524	556	556	334	853	853	85
Grp Volume(v), veh/h	10	577	6	103	1866	15	26	0	0	21	0	0
Grp Sat Flow(s),veh/h/ln	1616	1612	1442	1707	1703	1524	1446	0	0	1791	0	0
Q Serve(g_s), s	0.3	3.7	0.1	3.0	17.3	0.1	0.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	3.7	0.1	3.0	17.3	0.1	0.9	0.0	0.0	0.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.38		0.23	0.48		0.05
Lane Grp Cap(c), veh/h	33	2131	953	131	2443	1093	134	0	0	149	0	0
V/C Ratio(X)	0.31	0.27	0.01	0.79	0.76	0.01	0.19	0.00	0.00	0.14	0.00	0.00
Avail Cap(c_a), veh/h	481	2558	1144	508	2703	1209	639	0	0	754	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.3	3.5	2.9	22.9	4.5	2.0	24.4	0.0	0.0	24.3	0.0	0.0
Incr Delay (d2), s/veh	1.9	0.1	0.0	3.9	1.3	0.0	0.7	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.6	0.0	1.5	8.2	0.1	0.4	0.0	0.0	0.3	0.0	0.0
LnGrp Delay(d),s/veh	26.3	3.6	2.9	26.8	5.8	2.0	25.1	0.0	0.0	24.7	0.0	0.0
LnGrp LOS	C	A	A	C	A	A	C			C		
Approach Vol, veh/h		593			1984			26			21	
Approach Delay, s/veh		4.0			6.9			25.1			24.7	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.9	37.3		5.2	5.0	40.2		5.2
Change Period (Y+Rc), s	4.0	5.0		4.0	4.5	5.0		4.0
Max Green Setting (Gmax), s	15.0	39.0		20.0	14.5	39.0		20.0
Max Q Clear Time (g_c+I1), s	5.3	5.7		2.9	2.3	19.3		2.6
Green Ext Time (p_c), s	0.1	5.5		0.1	0.0	15.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	6.5
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	30	150	20	10	30	500	60	30	1760	40
Future Volume (veh/h)	10	10	30	150	20	10	30	500	60	30	1760	40
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1242	1242	1900	1508	1508	1508	1696	1696	1696	1810	1810	1810
Adj Flow Rate, veh/h	11	11	0	173	0	2	32	526	38	32	1853	25
Adj No. of Lanes	1	1	0	2	0	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	53	53	53	26	26	26	12	12	12	5	5	5
Cap, veh/h	22	23	0	262	0	117	38	2159	966	40	2302	1028
Arrive On Green	0.02	0.02	0.00	0.09	0.00	0.09	0.02	0.67	0.67	0.02	0.67	0.67
Sat Flow, veh/h	1183	1242	0	2872	0	1282	1616	3223	1442	1723	3438	1535
Grp Volume(v), veh/h	11	11	0	173	0	2	32	526	38	32	1853	25
Grp Sat Flow(s),veh/h/ln	1183	1242	0	1436	0	1282	1616	1612	1442	1723	1719	1535
Q Serve(g_s), s	0.9	0.9	0.0	5.9	0.0	0.1	2.0	6.5	0.9	1.9	39.1	0.6
Cycle Q Clear(g_c), s	0.9	0.9	0.0	5.9	0.0	0.1	2.0	6.5	0.9	1.9	39.1	0.6
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	22	23	0	262	0	117	38	2159	966	40	2302	1028
V/C Ratio(X)	0.51	0.49	0.00	0.66	0.00	0.02	0.84	0.24	0.04	0.79	0.80	0.02
Avail Cap(c_a), veh/h	117	123	0	709	0	316	399	2545	1139	425	2715	1212
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.3	49.3	0.0	44.5	0.0	41.9	49.3	6.6	5.7	49.2	12.0	5.6
Incr Delay (d2), s/veh	17.4	15.2	0.0	9.9	0.0	0.2	16.3	0.1	0.0	12.1	1.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.4	0.0	2.7	0.0	0.1	1.1	2.9	0.4	1.0	18.8	0.2
LnGrp Delay(d),s/veh	66.7	64.5	0.0	54.4	0.0	42.1	65.6	6.7	5.7	61.3	13.8	5.6
LnGrp LOS	E	E		D		D	E	A	A	E	B	A
Approach Vol, veh/h		22			175			596			1910	
Approach Delay, s/veh		65.6			54.3			9.8			14.5	
Approach LOS		E			D			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.4	73.9		14.2	6.4	73.8		6.8
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0
Max Green Setting (Gmax), s	25.0	80.0		25.0	25.0	80.0		10.0
Max Q Clear Time (g_c+I1), s	2.9	8.5		7.9	4.0	41.1		2.9
Green Ext Time (p_c), s	0.0	5.4		1.4	0.0	26.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	16.4
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	3.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	80	30	60	160	20	90
Future Vol, veh/h	80	30	60	160	20	90
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	175	-	0	25
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	24	24	14	14	23	23
Mvmt Flow	95	36	71	190	24	107

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	132	0	446	114
Stage 1	-	-	-	-	114	-
Stage 2	-	-	-	-	332	-
Critical Hdwy	-	-	4.24	-	6.63	6.43
Critical Hdwy Stg 1	-	-	-	-	5.63	-
Critical Hdwy Stg 2	-	-	-	-	5.63	-
Follow-up Hdwy	-	-	2.326	-	3.707	3.507
Pot Cap-1 Maneuver	-	-	1382	-	533	885
Stage 1	-	-	-	-	861	-
Stage 2	-	-	-	-	682	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1381	-	505	884
Mov Cap-2 Maneuver	-	-	-	-	505	-
Stage 1	-	-	-	-	816	-
Stage 2	-	-	-	-	682	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.1	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	505	884	-	-	1381	-
HCM Lane V/C Ratio	0.047	0.121	-	-	0.052	-
HCM Control Delay (s)	12.5	9.6	-	-	7.7	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.4	-	-	0.2	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	20	70	10	10	10	570	60	40	1880	20
Future Volume (veh/h)	10	10	20	70	10	10	10	570	60	40	1880	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1462	1900	1900	1484	1900	1727	1727	1900	1776	1776	1900
Adj Flow Rate, veh/h	10	10	3	73	10	7	10	594	59	42	1958	21
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	30	30	30	28	28	28	10	10	10	7	7	7
Cap, veh/h	103	79	19	169	19	10	16	2205	219	52	2571	28
Arrive On Green	0.10	0.10	0.09	0.10	0.10	0.09	0.01	0.73	0.71	0.03	0.75	0.73
Sat Flow, veh/h	436	758	179	919	182	93	1645	3016	299	1691	3420	37
Grp Volume(v), veh/h	23	0	0	90	0	0	10	323	330	42	964	1015
Grp Sat Flow(s),veh/h/ln	1373	0	0	1194	0	0	1645	1641	1674	1691	1687	1769
Q Serve(g_s), s	0.0	0.0	0.0	5.1	0.0	0.0	0.5	5.9	6.0	2.2	29.7	29.9
Cycle Q Clear(g_c), s	1.3	0.0	0.0	6.4	0.0	0.0	0.5	5.9	6.0	2.2	29.7	29.9
Prop In Lane	0.43		0.13	0.81		0.08	1.00		0.18	1.00		0.02
Lane Grp Cap(c), veh/h	201	0	0	198	0	0	16	1199	1224	52	1268	1330
V/C Ratio(X)	0.11	0.00	0.00	0.46	0.00	0.00	0.62	0.27	0.27	0.81	0.76	0.76
Avail Cap(c_a), veh/h	642	0	0	605	0	0	459	1502	1533	472	1544	1620
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.6	0.0	0.0	38.7	0.0	0.0	44.2	4.0	4.1	43.2	6.4	6.5
Incr Delay (d2), s/veh	0.2	0.0	0.0	1.6	0.0	0.0	13.4	0.2	0.2	10.5	2.1	2.1
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	0.5	0.0	0.0	2.2	0.0	0.0	0.3	2.7	2.7	1.2	14.1	14.9
LnGrp Delay(d),s/veh	36.8	0.0	0.0	40.4	0.0	0.0	57.6	4.2	4.3	53.6	8.6	8.6
LnGrp LOS	D			D			E	A	A	D	A	A
Approach Vol, veh/h		23			90			663			2021	
Approach Delay, s/veh		36.8			40.4			5.0			9.5	
Approach LOS		D			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.8	69.5		13.4	4.9	71.3		13.4
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0
Max Green Setting (Gmax), s	25.0	80.0		40.0	25.0	80.0		40.0
Max Q Clear Time (g_c+I1), s	4.2	8.0		3.3	2.5	31.9		8.4
Green Ext Time (p_c), s	0.0	6.1		0.1	0.0	33.4		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	9.7
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	10	20	110	10	40	40	580	30	30	1890	30
Future Volume (veh/h)	20	10	20	110	10	40	40	580	30	30	1890	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1597	1597	1881	1881	1900	1712	1712	1712	1776	1776	1900
Adj Flow Rate, veh/h	20	10	1	124	0	0	41	592	18	31	1929	31
Adj No. of Lanes	0	1	1	2	1	0	1	2	1	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	19	19	19	1	1	1	11	11	11	7	7	7
Cap, veh/h	27	14	36	227	119	0	53	2073	927	45	2146	34
Arrive On Green	0.03	0.03	0.03	0.06	0.00	0.00	0.03	0.64	0.64	0.03	0.63	0.61
Sat Flow, veh/h	1030	515	1357	3583	1881	0	1630	3252	1455	1691	3399	54
Grp Volume(v), veh/h	30	0	1	124	0	0	41	592	18	31	955	1005
Grp Sat Flow(s),veh/h/ln	1545	0	1357	1792	1881	0	1630	1626	1455	1691	1687	1766
Q Serve(g_s), s	1.3	0.0	0.0	2.2	0.0	0.0	1.6	5.2	0.3	1.2	31.2	31.6
Cycle Q Clear(g_c), s	1.3	0.0	0.0	2.2	0.0	0.0	1.6	5.2	0.3	1.2	31.2	31.6
Prop In Lane	0.67		1.00	1.00		0.00	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	41	0	36	227	119	0	53	2073	927	45	1065	1115
V/C Ratio(X)	0.74	0.00	0.03	0.55	0.00	0.00	0.78	0.29	0.02	0.69	0.90	0.90
Avail Cap(c_a), veh/h	476	0	418	2762	1450	0	377	2081	931	391	1079	1130
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.4	0.0	30.8	29.5	0.0	0.0	31.2	5.2	4.3	31.3	10.2	10.2
Incr Delay (d2), s/veh	22.3	0.0	0.3	2.0	0.0	0.0	9.0	0.1	0.0	7.0	10.1	10.2
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	0.8	0.0	0.0	1.1	0.0	0.0	0.8	2.3	0.1	0.6	17.3	18.2
LnGrp Delay(d),s/veh	53.7	0.0	31.1	31.5	0.0	0.0	40.1	5.3	4.3	38.3	20.3	20.4
LnGrp LOS	D		C	C			D	A	A	D	C	C
Approach Vol, veh/h		31			124			651			1991	
Approach Delay, s/veh		53.0			31.5			7.5			20.6	
Approach LOS		D			C			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.7	45.3		5.7	6.1	45.0		8.1
Change Period (Y+Rc), s	4.0	5.5		4.0	4.0	5.5		4.0
Max Green Setting (Gmax), s	15.0	40.0		20.0	15.0	40.0		50.0
Max Q Clear Time (g_c+I1), s	3.3	7.2		3.3	3.6	33.6		4.2
Green Ext Time (p_c), s	0.0	5.7		0.1	0.0	5.9		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	18.4
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
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)	0	10	10	50	10	10	0	300	40	10	830	0
Future Volume (veh/h)	0	10	10	50	10	10	0	300	40	10	830	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1508	1508	1900	1624	1624	1900	1696	1696	1696
Adj Flow Rate, veh/h	0	11	0	53	11	1	0	319	38	11	883	0
Adj No. of Lanes	1	1	0	2	1	0	1	2	0	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	26	26	26	17	17	17	12	12	12
Cap, veh/h	2	20	0	87	112	10	2	2181	258	17	2694	1205
Arrive On Green	0.00	0.01	0.00	0.03	0.08	0.08	0.00	0.78	0.77	0.01	0.84	0.00
Sat Flow, veh/h	1810	1900	0	2786	1362	124	1547	2780	329	1616	3223	1442
Grp Volume(v), veh/h	0	11	0	53	0	12	0	176	181	11	883	0
Grp Sat Flow(s),veh/h/ln	1810	1900	0	1393	0	1486	1547	1543	1566	1616	1612	1442
Q Serve(g_s), s	0.0	0.6	0.0	1.8	0.0	0.7	0.0	2.7	2.8	0.7	6.1	0.0
Cycle Q Clear(g_c), s	0.0	0.6	0.0	1.8	0.0	0.7	0.0	2.7	2.8	0.7	6.1	0.0
Prop In Lane	1.00		0.00	1.00		0.08	1.00		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	2	20	0	87	0	123	2	1210	1228	17	2694	1205
V/C Ratio(X)	0.00	0.55	0.00	0.61	0.00	0.10	0.00	0.15	0.15	0.64	0.33	0.00
Avail Cap(c_a), veh/h	153	562	0	236	0	167	126	1210	1228	132	2694	1205
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.99	0.00	0.99	0.00	0.98	0.98	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	48.2	0.0	46.9	0.0	41.6	0.0	2.6	2.6	48.3	1.8	0.0
Incr Delay (d2), s/veh	0.0	29.3	0.0	2.5	0.0	0.5	0.0	0.2	0.2	14.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.5	0.0	0.7	0.0	0.3	0.0	1.2	1.3	0.4	2.7	0.0
LnGrp Delay(d),s/veh	0.0	77.5	0.0	49.4	0.0	42.1	0.0	2.8	2.9	62.4	2.1	0.0
LnGrp LOS		E		D		D		A	A	E	A	
Approach Vol, veh/h		11			65			357			894	
Approach Delay, s/veh		77.5			48.1			2.8			2.9	
Approach LOS		E			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.0	80.9	7.1	5.0	0.0	85.9	0.0	12.1
Change Period (Y+Rc), s	4.0	5.7	4.0	4.0	4.0	5.7	4.0	4.0
Max Green Setting (Gmax), s	8.0	35.0	8.3	29.0	8.0	35.0	8.3	11.0
Max Q Clear Time (g_c+I1), s	2.7	4.8	3.8	2.6	0.0	8.1	0.0	2.7
Green Ext Time (p_c), s	0.0	2.8	0.0	0.0	0.0	8.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	5.7
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	20	30	200	40	20	30	280	70	40	1120	30
Future Volume (veh/h)	20	20	30	200	40	20	30	280	70	40	1120	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1462	1462	1900	1827	1827	1900	1776	1776	1900	1845	1845	1900
Adj Flow Rate, veh/h	21	21	31	208	42	21	31	292	57	42	1167	30
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	30	30	30	4	4	4	7	7	7	3	3	3
Cap, veh/h	295	120	178	345	258	129	42	1675	323	53	2092	54
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.02	0.59	0.58	0.03	0.60	0.58
Sat Flow, veh/h	1042	532	786	1315	1142	571	1691	2823	544	1757	3492	90
Grp Volume(v), veh/h	21	0	52	208	0	63	31	173	176	42	586	611
Grp Sat Flow(s),veh/h/ln	1042	0	1318	1315	0	1714	1691	1687	1679	1757	1752	1829
Q Serve(g_s), s	1.3	0.0	2.5	12.1	0.0	2.4	1.5	3.7	3.9	1.9	16.1	16.1
Cycle Q Clear(g_c), s	3.7	0.0	2.5	14.7	0.0	2.4	1.5	3.7	3.9	1.9	16.1	16.1
Prop In Lane	1.00		0.60	1.00		0.33	1.00		0.32	1.00		0.05
Lane Grp Cap(c), veh/h	295	0	298	345	0	387	42	1001	997	53	1050	1096
V/C Ratio(X)	0.07	0.00	0.17	0.60	0.00	0.16	0.74	0.17	0.18	0.79	0.56	0.56
Avail Cap(c_a), veh/h	511	0	572	619	0	743	169	1001	997	176	1050	1096
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.00	0.99	1.00	0.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	0.0	24.9	30.8	0.0	24.9	38.7	7.4	7.5	38.5	9.7	9.7
Incr Delay (d2), s/veh	0.1	0.0	0.2	1.5	0.0	0.2	8.8	0.4	0.4	9.2	2.1	2.1
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	0.4	0.0	0.9	4.5	0.0	1.1	0.8	1.8	1.9	1.1	8.3	8.6
LnGrp Delay(d),s/veh	26.4	0.0	25.2	32.4	0.0	25.0	47.5	7.7	7.9	47.7	11.8	11.7
LnGrp LOS	C		C	C		C	D	A	A	D	B	B
Approach Vol, veh/h		73			271			380			1239	
Approach Delay, s/veh		25.6			30.7			11.0			13.0	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.4	51.5		22.1	6.0	51.9		22.1
Change Period (Y+Rc), s	4.0	5.3		4.0	4.0	5.3		4.0
Max Green Setting (Gmax), s	8.0	24.0		34.7	8.0	24.0		34.7
Max Q Clear Time (g_c+I1), s	3.9	5.9		5.7	3.5	18.1		16.7
Green Ext Time (p_c), s	0.0	2.8		0.3	0.0	4.4		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	15.5
HCM 2010 LOS	B

Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	170	60	320	80	190	1160
Future Volume (veh/h)	170	60	320	80	190	1160
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1792	1900	1845	1845
Adj Flow Rate, veh/h	175	62	330	63	196	1196
Adj No. of Lanes	2	1	2	0	1	2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	6	6	3	3
Cap, veh/h	270	124	1830	345	233	2882
Arrive On Green	0.08	0.08	0.64	0.62	0.13	0.82
Sat Flow, veh/h	3476	1599	2950	540	1757	3597
Grp Volume(v), veh/h	175	62	195	198	196	1196
Grp Sat Flow(s),veh/h/ln	1738	1599	1703	1697	1757	1752
Q Serve(g_s), s	3.9	3.0	3.7	3.9	8.7	7.4
Cycle Q Clear(g_c), s	3.9	3.0	3.7	3.9	8.7	7.4
Prop In Lane	1.00	1.00		0.32	1.00	
Lane Grp Cap(c), veh/h	270	124	1089	1086	233	2882
V/C Ratio(X)	0.65	0.50	0.18	0.18	0.84	0.41
Avail Cap(c_a), veh/h	726	334	1089	1086	264	2882
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.99	0.99	0.78	0.78
Uniform Delay (d), s/veh	35.8	35.4	5.9	6.0	33.9	1.9
Incr Delay (d2), s/veh	1.0	1.2	0.4	0.4	14.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	1.3	1.8	1.9	5.1	3.6
LnGrp Delay(d),s/veh	36.8	36.6	6.2	6.3	48.0	2.3
LnGrp LOS	D	D	A	A	D	A
Approach Vol, veh/h	237		393			1392
Approach Delay, s/veh	36.8		6.3			8.7
Approach LOS	D		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	14.6	55.2				69.8		10.2
Change Period (Y+Rc), s	4.0	5.3				5.3		4.0
Max Green Setting (Gmax), s	12.6	38.0				54.0		16.7
Max Q Clear Time (g_c+I1), s	10.7	5.9				9.4		5.9
Green Ext Time (p_c), s	0.0	3.6				17.3		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	11.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	90	0	70	0	330	60	60	1270	0
Future Volume (veh/h)	0	0	0	90	0	70	0	330	60	60	1270	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	0.99		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1845	1845	1776	1776	1900	1845	1845	1900
Adj Flow Rate, veh/h	0	0	0	93	0	5	0	340	52	62	1309	0
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	3	3	3	7	7	7	3	3	3
Cap, veh/h	0	2	0	122	0	109	2	2161	328	78	2910	0
Arrive On Green	0.00	0.00	0.00	0.07	0.00	0.07	0.00	0.74	0.72	0.09	1.00	0.00
Sat Flow, veh/h	0	1863	0	1743	0	1555	1691	2938	445	1757	3597	0
Grp Volume(v), veh/h	0	0	0	93	0	5	0	194	198	62	1309	0
Grp Sat Flow(s),veh/h/ln	0	1863	0	1743	0	1555	1691	1687	1697	1757	1752	0
Q Serve(g_s), s	0.0	0.0	0.0	4.2	0.0	0.2	0.0	2.7	2.8	2.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	4.2	0.0	0.2	0.0	2.7	2.8	2.8	0.0	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.26	1.00		0.00
Lane Grp Cap(c), veh/h	0	2	0	122	0	109	2	1241	1248	78	2910	0
V/C Ratio(X)	0.00	0.00	0.00	0.76	0.00	0.05	0.00	0.16	0.16	0.79	0.45	0.00
Avail Cap(c_a), veh/h	0	203	0	218	0	194	169	1241	1248	176	2910	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.99	0.99	0.90	0.90	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	36.6	0.0	34.7	0.0	3.2	3.2	36.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	7.2	0.0	0.1	0.0	0.3	0.3	5.9	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	0.0	0.0	0.0	2.3	0.0	0.1	0.0	1.3	1.4	1.5	0.2	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	43.8	0.0	34.8	0.0	3.4	3.5	41.9	0.5	0.0
LnGrp LOS				D		C		A	A	D	A	
Approach Vol, veh/h		0			98			392			1371	
Approach Delay, s/veh		0.0			43.3			3.5			2.3	
Approach LOS					D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.6	62.8		0.0	0.0	70.4		9.6
Change Period (Y+Rc), s	4.0	5.3		4.0	4.0	5.3		4.0
Max Green Setting (Gmax), s	8.0	36.0		8.7	8.0	36.0		10.0
Max Q Clear Time (g_c+I1), s	4.8	4.8		0.0	0.0	2.0		6.2
Green Ext Time (p_c), s	0.0	3.5		0.0	0.0	17.4		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	4.7
HCM 2010 LOS	A

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	20	20	30	20	50	40	290	50	140	1100	120
Future Volume (veh/h)	50	20	20	30	20	50	40	290	50	140	1100	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1900	1681	1900	1759	1759	1900	1863	1863	1900
Adj Flow Rate, veh/h	51	20	0	31	20	2	41	296	40	143	1122	117
Adj No. of Lanes	1	1	1	0	2	0	1	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	4	4	13	13	13	8	8	8	2	2	2
Cap, veh/h	96	101	86	87	82	8	59	1831	245	168	2190	228
Arrive On Green	0.06	0.06	0.00	0.05	0.05	0.05	0.04	0.62	0.60	0.09	0.68	0.66
Sat Flow, veh/h	1740	1827	1553	1601	1504	150	1675	2964	397	1774	3236	337
Grp Volume(v), veh/h	51	20	0	31	0	22	41	166	170	143	613	626
Grp Sat Flow(s),veh/h/ln	1740	1827	1553	1601	0	1654	1675	1671	1689	1774	1770	1803
Q Serve(g_s), s	2.6	0.9	0.0	1.7	0.0	1.1	2.2	3.8	3.9	7.1	15.4	15.6
Cycle Q Clear(g_c), s	2.6	0.9	0.0	1.7	0.0	1.1	2.2	3.8	3.9	7.1	15.4	15.6
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.23	1.00		0.19
Lane Grp Cap(c), veh/h	96	101	86	87	0	90	59	1033	1044	168	1198	1221
V/C Ratio(X)	0.53	0.20	0.00	0.36	0.00	0.24	0.69	0.16	0.16	0.85	0.51	0.51
Avail Cap(c_a), veh/h	323	339	288	276	0	285	149	1033	1044	168	1198	1221
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.88	0.88	0.88
Uniform Delay (d), s/veh	41.4	40.6	0.0	41.0	0.0	40.8	42.9	7.3	7.4	40.1	7.2	7.3
Incr Delay (d2), s/veh	3.3	0.7	0.0	0.9	0.0	0.5	15.8	0.3	0.3	28.2	1.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.5	0.0	0.8	0.0	0.5	1.3	1.8	1.9	4.8	7.8	8.1
LnGrp Delay(d),s/veh	44.7	41.3	0.0	41.9	0.0	41.3	58.7	7.6	7.7	68.3	8.6	8.6
LnGrp LOS	D	D		D		D	E	A	A	E	A	A
Approach Vol, veh/h		71			53			377			1382	
Approach Delay, s/veh		43.7			41.7			13.2			14.8	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.5	59.6		9.0	7.2	64.9		8.9
Change Period (Y+Rc), s	4.0	5.3		4.0	4.5	5.3		4.5
Max Green Setting (Gmax), s	8.5	32.0		16.7	7.5	22.5		15.0
Max Q Clear Time (g_c+I1), s	19.1	5.9		4.6	4.2	17.6		3.7
Green Ext Time (p_c), s	0.0	2.8		0.1	0.0	3.7		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	16.3
HCM 2010 LOS	B

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	70	120	150	90	260	0	0	880	330
Future Volume (veh/h)	0	0	0	70	120	150	90	260	0	0	880	330
Number				7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1773	1900	1863	1759	0	0	1828	1863
Adj Flow Rate, veh/h				75	129	41	97	280	0	0	946	355
Adj No. of Lanes				0	2	0	1	2	0	0	2	1
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	0	2	8	0	0	4	2
Cap, veh/h				148	266	87	152	2207	0	0	1649	714
Arrive On Green				0.12	0.15	0.15	0.09	0.66	0.00	0.00	0.45	0.45
Sat Flow, veh/h				1000	1800	591	1774	3431	0	0	3656	1583
Grp Volume(v), veh/h				129	0	116	97	280	0	0	946	355
Grp Sat Flow(s),veh/h/ln				1723	0	1669	1774	1671	0	0	1828	1583
Q Serve(g_s), s				2.5	0.0	2.3	1.9	1.1	0.0	0.0	7.0	5.8
Cycle Q Clear(g_c), s				2.5	0.0	2.3	1.9	1.1	0.0	0.0	7.0	5.8
Prop In Lane				0.58		0.35	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				254	0	246	152	2207	0	0	1649	714
V/C Ratio(X)				0.51	0.00	0.47	0.64	0.13	0.00	0.00	0.57	0.50
Avail Cap(c_a), veh/h				993	0	962	463	2207	0	0	1907	826
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	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				14.6	0.0	14.2	16.1	2.3	0.0	0.0	7.4	7.1
Incr Delay (d2), s/veh				1.9	0.0	1.7	4.4	0.0	0.0	0.0	0.7	1.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.3	0.0	1.2	1.1	0.5	0.0	0.0	3.6	2.7
LnGrp Delay(d),s/veh				16.5	0.0	15.9	20.5	2.3	0.0	0.0	8.1	8.2
LnGrp LOS				B		B	C	A			A	A
Approach Vol, veh/h					245			377			1301	
Approach Delay, s/veh					16.2			7.0			8.1	
Approach LOS					B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		28.0		8.4	7.6	20.4		
Change Period (Y+Rc), s		4.0		3.0	4.5	4.0		
Max Green Setting (Gmax), s		18.0		21.0	9.5	19.0		
Max Q Clear Time (g_c+I1), s		3.1		4.5	3.9	9.0		
Green Ext Time (p_c), s		1.9		1.3	0.1	7.4		

Intersection Summary	
HCM 2010 Ctrl Delay	8.9
HCM 2010 LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
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)	130	150	80	0	0	0	0	180	180	610	370	0
Future Volume (veh/h)	130	150	80	0	0	0	0	180	180	610	370	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792				0	1624	1624	1810	1810	0
Adj Flow Rate, veh/h	140	161	9				0	194	97	656	398	0
Adj No. of Lanes	1	1	1				0	2	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	6	6				0	17	17	5	5	0
Cap, veh/h	222	233	198				0	551	234	646	2303	0
Arrive On Green	0.13	0.13	0.13				0.00	0.17	0.17	0.38	0.67	0.00
Sat Flow, veh/h	1707	1792	1524				0	3248	1380	1723	3529	0
Grp Volume(v), veh/h	140	161	9				0	194	97	656	398	0
Grp Sat Flow(s),veh/h/ln	1707	1792	1524				0	1624	1380	1723	1719	0
Q Serve(g_s), s	3.1	3.4	0.2				0.0	2.1	2.5	15.0	1.7	0.0
Cycle Q Clear(g_c), s	3.1	3.4	0.2				0.0	2.1	2.5	15.0	1.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	222	233	198				0	551	234	646	2303	0
V/C Ratio(X)	0.63	0.69	0.05				0.00	0.35	0.41	1.01	0.17	0.00
Avail Cap(c_a), veh/h	726	762	648				0	1543	656	646	2303	0
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	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	16.5	16.6	15.2				0.0	14.7	14.8	12.5	2.5	0.0
Incr Delay (d2), s/veh	2.9	3.6	0.1				0.0	0.8	2.5	39.2	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	1.6	1.9	0.1				0.0	1.0	1.1	14.0	0.8	0.0
LnGrp Delay(d),s/veh	19.4	20.2	15.3				0.0	15.5	17.3	51.7	2.5	0.0
LnGrp LOS	B	C	B					B	B	F	A	
Approach Vol, veh/h		310						291			1054	
Approach Delay, s/veh		19.7						16.1			33.1	
Approach LOS		B						B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	30.0	10.8		9.2		30.8		
Change Period (Y+Rc), s	4.0	* 4		3.0		4.0		
Max Green Setting (Gmax), s	16.0	* 19		18.0		18.0		
Max Q Clear Time (g_c+I1), s	17.0	4.5		5.4		3.7		
Green Ext Time (p_c), s	0.0	2.3		1.0		2.8		

Intersection Summary	
HCM 2010 Ctrl Delay	27.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	10	110	50	50	40	230	30	180	610	70
Future Volume (veh/h)	10	10	10	110	50	50	40	230	30	180	610	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	90	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1776	1624	1624	1624	1776	1776	1776	1667	1667	1667
Adj Flow Rate, veh/h	11	11	0	84	97	17	42	242	0	189	642	32
Adj No. of Lanes	1	1	1	1	1	2	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	7	7	7	17	17	17	7	7	7	14	14	14
Cap, veh/h	90	95	80	140	147	1550	30	478	214	581	1890	846
Arrive On Green	0.09	0.09	0.00	0.11	0.11	0.11	0.01	0.23	0.00	0.16	0.37	0.37
Sat Flow, veh/h	1691	1776	1509	1547	1624	2761	1691	3374	1509	1587	3167	1417
Grp Volume(v), veh/h	11	11	0	84	97	17	42	242	0	189	642	32
Grp Sat Flow(s),veh/h/ln	1691	1776	1509	1547	1624	1380	1691	1687	1509	1587	1583	1417
Q Serve(g_s), s	0.2	0.2	0.0	2.0	2.2	0.2	0.4	2.3	0.0	4.3	6.1	0.6
Cycle Q Clear(g_c), s	0.2	0.2	0.0	2.0	2.2	0.2	0.4	2.3	0.0	4.3	6.1	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	90	95	80	140	147	1550	30	478	214	581	1890	846
V/C Ratio(X)	0.12	0.12	0.00	0.60	0.66	0.01	1.39	0.51	0.00	0.33	0.34	0.04
Avail Cap(c_a), veh/h	862	905	769	1092	1146	2389	840	2690	1203	2075	2525	1130
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	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	34.1	0.0	32.8	33.0	6.4	42.6	30.6	0.0	16.8	6.7	5.5
Incr Delay (d2), s/veh	0.2	0.2	0.0	1.6	1.9	0.0	192.6	0.8	0.0	0.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	255.5	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.0	1.7	2.0	0.1	2.3	2.4	0.0	53.0	3.0	0.3
LnGrp Delay(d),s/veh	34.3	34.3	0.0	34.3	34.9	6.4	235.2	31.4	0.0	272.8	6.9	5.5
LnGrp LOS	C	C		C	C	A	F	C		F	A	A
Approach Vol, veh/h		22			198			284			863	
Approach Delay, s/veh		34.3			32.2			61.5			65.1	
Approach LOS		C			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.1	12.6		7.5	4.4	18.3		8.0
Change Period (Y+Rc), s	4.0	4.5		3.5	3.0	4.5		4.0
Max Green Setting (Gmax), s	50.0	30.0		20.0	20.0	30.0		27.0
Max Q Clear Time (g_c+I1), s	6.3	4.3		2.2	2.4	8.1		4.2
Green Ext Time (p_c), s	0.7	1.3		0.0	0.0	5.7		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	59.1
HCM 2010 LOS	E

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	10	10	80	10	10	10	90	40	10	70	10
Future Vol, veh/h	10	10	10	80	10	10	10	90	40	10	70	10
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	11	11	85	11	11	11	96	43	11	74	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Righ	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.7	8.4	8.1	8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	33%	80%	11%
Vol Thru, %	64%	33%	10%	78%
Vol Right, %	29%	33%	10%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	140	30	100	90
LT Vol	10	10	80	10
Through Vol	90	10	10	70
RT Vol	40	10	10	10
Lane Flow Rate	149	32	106	96
Geometry Grp	1	1	1	1
Degree of Util (X)	0.174	0.04	0.136	0.116
Departure Headway (Hd)	4.209	4.468	4.611	4.373
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	855	803	780	821
Service Time	2.224	2.488	2.628	2.39
HCM Lane V/C Ratio	0.174	0.04	0.136	0.117
HCM Control Delay	8.1	7.7	8.4	8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.1	0.5	0.4

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	40	30	110	120	60
Future Vol, veh/h	30	40	30	110	120	60
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	-	-	-	-	145
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	43	32	117	128	64

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	309	128	192	0	-	0
Stage 1	128	-	-	-	-	-
Stage 2	181	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	683	922	1381	-	-	-
Stage 1	898	-	-	-	-	-
Stage 2	850	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	666	922	1381	-	-	-
Mov Cap-2 Maneuver	666	-	-	-	-	-
Stage 1	876	-	-	-	-	-
Stage 2	850	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	1.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1381	-	792	-	-
HCM Lane V/C Ratio	0.023	-	0.094	-	-
HCM Control Delay (s)	7.7	0	10	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	50	20	70	20	40	10	70	40	40	130	20
Future Vol, veh/h	30	50	20	70	20	40	10	70	40	40	130	20
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	1	1	1	7	7	7	3	3	3
Mvmt Flow	32	53	21	74	21	43	11	74	43	43	138	21
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.6	8.9	8.7	9.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	30%	54%	21%
Vol Thru, %	58%	50%	15%	68%
Vol Right, %	33%	20%	31%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	120	100	130	190
LT Vol	10	30	70	40
Through Vol	70	50	20	130
RT Vol	40	20	40	20
Lane Flow Rate	128	106	138	202
Geometry Grp	1	1	1	1
Degree of Util (X)	0.166	0.142	0.183	0.262
Departure Headway (Hd)	4.668	4.791	4.751	4.671
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	765	745	752	766
Service Time	2.716	2.842	2.799	2.715
HCM Lane V/C Ratio	0.167	0.142	0.184	0.264
HCM Control Delay	8.7	8.6	8.9	9.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.5	0.7	1

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	50	120	160	10	30	60
Future Vol, veh/h	50	120	160	10	30	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	178	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	128	170	11	32	64

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	181	0	-	0	410	176
Stage 1	-	-	-	-	176	-
Stage 2	-	-	-	-	234	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1394	-	-	-	598	867
Stage 1	-	-	-	-	855	-
Stage 2	-	-	-	-	805	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1394	-	-	-	575	867
Mov Cap-2 Maneuver	-	-	-	-	575	-
Stage 1	-	-	-	-	823	-
Stage 2	-	-	-	-	805	-

Approach	EB	WB	SB
HCM Control Delay, s	2.3	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1394	-	-	-	741
HCM Lane V/C Ratio	0.038	-	-	-	0.129
HCM Control Delay (s)	7.7	-	-	-	10.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	30	220	80	50	30	110	810	30	10	1050	70
Future Volume (veh/h)	50	30	220	80	50	30	110	810	30	10	1050	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	53	32	0	85	53	21	117	862	0	11	1117	70
Adj No. of Lanes	0	1	1	0	1	0	1	2	1	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	245	115	219	228	84	30	170	2055	919	30	1698	106
Arrive On Green	0.14	0.14	0.00	0.13	0.14	0.13	0.10	0.58	0.00	0.02	0.50	0.49
Sat Flow, veh/h	877	831	1583	805	607	215	1774	3539	1583	1774	3383	212
Grp Volume(v), veh/h	85	0	0	159	0	0	117	862	0	11	584	603
Grp Sat Flow(s),veh/h/ln	1708	0	1583	1626	0	0	1774	1770	1583	1774	1770	1825
Q Serve(g_s), s	0.0	0.0	0.0	2.4	0.0	0.0	3.0	6.4	0.0	0.3	11.6	11.6
Cycle Q Clear(g_c), s	2.0	0.0	0.0	4.4	0.0	0.0	3.0	6.4	0.0	0.3	11.6	11.6
Prop In Lane	0.62		1.00	0.53		0.13	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	359	0	219	324	0	0	170	2055	919	30	888	916
V/C Ratio(X)	0.24	0.00	0.00	0.49	0.00	0.00	0.69	0.42	0.00	0.36	0.66	0.66
Avail Cap(c_a), veh/h	985	0	886	1003	0	0	806	2280	1020	993	1140	1176
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.4	0.0	0.0	19.5	0.0	0.0	20.7	5.5	0.0	23.0	8.8	8.8
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.4	0.0	0.0	1.8	0.2	0.0	2.7	1.3	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.0	2.0	0.0	0.0	1.5	3.0	0.0	0.2	5.8	6.0
LnGrp Delay(d),s/veh	18.6	0.0	0.0	20.0	0.0	0.0	22.6	5.7	0.0	25.7	10.0	10.0
LnGrp LOS	B			B			C	A		C	B	B
Approach Vol, veh/h		85			159			979			1198	
Approach Delay, s/veh		18.6			20.0			7.7			10.2	
Approach LOS		B			B			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.3	32.0		11.0	8.0	28.3		11.0
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		* 5
Max Green Setting (Gmax), s	26.0	30.0		26.0	21.0	30.0		* 27
Max Q Clear Time (g_c+I1), s	2.3	8.4		4.0	5.0	13.6		6.4
Green Ext Time (p_c), s	0.0	8.5		0.2	0.1	9.6		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	10.1
HCM 2010 LOS	B

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	1390	120	220	370	300	200	120	730	120	250	610
Future Volume (veh/h)	190	1390	120	220	370	300	200	120	730	120	250	610
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1845	1845	1845
Adj Flow Rate, veh/h	196	1433	75	227	381	0	206	124	283	124	258	86
Adj No. of Lanes	1	3	1	2	1	1	1	1	2	1	1	2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	3	3
Cap, veh/h	219	2609	810	295	885	753	228	370	551	146	283	423
Arrive On Green	0.12	0.51	0.51	0.09	0.48	0.00	0.13	0.20	0.20	0.08	0.15	0.15
Sat Flow, veh/h	1774	5085	1579	3442	1863	1583	1774	1863	2774	1757	1845	2760
Grp Volume(v), veh/h	196	1433	75	227	381	0	206	124	283	124	258	86
Grp Sat Flow(s),veh/h/ln	1774	1695	1579	1721	1863	1583	1774	1863	1387	1757	1845	1380
Q Serve(g_s), s	15.2	26.8	3.4	9.0	18.9	0.0	16.0	8.0	12.7	9.7	19.3	3.8
Cycle Q Clear(g_c), s	15.2	26.8	3.4	9.0	18.9	0.0	16.0	8.0	12.7	9.7	19.3	3.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	219	2609	810	295	885	753	228	370	551	146	283	423
V/C Ratio(X)	0.90	0.55	0.09	0.77	0.43	0.00	0.90	0.33	0.51	0.85	0.91	0.20
Avail Cap(c_a), veh/h	329	2609	810	442	885	753	253	612	911	201	540	808
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.5	23.1	17.4	62.6	24.2	0.0	60.1	48.1	50.0	63.3	58.4	51.8
Incr Delay (d2), s/veh	13.9	0.8	0.2	2.1	1.5	0.0	28.7	0.2	0.3	16.3	4.8	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	8.3	12.7	1.5	4.4	10.1	0.0	9.7	4.2	4.9	5.4	10.2	1.5
LnGrp Delay(d),s/veh	74.4	24.0	17.7	64.7	25.8	0.0	88.8	48.3	50.3	79.6	63.1	51.9
LnGrp LOS	E	C	B	E	C		F	D	D	E	E	D
Approach Vol, veh/h		1704			608			613			468	
Approach Delay, s/veh		29.5			40.3			62.9			65.4	
Approach LOS		C			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.7	76.9	21.7	25.7	21.0	71.6	15.4	32.0
Change Period (Y+Rc), s	3.7	5.1	3.7	* 4.2	3.7	5.1	3.7	* 4.2
Max Green Setting (Gmax), s	18.0	43.3	20.0	* 41	26.0	35.3	16.0	* 46
Max Q Clear Time (g_c+I1), s	11.0	28.8	18.0	21.3	17.2	20.9	11.7	14.7
Green Ext Time (p_c), s	0.0	2.0	0.0	0.2	0.0	0.2	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	42.4
HCM 2010 LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	630	1580	40	100	630	500	40	1010	70	160	350	200
Future Volume (veh/h)	630	1580	40	100	630	500	40	1010	70	160	350	200
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1827	1827	1827	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	656	1646	40	104	656	0	42	1052	18	167	365	71
Adj No. of Lanes	2	3	0	2	3	1	1	2	1	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	4	4	4	1	1	1	2	2	2
Cap, veh/h	726	1855	45	141	967	301	54	923	413	195	1197	535
Arrive On Green	0.21	0.36	0.36	0.04	0.19	0.00	0.03	0.26	0.26	0.11	0.34	0.34
Sat Flow, veh/h	3442	5106	124	3375	4988	1553	1792	3574	1597	1774	3539	1581
Grp Volume(v), veh/h	656	1093	593	104	656	0	42	1052	18	167	365	71
Grp Sat Flow(s),veh/h/ln	1721	1695	1840	1688	1663	1553	1792	1787	1597	1774	1770	1581
Q Serve(g_s), s	22.3	36.3	36.4	3.7	14.7	0.0	2.8	31.0	1.0	11.1	9.1	3.7
Cycle Q Clear(g_c), s	22.3	36.3	36.4	3.7	14.7	0.0	2.8	31.0	1.0	11.1	9.1	3.7
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	726	1231	668	141	967	301	54	923	413	195	1197	535
V/C Ratio(X)	0.90	0.89	0.89	0.74	0.68	0.00	0.78	1.14	0.04	0.86	0.30	0.13
Avail Cap(c_a), veh/h	860	1231	668	141	967	301	72	923	413	263	1298	580
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.39	0.39	0.39	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.1	35.9	35.9	56.9	44.9	0.0	57.8	44.5	33.4	52.5	29.3	27.5
Incr Delay (d2), s/veh	4.9	4.2	7.3	17.7	3.8	0.0	28.0	75.9	0.1	18.2	0.2	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	11.1	17.7	19.8	2.1	7.1	0.0	1.8	25.0	0.5	6.4	4.5	1.7
LnGrp Delay(d),s/veh	51.0	40.1	43.2	74.6	48.7	0.0	85.8	120.4	33.5	70.6	29.5	27.7
LnGrp LOS	D	D	D	E	D		F	F	C	E	C	C
Approach Vol, veh/h		2342			760			1112			603	
Approach Delay, s/veh		43.9			52.3			117.7			40.7	
Approach LOS		D			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	50.8	9.6	47.6	32.3	30.5	19.2	38.0
Change Period (Y+Rc), s	7.0	7.2	6.0	7.0	7.0	7.2	6.0	7.0
Max Green Setting (Gmax), s	5.0	39.0	4.8	44.0	30.0	14.0	17.8	31.0
Max Q Clear Time (g_c+I1), s	15.7	38.4	4.8	11.1	24.3	16.7	13.1	33.0
Green Ext Time (p_c), s	0.0	0.6	0.0	4.3	1.0	0.0	0.2	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	61.9
HCM 2010 LOS	E

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	1860	210	80	550	240	70	30	170	220	50	90
Future Volume (veh/h)	60	1860	210	80	550	240	70	30	170	220	50	90
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1792	1792	1792	1881	1881	1881	1792	1792	1792
Adj Flow Rate, veh/h	64	1979	118	85	585	128	74	32	10	234	53	30
Adj No. of Lanes	2	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	6	6	6	1	1	1	6	6	6
Cap, veh/h	108	2392	744	106	2412	750	99	145	122	279	339	284
Arrive On Green	0.03	0.47	0.47	0.06	0.49	0.49	0.06	0.08	0.08	0.16	0.19	0.19
Sat Flow, veh/h	3476	5136	1598	1707	4893	1523	1792	1881	1580	1707	1792	1501
Grp Volume(v), veh/h	64	1979	118	85	585	128	74	32	10	234	53	30
Grp Sat Flow(s),veh/h/ln	1738	1712	1598	1707	1631	1523	1792	1881	1580	1707	1792	1501
Q Serve(g_s), s	2.2	41.2	5.2	6.0	8.5	5.7	5.0	2.0	0.7	16.4	3.0	2.0
Cycle Q Clear(g_c), s	2.2	41.2	5.2	6.0	8.5	5.7	5.0	2.0	0.7	16.4	3.0	2.0
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	108	2392	744	106	2412	750	99	145	122	279	339	284
V/C Ratio(X)	0.59	0.83	0.16	0.80	0.24	0.17	0.75	0.22	0.08	0.84	0.16	0.11
Avail Cap(c_a), veh/h	847	2504	779	347	2412	750	437	459	385	694	437	366
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	58.8	28.6	19.0	56.9	18.0	17.3	57.3	53.3	52.7	49.9	41.7	41.3
Incr Delay (d2), s/veh	1.9	2.5	0.1	5.1	0.1	0.2	21.1	1.1	0.4	13.2	0.3	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	1.1	20.0	2.3	3.0	3.8	2.4	3.1	1.1	0.3	8.8	1.5	0.9
LnGrp Delay(d),s/veh	60.7	31.1	19.1	62.0	18.0	17.4	78.4	54.4	53.2	63.1	42.0	41.5
LnGrp LOS	E	C	B	E	B	B	E	D	D	E	D	D
Approach Vol, veh/h		2161			798			116			317	
Approach Delay, s/veh		31.3			22.6			69.6			57.5	
Approach LOS		C			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.7	64.3	13.8	30.3	11.3	67.6	27.6	16.5
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.5	7.0	7.5	7.0
Max Green Setting (Gmax), s	25.0	60.0	30.0	30.0	30.0	60.0	50.0	30.0
Max Q Clear Time (g_c+I1), s	10.0	43.2	7.0	5.0	4.2	10.5	18.4	4.0
Green Ext Time (p_c), s	0.1	14.1	0.4	0.4	0.1	6.7	1.7	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	33.0
HCM 2010 LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	2010	1080	60	610	40	150	60	80	40	70	20
Future Volume (veh/h)	30	2010	1080	60	610	40	150	60	80	40	70	20
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1776	1776	1776	1827	1827	1827	1900	1900	1900
Adj Flow Rate, veh/h	32	2161	721	65	656	21	161	65	17	43	75	0
Adj No. of Lanes	2	3	1	1	3	1	2	1	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	7	7	7	4	4	4	0	0	0
Cap, veh/h	87	2786	868	83	2770	862	351	184	154	125	249	0
Arrive On Green	0.03	0.55	0.55	0.05	0.57	0.57	0.10	0.10	0.10	0.07	0.07	0.00
Sat Flow, veh/h	3442	5085	1583	1691	4848	1509	3480	1827	1521	1810	3705	0
Grp Volume(v), veh/h	32	2161	721	65	656	21	161	65	17	43	75	0
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1691	1616	1509	1740	1827	1521	1810	1805	0
Q Serve(g_s), s	0.7	27.1	30.6	3.1	5.4	0.5	3.5	2.7	0.8	1.8	1.6	0.0
Cycle Q Clear(g_c), s	0.7	27.1	30.6	3.1	5.4	0.5	3.5	2.7	0.8	1.8	1.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	87	2786	868	83	2770	862	351	184	154	125	249	0
V/C Ratio(X)	0.37	0.78	0.83	0.79	0.24	0.02	0.46	0.35	0.11	0.34	0.30	0.00
Avail Cap(c_a), veh/h	850	2826	880	731	2770	862	1074	564	469	559	1114	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	38.8	14.4	15.2	38.1	8.6	7.5	34.3	33.9	33.1	36.0	35.8	0.0
Incr Delay (d2), s/veh	1.0	1.5	7.0	6.1	0.1	0.0	1.3	1.6	0.4	0.6	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	13.0	14.9	1.6	2.4	0.2	1.8	1.4	0.4	0.9	0.8	0.0
LnGrp Delay(d),s/veh	39.8	15.9	22.2	44.2	8.7	7.6	35.6	35.6	33.5	36.6	36.1	0.0
LnGrp LOS	D	B	C	D	A	A	D	D	C	D	D	
Approach Vol, veh/h		2914			742			243			118	
Approach Delay, s/veh		17.7			11.7			35.5			36.3	
Approach LOS		B			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	50.1		10.2	6.1	52.0		12.8
Change Period (Y+Rc), s	4.0	5.7		4.6	4.0	5.7		4.6
Max Green Setting (Gmax), s	35.0	45.0		25.0	20.0	45.0		25.0
Max Q Clear Time (g_c+I1), s	5.1	32.6		3.8	2.7	7.4		5.5
Green Ext Time (p_c), s	0.1	11.8		0.3	0.0	6.6		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	18.2
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
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)	10	2350	20	60	690	20	20	10	610	20	10	10
Future Volume (veh/h)	10	2350	20	60	690	20	20	10	610	20	10	10
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1900	1845	1900	1900	1845	1900
Adj Flow Rate, veh/h	11	2474	17	63	726	14	21	11	418	21	11	0
Adj No. of Lanes	1	2	1	1	2	1	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	19	1812	810	80	1911	855	60	20	388	167	71	0
Arrive On Green	0.01	0.52	0.52	0.05	0.55	0.55	0.27	0.27	0.27	0.27	0.27	0.00
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	37	75	1462	330	270	0
Grp Volume(v), veh/h	11	2474	17	63	726	14	450	0	0	32	0	0
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1568	1574	0	0	600	0	0
Q Serve(g_s), s	0.5	39.0	0.4	2.7	9.0	0.3	10.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	39.0	0.4	2.7	9.0	0.3	20.0	0.0	0.0	1.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.05		0.93	0.66		0.00
Lane Grp Cap(c), veh/h	19	1812	810	80	1911	855	467	0	0	238	0	0
V/C Ratio(X)	0.57	1.37	0.02	0.78	0.38	0.02	0.96	0.00	0.00	0.13	0.00	0.00
Avail Cap(c_a), veh/h	338	1812	810	349	1911	855	467	0	0	238	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	37.1	18.2	8.9	35.6	9.8	7.9	28.4	0.0	0.0	20.7	0.0	0.0
Incr Delay (d2), s/veh	9.6	168.2	0.0	6.1	0.2	0.0	32.2	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	60.9	0.2	1.4	4.4	0.1	13.4	0.0	0.0	0.5	0.0	0.0
LnGrp Delay(d),s/veh	46.8	186.4	8.9	41.7	10.0	7.9	60.6	0.0	0.0	21.0	0.0	0.0
LnGrp LOS	D	F	A	D	B	A	E			C		
Approach Vol, veh/h		2502			803			450			32	
Approach Delay, s/veh		184.6			12.5			60.6			21.0	
Approach LOS		F			B			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.5	44.0		24.0	5.3	46.1		24.0
Change Period (Y+Rc), s	4.0	5.0		4.0	4.5	5.0		4.0
Max Green Setting (Gmax), s	15.0	39.0		20.0	14.5	39.0		20.0
Max Q Clear Time (g_c+I1), s	4.7	41.0		22.0	2.5	11.0		3.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	6.9		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	132.0
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	30	20	70	10	20	40	2320	190	10	680	30
Future Volume (veh/h)	40	30	20	70	10	20	40	2320	190	10	680	30
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1727	1727	1727	1863	1863	1863	1792	1792	1792
Adj Flow Rate, veh/h	41	31	6	78	0	2	41	2367	171	10	694	20
Adj No. of Lanes	1	1	0	2	0	1	1	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	6	6	6	10	10	10	2	2	2	6	6	6
Cap, veh/h	66	57	11	141	0	63	52	2566	1148	16	2402	1074
Arrive On Green	0.04	0.04	0.04	0.04	0.00	0.04	0.03	0.73	0.73	0.01	0.71	0.71
Sat Flow, veh/h	1707	1460	283	3290	0	1468	1774	3539	1583	1707	3406	1524
Grp Volume(v), veh/h	41	0	37	78	0	2	41	2367	171	10	694	20
Grp Sat Flow(s),veh/h/ln	1707	0	1743	1645	0	1468	1774	1770	1583	1707	1703	1524
Q Serve(g_s), s	2.6	0.0	2.3	2.5	0.0	0.1	2.5	60.4	3.6	0.6	8.2	0.4
Cycle Q Clear(g_c), s	2.6	0.0	2.3	2.5	0.0	0.1	2.5	60.4	3.6	0.6	8.2	0.4
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	0	68	141	0	63	52	2566	1148	16	2402	1074
V/C Ratio(X)	0.62	0.00	0.55	0.55	0.00	0.03	0.78	0.92	0.15	0.61	0.29	0.02
Avail Cap(c_a), veh/h	157	0	160	756	0	337	408	2602	1164	392	2504	1120
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	0.0	51.4	51.1	0.0	49.9	52.5	12.4	4.6	53.7	5.9	4.8
Incr Delay (d2), s/veh	9.1	0.0	6.8	11.9	0.0	0.7	9.0	6.2	0.1	12.9	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	1.2	1.4	0.0	0.1	1.4	31.1	1.6	0.4	3.9	0.2
LnGrp Delay(d),s/veh	60.6	0.0	58.1	62.9	0.0	50.7	61.5	18.6	4.7	66.6	6.0	4.8
LnGrp LOS	E		E	E		D	E	B	A	E	A	A
Approach Vol, veh/h		78			80			2579			724	
Approach Delay, s/veh		59.4			62.6			18.4			6.8	
Approach LOS		E			E			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.0	84.9		9.6	7.2	82.7		9.2
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0
Max Green Setting (Gmax), s	25.0	80.0		25.0	25.0	80.0		10.0
Max Q Clear Time (g_c+I1), s	2.6	62.4		4.5	4.5	10.2		4.6
Green Ext Time (p_c), s	0.0	16.5		0.6	0.0	7.5		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	17.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	24.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	240	20	70	80	20	640
Future Vol, veh/h	240	20	70	80	20	640
Conflicting Peds, #/hr	0	0	0	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	175	-	0	25
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	10	10	2	2	2	2
Mvmt Flow	264	22	77	88	22	703

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	286	0	518	275
Stage 1	-	-	-	-	275	-
Stage 2	-	-	-	-	243	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1276	-	518	764
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	797	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1276	-	486	764
Mov Cap-2 Maneuver	-	-	-	-	486	-
Stage 1	-	-	-	-	725	-
Stage 2	-	-	-	-	796	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.7	38.7
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	486	764	-	-	1276	-
HCM Lane V/C Ratio	0.045	0.921	-	-	0.06	-
HCM Control Delay (s)	12.8	39.5	-	-	8	-
HCM Lane LOS	B	E	-	-	A	-
HCM 95th %tile Q(veh)	0.1	12.9	-	-	0.2	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	10	10	50	10	50	10	2480	100	20	730	20
Future Volume (veh/h)	20	10	10	50	10	50	10	2480	100	20	730	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1696	1900	1863	1863	1900	1827	1827	1900
Adj Flow Rate, veh/h	21	11	2	53	11	30	11	2611	104	21	768	21
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	12	12	12	2	2	2	4	4	4
Cap, veh/h	128	59	8	114	22	39	19	2620	104	30	2631	72
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.01	0.76	0.76	0.02	0.76	0.76
Sat Flow, veh/h	852	685	96	709	256	452	1774	3468	137	1740	3451	94
Grp Volume(v), veh/h	34	0	0	94	0	0	11	1323	1392	21	386	403
Grp Sat Flow(s),veh/h/ln	1633	0	0	1418	0	0	1774	1770	1835	1740	1736	1810
Q Serve(g_s), s	0.0	0.0	0.0	4.9	0.0	0.0	0.7	76.6	80.0	1.3	7.2	7.2
Cycle Q Clear(g_c), s	1.9	0.0	0.0	6.8	0.0	0.0	0.7	76.6	80.0	1.3	7.2	7.2
Prop In Lane	0.62		0.06	0.56		0.32	1.00		0.07	1.00		0.05
Lane Grp Cap(c), veh/h	195	0	0	174	0	0	19	1337	1386	30	1323	1380
V/C Ratio(X)	0.17	0.00	0.00	0.54	0.00	0.00	0.59	0.99	1.00	0.69	0.29	0.29
Avail Cap(c_a), veh/h	643	0	0	572	0	0	419	1337	1386	411	1323	1380
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	0.0	0.0	47.3	0.0	0.0	52.2	12.5	12.9	51.7	3.8	3.8
Incr Delay (d2), s/veh	0.4	0.0	0.0	2.6	0.0	0.0	10.8	22.0	25.2	10.1	0.2	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	0.9	0.0	0.0	2.8	0.0	0.0	0.4	44.6	49.0	0.7	3.5	3.6
LnGrp Delay(d),s/veh	45.5	0.0	0.0	49.8	0.0	0.0	62.9	34.6	38.2	61.8	4.0	4.0
LnGrp LOS	D			D			E	C	F	E	A	A
Approach Vol, veh/h		34			94			2726			810	
Approach Delay, s/veh		45.5			49.8			36.5			5.5	
Approach LOS		D			D			D			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.8	86.0		14.1	5.1	86.7		14.1
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0
Max Green Setting (Gmax), s	25.0	80.0		40.0	25.0	80.0		40.0
Max Q Clear Time (g_c+I1), s	3.3	82.0		3.9	2.7	9.2		8.8
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	7.7		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	30.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	20	40	60	10	50	30	2490	330	40	730	10
Future Volume (veh/h)	50	20	40	60	10	50	30	2490	330	40	730	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1881	1881	1900	1845	1845	1845	1827	1827	1900
Adj Flow Rate, veh/h	52	21	3	71	0	0	31	2567	296	41	753	10
Adj No. of Lanes	0	1	1	2	1	0	1	2	1	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	1	1	1	3	3	3	4	4	4
Cap, veh/h	71	29	88	158	83	0	46	2117	946	56	2139	28
Arrive On Green	0.06	0.06	0.06	0.04	0.00	0.00	0.03	0.60	0.60	0.03	0.61	0.61
Sat Flow, veh/h	1281	517	1583	3583	1881	0	1757	3505	1567	1740	3508	47
Grp Volume(v), veh/h	73	0	3	71	0	0	31	2567	296	41	373	390
Grp Sat Flow(s),veh/h/ln	1799	0	1583	1792	1881	0	1757	1752	1567	1740	1736	1819
Q Serve(g_s), s	2.6	0.0	0.1	1.3	0.0	0.0	1.2	40.0	6.1	1.5	7.1	7.1
Cycle Q Clear(g_c), s	2.6	0.0	0.1	1.3	0.0	0.0	1.2	40.0	6.1	1.5	7.1	7.1
Prop In Lane	0.71		1.00	1.00		0.00	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	100	0	88	158	83	0	46	2117	946	56	1058	1109
V/C Ratio(X)	0.73	0.00	0.03	0.45	0.00	0.00	0.67	1.21	0.31	0.74	0.35	0.35
Avail Cap(c_a), veh/h	543	0	478	2706	1421	0	398	2117	946	394	1058	1109
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.8	0.0	29.6	30.9	0.0	0.0	32.0	13.1	6.4	31.8	6.4	6.4
Incr Delay (d2), s/veh	9.8	0.0	0.2	2.0	0.0	0.0	6.2	100.2	0.3	6.9	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.1	0.7	0.0	0.0	0.6	48.3	2.7	0.8	3.4	3.6
LnGrp Delay(d),s/veh	40.6	0.0	29.7	32.9	0.0	0.0	38.1	113.3	6.7	38.6	6.7	6.7
LnGrp LOS	D		C	C			D	F	A	D	A	A
Approach Vol, veh/h		76			71			2894			804	
Approach Delay, s/veh		40.1			32.9			101.6			8.3	
Approach LOS		D			C			F			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.1	45.5		7.7	5.7	45.9		6.9
Change Period (Y+Rc), s	4.0	5.5		4.0	4.0	5.5		4.0
Max Green Setting (Gmax), s	15.0	40.0		20.0	15.0	40.0		50.0
Max Q Clear Time (g_c+I1), s	3.5	42.0		4.6	3.2	9.1		3.3
Green Ext Time (p_c), s	0.0	0.0		0.2	0.0	6.7		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	79.6
HCM 2010 LOS	E

Notes

User approved pedestrian interval to be less than phase max green.
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)	0	10	10	50	0	10	10	2150	330	10	470	0
Future Volume (veh/h)	0	10	10	50	0	10	10	2150	330	10	470	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1667	1667	1900	1845	1845	1900	1827	1827	1827
Adj Flow Rate, veh/h	0	11	0	56	0	1	11	2416	364	11	528	0
Adj No. of Lanes	1	1	0	2	1	0	1	2	0	1	2	1
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, %	0	0	0	14	14	14	3	3	3	4	4	4
Cap, veh/h	2	27	0	93	0	115	18	2396	352	18	2712	1213
Arrive On Green	0.00	0.01	0.00	0.03	0.00	0.08	0.01	0.78	0.78	0.01	0.78	0.00
Sat Flow, veh/h	1810	1900	0	3079	0	1417	1757	3067	451	1740	3471	1553
Grp Volume(v), veh/h	0	11	0	56	0	1	11	1354	1426	11	528	0
Grp Sat Flow(s),veh/h/ln	1810	1900	0	1540	0	1417	1757	1752	1765	1740	1736	1553
Q Serve(g_s), s	0.0	0.6	0.0	1.9	0.0	0.1	0.7	80.4	84.4	0.7	4.2	0.0
Cycle Q Clear(g_c), s	0.0	0.6	0.0	1.9	0.0	0.1	0.7	80.4	84.4	0.7	4.2	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	2	27	0	93	0	115	18	1369	1379	18	2712	1213
V/C Ratio(X)	0.00	0.40	0.00	0.60	0.00	0.01	0.60	0.99	1.03	0.61	0.19	0.00
Avail Cap(c_a), veh/h	122	510	0	208	0	144	114	1369	1379	113	2712	1213
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	0.00	1.00	0.52	0.52	0.52	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	52.8	0.0	51.7	0.0	45.6	53.2	11.4	11.8	53.2	3.0	0.0
Incr Delay (d2), s/veh	0.0	13.2	0.0	2.3	0.0	0.0	5.9	15.1	26.9	11.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.4	0.0	0.9	0.0	0.0	0.4	43.4	50.1	0.4	2.0	0.0
LnGrp Delay(d),s/veh	0.0	65.9	0.0	54.1	0.0	45.6	59.2	26.5	38.7	64.8	3.2	0.0
LnGrp LOS		E		D		D	E	C	F	E	A	
Approach Vol, veh/h		11			57			2791			539	
Approach Delay, s/veh		65.9			53.9			32.9			4.5	
Approach LOS		E			D			C			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	90.1	7.3	5.5	5.1	90.1	0.0	12.8
Change Period (Y+Rc), s	4.0	5.7	4.0	4.0	4.0	5.7	4.0	4.0
Max Green Setting (Gmax), s	7.0	47.0	7.3	29.0	7.0	47.0	7.3	11.0
Max Q Clear Time (g_c+I1), s	2.7	86.4	3.9	2.6	2.7	6.2	0.0	2.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	28.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	290	70	150	20	30	20	1070	420	30	310	10
Future Volume (veh/h)	90	290	70	150	20	30	20	1070	420	30	310	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1792	1792	1900	1881	1881	1900	1845	1845	1900
Adj Flow Rate, veh/h	97	312	75	161	22	32	22	1151	423	32	333	10
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	6	6	6	1	1	1	3	3	3
Cap, veh/h	543	533	128	265	242	352	34	1187	426	43	1620	49
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.02	0.46	0.46	0.02	0.47	0.47
Sat Flow, veh/h	1340	1451	349	953	659	959	1792	2578	926	1757	3475	104
Grp Volume(v), veh/h	97	0	387	161	0	54	22	789	785	32	168	175
Grp Sat Flow(s),veh/h/ln	1340	0	1800	953	0	1619	1792	1787	1717	1757	1752	1826
Q Serve(g_s), s	4.6	0.0	15.6	14.7	0.0	2.0	1.1	38.4	40.9	1.6	5.1	5.1
Cycle Q Clear(g_c), s	6.6	0.0	15.6	30.3	0.0	2.0	1.1	38.4	40.9	1.6	5.1	5.1
Prop In Lane	1.00		0.19	1.00		0.59	1.00		0.54	1.00		0.06
Lane Grp Cap(c), veh/h	543	0	661	265	0	594	34	823	790	43	817	851
V/C Ratio(X)	0.18	0.00	0.59	0.61	0.00	0.09	0.65	0.96	0.99	0.74	0.21	0.21
Avail Cap(c_a), veh/h	761	0	954	420	0	858	139	823	790	156	817	851
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.51	0.51	0.51	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.8	0.0	23.0	35.2	0.0	18.6	43.9	23.5	24.1	43.6	14.2	14.2
Incr Delay (d2), s/veh	0.1	0.0	0.7	2.0	0.0	0.1	4.1	14.7	21.3	9.1	0.6	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	7.9	4.0	0.0	0.9	0.6	22.2	23.8	0.9	2.6	2.7
LnGrp Delay(d),s/veh	20.9	0.0	23.7	37.2	0.0	18.7	47.9	38.2	45.4	52.7	14.8	14.7
LnGrp LOS	C		C	D		B	D	D	D	D	B	B
Approach Vol, veh/h		484			215			1596			375	
Approach Delay, s/veh		23.1			32.6			41.9			18.0	
Approach LOS		C			C			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.2	46.7		37.1	5.7	47.3		37.1
Change Period (Y+Rc), s	4.0	5.3		4.0	4.0	5.3		4.0
Max Green Setting (Gmax), s	8.0	21.0		47.7	7.0	22.0		47.7
Max Q Clear Time (g_c+I1), s	3.6	42.9		17.6	3.1	7.1		32.3
Green Ext Time (p_c), s	0.0	0.0		2.7	0.0	2.4		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	34.4
HCM 2010 LOS	C

Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	120	110	1400	330	90	440
Future Volume (veh/h)	120	110	1400	330	90	440
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1863	1900	1845	1845
Adj Flow Rate, veh/h	126	116	1474	331	95	463
Adj No. of Lanes	2	1	2	0	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	2	2	3	3
Cap, veh/h	336	155	1984	434	121	2804
Arrive On Green	0.10	0.10	0.91	0.91	0.07	0.80
Sat Flow, veh/h	3476	1599	2982	631	1757	3597
Grp Volume(v), veh/h	126	116	887	918	95	463
Grp Sat Flow(s),veh/h/ln	1738	1599	1770	1751	1757	1752
Q Serve(g_s), s	3.1	6.4	11.7	13.5	4.8	2.7
Cycle Q Clear(g_c), s	3.1	6.4	11.7	13.5	4.8	2.7
Prop In Lane	1.00	1.00		0.36	1.00	
Lane Grp Cap(c), veh/h	336	155	1215	1202	121	2804
V/C Ratio(X)	0.37	0.75	0.73	0.76	0.79	0.17
Avail Cap(c_a), veh/h	877	403	1215	1202	195	2804
HCM Platoon Ratio	1.00	1.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.61	0.61	0.84	0.84
Uniform Delay (d), s/veh	38.1	39.6	1.7	1.8	41.3	2.1
Incr Delay (d2), s/veh	0.3	2.7	2.4	2.9	3.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	2.9	5.6	6.6	2.4	1.3
LnGrp Delay(d),s/veh	38.4	42.3	4.1	4.7	44.9	2.2
LnGrp LOS	D	D	A	A	D	A
Approach Vol, veh/h	242		1805			558
Approach Delay, s/veh	40.3		4.4			9.4
Approach LOS	D		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	10.2	67.1				77.3		12.7
Change Period (Y+Rc), s	4.0	5.3				5.3		4.0
Max Green Setting (Gmax), s	10.0	44.0				58.0		22.7
Max Q Clear Time (g_c+I1), s	13.8	15.5				4.7		8.4
Green Ext Time (p_c), s	0.0	22.1				5.0		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	8.8
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	90	0	100	0	1630	190	80	480	0
Future Volume (veh/h)	0	0	0	90	0	100	0	1630	190	80	480	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1881	1881	1881	1900	1845	1845	1900
Adj Flow Rate, veh/h	0	0	0	93	0	16	0	1680	190	82	495	0
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	3	3	3
Cap, veh/h	0	2	0	124	0	111	2	2347	261	104	2899	0
Arrive On Green	0.00	0.00	0.00	0.07	0.00	0.07	0.00	0.96	0.96	0.12	1.00	0.00
Sat Flow, veh/h	0	1863	0	1792	0	1599	1792	3243	361	1757	3597	0
Grp Volume(v), veh/h	0	0	0	93	0	16	0	913	957	82	495	0
Grp Sat Flow(s),veh/h/ln	0	1863	0	1792	0	1599	1792	1787	1817	1757	1752	0
Q Serve(g_s), s	0.0	0.0	0.0	4.6	0.0	0.8	0.0	5.4	5.9	4.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	4.6	0.0	0.8	0.0	5.4	5.9	4.1	0.0	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.20	1.00		0.00
Lane Grp Cap(c), veh/h	0	2	0	124	0	111	2	1294	1315	104	2899	0
V/C Ratio(X)	0.00	0.00	0.00	0.75	0.00	0.14	0.00	0.71	0.73	0.79	0.17	0.00
Avail Cap(c_a), veh/h	0	201	0	199	0	178	159	1294	1315	117	2899	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	2.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.35	0.35	0.99	0.99	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	41.1	0.0	39.4	0.0	0.6	0.6	39.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	6.5	0.0	0.4	0.0	1.2	1.3	23.5	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	2.5	0.0	0.4	0.0	2.3	2.5	2.6	0.1	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	47.6	0.0	39.8	0.0	1.7	1.9	62.6	0.1	0.0
LnGrp LOS				D		D		A	A	E	A	
Approach Vol, veh/h		0			109			1870			577	
Approach Delay, s/veh		0.0			46.4			1.8			9.0	
Approach LOS					D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.3	70.4		0.0	0.0	79.7		10.3
Change Period (Y+Rc), s	4.0	5.3		4.0	4.0	5.3		4.0
Max Green Setting (Gmax), s	5.0	47.0		9.7	8.0	45.0		10.0
Max Q Clear Time (g_c+I1), s	6.1	7.9		0.0	0.0	2.0		6.6
Green Ext Time (p_c), s	0.0	29.2		0.0	0.0	5.4		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	5.3
HCM 2010 LOS	A

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	30	30	50	20	60	50	1590	90	50	390	130
Future Volume (veh/h)	170	30	30	50	20	60	50	1590	90	50	390	130
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1845	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	175	31	0	52	21	3	52	1639	90	52	402	106
Adj No. of Lanes	1	1	1	0	2	0	1	2	0	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	3	3	3	2	2	2	2	2	2
Cap, veh/h	226	237	201	100	90	13	67	1986	108	67	1602	418
Arrive On Green	0.13	0.13	0.00	0.06	0.06	0.06	0.04	0.58	0.58	0.01	0.19	0.19
Sat Flow, veh/h	1792	1881	1599	1757	1579	226	1774	3412	186	1774	2779	725
Grp Volume(v), veh/h	175	31	0	52	0	24	52	846	883	52	255	253
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1757	0	1805	1774	1770	1828	1774	1770	1735
Q Serve(g_s), s	8.5	1.3	0.0	2.6	0.0	1.1	2.6	34.4	35.2	2.6	11.0	11.2
Cycle Q Clear(g_c), s	8.5	1.3	0.0	2.6	0.0	1.1	2.6	34.4	35.2	2.6	11.0	11.2
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.10	1.00		0.42
Lane Grp Cap(c), veh/h	226	237	201	100	0	102	67	1030	1064	67	1020	1000
V/C Ratio(X)	0.78	0.13	0.00	0.52	0.00	0.23	0.78	0.82	0.83	0.78	0.25	0.25
Avail Cap(c_a), veh/h	332	349	297	293	0	301	148	1030	1064	168	1020	1000
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	0.75	0.75	0.75	0.99	0.99	0.99
Uniform Delay (d), s/veh	38.1	34.9	0.0	41.3	0.0	40.6	42.9	15.1	15.2	44.1	19.9	20.0
Incr Delay (d2), s/veh	5.3	0.2	0.0	1.6	0.0	0.4	16.2	5.6	5.7	7.2	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.7	0.0	1.3	0.0	0.6	1.6	18.3	19.4	1.4	5.6	5.6
LnGrp Delay(d),s/veh	43.4	35.1	0.0	42.8	0.0	41.0	59.2	20.6	21.0	51.2	20.5	20.6
LnGrp LOS	D	D		D		D	E	C	C	D	C	C
Approach Vol, veh/h		206			76			1781			560	
Approach Delay, s/veh		42.2			42.3			21.9			23.4	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.4	57.7		15.3	7.9	57.2		9.6
Change Period (Y+Rc), s	4.0	5.3		4.0	4.5	5.3		4.5
Max Green Setting (Gmax), s	8.5	32.0		16.7	7.5	32.5		15.0
Max Q Clear Time (g_c+I1), s	4.6	37.2		10.5	4.6	13.2		4.6
Green Ext Time (p_c), s	0.0	0.0		0.2	0.0	4.1		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	24.4
HCM 2010 LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	160	10	680	70	1040	0	0	400	110
Future Volume (veh/h)	0	0	0	160	10	680	70	1040	0	0	400	110
Number				7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1827	1900	1863	1863	0	0	1827	1827
Adj Flow Rate, veh/h				165	10	649	72	1072	0	0	412	45
Adj No. of Lanes				0	2	0	1	2	0	0	2	1
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				0	4	0	2	2	0	0	4	4
Cap, veh/h				756	46	713	142	1350	0	0	853	362
Arrive On Green				0.46	0.46	0.46	0.08	0.38	0.00	0.00	0.23	0.23
Sat Flow, veh/h				1645	100	1553	1774	3632	0	0	3654	1550
Grp Volume(v), veh/h				175	0	649	72	1072	0	0	412	45
Grp Sat Flow(s),veh/h/ln				1745	0	1553	1774	1770	0	0	1827	1550
Q Serve(g_s), s				2.7	0.0	17.1	1.7	11.8	0.0	0.0	4.3	1.0
Cycle Q Clear(g_c), s				2.7	0.0	17.1	1.7	11.8	0.0	0.0	4.3	1.0
Prop In Lane				0.94		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				801	0	713	142	1350	0	0	853	362
V/C Ratio(X)				0.22	0.00	0.91	0.51	0.79	0.00	0.00	0.48	0.12
Avail Cap(c_a), veh/h				833	0	741	444	1448	0	0	1578	669
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	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				7.1	0.0	11.0	19.4	12.1	0.0	0.0	14.6	13.3
Incr Delay (d2), s/veh				0.2	0.0	15.1	2.8	3.2	0.0	0.0	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				1.3	0.0	10.2	1.0	6.3	0.0	0.0	2.2	0.5
LnGrp Delay(d),s/veh				7.3	0.0	26.2	22.2	15.2	0.0	0.0	15.5	13.6
LnGrp LOS				A		C	C	B			B	B
Approach Vol, veh/h					824			1144			457	
Approach Delay, s/veh					22.2			15.7			15.3	
Approach LOS					C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		20.8		23.2	6.5	14.3		
Change Period (Y+Rc), s		4.0		3.0	3.0	4.0		
Max Green Setting (Gmax), s		18.0		21.0	11.0	19.0		
Max Q Clear Time (g_c+I1), s		13.8		19.1	3.7	6.3		
Green Ext Time (p_c), s		3.0		1.1	0.1	3.6		

Intersection Summary	
HCM 2010 Ctrl Delay	17.8
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
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)	790	80	210	0	0	0	0	290	220	300	250	0
Future Volume (veh/h)	790	80	210	0	0	0	0	290	220	300	250	0
Number	7	4	14				5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1810	1810	1810	1810	0
Adj Flow Rate, veh/h	892	0	62				0	305	103	316	263	0
Adj No. of Lanes	2	0	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	5	5	5	5	0
Cap, veh/h	1142	0	509				0	709	297	395	1778	0
Arrive On Green	0.32	0.00	0.32				0.00	0.20	0.20	0.23	0.52	0.00
Sat Flow, veh/h	3548	0	1583				0	3619	1516	1723	3529	0
Grp Volume(v), veh/h	892	0	62				0	305	103	316	263	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1810	1516	1723	1719	0
Q Serve(g_s), s	9.9	0.0	1.2				0.0	3.2	2.5	7.5	1.7	0.0
Cycle Q Clear(g_c), s	9.9	0.0	1.2				0.0	3.2	2.5	7.5	1.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1142	0	509				0	709	297	395	1778	0
V/C Ratio(X)	0.78	0.00	0.12				0.00	0.43	0.35	0.80	0.15	0.00
Avail Cap(c_a), veh/h	1469	0	655				0	1581	662	634	1778	0
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	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	13.4	0.0	10.4				0.0	15.3	15.1	15.8	5.5	0.0
Incr Delay (d2), s/veh	2.1	0.0	0.1				0.0	0.9	1.5	4.5	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	5.2	0.0	0.5				0.0	1.7	1.2	4.0	0.8	0.0
LnGrp Delay(d),s/veh	15.5	0.0	10.5				0.0	16.2	16.6	20.3	5.5	0.0
LnGrp LOS	B		B					B	B	C	A	
Approach Vol, veh/h		954						408			579	
Approach Delay, s/veh		15.2						16.3			13.6	
Approach LOS		B						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.0	12.5		17.0		26.5		
Change Period (Y+Rc), s	4.0	* 4		3.0		4.0		
Max Green Setting (Gmax), s	16.0	* 19		18.0		18.0		
Max Q Clear Time (g_c+I1), s	11.9	5.2		11.9		3.7		
Green Ext Time (p_c), s	0.7	3.3		2.1		1.8		

Intersection Summary	
HCM 2010 Ctrl Delay	14.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	20	80	150	10	260	10	1120	0	290	290	10
Future Volume (veh/h)	100	20	80	150	10	260	10	1120	0	290	290	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1759	1759	1759	1863	1863	1863	1827	1827	1827
Adj Flow Rate, veh/h	121	0	0	168	0	86	11	1191	0	309	309	7
Adj No. of Lanes	2	0	1	2	0	2	1	2	1	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	8	8	8	2	2	2	4	4	4
Cap, veh/h	233	0	104	282	0	897	20	1408	630	376	2144	959
Arrive On Green	0.06	0.00	0.00	0.08	0.00	0.08	0.01	0.40	0.00	0.22	0.62	0.62
Sat Flow, veh/h	3619	0	1615	3351	0	2991	1774	3539	1583	1740	3471	1553
Grp Volume(v), veh/h	121	0	0	168	0	86	11	1191	0	309	309	7
Grp Sat Flow(s),veh/h/ln	1810	0	1615	1675	0	1495	1774	1770	1583	1740	1736	1553
Q Serve(g_s), s	2.2	0.0	0.0	3.3	0.0	1.4	0.4	20.6	0.0	11.4	2.5	0.1
Cycle Q Clear(g_c), s	2.2	0.0	0.0	3.3	0.0	1.4	0.4	20.6	0.0	11.4	2.5	0.1
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	233	0	104	282	0	897	20	1408	630	376	2144	959
V/C Ratio(X)	0.52	0.00	0.00	0.60	0.00	0.10	0.56	0.85	0.00	0.82	0.14	0.01
Avail Cap(c_a), veh/h	1076	0	480	1344	0	1846	527	1578	706	1293	2144	959
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	0.0	0.0	29.7	0.0	17.0	33.1	18.4	0.0	25.1	5.4	4.9
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.8	0.0	0.0	31.2	4.1	0.0	5.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.0	1.5	0.0	0.6	0.4	10.7	0.0	6.0	1.2	0.0
LnGrp Delay(d),s/veh	31.1	0.0	0.0	30.5	0.0	17.0	64.3	22.5	0.0	30.5	5.4	4.9
LnGrp LOS	C			C		B	E	C		C	A	A
Approach Vol, veh/h		121			254			1202			625	
Approach Delay, s/veh		31.1			25.9			22.9			17.8	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.5	31.3		7.8	3.7	46.1		9.7
Change Period (Y+Rc), s	4.0	4.5		3.5	3.0	4.5		4.0
Max Green Setting (Gmax), s	50.0	30.0		20.0	20.0	30.0		27.0
Max Q Clear Time (g_c+I1), s	13.4	22.6		4.2	2.4	4.5		5.3
Green Ext Time (p_c), s	1.2	4.2		0.2	0.0	1.1		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	22.2
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	80.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	30	10	60	10	60	10	570	150	10	70	10
Future Vol, veh/h	30	30	10	60	10	60	10	570	150	10	70	10
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	37	37	12	73	12	73	12	695	183	12	85	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Righ	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.1	11.8	107.7	10.1
HCM LOS	B	B	F	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	1%	43%	46%	11%
Vol Thru, %	78%	43%	8%	78%
Vol Right, %	21%	14%	46%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	730	70	130	90
LT Vol	10	30	60	10
Through Vol	570	30	10	70
RT Vol	150	10	60	10
Lane Flow Rate	890	85	159	110
Geometry Grp	1	1	1	1
Degree of Util (X)	1.166	0.151	0.266	0.171
Departure Headway (Hd)	4.714	6.863	6.489	5.924
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	766	526	556	609
Service Time	2.799	4.863	4.489	3.924
HCM Lane V/C Ratio	1.162	0.162	0.286	0.181
HCM Control Delay	107.7	11.1	11.8	10.1
HCM Lane LOS	F	B	B	B
HCM 95th-tile Q	27.5	0.5	1.1	0.6

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	120	40	20	610	90	50
Future Vol, veh/h	120	40	20	610	90	50
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	-	-	-	-	145
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	145	48	24	735	108	60

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	891	108	168	0	-	0
Stage 1	108	-	-	-	-	-
Stage 2	783	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	312	943	1404	-	-	-
Stage 1	914	-	-	-	-	-
Stage 2	449	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	303	943	1404	-	-	-
Mov Cap-2 Maneuver	303	-	-	-	-	-
Stage 1	887	-	-	-	-	-
Stage 2	449	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.4	0.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1404	-	365	-	-
HCM Lane V/C Ratio	0.017	-	0.528	-	-
HCM Control Delay (s)	7.6	0	25.4	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	3	-	-

Intersection	
Intersection Delay, s/veh	16
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	190	50	10	40	20	50	20	390	40	50	60	20
Future Vol, veh/h	190	50	10	40	20	50	20	390	40	50	60	20
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	202	53	11	43	21	53	21	415	43	53	64	21
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.8	10.5	20	10.7
HCM LOS	B	B	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	76%	36%	38%
Vol Thru, %	87%	20%	18%	46%
Vol Right, %	9%	4%	45%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	450	250	110	130
LT Vol	20	190	40	50
Through Vol	390	50	20	60
RT Vol	40	10	50	20
Lane Flow Rate	479	266	117	138
Geometry Grp	1	1	1	1
Degree of Util (X)	0.704	0.442	0.194	0.226
Departure Headway (Hd)	5.295	5.984	5.98	5.875
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	680	598	596	607
Service Time	3.346	4.048	4.058	3.946
HCM Lane V/C Ratio	0.704	0.445	0.196	0.227
HCM Control Delay	20	13.8	10.5	10.7
HCM Lane LOS	C	B	B	B
HCM 95th-tile Q	5.8	2.3	0.7	0.9

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	420	460	100	30	20	50
Future Vol, veh/h	420	460	100	30	20	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	178	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	472	517	112	34	22	56

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	146	0	-	0	1590	129
Stage 1	-	-	-	-	129	-
Stage 2	-	-	-	-	1461	-
Critical Hdwy	4.16	-	-	-	6.46	6.26
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	2.254	-	-	-	3.554	3.354
Pot Cap-1 Maneuver	1412	-	-	-	116	910
Stage 1	-	-	-	-	887	-
Stage 2	-	-	-	-	209	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1412	-	-	-	77	910
Mov Cap-2 Maneuver	-	-	-	-	77	-
Stage 1	-	-	-	-	591	-
Stage 2	-	-	-	-	209	-

Approach	EB	WB	SB
HCM Control Delay, s	4.2	0	29.9
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1412	-	-	-	222
HCM Lane V/C Ratio	0.334	-	-	-	0.354
HCM Control Delay (s)	8.8	-	-	-	29.9
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	1.5	-	-	-	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	80	160	50	70	40	160	1130	40	30	490	40
Future Volume (veh/h)	130	80	160	50	70	40	160	1130	40	30	490	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	0.99		0.98	1.00		1.00	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
Adj Sat Flow, veh/h/ln	1900	1881	1881	1900	1881	1900	1881	1881	1881	1881	1881	1900
Adj Flow Rate, veh/h	140	86	0	54	75	29	172	1215	0	32	527	37
Adj No. of Lanes	0	1	1	0	1	0	1	2	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	312	129	320	185	201	64	240	1823	815	56	1377	96
Arrive On Green	0.20	0.20	0.00	0.19	0.20	0.19	0.13	0.51	0.00	0.03	0.41	0.40
Sat Flow, veh/h	956	645	1599	425	1001	320	1792	3574	1599	1792	3382	237
Grp Volume(v), veh/h	226	0	0	158	0	0	172	1215	0	32	278	286
Grp Sat Flow(s),veh/h/ln	1600	0	1599	1746	0	0	1792	1787	1599	1792	1787	1831
Q Serve(g_s), s	2.3	0.0	0.0	0.0	0.0	0.0	4.4	12.2	0.0	0.9	5.3	5.3
Cycle Q Clear(g_c), s	6.0	0.0	0.0	3.7	0.0	0.0	4.4	12.2	0.0	0.9	5.3	5.3
Prop In Lane	0.62		1.00	0.34		0.18	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	441	0	320	432	0	0	240	1823	815	56	727	745
V/C Ratio(X)	0.51	0.00	0.00	0.37	0.00	0.00	0.72	0.67	0.00	0.57	0.38	0.38
Avail Cap(c_a), veh/h	950	0	876	1016	0	0	797	2254	1009	982	1127	1155
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.7	0.0	0.0	17.1	0.0	0.0	20.1	8.8	0.0	23.1	10.1	10.1
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.2	0.0	0.0	1.5	0.7	0.0	3.4	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	0.0	1.9	0.0	0.0	2.3	6.1	0.0	0.5	2.6	2.7
LnGrp Delay(d),s/veh	18.1	0.0	0.0	17.3	0.0	0.0	21.6	9.5	0.0	26.5	10.5	10.6
LnGrp LOS	B			B			C	A		C	B	B
Approach Vol, veh/h		226			158			1387			596	
Approach Delay, s/veh		18.1			17.3			11.0			11.4	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.0	29.2		14.2	10.0	24.2		14.2
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		* 5
Max Green Setting (Gmax), s	26.0	30.0		26.0	21.0	30.0		* 27
Max Q Clear Time (g_c+I1), s	2.9	14.2		8.0	6.4	7.3		5.7
Green Ext Time (p_c), s	0.0	10.0		0.8	0.2	4.9		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	12.2
HCM 2010 LOS	B

Notes

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

EXISTING WITH CENTERPOINT PROJECT CONDITIONS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	654	190	140	302	80	70	40	230	50	340	1129
Future Volume (veh/h)	200	654	190	140	302	80	70	40	230	50	340	1129
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1759	1759	1759	1759	1792	1792	1792	1776	1776	1776
Adj Flow Rate, veh/h	208	681	89	146	315	0	73	42	59	52	354	465
Adj No. of Lanes	1	3	1	2	1	1	1	1	2	1	1	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	8	8	6	6	6	7	7	7
Cap, veh/h	164	2280	709	291	821	698	167	495	740	62	382	571
Arrive On Green	0.10	0.47	0.47	0.09	0.47	0.00	0.10	0.28	0.28	0.04	0.21	0.21
Sat Flow, veh/h	1675	4803	1493	3250	1759	1495	1707	1792	2682	1691	1776	2656
Grp Volume(v), veh/h	208	681	89	146	315	0	73	42	59	52	354	465
Grp Sat Flow(s),veh/h/ln	1675	1601	1493	1625	1759	1495	1707	1792	1341	1691	1776	1328
Q Serve(g_s), s	12.7	11.3	4.3	5.6	15.1	0.0	5.2	2.3	2.1	4.0	25.4	21.7
Cycle Q Clear(g_c), s	12.7	11.3	4.3	5.6	15.1	0.0	5.2	2.3	2.1	4.0	25.4	21.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	164	2280	709	291	821	698	167	495	740	62	382	571
V/C Ratio(X)	1.27	0.30	0.13	0.50	0.38	0.00	0.44	0.08	0.08	0.84	0.93	0.81
Avail Cap(c_a), veh/h	164	2280	709	368	821	698	219	637	953	139	590	883
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.7	20.9	19.1	56.4	22.5	0.0	55.3	34.9	34.8	62.2	50.0	48.6
Incr Delay (d2), s/veh	160.9	0.3	0.4	0.5	1.4	0.0	0.7	0.0	0.0	10.6	11.7	1.8
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	13.2	5.1	1.9	2.5	7.7	0.0	2.5	1.1	0.8	2.0	13.7	8.1
LnGrp Delay(d),s/veh	219.6	21.2	19.4	56.9	23.9	0.0	56.0	34.9	34.9	72.8	61.8	50.3
LnGrp LOS	F	C	B	E	C		E	C	C	E	E	D
Approach Vol, veh/h		978			461			174			871	
Approach Delay, s/veh		63.2			34.3			43.7			56.3	
Approach LOS		E			C			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.6	65.7	16.7	31.9	16.7	64.7	8.8	39.9
Change Period (Y+Rc), s	3.7	5.1	3.7	* 4.2	3.7	5.1	3.7	* 4.2
Max Green Setting (Gmax), s	15.0	38.3	17.0	* 43	13.0	40.3	11.0	* 46
Max Q Clear Time (g_c+I1), s	7.6	13.3	7.2	27.4	14.7	17.1	6.0	4.3
Green Ext Time (p_c), s	0.0	0.9	0.0	0.3	0.0	0.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	54.1
HCM 2010 LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	594	20	90	1111	130	30	250	70	210	770	660
Future Volume (veh/h)	200	594	20	90	1111	130	30	250	70	210	770	660
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1712	1712	1900	1743	1743	1743	1827	1827	1827	1863	1863	1863
Adj Flow Rate, veh/h	215	639	19	97	1195	0	32	269	9	226	828	558
Adj No. of Lanes	2	3	0	2	3	1	1	2	1	1	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	11	11	11	9	9	9	4	4	4	2	2	2
Cap, veh/h	316	2021	60	222	1914	596	69	711	318	283	1150	514
Arrive On Green	0.10	0.43	0.41	0.07	0.40	0.00	0.04	0.20	0.20	0.16	0.32	0.32
Sat Flow, veh/h	3163	4664	138	3221	4759	1482	1740	3471	1553	1774	3539	1582
Grp Volume(v), veh/h	215	426	232	97	1195	0	32	269	9	226	828	558
Grp Sat Flow(s),veh/h/ln	1581	1558	1687	1610	1586	1482	1740	1736	1553	1774	1770	1582
Q Serve(g_s), s	7.9	10.8	10.9	3.5	24.1	0.0	2.2	8.0	0.6	14.7	24.7	39.0
Cycle Q Clear(g_c), s	7.9	10.8	10.9	3.5	24.1	0.0	2.2	8.0	0.6	14.7	24.7	39.0
Prop In Lane	1.00		0.08	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	316	1350	731	222	1914	596	69	711	318	283	1150	514
V/C Ratio(X)	0.68	0.32	0.32	0.44	0.62	0.00	0.47	0.38	0.03	0.80	0.72	1.09
Avail Cap(c_a), veh/h	316	1350	731	242	1914	596	128	711	318	441	1150	514
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.94	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.1	22.3	22.4	53.6	28.6	0.0	56.4	41.1	38.2	48.6	35.7	40.5
Incr Delay (d2), s/veh	5.1	0.6	1.1	1.0	1.5	0.0	3.6	0.6	0.1	5.6	2.6	64.8
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	3.7	4.7	5.3	1.6	10.8	0.0	1.1	3.9	0.2	7.7	12.5	26.2
LnGrp Delay(d),s/veh	57.2	22.9	23.5	54.6	30.2	0.0	60.0	41.7	38.2	54.1	38.2	105.3
LnGrp LOS	E	C	C	D	C		E	D	D	D	D	F
Approach Vol, veh/h		873			1292			310			1612	
Approach Delay, s/veh		31.5			32.0			43.5			63.7	
Approach LOS		C			C			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	56.0	8.7	43.0	16.0	52.3	23.2	28.6
Change Period (Y+Rc), s	7.0	7.2	6.0	7.0	7.0	7.2	6.0	7.0
Max Green Setting (Gmax), s	6.0	44.0	6.8	36.0	9.0	41.0	27.8	15.0
Max Q Clear Time (g_c+I1), s	15.5	12.9	4.2	41.0	9.9	26.1	16.7	10.0
Green Ext Time (p_c), s	0.0	6.9	0.0	0.0	0.0	9.6	0.4	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	45.3
HCM 2010 LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	494	132	50	1441	310	82	30	110	210	60	122
Future Volume (veh/h)	62	494	132	50	1441	310	82	30	110	210	60	122
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1696	1696	1696	1759	1759	1759	1863	1863	1863	1776	1776	1776
Adj Flow Rate, veh/h	65	520	64	53	1517	151	86	32	5	221	63	16
Adj No. of Lanes	2	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	12	12	12	8	8	8	2	2	2	7	7	7
Cap, veh/h	213	2204	686	115	2289	713	166	200	170	324	365	310
Arrive On Green	0.07	0.48	0.48	0.07	0.48	0.48	0.09	0.11	0.11	0.19	0.21	0.21
Sat Flow, veh/h	3134	4631	1442	1675	4803	1495	1774	1863	1583	1691	1776	1509
Grp Volume(v), veh/h	65	520	64	53	1517	151	86	32	5	221	63	16
Grp Sat Flow(s),veh/h/ln	1567	1544	1442	1675	1601	1495	1774	1863	1583	1691	1776	1509
Q Serve(g_s), s	2.0	6.8	2.5	3.1	24.7	6.0	4.7	1.6	0.3	12.4	3.0	0.9
Cycle Q Clear(g_c), s	2.0	6.8	2.5	3.1	24.7	6.0	4.7	1.6	0.3	12.4	3.0	0.9
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	213	2204	686	115	2289	713	166	200	170	324	365	310
V/C Ratio(X)	0.30	0.24	0.09	0.46	0.66	0.21	0.52	0.16	0.03	0.68	0.17	0.05
Avail Cap(c_a), veh/h	1028	2855	889	459	2961	922	573	602	511	885	573	487
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	45.3	15.8	14.7	45.8	20.5	15.6	44.1	41.4	40.8	38.4	33.4	32.6
Incr Delay (d2), s/veh	0.3	0.1	0.1	1.1	0.5	0.2	5.3	0.5	0.1	5.3	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.9	1.0	1.5	10.9	2.5	2.6	0.8	0.1	6.2	1.5	0.4
LnGrp Delay(d),s/veh	45.6	15.9	14.8	46.8	21.0	15.8	49.4	41.9	40.9	43.8	33.8	32.7
LnGrp LOS	D	B	B	D	C	B	D	D	D	D	C	C
Approach Vol, veh/h		649			1721			123			300	
Approach Delay, s/veh		18.7			21.3			47.1			41.1	
Approach LOS		B			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	52.6	13.6	25.0	11.0	52.7	23.6	15.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.5	7.0	7.5	7.0
Max Green Setting (Gmax), s	25.0	60.0	30.0	30.0	30.0	60.0	50.0	30.0
Max Q Clear Time (g_c+I1), s	5.1	8.8	6.7	5.0	4.0	26.7	14.4	3.6
Green Ext Time (p_c), s	0.0	5.5	0.5	0.4	0.1	19.0	1.7	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	24.0
HCM 2010 LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	558	154	30	1595	20	224	30	90	40	70	80
Future Volume (veh/h)	10	558	154	30	1595	20	224	30	90	40	70	80
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1696	1696	1696	1776	1776	1776	1863	1863	1863	1900	1900	1900
Adj Flow Rate, veh/h	10	569	75	31	1628	10	229	31	15	41	71	6
Adj No. of Lanes	2	3	1	1	3	1	2	1	1	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	12	12	12	7	7	7	2	2	2	0	0	0
Cap, veh/h	32	2419	753	44	2609	812	461	242	203	158	295	25
Arrive On Green	0.01	0.52	0.52	0.03	0.54	0.54	0.13	0.13	0.13	0.09	0.09	0.08
Sat Flow, veh/h	3134	4631	1442	1691	4848	1509	3548	1863	1565	1810	3374	282
Grp Volume(v), veh/h	10	569	75	31	1628	10	229	31	15	41	38	39
Grp Sat Flow(s),veh/h/ln	1567	1544	1442	1691	1616	1509	1774	1863	1565	1810	1805	1850
Q Serve(g_s), s	0.2	4.6	1.8	1.2	15.9	0.2	4.1	1.0	0.6	1.4	1.3	1.4
Cycle Q Clear(g_c), s	0.2	4.6	1.8	1.2	15.9	0.2	4.1	1.0	0.6	1.4	1.3	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	32	2419	753	44	2609	812	461	242	203	158	158	162
V/C Ratio(X)	0.32	0.24	0.10	0.70	0.62	0.01	0.50	0.13	0.07	0.26	0.24	0.24
Avail Cap(c_a), veh/h	919	3170	987	868	3318	1033	1331	699	587	679	677	694
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	33.5	8.9	8.2	33.0	11.0	7.3	27.6	26.3	26.1	29.1	29.0	29.1
Incr Delay (d2), s/veh	2.1	0.1	0.1	7.4	0.4	0.0	1.2	0.3	0.2	0.3	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.0	0.7	0.7	7.2	0.1	2.1	0.5	0.3	0.7	0.7	0.7
LnGrp Delay(d),s/veh	35.6	8.9	8.3	40.3	11.3	7.3	28.8	26.6	26.3	29.4	29.3	29.4
LnGrp LOS	D	A	A	D	B	A	C	C	C	C	C	C
Approach Vol, veh/h		654			1669			275			118	
Approach Delay, s/veh		9.3			11.8			28.4			29.4	
Approach LOS		A			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.8	39.6		10.0	4.7	40.7		12.9
Change Period (Y+Rc), s	4.0	5.7		4.6	4.0	5.7		4.6
Max Green Setting (Gmax), s	35.0	45.0		25.0	20.0	45.0		25.0
Max Q Clear Time (g_c+I1), s	3.2	6.6		3.4	2.2	17.9		6.1
Green Ext Time (p_c), s	0.0	6.0		0.2	0.0	17.1		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	13.7
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
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)	10	622	10	100	1869	20	10	10	80	10	10	10
Future Volume (veh/h)	10	622	10	100	1869	20	10	10	80	10	10	10
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1696	1696	1696	1792	1792	1792	1900	1583	1900	1900	1900	1900
Adj Flow Rate, veh/h	10	641	6	103	1927	15	10	10	6	10	10	1
Adj No. of Lanes	1	2	1	1	2	1	0	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	12	12	12	6	6	6	20	20	20	0	0	0
Cap, veh/h	33	2142	958	131	2456	1099	111	13	8	124	21	2
Arrive On Green	0.02	0.66	0.66	0.08	0.72	0.72	0.02	0.02	0.02	0.02	0.02	0.02
Sat Flow, veh/h	1616	3223	1442	1707	3406	1524	556	556	334	853	853	85
Grp Volume(v), veh/h	10	641	6	103	1927	15	26	0	0	21	0	0
Grp Sat Flow(s),veh/h/ln	1616	1612	1442	1707	1703	1524	1447	0	0	1791	0	0
Q Serve(g_s), s	0.3	4.3	0.1	3.0	18.6	0.1	0.3	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	4.3	0.1	3.0	18.6	0.1	0.9	0.0	0.0	0.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.38		0.23	0.48		0.05
Lane Grp Cap(c), veh/h	33	2142	958	131	2456	1099	132	0	0	147	0	0
V/C Ratio(X)	0.31	0.30	0.01	0.79	0.78	0.01	0.20	0.00	0.00	0.14	0.00	0.00
Avail Cap(c_a), veh/h	474	2519	1127	500	2662	1191	629	0	0	743	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.7	3.6	2.9	23.2	4.6	2.0	24.8	0.0	0.0	24.6	0.0	0.0
Incr Delay (d2), s/veh	2.0	0.1	0.0	3.9	1.6	0.0	0.7	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.9	0.0	1.6	8.8	0.1	0.4	0.0	0.0	0.3	0.0	0.0
LnGrp Delay(d),s/veh	26.7	3.7	2.9	27.1	6.2	2.0	25.5	0.0	0.0	25.1	0.0	0.0
LnGrp LOS	C	A	A	C	A	A	C			C		
Approach Vol, veh/h		657			2045			26			21	
Approach Delay, s/veh		4.0			7.2			25.5			25.1	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.9	38.0		5.2	5.0	40.9		5.2
Change Period (Y+Rc), s	4.0	5.0		4.0	4.5	5.0		4.0
Max Green Setting (Gmax), s	15.0	39.0		20.0	14.5	39.0		20.0
Max Q Clear Time (g_c+I1), s	5.0	6.3		2.9	2.3	20.6		2.6
Green Ext Time (p_c), s	0.1	6.2		0.1	0.0	15.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	6.8
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	30	295	20	72	30	500	189	89	1760	40
Future Volume (veh/h)	10	10	30	295	20	72	30	500	189	89	1760	40
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1242	1242	1900	1508	1508	1508	1696	1696	1696	1810	1810	1810
Adj Flow Rate, veh/h	11	11	0	326	0	11	32	526	103	94	1853	24
Adj No. of Lanes	1	1	0	2	0	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	53	53	53	26	26	26	12	12	12	5	5	5
Cap, veh/h	21	22	0	423	0	189	39	1905	852	118	2185	975
Arrive On Green	0.02	0.02	0.00	0.15	0.00	0.15	0.02	0.59	0.59	0.07	0.64	0.64
Sat Flow, veh/h	1183	1242	0	2872	0	1282	1616	3223	1442	1723	3438	1534
Grp Volume(v), veh/h	11	11	0	326	0	11	32	526	103	94	1853	24
Grp Sat Flow(s),veh/h/ln	1183	1242	0	1436	0	1282	1616	1612	1442	1723	1719	1534
Q Serve(g_s), s	1.0	1.0	0.0	12.4	0.0	0.8	2.2	9.1	3.6	6.1	48.5	0.7
Cycle Q Clear(g_c), s	1.0	1.0	0.0	12.4	0.0	0.8	2.2	9.1	3.6	6.1	48.5	0.7
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	21	22	0	423	0	189	39	1905	852	118	2185	975
V/C Ratio(X)	0.53	0.50	0.00	0.77	0.00	0.06	0.83	0.28	0.12	0.80	0.85	0.02
Avail Cap(c_a), veh/h	104	109	0	631	0	282	355	2266	1014	379	2417	1079
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.4	55.4	0.0	46.7	0.0	41.7	55.3	11.4	10.2	52.2	16.4	7.7
Incr Delay (d2), s/veh	19.2	16.7	0.0	10.3	0.0	0.5	15.3	0.1	0.1	4.6	3.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.4	0.0	5.5	0.0	0.3	1.2	4.0	1.5	3.1	23.6	0.3
LnGrp Delay(d),s/veh	74.6	72.1	0.0	57.0	0.0	42.2	70.6	11.5	10.3	56.8	19.4	7.7
LnGrp LOS	E	E		E		D	E	B	B	E	B	A
Approach Vol, veh/h		22			337			661			1971	
Approach Delay, s/veh		73.4			56.5			14.2			21.0	
Approach LOS		E			E			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.8	73.3		21.8	6.7	78.3		7.0
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0
Max Green Setting (Gmax), s	25.0	80.0		25.0	25.0	80.0		10.0
Max Q Clear Time (g_c+I1), s	3.1	11.1		14.4	4.2	50.5		3.0
Green Ext Time (p_c), s	0.1	5.9		2.3	0.0	21.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	23.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	80	30	60	162	28	90
Future Volume (veh/h)	80	30	60	162	28	90
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1532	1900	1667	1667	1545	1545
Adj Flow Rate, veh/h	95	21	71	193	33	36
Adj No. of Lanes	1	0	1	1	1	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	24	24	14	14	23	23
Cap, veh/h	220	49	319	937	112	364
Arrive On Green	0.18	0.18	0.20	0.56	0.08	0.08
Sat Flow, veh/h	1215	269	1587	1667	1471	1313
Grp Volume(v), veh/h	0	116	71	193	33	36
Grp Sat Flow(s),veh/h/ln	0	1484	1587	1667	1471	1313
Q Serve(g_s), s	0.0	1.7	0.9	1.4	0.5	0.5
Cycle Q Clear(g_c), s	0.0	1.7	0.9	1.4	0.5	0.5
Prop In Lane		0.18	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	269	319	937	112	364
V/C Ratio(X)	0.00	0.43	0.22	0.21	0.29	0.10
Avail Cap(c_a), veh/h	0	2116	2263	5053	2097	2135
HCM Platoon Ratio	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	1.00
Uniform Delay (d), s/veh	0.0	9.1	8.3	2.7	10.9	6.7
Incr Delay (d2), s/veh	0.0	1.1	0.3	0.1	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.8	0.4	0.7	0.3	0.2
LnGrp Delay(d),s/veh	0.0	10.2	8.7	2.8	12.3	6.8
LnGrp LOS		B	A	A	B	A
Approach Vol, veh/h	116			264	69	
Approach Delay, s/veh	10.2			4.4	9.4	
Approach LOS	B			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		6.4	9.5	9.0				18.5
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		35.5	35.5	35.5				75.5
Max Q Clear Time (g_c+I1), s		2.5	2.9	3.7				3.4
Green Ext Time (p_c), s		0.2	0.2	0.6				1.2

Intersection Summary	
HCM 2010 Ctrl Delay	6.7
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	20	70	10	10	10	699	60	45	2020	20
Future Volume (veh/h)	10	10	20	70	10	10	10	699	60	45	2020	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1462	1900	1900	1484	1900	1727	1727	1900	1776	1776	1900
Adj Flow Rate, veh/h	10	10	2	73	10	7	10	728	60	47	2104	21
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	30	30	30	28	28	28	10	10	10	7	7	7
Cap, veh/h	103	79	13	163	19	10	16	2264	187	59	2610	26
Arrive On Green	0.10	0.10	0.09	0.10	0.10	0.09	0.01	0.74	0.72	0.03	0.76	0.74
Sat Flow, veh/h	470	771	124	919	182	93	1645	3071	253	1691	3422	34
Grp Volume(v), veh/h	22	0	0	90	0	0	10	389	399	47	1035	1090
Grp Sat Flow(s),veh/h/ln	1365	0	0	1194	0	0	1645	1641	1683	1691	1687	1770
Q Serve(g_s), s	0.0	0.0	0.0	5.6	0.0	0.0	0.6	7.9	7.9	2.7	36.3	36.7
Cycle Q Clear(g_c), s	1.3	0.0	0.0	6.9	0.0	0.0	0.6	7.9	7.9	2.7	36.3	36.7
Prop In Lane	0.45		0.09	0.81		0.08	1.00		0.15	1.00		0.02
Lane Grp Cap(c), veh/h	195	0	0	191	0	0	16	1210	1241	59	1286	1349
V/C Ratio(X)	0.11	0.00	0.00	0.47	0.00	0.00	0.62	0.32	0.32	0.80	0.80	0.81
Avail Cap(c_a), veh/h	598	0	0	564	0	0	427	1398	1433	439	1437	1507
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	0.0	0.0	41.7	0.0	0.0	47.5	4.4	4.4	46.1	7.0	7.1
Incr Delay (d2), s/veh	0.3	0.0	0.0	1.8	0.0	0.0	13.8	0.2	0.2	8.8	3.4	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	2.4	0.0	0.0	0.3	3.5	3.7	1.4	17.6	18.8
LnGrp Delay(d),s/veh	39.6	0.0	0.0	43.6	0.0	0.0	61.3	4.6	4.6	54.9	10.4	10.4
LnGrp LOS	D			D			E	A	A	D	B	B
Approach Vol, veh/h		22			90			798			2172	
Approach Delay, s/veh		39.6			43.6			5.3			11.4	
Approach LOS		D			D			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.4	75.0		13.9	4.9	77.4		13.9
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0
Max Green Setting (Gmax), s	25.0	80.0		40.0	25.0	80.0		40.0
Max Q Clear Time (g_c+I1), s	4.7	9.9		3.3	2.6	38.7		8.9
Green Ext Time (p_c), s	0.0	7.8		0.1	0.0	32.7		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	11.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	10	20	110	10	40	40	709	30	35	2025	30
Future Volume (veh/h)	20	10	20	110	10	40	40	709	30	35	2025	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1597	1597	1881	1881	1900	1712	1712	1712	1776	1776	1900
Adj Flow Rate, veh/h	20	10	1	123	0	0	41	723	18	36	2066	31
Adj No. of Lanes	0	1	1	2	1	0	1	2	1	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	19	19	19	1	1	1	11	11	11	7	7	7
Cap, veh/h	27	14	36	225	118	0	52	2071	927	50	2158	32
Arrive On Green	0.03	0.03	0.03	0.06	0.00	0.00	0.03	0.64	0.64	0.03	0.63	0.61
Sat Flow, veh/h	1030	515	1357	3583	1881	0	1630	3252	1455	1691	3403	51
Grp Volume(v), veh/h	30	0	1	123	0	0	41	723	18	36	1022	1075
Grp Sat Flow(s),veh/h/ln	1545	0	1357	1792	1881	0	1630	1626	1455	1691	1687	1767
Q Serve(g_s), s	1.3	0.0	0.0	2.2	0.0	0.0	1.6	6.8	0.3	1.4	36.7	37.2
Cycle Q Clear(g_c), s	1.3	0.0	0.0	2.2	0.0	0.0	1.6	6.8	0.3	1.4	36.7	37.2
Prop In Lane	0.67		1.00	1.00		0.00	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	41	0	36	225	118	0	52	2071	927	50	1070	1120
V/C Ratio(X)	0.74	0.00	0.03	0.55	0.00	0.00	0.78	0.35	0.02	0.73	0.95	0.96
Avail Cap(c_a), veh/h	473	0	415	2739	1438	0	374	2071	927	388	1070	1121
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.6	0.0	31.0	29.7	0.0	0.0	31.4	5.5	4.4	31.5	11.1	11.2
Incr Delay (d2), s/veh	22.5	0.0	0.3	2.1	0.0	0.0	9.1	0.1	0.0	7.2	17.8	18.1
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	0.8	0.0	0.0	1.1	0.0	0.0	0.9	3.1	0.1	0.7	22.0	23.3
LnGrp Delay(d),s/veh	54.1	0.0	31.3	31.8	0.0	0.0	40.5	5.7	4.4	38.7	28.9	29.3
LnGrp LOS	D		C	C			D	A	A	D	C	C
Approach Vol, veh/h		31			123			782			2133	
Approach Delay, s/veh		53.4			31.8			7.5			29.3	
Approach LOS		D			C			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.9	45.7		5.7	6.1	45.5		8.1
Change Period (Y+Rc), s	4.0	5.5		4.0	4.0	5.5		4.0
Max Green Setting (Gmax), s	15.0	40.0		20.0	15.0	40.0		50.0
Max Q Clear Time (g_c+I1), s	3.4	8.8		3.3	3.6	39.2		4.2
Green Ext Time (p_c), s	0.0	7.2		0.1	0.0	0.8		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	24.1
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
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)	0	10	10	50	10	10	0	388	40	10	922	0
Future Volume (veh/h)	0	10	10	50	10	10	0	388	40	10	922	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1508	1508	1900	1624	1624	1900	1696	1696	1696
Adj Flow Rate, veh/h	0	11	0	53	11	0	0	413	40	11	981	0
Adj No. of Lanes	1	1	0	2	1	0	1	2	0	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	26	26	26	17	17	17	12	12	12
Cap, veh/h	2	20	0	87	124	0	2	2231	215	17	2694	1205
Arrive On Green	0.00	0.01	0.00	0.03	0.08	0.00	0.00	0.78	0.77	0.01	0.84	0.00
Sat Flow, veh/h	1810	1900	0	2786	1508	0	1547	2844	274	1616	3223	1442
Grp Volume(v), veh/h	0	11	0	53	11	0	0	223	230	11	981	0
Grp Sat Flow(s),veh/h/ln	1810	1900	0	1393	1508	0	1547	1543	1576	1616	1612	1442
Q Serve(g_s), s	0.0	0.6	0.0	1.8	0.7	0.0	0.0	3.6	3.7	0.7	7.0	0.0
Cycle Q Clear(g_c), s	0.0	0.6	0.0	1.8	0.7	0.0	0.0	3.6	3.7	0.7	7.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	2	20	0	87	124	0	2	1210	1236	17	2694	1205
V/C Ratio(X)	0.00	0.55	0.00	0.61	0.09	0.00	0.00	0.18	0.19	0.64	0.36	0.00
Avail Cap(c_a), veh/h	153	562	0	236	169	0	126	1210	1236	132	2694	1205
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.99	0.99	0.00	0.00	0.97	0.97	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	48.2	0.0	46.9	41.5	0.0	0.0	2.7	2.7	48.3	1.9	0.0
Incr Delay (d2), s/veh	0.0	29.3	0.0	2.5	0.4	0.0	0.0	0.3	0.3	14.1	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	0.0	0.5	0.0	0.7	0.3	0.0	0.0	1.6	1.7	0.4	3.1	0.0
LnGrp Delay(d),s/veh	0.0	77.5	0.0	49.4	42.0	0.0	0.0	3.0	3.0	62.4	2.3	0.0
LnGrp LOS		E		D	D			A	A	E	A	
Approach Vol, veh/h		11			64			453			992	
Approach Delay, s/veh		77.5			48.1			3.0			2.9	
Approach LOS		E			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.0	80.9	7.1	5.0	0.0	85.9	0.0	12.1
Change Period (Y+Rc), s	4.0	5.7	4.0	4.0	4.0	5.7	4.0	4.0
Max Green Setting (Gmax), s	8.0	35.0	8.3	29.0	8.0	35.0	8.3	11.0
Max Q Clear Time (g_c+I1), s	2.7	5.7	3.8	2.6	0.0	9.0	0.0	2.7
Green Ext Time (p_c), s	0.0	3.6	0.0	0.0	0.0	9.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	5.4
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	20	30	200	40	20	30	321	70	40	1163	30
Future Volume (veh/h)	20	20	30	200	40	20	30	321	70	40	1163	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1462	1462	1900	1827	1827	1900	1776	1776	1900	1845	1845	1900
Adj Flow Rate, veh/h	21	21	31	208	42	21	31	334	57	42	1211	30
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	30	30	30	4	4	4	7	7	7	3	3	3
Cap, veh/h	295	120	178	345	258	129	42	1714	290	53	2094	52
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.02	0.59	0.58	0.03	0.60	0.58
Sat Flow, veh/h	1042	532	786	1315	1142	571	1691	2888	488	1757	3495	87
Grp Volume(v), veh/h	21	0	52	208	0	63	31	194	197	42	607	634
Grp Sat Flow(s),veh/h/ln	1042	0	1318	1315	0	1714	1691	1687	1689	1757	1752	1829
Q Serve(g_s), s	1.3	0.0	2.5	12.1	0.0	2.4	1.5	4.2	4.3	1.9	17.0	17.0
Cycle Q Clear(g_c), s	3.7	0.0	2.5	14.7	0.0	2.4	1.5	4.2	4.3	1.9	17.0	17.0
Prop In Lane	1.00		0.60	1.00		0.33	1.00		0.29	1.00		0.05
Lane Grp Cap(c), veh/h	295	0	298	345	0	387	42	1001	1003	53	1050	1096
V/C Ratio(X)	0.07	0.00	0.17	0.60	0.00	0.16	0.74	0.19	0.20	0.79	0.58	0.58
Avail Cap(c_a), veh/h	511	0	572	619	0	743	169	1001	1003	176	1050	1096
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.00	0.99	1.00	0.00	1.00	0.98	0.98	0.98	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	0.0	24.9	30.8	0.0	24.9	38.7	7.5	7.6	38.5	9.8	9.9
Incr Delay (d2), s/veh	0.1	0.0	0.2	1.5	0.0	0.2	8.7	0.4	0.4	9.2	2.3	2.2
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	0.4	0.0	0.9	4.5	0.0	1.1	0.8	2.1	2.1	1.1	8.8	9.1
LnGrp Delay(d),s/veh	26.4	0.0	25.2	32.4	0.0	25.0	47.5	7.9	8.0	47.7	12.2	12.1
LnGrp LOS	C		C	C		C	D	A	A	D	B	B
Approach Vol, veh/h		73			271			422			1283	
Approach Delay, s/veh		25.6			30.7			10.9			13.3	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.4	51.5		22.1	6.0	51.9		22.1
Change Period (Y+Rc), s	4.0	5.3		4.0	4.0	5.3		4.0
Max Green Setting (Gmax), s	8.0	24.0		34.7	8.0	24.0		34.7
Max Q Clear Time (g_c+I1), s	3.9	6.3		5.7	3.5	19.0		16.7
Green Ext Time (p_c), s	0.0	3.1		0.3	0.0	3.8		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	15.5
HCM 2010 LOS	B

Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	170	64	357	80	194	1199
Future Volume (veh/h)	170	64	357	80	194	1199
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1792	1900	1845	1845
Adj Flow Rate, veh/h	175	66	368	62	200	1236
Adj No. of Lanes	2	1	2	0	1	2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	6	6	3	3
Cap, veh/h	270	124	1862	311	237	2882
Arrive On Green	0.08	0.08	0.64	0.62	0.13	0.82
Sat Flow, veh/h	3476	1599	3011	488	1757	3597
Grp Volume(v), veh/h	175	66	213	217	200	1236
Grp Sat Flow(s),veh/h/ln	1738	1599	1703	1706	1757	1752
Q Serve(g_s), s	3.9	3.2	4.2	4.3	8.9	7.7
Cycle Q Clear(g_c), s	3.9	3.2	4.2	4.3	8.9	7.7
Prop In Lane	1.00	1.00		0.29	1.00	
Lane Grp Cap(c), veh/h	270	124	1085	1088	237	2882
V/C Ratio(X)	0.65	0.53	0.20	0.20	0.84	0.43
Avail Cap(c_a), veh/h	726	334	1085	1088	264	2882
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.99	0.99	0.77	0.77
Uniform Delay (d), s/veh	35.8	35.5	6.0	6.1	33.8	2.0
Incr Delay (d2), s/veh	1.0	1.3	0.4	0.4	14.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	1.5	2.1	2.1	5.3	3.7
LnGrp Delay(d),s/veh	36.8	36.8	6.4	6.5	48.3	2.3
LnGrp LOS	D	D	A	A	D	A
Approach Vol, veh/h	241		430			1436
Approach Delay, s/veh	36.8		6.5			8.7
Approach LOS	D		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	14.8	55.0				69.8		10.2
Change Period (Y+Rc), s	4.0	5.3				5.3		4.0
Max Green Setting (Gmax), s	12.0	38.0				54.0		16.7
Max Q Clear Time (g_c+I1), s	10.9	6.3				9.7		5.9
Green Ext Time (p_c), s	0.0	4.0				18.1		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	11.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	90	0	73	0	364	60	64	1305	0
Future Volume (veh/h)	0	0	0	90	0	73	0	364	60	64	1305	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	0.99		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1845	1845	1776	1776	1900	1845	1845	1900
Adj Flow Rate, veh/h	0	0	0	93	0	5	0	375	50	66	1345	0
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	3	3	3	7	7	7	3	3	3
Cap, veh/h	0	2	0	122	0	109	2	2195	291	84	2910	0
Arrive On Green	0.00	0.00	0.00	0.07	0.00	0.07	0.00	0.73	0.72	0.10	1.00	0.00
Sat Flow, veh/h	0	1863	0	1743	0	1555	1691	2996	397	1757	3597	0
Grp Volume(v), veh/h	0	0	0	93	0	5	0	210	215	66	1345	0
Grp Sat Flow(s),veh/h/ln	0	1863	0	1743	0	1555	1691	1687	1706	1757	1752	0
Q Serve(g_s), s	0.0	0.0	0.0	4.2	0.0	0.2	0.0	3.0	3.1	2.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	4.2	0.0	0.2	0.0	3.0	3.1	2.9	0.0	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.23	1.00		0.00
Lane Grp Cap(c), veh/h	0	2	0	122	0	109	2	1236	1249	84	2910	0
V/C Ratio(X)	0.00	0.00	0.00	0.76	0.00	0.05	0.00	0.17	0.17	0.79	0.46	0.00
Avail Cap(c_a), veh/h	0	203	0	218	0	194	169	1236	1249	176	2910	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.99	0.99	0.89	0.89	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	36.6	0.0	34.7	0.0	3.3	3.3	35.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	7.2	0.0	0.1	0.0	0.3	0.3	5.4	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	0.0	0.0	0.0	2.3	0.0	0.1	0.0	1.5	1.6	1.6	0.2	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	43.8	0.0	34.8	0.0	3.6	3.6	41.2	0.5	0.0
LnGrp LOS				D		C		A	A	D	A	
Approach Vol, veh/h		0			98			425			1411	
Approach Delay, s/veh		0.0			43.3			3.6			2.4	
Approach LOS					D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.8	62.6		0.0	0.0	70.4		9.6
Change Period (Y+Rc), s	4.0	5.3		4.0	4.0	5.3		4.0
Max Green Setting (Gmax), s	8.0	36.0		8.7	8.0	36.0		10.0
Max Q Clear Time (g_c+I1), s	4.9	5.1		0.0	0.0	2.0		6.2
Green Ext Time (p_c), s	0.0	3.9		0.0	0.0	18.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	4.7
HCM 2010 LOS	A

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	20	20	30	20	53	40	321	50	143	1132	120
Future Volume (veh/h)	50	20	20	30	20	53	40	321	50	143	1132	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1900	1681	1900	1759	1759	1900	1863	1863	1900
Adj Flow Rate, veh/h	51	20	0	31	20	3	41	328	42	146	1155	117
Adj No. of Lanes	1	1	1	0	2	0	1	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	4	4	13	13	13	8	8	8	2	2	2
Cap, veh/h	96	101	86	88	78	12	59	1843	234	168	2196	222
Arrive On Green	0.06	0.06	0.00	0.05	0.05	0.05	0.04	0.62	0.60	0.09	0.68	0.66
Sat Flow, veh/h	1740	1827	1553	1601	1428	214	1675	2985	379	1774	3246	328
Grp Volume(v), veh/h	51	20	0	31	0	23	41	182	188	146	629	643
Grp Sat Flow(s),veh/h/ln	1740	1827	1553	1601	0	1642	1675	1671	1692	1774	1770	1805
Q Serve(g_s), s	2.6	0.9	0.0	1.7	0.0	1.2	2.2	4.2	4.3	7.3	16.0	16.2
Cycle Q Clear(g_c), s	2.6	0.9	0.0	1.7	0.0	1.2	2.2	4.2	4.3	7.3	16.0	16.2
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.22	1.00		0.18
Lane Grp Cap(c), veh/h	96	101	86	88	0	90	59	1032	1045	168	1197	1221
V/C Ratio(X)	0.53	0.20	0.00	0.35	0.00	0.25	0.69	0.18	0.18	0.87	0.53	0.53
Avail Cap(c_a), veh/h	323	339	288	276	0	283	149	1032	1045	168	1197	1221
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	41.4	40.6	0.0	41.0	0.0	40.8	42.9	7.4	7.5	40.2	7.3	7.4
Incr Delay (d2), s/veh	3.3	0.7	0.0	0.9	0.0	0.5	15.8	0.4	0.4	31.4	1.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.5	0.0	0.8	0.0	0.6	1.3	2.0	2.1	5.0	8.2	8.4
LnGrp Delay(d),s/veh	44.7	41.3	0.0	41.9	0.0	41.3	58.7	7.8	7.8	71.6	8.7	8.8
LnGrp LOS	D	D		D		D	E	A	A	E	A	A
Approach Vol, veh/h		71			54			411			1418	
Approach Delay, s/veh		43.7			41.6			12.9			15.2	
Approach LOS		D			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.5	59.6		9.0	7.2	64.9		8.9
Change Period (Y+Rc), s	4.0	5.3		4.0	4.5	5.3		4.5
Max Green Setting (Gmax), s	8.5	32.0		16.7	7.5	22.5		15.0
Max Q Clear Time (g_c+I1), s	19.3	6.3		4.6	4.2	18.2		3.7
Green Ext Time (p_c), s	0.0	3.2		0.1	0.0	3.3		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	16.5
HCM 2010 LOS	B

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	70	120	181	90	260	0	0	912	330
Future Volume (veh/h)	0	0	0	70	120	181	90	260	0	0	912	330
Number				7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1769	1900	1863	1759	0	0	1828	1863
Adj Flow Rate, veh/h				75	129	29	97	280	0	0	981	355
Adj No. of Lanes				0	2	0	1	2	0	0	2	1
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	0	2	8	0	0	4	2
Cap, veh/h				148	270	62	152	2229	0	0	1672	724
Arrive On Green				0.11	0.14	0.14	0.09	0.67	0.00	0.00	0.46	0.46
Sat Flow, veh/h				1052	1912	443	1774	3431	0	0	3656	1583
Grp Volume(v), veh/h				122	0	111	97	280	0	0	981	355
Grp Sat Flow(s),veh/h/ln				1716	0	1691	1774	1671	0	0	1828	1583
Q Serve(g_s), s				2.4	0.0	2.2	1.9	1.1	0.0	0.0	7.2	5.7
Cycle Q Clear(g_c), s				2.4	0.0	2.2	1.9	1.1	0.0	0.0	7.2	5.7
Prop In Lane				0.61		0.26	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				242	0	238	152	2229	0	0	1672	724
V/C Ratio(X)				0.51	0.00	0.46	0.64	0.13	0.00	0.00	0.59	0.49
Avail Cap(c_a), veh/h				990	0	975	463	2229	0	0	1908	826
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	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				14.8	0.0	14.4	16.1	2.2	0.0	0.0	7.3	6.9
Incr Delay (d2), s/veh				2.0	0.0	1.7	4.4	0.0	0.0	0.0	0.7	1.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				1.3	0.0	1.1	1.1	0.5	0.0	0.0	3.7	2.7
LnGrp Delay(d),s/veh				16.7	0.0	16.1	20.5	2.2	0.0	0.0	8.1	8.0
LnGrp LOS				B		B	C	A			A	A
Approach Vol, veh/h					233			377			1336	
Approach Delay, s/veh					16.4			6.9			8.0	
Approach LOS					B			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		28.3		8.1	7.6	20.7		
Change Period (Y+Rc), s		4.0		3.0	4.5	4.0		
Max Green Setting (Gmax), s		18.0		21.0	9.5	19.0		
Max Q Clear Time (g_c+I1), s		3.1		4.4	3.9	9.2		
Green Ext Time (p_c), s		1.9		1.2	0.1	7.4		

Intersection Summary	
HCM 2010 Ctrl Delay	8.8
HCM 2010 LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
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)	130	150	80	0	0	0	0	180	180	642	370	0
Future Volume (veh/h)	130	150	80	0	0	0	0	180	180	642	370	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792				0	1624	1624	1810	1810	0
Adj Flow Rate, veh/h	140	161	9				0	194	97	690	398	0
Adj No. of Lanes	1	1	1				0	2	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	6	6				0	17	17	5	5	0
Cap, veh/h	222	233	198				0	551	234	646	2303	0
Arrive On Green	0.13	0.13	0.13				0.00	0.17	0.17	0.38	0.67	0.00
Sat Flow, veh/h	1707	1792	1524				0	3248	1380	1723	3529	0
Grp Volume(v), veh/h	140	161	9				0	194	97	690	398	0
Grp Sat Flow(s),veh/h/ln	1707	1792	1524				0	1624	1380	1723	1719	0
Q Serve(g_s), s	3.1	3.4	0.2				0.0	2.1	2.5	15.0	1.7	0.0
Cycle Q Clear(g_c), s	3.1	3.4	0.2				0.0	2.1	2.5	15.0	1.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	222	233	198				0	551	234	646	2303	0
V/C Ratio(X)	0.63	0.69	0.05				0.00	0.35	0.41	1.07	0.17	0.00
Avail Cap(c_a), veh/h	726	762	648				0	1543	656	646	2303	0
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	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	16.5	16.6	15.2				0.0	14.7	14.8	12.5	2.5	0.0
Incr Delay (d2), s/veh	2.9	3.6	0.1				0.0	0.8	2.5	54.8	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	1.6	1.9	0.1				0.0	1.0	1.1	16.8	0.8	0.0
LnGrp Delay(d),s/veh	19.4	20.2	15.3				0.0	15.5	17.3	67.3	2.5	0.0
LnGrp LOS	B	C	B					B	B	F	A	
Approach Vol, veh/h		310						291			1088	
Approach Delay, s/veh		19.7						16.1			43.6	
Approach LOS		B						B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	30.0	10.8		9.2		30.8		
Change Period (Y+Rc), s	4.0	* 4		3.0		4.0		
Max Green Setting (Gmax), s	16.0	* 19		18.0		18.0		
Max Q Clear Time (g_c+I1), s	17.0	4.5		5.4		3.7		
Green Ext Time (p_c), s	0.0	2.3		1.0		2.8		

Intersection Summary	
HCM 2010 Ctrl Delay	34.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	10	110	50	108	40	260	30	210	672	70
Future Volume (veh/h)	10	10	10	110	50	108	40	260	30	210	672	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	90	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1776	1624	1624	1624	1776	1776	1776	1667	1667	1667
Adj Flow Rate, veh/h	11	11	0	84	97	43	42	274	0	221	707	33
Adj No. of Lanes	1	1	1	1	1	2	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	7	7	7	17	17	17	7	7	7	14	14	14
Cap, veh/h	86	91	77	141	148	1572	30	494	221	616	1926	861
Arrive On Green	0.09	0.09	0.00	0.11	0.11	0.11	0.01	0.22	0.00	0.19	0.39	0.39
Sat Flow, veh/h	1691	1776	1509	1547	1624	2761	1691	3374	1509	1587	3167	1417
Grp Volume(v), veh/h	11	11	0	84	97	43	42	274	0	221	707	33
Grp Sat Flow(s),veh/h/ln	1691	1776	1509	1547	1624	1380	1691	1687	1509	1587	1583	1417
Q Serve(g_s), s	0.2	0.2	0.0	2.1	2.3	0.4	0.5	2.8	0.0	5.3	7.0	0.6
Cycle Q Clear(g_c), s	0.2	0.2	0.0	2.1	2.3	0.4	0.5	2.8	0.0	5.3	7.0	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	86	91	77	141	148	1572	30	494	221	616	1926	861
V/C Ratio(X)	0.13	0.12	0.00	0.60	0.66	0.03	1.39	0.55	0.00	0.36	0.37	0.04
Avail Cap(c_a), veh/h	823	864	735	1042	1094	2372	802	2569	1149	1981	2411	1079
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	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.1	35.1	0.0	33.7	33.9	6.5	43.2	31.2	0.0	17.3	6.8	5.4
Incr Delay (d2), s/veh	0.2	0.2	0.0	1.5	1.8	0.0	193.1	1.0	0.0	0.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	240.1	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.0	1.8	2.1	0.2	2.3	2.8	0.0	53.6	3.5	0.3
LnGrp Delay(d),s/veh	35.4	35.3	0.0	35.2	35.7	6.5	236.3	32.2	0.0	257.9	7.0	5.5
LnGrp LOS	D	D		D	D	A	F	C		F	A	A
Approach Vol, veh/h		22			224			316			961	
Approach Delay, s/veh		35.4			29.9			59.3			64.6	
Approach LOS		D			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.4	12.8		7.5	4.5	19.7		8.4
Change Period (Y+Rc), s	4.0	4.5		3.5	3.0	4.5		4.0
Max Green Setting (Gmax), s	50.0	30.0		20.0	20.0	30.0		27.0
Max Q Clear Time (g_c+I1), s	7.3	4.8		2.2	2.5	9.0		4.3
Green Ext Time (p_c), s	0.8	1.5		0.0	0.0	6.2		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	58.0
HCM 2010 LOS	E

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	10	10	80	10	10	10	98	40	10	70	10
Future Vol, veh/h	10	10	10	80	10	10	10	98	40	10	70	10
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	11	11	85	11	11	11	104	43	11	74	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Righ	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.7	8.4	8.2	8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	33%	80%	11%
Vol Thru, %	66%	33%	10%	78%
Vol Right, %	27%	33%	10%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	148	30	100	90
LT Vol	10	10	80	10
Through Vol	98	10	10	70
RT Vol	40	10	10	10
Lane Flow Rate	157	32	106	96
Geometry Grp	1	1	1	1
Degree of Util (X)	0.185	0.04	0.137	0.117
Departure Headway (Hd)	4.22	4.489	4.63	4.384
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	852	798	776	820
Service Time	2.235	2.512	2.651	2.402
HCM Lane V/C Ratio	0.184	0.04	0.137	0.117
HCM Control Delay	8.2	7.7	8.4	8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.1	0.5	0.4

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	45	30	118	120	60
Future Vol, veh/h	30	45	30	118	120	60
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	-	-	-	-	145
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	48	32	126	128	64

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	318	128	192	0	-	0
Stage 1	128	-	-	-	-	-
Stage 2	190	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	675	922	1381	-	-	-
Stage 1	898	-	-	-	-	-
Stage 2	842	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	658	922	1381	-	-	-
Mov Cap-2 Maneuver	658	-	-	-	-	-
Stage 1	876	-	-	-	-	-
Stage 2	842	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	1.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1381	-	794	-	-
HCM Lane V/C Ratio	0.023	-	0.1	-	-
HCM Control Delay (s)	7.7	0	10	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	50	20	70	20	42	10	76	40	45	130	20
Future Vol, veh/h	30	50	20	70	20	42	10	76	40	45	130	20
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	1	1	1	7	7	7	3	3	3
Mvmt Flow	32	53	21	74	21	45	11	81	43	48	138	21
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.7	8.9	8.7	9.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	30%	53%	23%
Vol Thru, %	60%	50%	15%	67%
Vol Right, %	32%	20%	32%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	126	100	132	195
LT Vol	10	30	70	45
Through Vol	76	50	20	130
RT Vol	40	20	42	20
Lane Flow Rate	134	106	140	207
Geometry Grp	1	1	1	1
Degree of Util (X)	0.175	0.143	0.186	0.27
Departure Headway (Hd)	4.691	4.825	4.773	4.691
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	761	739	748	763
Service Time	2.741	2.878	2.824	2.738
HCM Lane V/C Ratio	0.176	0.143	0.187	0.271
HCM Control Delay	8.7	8.7	8.9	9.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.5	0.7	1.1

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	50	120	162	10	30	60
Future Vol, veh/h	50	120	162	10	30	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	178	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	128	172	11	32	64

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	183	0	-	0	412	178
Stage 1	-	-	-	-	178	-
Stage 2	-	-	-	-	234	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1392	-	-	-	596	865
Stage 1	-	-	-	-	853	-
Stage 2	-	-	-	-	805	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1392	-	-	-	573	865
Mov Cap-2 Maneuver	-	-	-	-	573	-
Stage 1	-	-	-	-	821	-
Stage 2	-	-	-	-	805	-

Approach	EB	WB	SB
HCM Control Delay, s	2.3	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1392	-	-	-	739
HCM Lane V/C Ratio	0.038	-	-	-	0.13
HCM Control Delay (s)	7.7	-	-	-	10.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	30	220	80	50	30	110	810	30	10	1050	70
Future Volume (veh/h)	50	30	220	80	50	30	110	810	30	10	1050	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	53	32	0	85	53	21	117	862	0	11	1117	70
Adj No. of Lanes	0	1	1	0	1	0	1	2	1	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	235	106	202	219	77	27	152	2023	905	12	1665	104
Arrive On Green	0.14	0.13	0.00	0.13	0.13	0.13	0.09	0.57	0.00	0.01	0.49	0.49
Sat Flow, veh/h	877	831	1583	804	607	215	1774	3539	1583	1774	3383	212
Grp Volume(v), veh/h	85	0	0	159	0	0	117	862	0	11	584	603
Grp Sat Flow(s),veh/h/ln	1708	0	1583	1626	0	0	1774	1770	1583	1774	1770	1825
Q Serve(g_s), s	0.0	0.0	0.0	2.4	0.0	0.0	3.1	6.6	0.0	0.3	11.9	11.9
Cycle Q Clear(g_c), s	2.0	0.0	0.0	4.4	0.0	0.0	3.1	6.6	0.0	0.3	11.9	11.9
Prop In Lane	0.62		1.00	0.53		0.13	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	359	0	202	324	0	0	152	2023	905	12	871	899
V/C Ratio(X)	0.24	0.00	0.00	0.49	0.00	0.00	0.77	0.43	0.00	0.95	0.67	0.67
Avail Cap(c_a), veh/h	980	0	865	998	0	0	783	2232	998	969	1116	1151
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.8	0.0	0.0	19.9	0.0	0.0	21.3	5.8	0.0	23.6	9.2	9.2
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.4	0.0	0.0	3.0	0.2	0.0	62.2	1.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.0	2.0	0.0	0.0	1.6	3.2	0.0	0.3	6.0	6.2
LnGrp Delay(d),s/veh	19.0	0.0	0.0	20.4	0.0	0.0	24.3	6.0	0.0	85.8	10.6	10.5
LnGrp LOS	B			C			C	A		F	B	B
Approach Vol, veh/h		85			159			979			1198	
Approach Delay, s/veh		19.0			20.4			8.2			11.2	
Approach LOS		B			C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.3	32.2		11.1	8.1	28.4		11.1
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		* 5
Max Green Setting (Gmax), s	26.0	30.0		26.0	21.0	30.0		* 27
Max Q Clear Time (g_c+I1), s	2.3	8.6		4.0	5.1	13.9		6.4
Green Ext Time (p_c), s	0.0	8.5		0.2	0.1	9.5		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	10.9
HCM 2010 LOS	B

Notes

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

HCM 2010 Research does not support Non-NEMA phasing.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	1426	120	220	372	300	200	120	730	120	250	655
Future Volume (veh/h)	190	1426	120	220	372	300	200	120	730	120	250	655
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1845	1845	1845
Adj Flow Rate, veh/h	196	1470	75	227	384	0	206	124	284	124	258	93
Adj No. of Lanes	1	3	1	2	1	1	1	1	2	1	1	2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	3	3
Cap, veh/h	219	2609	810	295	885	753	228	370	551	146	283	423
Arrive On Green	0.12	0.51	0.51	0.09	0.48	0.00	0.13	0.20	0.20	0.08	0.15	0.15
Sat Flow, veh/h	1774	5085	1579	3442	1863	1583	1774	1863	2774	1757	1845	2760
Grp Volume(v), veh/h	196	1470	75	227	384	0	206	124	284	124	258	93
Grp Sat Flow(s),veh/h/ln	1774	1695	1579	1721	1863	1583	1774	1863	1387	1757	1845	1380
Q Serve(g_s), s	15.2	27.7	3.4	9.0	19.1	0.0	16.0	8.0	12.8	9.7	19.3	4.1
Cycle Q Clear(g_c), s	15.2	27.7	3.4	9.0	19.1	0.0	16.0	8.0	12.8	9.7	19.3	4.1
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	219	2609	810	295	885	753	228	370	551	146	283	423
V/C Ratio(X)	0.90	0.56	0.09	0.77	0.43	0.00	0.90	0.33	0.52	0.85	0.91	0.22
Avail Cap(c_a), veh/h	329	2609	810	442	885	753	253	612	911	201	540	808
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.5	23.4	17.4	62.6	24.3	0.0	60.1	48.1	50.1	63.3	58.3	51.9
Incr Delay (d2), s/veh	13.9	0.9	0.2	2.1	1.5	0.0	28.7	0.2	0.3	16.3	4.7	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	8.3	13.1	1.5	4.4	10.2	0.0	9.7	4.2	4.9	5.4	10.2	1.6
LnGrp Delay(d),s/veh	74.4	24.2	17.7	64.7	25.8	0.0	88.8	48.3	50.3	79.6	63.1	52.0
LnGrp LOS	E	C	B	E	C		F	D	D	E	E	D
Approach Vol, veh/h		1741			611			614			475	
Approach Delay, s/veh		29.6			40.3			62.8			65.2	
Approach LOS		C			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.7	76.9	21.7	25.7	21.0	71.6	15.4	32.0
Change Period (Y+Rc), s	3.7	5.1	3.7	* 4.2	3.7	5.1	3.7	* 4.2
Max Green Setting (Gmax), s	18.0	43.3	20.0	* 41	26.0	35.3	16.0	* 46
Max Q Clear Time (g_c+I1), s	11.0	29.7	18.0	21.3	17.2	21.1	11.7	14.8
Green Ext Time (p_c), s	0.0	2.0	0.0	0.2	0.0	0.2	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	42.3
HCM 2010 LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	639	1616	40	100	677	500	40	1010	70	160	350	211
Future Volume (veh/h)	639	1616	40	100	677	500	40	1010	70	160	350	211
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1827	1827	1827	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	666	1683	40	104	705	0	42	1052	18	167	365	74
Adj No. of Lanes	2	3	0	2	3	1	1	2	1	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	4	4	4	1	1	1	2	2	2
Cap, veh/h	736	1856	44	141	954	297	54	923	413	195	1197	535
Arrive On Green	0.21	0.36	0.36	0.04	0.19	0.00	0.03	0.26	0.26	0.11	0.34	0.34
Sat Flow, veh/h	3442	5109	121	3375	4988	1553	1792	3574	1597	1774	3539	1581
Grp Volume(v), veh/h	666	1117	606	104	705	0	42	1052	18	167	365	74
Grp Sat Flow(s),veh/h/ln	1721	1695	1841	1688	1663	1553	1792	1787	1597	1774	1770	1581
Q Serve(g_s), s	22.6	37.5	37.5	3.7	16.0	0.0	2.8	31.0	1.0	11.1	9.1	3.9
Cycle Q Clear(g_c), s	22.6	37.5	37.5	3.7	16.0	0.0	2.8	31.0	1.0	11.1	9.1	3.9
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	736	1231	669	141	954	297	54	923	413	195	1197	535
V/C Ratio(X)	0.91	0.91	0.91	0.74	0.74	0.00	0.78	1.14	0.04	0.86	0.30	0.14
Avail Cap(c_a), veh/h	860	1231	669	141	954	297	72	923	413	263	1298	580
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.36	0.36	0.36	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.0	36.3	36.3	56.9	45.7	0.0	57.8	44.5	33.4	52.5	29.3	27.6
Incr Delay (d2), s/veh	4.7	4.6	7.9	17.7	5.1	0.0	28.0	75.9	0.1	18.2	0.2	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	11.2	18.3	20.5	2.1	7.8	0.0	1.8	25.0	0.5	6.4	4.5	1.7
LnGrp Delay(d),s/veh	50.7	40.8	44.1	74.6	50.8	0.0	85.8	120.4	33.5	70.6	29.5	27.8
LnGrp LOS	D	D	D	E	D		F	F	C	E	C	C
Approach Vol, veh/h		2389			809			1112			606	
Approach Delay, s/veh		44.4			53.9			117.7			40.6	
Approach LOS		D			D			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	50.8	9.6	47.6	32.6	30.1	19.2	38.0
Change Period (Y+Rc), s	7.0	7.2	6.0	7.0	7.0	7.2	6.0	7.0
Max Green Setting (Gmax), s	5.0	39.0	4.8	44.0	30.0	14.0	17.8	31.0
Max Q Clear Time (g_c+I1), s	15.7	39.5	4.8	11.1	24.6	18.0	13.1	33.0
Green Ext Time (p_c), s	0.0	0.0	0.0	4.4	1.0	0.0	0.2	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	62.1
HCM 2010 LOS	E

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	1905	212	80	608	240	72	30	170	220	50	92
Future Volume (veh/h)	62	1905	212	80	608	240	72	30	170	220	50	92
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1792	1792	1792	1881	1881	1881	1792	1792	1792
Adj Flow Rate, veh/h	66	2027	121	85	647	108	77	32	8	234	53	14
Adj No. of Lanes	2	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	6	6	6	1	1	1	6	6	6
Cap, veh/h	111	2403	748	106	2418	753	103	144	121	278	334	280
Arrive On Green	0.03	0.47	0.47	0.06	0.49	0.49	0.06	0.08	0.08	0.16	0.19	0.19
Sat Flow, veh/h	3476	5136	1598	1707	4893	1523	1792	1881	1580	1707	1792	1501
Grp Volume(v), veh/h	66	2027	121	85	647	108	77	32	8	234	53	14
Grp Sat Flow(s),veh/h/ln	1738	1712	1598	1707	1631	1523	1792	1881	1580	1707	1792	1501
Q Serve(g_s), s	2.3	43.0	5.4	6.1	9.5	4.8	5.2	2.0	0.6	16.5	3.1	0.9
Cycle Q Clear(g_c), s	2.3	43.0	5.4	6.1	9.5	4.8	5.2	2.0	0.6	16.5	3.1	0.9
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	111	2403	748	106	2418	753	103	144	121	278	334	280
V/C Ratio(X)	0.60	0.84	0.16	0.80	0.27	0.14	0.75	0.22	0.07	0.84	0.16	0.05
Avail Cap(c_a), veh/h	842	2489	774	345	2418	753	434	456	383	689	434	364
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	59.1	29.0	19.0	57.3	18.2	17.0	57.5	53.7	53.1	50.2	42.2	41.4
Incr Delay (d2), s/veh	1.9	2.9	0.1	5.1	0.1	0.1	20.6	1.1	0.3	13.3	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	20.9	2.4	3.0	4.3	2.0	3.2	1.1	0.3	8.8	1.5	0.4
LnGrp Delay(d),s/veh	61.0	31.9	19.1	62.4	18.3	17.2	78.1	54.8	53.4	63.5	42.5	41.5
LnGrp LOS	E	C	B	E	B	B	E	D	D	E	D	D
Approach Vol, veh/h		2214			840			117			301	
Approach Delay, s/veh		32.0			22.6			70.0			58.8	
Approach LOS		C			C			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.7	64.9	14.1	30.1	11.4	68.2	27.7	16.5
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.5	7.0	7.5	7.0
Max Green Setting (Gmax), s	25.0	60.0	30.0	30.0	30.0	60.0	50.0	30.0
Max Q Clear Time (g_c+I1), s	8.1	45.0	7.2	5.1	4.3	11.5	18.5	4.0
Green Ext Time (p_c), s	0.1	13.0	0.4	0.4	0.1	7.3	1.7	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	33.4
HCM 2010 LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	2059	1084	60	672	40	154	60	80	40	70	20
Future Volume (veh/h)	30	2059	1084	60	672	40	154	60	80	40	70	20
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1776	1776	1776	1827	1827	1827	1900	1900	1900
Adj Flow Rate, veh/h	32	2214	724	65	723	21	166	65	8	43	75	0
Adj No. of Lanes	2	3	1	1	3	1	2	1	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	7	7	7	4	4	4	0	0	0
Cap, veh/h	87	2785	867	83	2769	862	354	186	155	124	248	0
Arrive On Green	0.03	0.55	0.55	0.05	0.57	0.57	0.10	0.10	0.10	0.07	0.07	0.00
Sat Flow, veh/h	3442	5085	1583	1691	4848	1509	3480	1827	1521	1810	3705	0
Grp Volume(v), veh/h	32	2214	724	65	723	21	166	65	8	43	75	0
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1691	1616	1509	1740	1827	1521	1810	1805	0
Q Serve(g_s), s	0.7	28.3	30.9	3.1	6.1	0.5	3.7	2.7	0.4	1.8	1.6	0.0
Cycle Q Clear(g_c), s	0.7	28.3	30.9	3.1	6.1	0.5	3.7	2.7	0.4	1.8	1.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	87	2785	867	83	2769	862	354	186	155	124	248	0
V/C Ratio(X)	0.37	0.79	0.83	0.79	0.26	0.02	0.47	0.35	0.05	0.35	0.30	0.00
Avail Cap(c_a), veh/h	848	2819	878	729	2769	862	1072	563	468	557	1112	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	38.9	14.7	15.3	38.2	8.8	7.6	34.4	33.9	32.9	36.1	35.9	0.0
Incr Delay (d2), s/veh	1.0	1.7	7.2	6.1	0.1	0.0	1.4	1.6	0.2	0.6	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	13.6	15.0	1.6	2.7	0.2	1.8	1.4	0.2	0.9	0.8	0.0
LnGrp Delay(d),s/veh	39.9	16.4	22.5	44.3	8.8	7.6	35.7	35.5	33.1	36.7	36.2	0.0
LnGrp LOS	D	B	C	D	A	A	D	D	C	D	D	
Approach Vol, veh/h		2970			809			239			118	
Approach Delay, s/veh		18.2			11.7			35.6			36.4	
Approach LOS		B			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	50.2		10.2	6.1	52.1		12.9
Change Period (Y+Rc), s	4.0	5.7		4.6	4.0	5.7		4.6
Max Green Setting (Gmax), s	35.0	45.0		25.0	20.0	45.0		25.0
Max Q Clear Time (g_c+I1), s	5.1	32.9		3.8	2.7	8.1		5.7
Green Ext Time (p_c), s	0.1	11.5		0.3	0.0	7.4		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	18.4
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
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)	10	2403	20	60	756	20	20	10	610	20	10	10
Future Volume (veh/h)	10	2403	20	60	756	20	20	10	610	20	10	10
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1900	1845	1900	1900	1845	1900
Adj Flow Rate, veh/h	11	2529	10	63	796	12	21	11	407	21	11	3
Adj No. of Lanes	1	2	1	1	2	1	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	19	1812	810	80	1911	855	60	20	387	162	74	15
Arrive On Green	0.01	0.52	0.52	0.05	0.55	0.55	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	38	77	1460	321	279	56
Grp Volume(v), veh/h	11	2529	10	63	796	12	439	0	0	35	0	0
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1568	1574	0	0	657	0	0
Q Serve(g_s), s	0.5	39.0	0.2	2.7	10.1	0.3	10.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	39.0	0.2	2.7	10.1	0.3	20.0	0.0	0.0	1.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.05		0.93	0.60		0.09
Lane Grp Cap(c), veh/h	19	1812	810	80	1911	855	467	0	0	250	0	0
V/C Ratio(X)	0.57	1.40	0.01	0.78	0.42	0.01	0.94	0.00	0.00	0.14	0.00	0.00
Avail Cap(c_a), veh/h	338	1812	810	349	1911	855	467	0	0	250	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	37.1	18.2	8.9	35.6	10.1	7.9	28.2	0.0	0.0	20.8	0.0	0.0
Incr Delay (d2), s/veh	9.6	181.7	0.0	6.1	0.2	0.0	27.1	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	64.3	0.1	1.4	4.9	0.1	12.5	0.0	0.0	0.6	0.0	0.0
LnGrp Delay(d),s/veh	46.8	199.9	8.9	41.7	10.3	7.9	55.3	0.0	0.0	21.0	0.0	0.0
LnGrp LOS	D	F	A	D	B	A	E			C		
Approach Vol, veh/h		2550			871			439			35	
Approach Delay, s/veh		198.5			12.5			55.3			21.0	
Approach LOS		F			B			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.5	44.0		24.0	5.3	46.1		24.0
Change Period (Y+Rc), s	4.0	5.0		4.0	4.5	5.0		4.0
Max Green Setting (Gmax), s	15.0	39.0		20.0	14.5	39.0		20.0
Max Q Clear Time (g_c+I1), s	4.7	41.0		22.0	2.5	12.1		3.1
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	7.6		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	139.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	30	20	188	10	73	40	2320	338	76	680	30
Future Volume (veh/h)	40	30	20	188	10	73	40	2320	338	76	680	30
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1727	1727	1727	1863	1863	1863	1792	1792	1792
Adj Flow Rate, veh/h	41	31	6	199	0	8	41	2367	304	78	694	19
Adj No. of Lanes	1	1	0	2	0	1	1	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	6	6	6	10	10	10	2	2	2	6	6	6
Cap, veh/h	65	55	11	291	0	130	53	2311	1034	98	2319	1037
Arrive On Green	0.04	0.04	0.04	0.09	0.00	0.09	0.03	0.65	0.65	0.06	0.68	0.68
Sat Flow, veh/h	1707	1460	283	3290	0	1468	1774	3539	1583	1707	3406	1524
Grp Volume(v), veh/h	41	0	37	199	0	8	41	2367	304	78	694	19
Grp Sat Flow(s),veh/h/ln	1707	0	1743	1645	0	1468	1774	1770	1583	1707	1703	1524
Q Serve(g_s), s	2.9	0.0	2.6	7.2	0.0	0.6	2.8	80.0	10.1	5.5	10.0	0.5
Cycle Q Clear(g_c), s	2.9	0.0	2.6	7.2	0.0	0.6	2.8	80.0	10.1	5.5	10.0	0.5
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	65	0	66	291	0	130	53	2311	1034	98	2319	1037
V/C Ratio(X)	0.64	0.00	0.56	0.68	0.00	0.06	0.78	1.02	0.29	0.79	0.30	0.02
Avail Cap(c_a), veh/h	139	0	142	671	0	300	362	2311	1034	348	2319	1037
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.1	0.0	58.0	54.2	0.0	51.2	59.0	21.3	9.1	57.0	7.8	6.3
Incr Delay (d2), s/veh	9.9	0.0	7.3	9.8	0.0	0.7	8.8	25.2	0.2	5.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	1.4	3.7	0.0	0.3	1.5	46.6	4.5	2.7	4.7	0.2
LnGrp Delay(d),s/veh	68.0	0.0	65.3	64.0	0.0	51.9	67.8	46.5	9.4	62.3	7.9	6.3
LnGrp LOS	E		E	E		D	E	F	A	E	A	A
Approach Vol, veh/h		78			207			2712			791	
Approach Delay, s/veh		66.7			63.6			42.6			13.3	
Approach LOS		E			E			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.1	86.0		15.8	7.6	89.4		9.6
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0
Max Green Setting (Gmax), s	25.0	80.0		25.0	25.0	80.0		10.0
Max Q Clear Time (g_c+I1), s	7.5	82.0		9.2	4.8	12.0		4.9
Green Ext Time (p_c), s	0.1	0.0		1.7	0.0	7.5		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	38.1
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	240	20	70	83	28	640
Future Volume (veh/h)	240	20	70	83	28	640
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	264	20	77	91	31	525
Adj No. of Lanes	1	0	1	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	10	10	2	2	2	2
Cap, veh/h	370	28	203	840	609	725
Arrive On Green	0.23	0.23	0.11	0.45	0.34	0.34
Sat Flow, veh/h	1586	120	1774	1863	1774	1583
Grp Volume(v), veh/h	0	284	77	91	31	525
Grp Sat Flow(s),veh/h/ln	0	1706	1774	1863	1774	1583
Q Serve(g_s), s	0.0	6.7	1.8	1.2	0.5	11.8
Cycle Q Clear(g_c), s	0.0	6.7	1.8	1.2	0.5	11.8
Prop In Lane		0.07	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	398	203	840	609	725
V/C Ratio(X)	0.00	0.71	0.38	0.11	0.05	0.72
Avail Cap(c_a), veh/h	0	1269	2173	3859	833	924
HCM Platoon Ratio	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	1.00
Uniform Delay (d), s/veh	0.0	15.4	17.9	6.9	9.6	9.6
Incr Delay (d2), s/veh	0.0	2.4	1.2	0.1	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.3	0.9	0.6	0.3	5.5
LnGrp Delay(d),s/veh	0.0	17.8	19.1	7.0	9.6	11.7
LnGrp LOS		B	B	A	A	B
Approach Vol, veh/h	284			168	556	
Approach Delay, s/veh	17.8			12.5	11.6	
Approach LOS	B			B	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		19.5	9.5	14.7				24.2
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		20.5	53.5	32.5				90.5
Max Q Clear Time (g_c+I1), s		13.8	3.8	8.7				3.2
Green Ext Time (p_c), s		1.3	0.2	1.6				0.5

Intersection Summary	
HCM 2010 Ctrl Delay	13.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	10	10	50	10	50	10	2628	100	25	843	20
Future Volume (veh/h)	20	10	10	50	10	50	10	2628	100	25	843	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1696	1900	1863	1863	1900	1827	1827	1900
Adj Flow Rate, veh/h	21	11	2	53	11	30	11	2766	104	26	887	20
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	12	12	12	2	2	2	4	4	4
Cap, veh/h	128	58	8	114	22	39	19	2618	98	35	2648	60
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.01	0.75	0.75	0.02	0.76	0.76
Sat Flow, veh/h	851	684	96	709	256	452	1774	3476	130	1740	3470	78
Grp Volume(v), veh/h	34	0	0	94	0	0	11	1398	1472	26	444	463
Grp Sat Flow(s),veh/h/ln	1632	0	0	1418	0	0	1774	1770	1837	1740	1736	1813
Q Serve(g_s), s	0.0	0.0	0.0	4.9	0.0	0.0	0.7	80.0	80.0	1.6	8.6	8.6
Cycle Q Clear(g_c), s	1.9	0.0	0.0	6.8	0.0	0.0	0.7	80.0	80.0	1.6	8.6	8.6
Prop In Lane	0.62		0.06	0.56		0.32	1.00		0.07	1.00		0.04
Lane Grp Cap(c), veh/h	194	0	0	174	0	0	19	1333	1383	35	1324	1383
V/C Ratio(X)	0.18	0.00	0.00	0.54	0.00	0.00	0.59	1.05	1.06	0.74	0.34	0.34
Avail Cap(c_a), veh/h	641	0	0	571	0	0	418	1333	1383	410	1324	1383
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.3	0.0	0.0	47.4	0.0	0.0	52.3	13.1	13.1	51.8	4.0	4.0
Incr Delay (d2), s/veh	0.4	0.0	0.0	2.6	0.0	0.0	10.8	38.6	43.2	10.8	0.2	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	1.0	0.0	0.0	2.8	0.0	0.0	0.4	52.4	56.2	0.9	4.1	4.3
LnGrp Delay(d),s/veh	45.7	0.0	0.0	50.0	0.0	0.0	63.1	51.7	56.3	62.5	4.2	4.2
LnGrp LOS	D			D			E	F	F	E	A	A
Approach Vol, veh/h		34			94			2881			933	
Approach Delay, s/veh		45.7			50.0			54.1			5.8	
Approach LOS		D			D			D			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.1	86.0		14.1	5.1	87.0		14.1
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0
Max Green Setting (Gmax), s	25.0	80.0		40.0	25.0	80.0		40.0
Max Q Clear Time (g_c+I1), s	3.6	82.0		3.9	2.7	10.6		8.8
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	9.5		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	42.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	20	40	60	10	50	30	2638	330	44	839	10
Future Volume (veh/h)	50	20	40	60	10	50	30	2638	330	44	839	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1881	1881	1900	1845	1845	1845	1827	1827	1900
Adj Flow Rate, veh/h	52	21	3	71	0	0	31	2720	299	45	865	10
Adj No. of Lanes	0	1	1	2	1	0	1	2	1	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	1	1	1	3	3	3	4	4	4
Cap, veh/h	71	29	88	158	83	0	46	2113	944	59	2146	25
Arrive On Green	0.06	0.06	0.06	0.04	0.00	0.00	0.03	0.60	0.60	0.03	0.61	0.61
Sat Flow, veh/h	1281	517	1583	3583	1881	0	1757	3505	1567	1740	3515	41
Grp Volume(v), veh/h	73	0	3	71	0	0	31	2720	299	45	427	448
Grp Sat Flow(s),veh/h/ln	1799	0	1583	1792	1881	0	1757	1752	1567	1740	1736	1820
Q Serve(g_s), s	2.7	0.0	0.1	1.3	0.0	0.0	1.2	40.0	6.2	1.7	8.4	8.4
Cycle Q Clear(g_c), s	2.7	0.0	0.1	1.3	0.0	0.0	1.2	40.0	6.2	1.7	8.4	8.4
Prop In Lane	0.71		1.00	1.00		0.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	100	0	88	158	83	0	46	2113	944	59	1060	1111
V/C Ratio(X)	0.73	0.00	0.03	0.45	0.00	0.00	0.67	1.29	0.32	0.76	0.40	0.40
Avail Cap(c_a), veh/h	542	0	477	2700	1417	0	397	2113	944	393	1060	1111
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.8	0.0	29.7	30.9	0.0	0.0	32.0	13.2	6.5	31.8	6.7	6.7
Incr Delay (d2), s/veh	9.8	0.0	0.2	2.0	0.0	0.0	6.2	133.1	0.3	7.3	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.1	0.7	0.0	0.0	0.6	57.8	2.7	0.9	4.1	4.3
LnGrp Delay(d),s/veh	40.6	0.0	29.8	32.9	0.0	0.0	38.2	146.3	6.7	39.1	7.0	7.0
LnGrp LOS	D		C	C			D	F	A	D	A	A
Approach Vol, veh/h		76			71			3050			920	
Approach Delay, s/veh		40.2			32.9			131.5			8.6	
Approach LOS		D			C			F			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.3	45.5		7.7	5.7	46.0		6.9
Change Period (Y+Rc), s	4.0	5.5		4.0	4.0	5.5		4.0
Max Green Setting (Gmax), s	15.0	40.0		20.0	15.0	40.0		50.0
Max Q Clear Time (g_c+I1), s	3.7	42.0		4.7	3.2	10.4		3.3
Green Ext Time (p_c), s	0.0	0.0		0.2	0.0	7.9		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	100.6
HCM 2010 LOS	F

Notes

User approved pedestrian interval to be less than phase max green.
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)	0	10	10	50	0	10	10	2249	330	10	543	0
Future Volume (veh/h)	0	10	10	50	0	10	10	2249	330	10	543	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1667	1667	1900	1845	1845	1900	1827	1827	1827
Adj Flow Rate, veh/h	0	11	0	56	0	1	11	2527	364	11	610	0
Adj No. of Lanes	1	1	0	2	1	0	1	2	0	1	2	1
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, %	0	0	0	14	14	14	3	3	3	4	4	4
Cap, veh/h	2	27	0	93	0	115	18	2411	339	18	2712	1213
Arrive On Green	0.00	0.01	0.00	0.03	0.00	0.08	0.01	0.78	0.78	0.01	0.78	0.00
Sat Flow, veh/h	1810	1900	0	3079	0	1417	1757	3086	434	1740	3471	1553
Grp Volume(v), veh/h	0	11	0	56	0	1	11	1408	1483	11	610	0
Grp Sat Flow(s),veh/h/ln	1810	1900	0	1540	0	1417	1757	1752	1768	1740	1736	1553
Q Serve(g_s), s	0.0	0.6	0.0	1.9	0.0	0.1	0.7	84.4	84.4	0.7	5.0	0.0
Cycle Q Clear(g_c), s	0.0	0.6	0.0	1.9	0.0	0.1	0.7	84.4	84.4	0.7	5.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	2	27	0	93	0	115	18	1369	1381	18	2712	1213
V/C Ratio(X)	0.00	0.40	0.00	0.60	0.00	0.01	0.60	1.03	1.07	0.61	0.22	0.00
Avail Cap(c_a), veh/h	122	510	0	208	0	144	114	1369	1381	113	2712	1213
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	0.00	1.00	0.46	0.46	0.46	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	52.8	0.0	51.7	0.0	45.6	53.2	11.8	11.8	53.2	3.1	0.0
Incr Delay (d2), s/veh	0.0	13.2	0.0	2.3	0.0	0.0	5.4	24.5	40.3	11.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.4	0.0	0.9	0.0	0.0	0.4	48.9	55.4	0.4	2.4	0.0
LnGrp Delay(d),s/veh	0.0	65.9	0.0	54.1	0.0	45.6	58.6	36.3	52.1	64.8	3.3	0.0
LnGrp LOS		E		D		D	E	F	F	E	A	
Approach Vol, veh/h		11			57			2902			621	
Approach Delay, s/veh		65.9			53.9			44.5			4.4	
Approach LOS		E			D			D			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	90.1	7.3	5.5	5.1	90.1	0.0	12.8
Change Period (Y+Rc), s	4.0	5.7	4.0	4.0	4.0	5.7	4.0	4.0
Max Green Setting (Gmax), s	7.0	47.0	7.3	29.0	7.0	47.0	7.3	11.0
Max Q Clear Time (g_c+I1), s	2.7	86.4	3.9	2.6	2.7	7.0	0.0	2.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	37.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	290	70	150	20	30	20	1119	420	30	346	10
Future Volume (veh/h)	90	290	70	150	20	30	20	1119	420	30	346	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1792	1792	1900	1881	1881	1900	1845	1845	1900
Adj Flow Rate, veh/h	97	312	75	161	22	32	22	1203	423	32	372	10
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	6	6	6	1	1	1	3	3	3
Cap, veh/h	543	533	128	265	242	352	34	1204	412	43	1625	44
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.02	0.46	0.46	0.02	0.47	0.47
Sat Flow, veh/h	1340	1451	349	953	659	959	1792	2614	895	1757	3487	94
Grp Volume(v), veh/h	97	0	387	161	0	54	22	812	814	32	187	195
Grp Sat Flow(s),veh/h/ln	1340	0	1800	953	0	1619	1792	1787	1722	1757	1752	1828
Q Serve(g_s), s	4.6	0.0	15.6	14.7	0.0	2.0	1.1	40.5	41.4	1.6	5.7	5.7
Cycle Q Clear(g_c), s	6.6	0.0	15.6	30.3	0.0	2.0	1.1	40.5	41.4	1.6	5.7	5.7
Prop In Lane	1.00		0.19	1.00		0.59	1.00		0.52	1.00		0.05
Lane Grp Cap(c), veh/h	543	0	661	265	0	594	34	823	793	43	817	852
V/C Ratio(X)	0.18	0.00	0.59	0.61	0.00	0.09	0.65	0.99	1.03	0.74	0.23	0.23
Avail Cap(c_a), veh/h	761	0	954	420	0	858	139	823	793	156	817	852
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.48	0.48	0.48	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.8	0.0	23.0	35.2	0.0	18.6	43.9	24.0	24.3	43.6	14.4	14.4
Incr Delay (d2), s/veh	0.1	0.0	0.7	2.0	0.0	0.1	3.8	18.8	29.0	9.1	0.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	7.9	4.0	0.0	0.9	0.6	24.2	26.0	0.9	2.9	3.0
LnGrp Delay(d),s/veh	20.9	0.0	23.7	37.2	0.0	18.7	47.6	42.8	53.3	52.7	15.0	15.0
LnGrp LOS	C		C	D		B	D	D	F	D	B	B
Approach Vol, veh/h		484			215			1648			414	
Approach Delay, s/veh		23.1			32.6			48.1			17.9	
Approach LOS		C			C			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.2	46.7		37.1	5.7	47.3		37.1
Change Period (Y+Rc), s	4.0	5.3		4.0	4.0	5.3		4.0
Max Green Setting (Gmax), s	8.0	21.0		47.7	7.0	22.0		47.7
Max Q Clear Time (g_c+I1), s	3.6	43.4		17.6	3.1	7.7		32.3
Green Ext Time (p_c), s	0.0	0.0		2.7	0.0	2.7		0.9

Intersection Summary	
HCM 2010 Ctrl Delay	38.0
HCM 2010 LOS	D

Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	120	114	1445	330	93	473
Future Volume (veh/h)	120	114	1445	330	93	473
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1863	1900	1845	1845
Adj Flow Rate, veh/h	126	120	1521	331	98	498
Adj No. of Lanes	2	1	2	0	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	2	2	3	3
Cap, veh/h	345	159	1984	419	124	2795
Arrive On Green	0.10	0.10	0.91	0.91	0.07	0.80
Sat Flow, veh/h	3476	1599	3002	615	1757	3597
Grp Volume(v), veh/h	126	120	908	944	98	498
Grp Sat Flow(s),veh/h/ln	1738	1599	1770	1754	1757	1752
Q Serve(g_s), s	3.0	6.6	13.4	15.8	4.9	3.0
Cycle Q Clear(g_c), s	3.0	6.6	13.4	15.8	4.9	3.0
Prop In Lane	1.00	1.00		0.35	1.00	
Lane Grp Cap(c), veh/h	345	159	1207	1196	124	2795
V/C Ratio(X)	0.37	0.76	0.75	0.79	0.79	0.18
Avail Cap(c_a), veh/h	877	403	1207	1196	195	2795
HCM Platoon Ratio	1.00	1.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.58	0.58	0.85	0.85
Uniform Delay (d), s/veh	37.9	39.5	1.9	2.1	41.2	2.2
Incr Delay (d2), s/veh	0.2	2.8	2.6	3.2	3.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	3.0	6.5	7.6	2.5	1.5
LnGrp Delay(d),s/veh	38.1	42.2	4.5	5.2	44.9	2.3
LnGrp LOS	D	D	A	A	D	A
Approach Vol, veh/h	246		1852			596
Approach Delay, s/veh	40.1		4.9			9.3
Approach LOS	D		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	10.4	66.7				77.1		12.9
Change Period (Y+Rc), s	4.0	5.3				5.3		4.0
Max Green Setting (Gmax), s	10.0	44.0				58.0		22.7
Max Q Clear Time (g_c+I1), s	5.0	17.8				5.0		8.6
Green Ext Time (p_c), s	0.0	21.1				5.5		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	9.1
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	90	0	104	0	1671	190	83	510	0
Future Volume (veh/h)	0	0	0	90	0	104	0	1671	190	83	510	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1881	1881	1881	1900	1845	1845	1900
Adj Flow Rate, veh/h	0	0	0	93	0	7	0	1723	190	86	526	0
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	3	3	3
Cap, veh/h	0	2	0	122	0	109	2	2350	255	108	2904	0
Arrive On Green	0.00	0.00	0.00	0.07	0.00	0.07	0.00	0.96	0.96	0.12	1.00	0.00
Sat Flow, veh/h	0	1863	0	1792	0	1599	1792	3253	353	1757	3597	0
Grp Volume(v), veh/h	0	0	0	93	0	7	0	933	980	86	526	0
Grp Sat Flow(s),veh/h/ln	0	1863	0	1792	0	1599	1792	1787	1818	1757	1752	0
Q Serve(g_s), s	0.0	0.0	0.0	4.6	0.0	0.4	0.0	6.0	6.7	4.3	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	4.6	0.0	0.4	0.0	6.0	6.7	4.3	0.0	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.19	1.00		0.00
Lane Grp Cap(c), veh/h	0	2	0	122	0	109	2	1291	1314	108	2904	0
V/C Ratio(X)	0.00	0.00	0.00	0.76	0.00	0.06	0.00	0.72	0.75	0.79	0.18	0.00
Avail Cap(c_a), veh/h	0	201	0	199	0	178	159	1291	1314	117	2904	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	2.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.25	0.25	0.99	0.99	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	41.2	0.0	39.2	0.0	0.6	0.6	38.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	7.1	0.0	0.2	0.0	0.9	1.0	25.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	2.5	0.0	0.2	0.0	2.3	2.8	2.8	0.1	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	48.3	0.0	39.4	0.0	1.5	1.6	64.2	0.1	0.0
LnGrp LOS				D		D		A	A	E	A	
Approach Vol, veh/h		0			100			1913			612	
Approach Delay, s/veh		0.0			47.6			1.5			9.1	
Approach LOS					D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.5	70.3		0.0	0.0	79.9		10.1
Change Period (Y+Rc), s	4.0	5.3		4.0	4.0	5.3		4.0
Max Green Setting (Gmax), s	6.0	47.0		9.7	8.0	45.0		10.0
Max Q Clear Time (g_c+I1), s	6.3	8.7		0.0	0.0	2.0		6.6
Green Ext Time (p_c), s	0.0	29.4		0.0	0.0	5.8		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	5.1
HCM 2010 LOS	A

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	30	30	50	20	63	50	1628	90	52	418	130
Future Volume (veh/h)	170	30	30	50	20	63	50	1628	90	52	418	130
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1845	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	175	31	0	52	21	3	52	1678	90	54	431	108
Adj No. of Lanes	1	1	1	0	2	0	1	2	0	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	3	3	3	2	2	2	2	2	2
Cap, veh/h	226	237	201	100	90	13	67	1983	106	69	1620	403
Arrive On Green	0.13	0.13	0.00	0.06	0.06	0.06	0.04	0.58	0.58	0.01	0.19	0.19
Sat Flow, veh/h	1792	1881	1599	1757	1579	226	1774	3417	182	1774	2811	698
Grp Volume(v), veh/h	175	31	0	52	0	24	52	864	904	54	270	269
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1757	0	1805	1774	1770	1829	1774	1770	1739
Q Serve(g_s), s	8.5	1.3	0.0	2.6	0.0	1.1	2.6	36.0	36.9	2.7	11.7	11.9
Cycle Q Clear(g_c), s	8.5	1.3	0.0	2.6	0.0	1.1	2.6	36.0	36.9	2.7	11.7	11.9
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.10	1.00		0.40
Lane Grp Cap(c), veh/h	226	237	201	100	0	102	67	1027	1062	69	1020	1003
V/C Ratio(X)	0.78	0.13	0.00	0.52	0.00	0.23	0.78	0.84	0.85	0.78	0.26	0.27
Avail Cap(c_a), veh/h	332	349	297	293	0	301	148	1027	1062	168	1020	1003
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	0.74	0.74	0.74	0.99	0.99	0.99
Uniform Delay (d), s/veh	38.1	34.9	0.0	41.3	0.0	40.6	42.9	15.5	15.7	44.0	20.2	20.2
Incr Delay (d2), s/veh	5.3	0.2	0.0	1.6	0.0	0.4	16.1	6.3	6.6	6.8	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.7	0.0	1.3	0.0	0.6	1.6	19.1	20.3	1.5	5.9	5.9
LnGrp Delay(d),s/veh	43.4	35.1	0.0	42.8	0.0	41.0	59.1	21.8	22.2	50.9	20.8	20.9
LnGrp LOS	D	D		D		D	E	C	C	D	C	C
Approach Vol, veh/h		206			76			1820			593	
Approach Delay, s/veh		42.2			42.3			23.1			23.6	
Approach LOS		D			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.5	57.5		15.3	7.9	57.2		9.6
Change Period (Y+Rc), s	4.0	5.3		4.0	4.5	5.3		4.5
Max Green Setting (Gmax), s	8.5	32.0		16.7	7.5	32.5		15.0
Max Q Clear Time (g_c+I1), s	4.7	38.9		10.5	4.6	13.9		4.6
Green Ext Time (p_c), s	0.0	0.0		0.2	0.0	4.3		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.2
HCM 2010 LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	160	10	718	70	1040	0	0	428	110
Future Volume (veh/h)	0	0	0	160	10	718	70	1040	0	0	428	110
Number				7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1827	1900	1863	1863	0	0	1827	1827
Adj Flow Rate, veh/h				165	10	689	72	1072	0	0	441	45
Adj No. of Lanes				0	2	0	1	2	0	0	2	1
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				0	4	0	2	2	0	0	4	4
Cap, veh/h				766	46	723	140	1341	0	0	852	361
Arrive On Green				0.47	0.47	0.47	0.08	0.38	0.00	0.00	0.23	0.23
Sat Flow, veh/h				1645	100	1553	1774	3632	0	0	3654	1550
Grp Volume(v), veh/h				175	0	689	72	1072	0	0	441	45
Grp Sat Flow(s),veh/h/ln				1745	0	1553	1774	1770	0	0	1827	1550
Q Serve(g_s), s				2.7	0.0	19.2	1.8	12.2	0.0	0.0	4.7	1.0
Cycle Q Clear(g_c), s				2.7	0.0	19.2	1.8	12.2	0.0	0.0	4.7	1.0
Prop In Lane				0.94		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				813	0	723	140	1341	0	0	852	361
V/C Ratio(X)				0.22	0.00	0.95	0.51	0.80	0.00	0.00	0.52	0.12
Avail Cap(c_a), veh/h				813	0	723	433	1413	0	0	1540	653
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	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				7.1	0.0	11.6	19.9	12.5	0.0	0.0	15.1	13.6
Incr Delay (d2), s/veh				0.2	0.0	22.6	2.9	3.4	0.0	0.0	1.0	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				1.3	0.0	12.6	1.0	6.4	0.0	0.0	2.5	0.5
LnGrp Delay(d),s/veh				7.3	0.0	34.1	22.8	15.9	0.0	0.0	16.1	14.0
LnGrp LOS				A		C	C	B			B	B
Approach Vol, veh/h					864			1144			486	
Approach Delay, s/veh					28.7			16.3			15.9	
Approach LOS					C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		21.1		24.0	6.6	14.5		
Change Period (Y+Rc), s		4.0		3.0	3.0	4.0		
Max Green Setting (Gmax), s		18.0		21.0	11.0	19.0		
Max Q Clear Time (g_c+I1), s		14.2		21.2	3.8	6.7		
Green Ext Time (p_c), s		2.7		0.0	0.1	3.8		

Intersection Summary	
HCM 2010 Ctrl Delay	20.5
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
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)	790	80	210	0	0	0	0	290	220	328	250	0
Future Volume (veh/h)	790	80	210	0	0	0	0	290	220	328	250	0
Number	7	4	14				5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1810	1810	1810	1810	0
Adj Flow Rate, veh/h	892	0	62				0	305	103	345	263	0
Adj No. of Lanes	2	0	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	5	5	5	5	0
Cap, veh/h	1128	0	504				0	695	291	422	1809	0
Arrive On Green	0.32	0.00	0.32				0.00	0.19	0.19	0.25	0.53	0.00
Sat Flow, veh/h	3548	0	1583				0	3619	1516	1723	3529	0
Grp Volume(v), veh/h	892	0	62				0	305	103	345	263	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1810	1516	1723	1719	0
Q Serve(g_s), s	10.3	0.0	1.2				0.0	3.3	2.6	8.5	1.8	0.0
Cycle Q Clear(g_c), s	10.3	0.0	1.2				0.0	3.3	2.6	8.5	1.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1128	0	504				0	695	291	422	1809	0
V/C Ratio(X)	0.79	0.00	0.12				0.00	0.44	0.35	0.82	0.15	0.00
Avail Cap(c_a), veh/h	1422	0	634				0	1531	641	614	1809	0
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	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	14.0	0.0	10.9				0.0	16.0	15.7	16.0	5.5	0.0
Incr Delay (d2), s/veh	2.4	0.0	0.1				0.0	0.9	1.6	6.2	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	5.3	0.0	0.5				0.0	1.7	1.2	4.8	0.8	0.0
LnGrp Delay(d),s/veh	16.4	0.0	11.0				0.0	16.9	17.3	22.2	5.5	0.0
LnGrp LOS	B		B					B	B	C	A	
Approach Vol, veh/h		954						408			608	
Approach Delay, s/veh		16.0						17.0			15.0	
Approach LOS		B						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	15.0	12.6		17.3		27.6		
Change Period (Y+Rc), s	4.0	* 4		3.0		4.0		
Max Green Setting (Gmax), s	16.0	* 19		18.0		18.0		
Max Q Clear Time (g_c+I1), s	10.5	5.3		12.3		3.8		
Green Ext Time (p_c), s	0.7	3.3		2.0		1.8		

Intersection Summary	
HCM 2010 Ctrl Delay	15.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	20	80	150	10	325	10	1154	0	316	337	10
Future Volume (veh/h)	100	20	80	150	10	325	10	1154	0	316	337	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1759	1759	1759	1863	1863	1863	1827	1827	1827
Adj Flow Rate, veh/h	121	0	0	168	0	151	11	1228	0	336	359	7
Adj No. of Lanes	2	0	1	2	0	2	1	2	1	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	8	8	8	2	2	2	4	4	4
Cap, veh/h	227	0	102	284	0	943	19	1401	627	401	2185	978
Arrive On Green	0.06	0.00	0.00	0.08	0.00	0.08	0.01	0.40	0.00	0.23	0.63	0.63
Sat Flow, veh/h	3619	0	1615	3351	0	2991	1774	3539	1583	1740	3471	1553
Grp Volume(v), veh/h	121	0	0	168	0	151	11	1228	0	336	359	7
Grp Sat Flow(s),veh/h/ln	1810	0	1615	1675	0	1495	1774	1770	1583	1740	1736	1553
Q Serve(g_s), s	2.3	0.0	0.0	3.4	0.0	2.6	0.4	22.7	0.0	13.0	3.0	0.1
Cycle Q Clear(g_c), s	2.3	0.0	0.0	3.4	0.0	2.6	0.4	22.7	0.0	13.0	3.0	0.1
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	227	0	102	284	0	943	19	1401	627	401	2185	978
V/C Ratio(X)	0.53	0.00	0.00	0.59	0.00	0.16	0.56	0.88	0.00	0.84	0.16	0.01
Avail Cap(c_a), veh/h	1023	0	456	1278	0	1831	501	1500	671	1229	2185	978
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	0.0	0.0	31.2	0.0	17.5	34.8	19.8	0.0	26.0	5.4	4.9
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.7	0.0	0.0	31.7	5.9	0.0	5.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.0	1.6	0.0	1.1	0.4	12.2	0.0	6.9	1.4	0.1
LnGrp Delay(d),s/veh	32.9	0.0	0.0	31.9	0.0	17.5	66.5	25.7	0.0	31.6	5.4	4.9
LnGrp LOS	C			C		B	E	C		C	A	A
Approach Vol, veh/h		121			319			1239			702	
Approach Delay, s/veh		32.9			25.1			26.1			17.9	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	30.3	32.5		7.9	3.8	49.1		10.0
Change Period (Y+Rc), s	4.0	4.5		3.5	3.0	4.5		4.0
Max Green Setting (Gmax), s	50.0	30.0		20.0	20.0	30.0		27.0
Max Q Clear Time (g_c+I1), s	15.0	24.7		4.3	2.4	5.0		5.4
Green Ext Time (p_c), s	1.3	3.3		0.2	0.0	1.3		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	23.9
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	84.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	30	10	60	10	60	10	578	150	10	70	10
Future Vol, veh/h	30	30	10	60	10	60	10	578	150	10	70	10
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	37	37	12	73	12	73	12	705	183	12	85	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Righ	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.1	11.9	113	10.2
HCM LOS	B	B	F	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	1%	43%	46%	11%
Vol Thru, %	78%	43%	8%	78%
Vol Right, %	20%	14%	46%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	738	70	130	90
LT Vol	10	30	60	10
Through Vol	578	30	10	70
RT Vol	150	10	60	10
Lane Flow Rate	900	85	159	110
Geometry Grp	1	1	1	1
Degree of Util (X)	1.18	0.151	0.266	0.171
Departure Headway (Hd)	4.72	6.891	6.516	5.939
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	765	523	555	608
Service Time	2.801	4.891	4.516	3.939
HCM Lane V/C Ratio	1.176	0.163	0.286	0.181
HCM Control Delay	113	11.1	11.9	10.2
HCM Lane LOS	F	B	B	B
HCM 95th-tile Q	28.5	0.5	1.1	0.6

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	120	45	20	618	90	50
Future Vol, veh/h	120	45	20	618	90	50
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	-	-	-	-	145
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	145	54	24	745	108	60

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	901	108	168	0	-	0
Stage 1	108	-	-	-	-	-
Stage 2	793	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	307	943	1404	-	-	-
Stage 1	914	-	-	-	-	-
Stage 2	444	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	298	943	1404	-	-	-
Mov Cap-2 Maneuver	298	-	-	-	-	-
Stage 1	887	-	-	-	-	-
Stage 2	444	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.9	0.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1404	-	366	-	-
HCM Lane V/C Ratio	0.017	-	0.543	-	-
HCM Control Delay (s)	7.6	0	25.9	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	3.1	-	-

Intersection	
Intersection Delay, s/veh	16.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	190	50	10	40	20	53	20	395	40	55	60	20
Future Vol, veh/h	190	50	10	40	20	53	20	395	40	55	60	20
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	202	53	11	43	21	56	21	420	43	59	64	21
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13.9	10.6	20.7	10.8
HCM LOS	B	B	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	76%	35%	41%
Vol Thru, %	87%	20%	18%	44%
Vol Right, %	9%	4%	47%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	455	250	113	135
LT Vol	20	190	40	55
Through Vol	395	50	20	60
RT Vol	40	10	53	20
Lane Flow Rate	484	266	120	144
Geometry Grp	1	1	1	1
Degree of Util (X)	0.716	0.445	0.201	0.236
Departure Headway (Hd)	5.322	6.029	6.012	5.913
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	678	593	593	603
Service Time	3.378	4.098	4.096	3.991
HCM Lane V/C Ratio	0.714	0.449	0.202	0.239
HCM Control Delay	20.7	13.9	10.6	10.8
HCM Lane LOS	C	B	B	B
HCM 95th-tile Q	6	2.3	0.7	0.9

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	420	460	103	30	20	50
Future Vol, veh/h	420	460	103	30	20	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	178	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	472	517	116	34	22	56

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	150	0	-	0	1594	133
Stage 1	-	-	-	-	133	-
Stage 2	-	-	-	-	1461	-
Critical Hdwy	4.16	-	-	-	6.46	6.26
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	2.254	-	-	-	3.554	3.354
Pot Cap-1 Maneuver	1407	-	-	-	115	906
Stage 1	-	-	-	-	883	-
Stage 2	-	-	-	-	209	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1407	-	-	-	76	906
Mov Cap-2 Maneuver	-	-	-	-	76	-
Stage 1	-	-	-	-	587	-
Stage 2	-	-	-	-	209	-

Approach	EB	WB	SB
HCM Control Delay, s	4.2	0	30.2
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1407	-	-	-	220
HCM Lane V/C Ratio	0.335	-	-	-	0.358
HCM Control Delay (s)	8.8	-	-	-	30.2
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	1.5	-	-	-	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	80	160	50	70	40	160	1130	40	30	490	40
Future Volume (veh/h)	130	80	160	50	70	40	160	1130	40	30	490	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	0.99		0.98	1.00		1.00	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
Adj Sat Flow, veh/h/ln	1900	1881	1881	1900	1881	1900	1881	1881	1881	1881	1881	1900
Adj Flow Rate, veh/h	140	86	0	54	75	29	172	1215	0	32	527	37
Adj No. of Lanes	0	1	1	0	1	0	1	2	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	312	129	320	185	201	64	240	1823	815	56	1377	96
Arrive On Green	0.20	0.20	0.00	0.19	0.20	0.19	0.13	0.51	0.00	0.03	0.41	0.40
Sat Flow, veh/h	956	645	1599	425	1001	320	1792	3574	1599	1792	3382	237
Grp Volume(v), veh/h	226	0	0	158	0	0	172	1215	0	32	278	286
Grp Sat Flow(s),veh/h/ln	1600	0	1599	1746	0	0	1792	1787	1599	1792	1787	1831
Q Serve(g_s), s	2.3	0.0	0.0	0.0	0.0	0.0	4.4	12.2	0.0	0.9	5.3	5.3
Cycle Q Clear(g_c), s	6.0	0.0	0.0	3.7	0.0	0.0	4.4	12.2	0.0	0.9	5.3	5.3
Prop In Lane	0.62		1.00	0.34		0.18	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	441	0	320	432	0	0	240	1823	815	56	727	745
V/C Ratio(X)	0.51	0.00	0.00	0.37	0.00	0.00	0.72	0.67	0.00	0.57	0.38	0.38
Avail Cap(c_a), veh/h	950	0	876	1016	0	0	797	2254	1009	982	1127	1155
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.7	0.0	0.0	17.1	0.0	0.0	20.1	8.8	0.0	23.1	10.1	10.1
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.2	0.0	0.0	1.5	0.7	0.0	3.4	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	0.0	1.9	0.0	0.0	2.3	6.1	0.0	0.5	2.6	2.7
LnGrp Delay(d),s/veh	18.1	0.0	0.0	17.3	0.0	0.0	21.6	9.5	0.0	26.5	10.5	10.6
LnGrp LOS	B			B			C	A		C	B	B
Approach Vol, veh/h		226			158			1387			596	
Approach Delay, s/veh		18.1			17.3			11.0			11.4	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.0	29.2		14.2	10.0	24.2		14.2
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		* 5
Max Green Setting (Gmax), s	26.0	30.0		26.0	21.0	30.0		* 27
Max Q Clear Time (g_c+I1), s	2.9	14.2		8.0	6.4	7.3		5.7
Green Ext Time (p_c), s	0.0	10.0		0.8	0.2	4.9		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	12.2
HCM 2010 LOS	B

Notes

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

HCM 2010 Research does not support Non-NEMA phasing.

HCM 2010 Signalized Intersection Summary
5: Goodrick Ave & Richmond Pkwy

04/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	2403	20	60	756	20	20	10	610	20	10	10
Future Volume (veh/h)	10	2403	20	60	756	20	20	10	610	20	10	10
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1900	1845	1900	1900	1845	1900
Adj Flow Rate, veh/h	11	2529	12	63	796	13	21	11	588	21	11	3
Adj No. of Lanes	1	2	1	1	2	1	0	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	18	1975	884	64	2051	917	42	15	420	115	53	11
Arrive On Green	0.01	0.56	0.56	0.04	0.59	0.59	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	29	52	1491	222	188	38
Grp Volume(v), veh/h	11	2529	12	63	796	13	620	0	0	35	0	0
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1568	1572	0	0	448	0	0
Q Serve(g_s), s	0.7	62.0	0.4	3.9	13.4	0.4	16.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.7	62.0	0.4	3.9	13.4	0.4	31.0	0.0	0.0	2.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.03		0.95	0.60		0.09
Lane Grp Cap(c), veh/h	18	1975	884	64	2051	917	477	0	0	178	0	0
V/C Ratio(X)	0.60	1.28	0.01	0.99	0.39	0.01	1.30	0.00	0.00	0.20	0.00	0.00
Avail Cap(c_a), veh/h	80	1975	884	64	2051	917	477	0	0	178	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	54.2	24.0	10.6	53.0	12.3	9.5	40.6	0.0	0.0	29.0	0.0	0.0
Incr Delay (d2), s/veh	11.3	130.1	0.0	107.3	0.2	0.0	149.9	0.0	0.0	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	65.3	0.2	3.8	6.5	0.2	34.3	0.0	0.0	0.8	0.0	0.0
LnGrp Delay(d),s/veh	65.5	154.1	10.6	160.3	12.4	9.6	190.4	0.0	0.0	29.5	0.0	0.0
LnGrp LOS	E	F	B	F	B	A	F			C		
Approach Vol, veh/h		2552			872			620			35	
Approach Delay, s/veh		153.1			23.1			190.4			29.5	
Approach LOS		F			C			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	67.0		35.0	5.6	69.4		35.0
Change Period (Y+Rc), s	4.0	5.0		4.0	4.5	5.0		4.0
Max Green Setting (Gmax), s	4.0	62.0		31.0	5.0	60.5		31.0
Max Q Clear Time (g_c+I1), s	5.9	64.0		33.0	2.7	15.4		4.4
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	8.6		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	129.9
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	20	40	60	10	50	30	2638	330	44	839	10
Future Volume (veh/h)	50	20	40	60	10	50	30	2638	330	44	839	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1881	1881	1900	1845	1845	1845	1827	1827	1900
Adj Flow Rate, veh/h	52	21	1	71	0	0	31	2720	286	45	865	10
Adj No. of Lanes	0	1	1	2	1	0	1	2	1	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	1	1	1	3	3	3	4	4	4
Cap, veh/h	58	23	72	134	70	0	42	2406	1075	56	2441	28
Arrive On Green	0.05	0.05	0.05	0.04	0.00	0.00	0.02	0.69	0.69	0.03	0.69	0.69
Sat Flow, veh/h	1281	517	1583	3583	1881	0	1757	3505	1567	1740	3515	41
Grp Volume(v), veh/h	73	0	1	71	0	0	31	2720	286	45	427	448
Grp Sat Flow(s),veh/h/ln	1799	0	1583	1792	1881	0	1757	1752	1567	1740	1736	1820
Q Serve(g_s), s	3.6	0.0	0.1	1.7	0.0	0.0	1.5	60.5	6.2	2.3	8.8	8.8
Cycle Q Clear(g_c), s	3.6	0.0	0.1	1.7	0.0	0.0	1.5	60.5	6.2	2.3	8.8	8.8
Prop In Lane	0.71		1.00	1.00		0.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	82	0	72	134	70	0	42	2406	1075	56	1205	1264
V/C Ratio(X)	0.89	0.00	0.01	0.53	0.00	0.00	0.73	1.13	0.27	0.80	0.35	0.35
Avail Cap(c_a), veh/h	82	0	72	1382	726	0	120	2406	1075	79	1205	1264
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.9	0.0	40.2	41.7	0.0	0.0	42.7	13.8	5.3	42.4	5.5	5.5
Incr Delay (d2), s/veh	65.5	0.0	0.1	3.2	0.0	0.0	8.6	64.7	0.2	21.6	0.3	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	3.2	0.0	0.0	0.9	0.0	0.0	0.9	50.3	2.7	1.4	4.2	4.4
LnGrp Delay(d),s/veh	107.4	0.0	40.3	44.9	0.0	0.0	51.4	78.5	5.5	64.0	5.7	5.7
LnGrp LOS	F		D	D			D	F	A	E	A	A
Approach Vol, veh/h		74			71			3037			920	
Approach Delay, s/veh		106.5			44.9			71.4			8.6	
Approach LOS		F			D			E			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.8	66.0		8.0	6.1	66.7		7.3
Change Period (Y+Rc), s	4.0	5.5		4.0	4.0	5.5		4.0
Max Green Setting (Gmax), s	4.0	60.5		4.0	6.0	58.5		34.0
Max Q Clear Time (g_c+I1), s	4.3	62.5		5.6	3.5	10.8		3.7
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	8.7		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	57.4
HCM 2010 LOS	E

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

CUMULATIVE WITHOUT CENTERPOINT PROJECT CONDITIONS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	894	280	210	441	120	110	60	340	80	490	1612
Future Volume (veh/h)	290	894	280	210	441	120	110	60	340	80	490	1612
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1759	1759	1759	1759	1792	1792	1792	1776	1776	1776
Adj Flow Rate, veh/h	302	931	157	219	459	0	115	62	138	83	510	1214
Adj No. of Lanes	1	3	1	2	1	1	1	1	2	1	1	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	8	8	6	6	6	7	7	7
Cap, veh/h	265	1619	503	257	454	386	148	753	1126	101	697	1043
Arrive On Green	0.16	0.34	0.34	0.08	0.26	0.00	0.09	0.42	0.42	0.06	0.39	0.39
Sat Flow, veh/h	1675	4803	1491	3250	1759	1495	1707	1792	2682	1691	1776	2656
Grp Volume(v), veh/h	302	931	157	219	459	0	115	62	138	83	510	1214
Grp Sat Flow(s),veh/h/ln	1675	1601	1491	1625	1759	1495	1707	1792	1341	1691	1776	1328
Q Serve(g_s), s	25.3	25.5	12.5	10.6	41.3	0.0	10.6	3.3	5.0	7.8	39.2	62.8
Cycle Q Clear(g_c), s	25.3	25.5	12.5	10.6	41.3	0.0	10.6	3.3	5.0	7.8	39.2	62.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	265	1619	503	257	454	386	148	753	1126	101	697	1043
V/C Ratio(X)	1.14	0.58	0.31	0.85	1.01	0.00	0.77	0.08	0.12	0.82	0.73	1.16
Avail Cap(c_a), veh/h	265	1619	503	362	454	386	149	753	1126	169	697	1043
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.3	43.6	39.3	72.7	59.4	0.0	71.5	27.9	28.4	74.4	41.4	48.6
Incr Delay (d2), s/veh	98.4	1.5	1.6	9.6	45.1	0.0	20.1	0.0	0.0	6.2	3.5	84.6
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	18.9	11.5	5.4	5.1	25.7	0.0	5.8	1.7	1.9	3.8	19.8	35.3
LnGrp Delay(d),s/veh	165.7	45.1	40.9	82.4	104.5	0.0	91.6	27.9	28.4	80.6	44.9	133.2
LnGrp LOS	F	D	D	F	F		F	C	C	F	D	F
Approach Vol, veh/h		1390			678			315			1807	
Approach Delay, s/veh		70.8			97.3			51.4			105.9	
Approach LOS		E			F			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.4	59.0	17.6	67.0	29.0	46.4	13.2	71.4
Change Period (Y+Rc), s	3.7	5.1	3.7	* 4.2	3.7	5.1	3.7	* 4.2
Max Green Setting (Gmax), s	17.8	48.7	14.0	* 63	25.3	41.2	16.0	* 61
Max Q Clear Time (g_c+I1), s	12.6	27.5	12.6	64.8	27.3	43.3	9.8	7.0
Green Ext Time (p_c), s	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	88.8
HCM 2010 LOS	F

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	281	803	30	134	1589	190	50	360	111	310	1111	944
Future Volume (veh/h)	281	803	30	134	1589	190	50	360	111	310	1111	944
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1712	1712	1900	1743	1743	1743	1827	1827	1827	1863	1863	1863
Adj Flow Rate, veh/h	302	863	30	144	1709	0	54	387	32	333	1195	843
Adj No. of Lanes	2	3	0	2	3	1	1	2	1	1	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	11	11	11	9	9	9	4	4	4	2	2	2
Cap, veh/h	357	1571	55	182	1338	417	68	1033	462	261	1435	642
Arrive On Green	0.11	0.34	0.34	0.06	0.28	0.00	0.04	0.30	0.30	0.15	0.41	0.41
Sat Flow, veh/h	3163	4638	161	3221	4759	1482	1740	3471	1553	1774	3539	1582
Grp Volume(v), veh/h	302	579	314	144	1709	0	54	387	32	333	1195	843
Grp Sat Flow(s),veh/h/ln	1581	1558	1683	1610	1586	1482	1740	1736	1553	1774	1770	1582
Q Serve(g_s), s	15.9	25.7	25.8	7.5	47.8	0.0	5.2	15.0	2.5	25.0	51.5	46.2
Cycle Q Clear(g_c), s	15.9	25.7	25.8	7.5	47.8	0.0	5.2	15.0	2.5	25.0	51.5	46.2
Prop In Lane	1.00		0.10	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	357	1055	570	182	1338	417	68	1033	462	261	1435	642
V/C Ratio(X)	0.85	0.55	0.55	0.79	1.28	0.00	0.79	0.37	0.07	1.28	0.83	1.31
Avail Cap(c_a), veh/h	357	1055	570	265	1338	417	82	1123	502	261	1499	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.9	45.7	45.7	79.2	61.1	0.0	81.0	47.2	42.8	72.5	45.4	22.7
Incr Delay (d2), s/veh	14.1	1.7	3.1	8.0	130.7	0.0	31.9	0.4	0.1	150.7	4.4	152.2
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	7.7	11.3	12.5	3.5	37.1	0.0	3.1	7.3	1.1	23.2	26.1	47.2
LnGrp Delay(d),s/veh	88.0	47.4	48.8	87.2	191.8	0.0	112.9	47.6	42.9	223.2	49.8	174.9
LnGrp LOS	F	D	D	F	F		F	D	D	F	D	F
Approach Vol, veh/h		1195			1853			473			2371	
Approach Delay, s/veh		58.0			183.6			54.7			118.6	
Approach LOS		E			F			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.6	64.8	12.7	75.9	26.4	55.0	31.0	57.6
Change Period (Y+Rc), s	7.0	7.2	6.0	7.0	7.2	* 7.2	6.0	7.0
Max Green Setting (Gmax), s	14.0	48.8	8.0	72.0	15.0	* 48	25.0	55.0
Max Q Clear Time (g_c+I1), s	19.5	27.8	7.2	53.5	17.9	49.8	27.0	17.0
Green Ext Time (p_c), s	0.1	8.4	0.0	15.4	0.0	0.0	0.0	4.4

Intersection Summary	
HCM 2010 Ctrl Delay	121.6
HCM 2010 LOS	F

Notes

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	654	190	70	2133	380	91	40	150	310	90	181
Future Volume (veh/h)	91	654	190	70	2133	380	91	40	150	310	90	181
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1696	1696	1696	1759	1759	1759	1863	1863	1863	1776	1776	1776
Adj Flow Rate, veh/h	96	688	88	74	2245	222	96	42	3	326	95	55
Adj No. of Lanes	2	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	12	12	12	8	8	8	2	2	2	7	7	7
Cap, veh/h	89	2278	709	92	2473	770	119	106	90	329	333	283
Arrive On Green	0.03	0.49	0.49	0.05	0.51	0.51	0.07	0.06	0.06	0.19	0.19	0.19
Sat Flow, veh/h	3134	4631	1442	1675	4803	1495	1774	1863	1583	1691	1776	1509
Grp Volume(v), veh/h	96	688	88	74	2245	222	96	42	3	326	95	55
Grp Sat Flow(s),veh/h/ln	1567	1544	1442	1675	1601	1495	1774	1863	1583	1691	1776	1509
Q Serve(g_s), s	4.0	12.5	4.7	6.2	60.1	11.9	7.5	3.1	0.3	27.1	6.5	4.3
Cycle Q Clear(g_c), s	4.0	12.5	4.7	6.2	60.1	11.9	7.5	3.1	0.3	27.1	6.5	4.3
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	89	2278	709	92	2473	770	119	106	90	329	333	283
V/C Ratio(X)	1.08	0.30	0.12	0.81	0.91	0.29	0.80	0.40	0.03	0.99	0.29	0.19
Avail Cap(c_a), veh/h	89	2278	709	142	2500	778	188	607	516	329	742	631
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	68.6	21.4	19.4	66.0	31.2	19.5	64.9	64.3	62.9	56.7	49.2	48.3
Incr Delay (d2), s/veh	119.2	0.1	0.1	8.6	5.4	0.3	23.2	3.4	0.2	46.8	0.7	0.5
Initial Q Delay(d3),s/veh	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	5.4	1.9	3.1	27.6	5.0	4.5	1.7	0.1	17.0	3.3	1.9
LnGrp Delay(d),s/veh	188.2	21.5	19.5	74.6	36.7	19.8	88.1	67.7	63.2	103.5	49.9	48.8
LnGrp LOS	F	C	B	E	D	B	F	E	E	F	D	D
Approach Vol, veh/h		872			2541			141			476	
Approach Delay, s/veh		39.7			36.3			81.5			86.5	
Approach LOS		D			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.7	76.5	16.5	33.5	11.5	79.7	35.0	15.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.5	7.0	7.5	7.0
Max Green Setting (Gmax), s	12.0	66.0	15.0	59.0	4.0	73.5	27.5	46.0
Max Q Clear Time (g_c+I1), s	8.2	14.5	9.5	8.5	6.0	62.1	29.1	5.1
Green Ext Time (p_c), s	0.0	7.8	0.2	1.1	0.0	10.6	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	44.5
HCM 2010 LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	775	191	40	2335	30	272	40	110	50	90	100
Future Volume (veh/h)	20	775	191	40	2335	30	272	40	110	50	90	100
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1696	1696	1696	1776	1776	1776	1863	1863	1863	1900	1900	1900
Adj Flow Rate, veh/h	20	791	91	41	2383	16	278	41	18	51	92	6
Adj No. of Lanes	2	3	1	1	3	1	2	1	1	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	12	12	12	7	7	7	2	2	2	0	0	0
Cap, veh/h	56	2487	774	50	2660	828	460	242	203	129	245	16
Arrive On Green	0.02	0.54	0.54	0.03	0.55	0.55	0.13	0.13	0.13	0.07	0.07	0.07
Sat Flow, veh/h	3134	4631	1442	1691	4848	1509	3548	1863	1565	1810	3443	223
Grp Volume(v), veh/h	20	791	91	41	2383	16	278	41	18	51	48	50
Grp Sat Flow(s),veh/h/ln	1567	1544	1442	1691	1616	1509	1774	1863	1565	1810	1805	1861
Q Serve(g_s), s	0.5	7.8	2.5	2.0	35.5	0.4	6.0	1.6	0.8	2.2	2.1	2.1
Cycle Q Clear(g_c), s	0.5	7.8	2.5	2.0	35.5	0.4	6.0	1.6	0.8	2.2	2.1	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	56	2487	774	50	2660	828	460	242	203	129	129	133
V/C Ratio(X)	0.36	0.32	0.12	0.82	0.90	0.02	0.60	0.17	0.09	0.40	0.37	0.38
Avail Cap(c_a), veh/h	771	2563	798	728	2683	835	1091	573	481	556	555	572
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	39.5	10.5	9.3	39.2	16.3	8.4	33.4	31.5	31.1	36.1	36.0	36.0
Incr Delay (d2), s/veh	1.4	0.1	0.1	11.2	4.5	0.0	1.8	0.5	0.3	0.7	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.3	1.0	1.1	16.8	0.2	3.1	0.9	0.4	1.1	1.0	1.1
LnGrp Delay(d),s/veh	40.9	10.6	9.4	50.4	20.8	8.4	35.2	32.0	31.4	36.8	36.7	36.7
LnGrp LOS	D	B	A	D	C	A	D	C	C	D	D	D
Approach Vol, veh/h		902			2440			337			149	
Approach Delay, s/veh		11.2			21.2			34.6			36.7	
Approach LOS		B			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.4	49.3		10.4	5.5	50.3		15.1
Change Period (Y+Rc), s	4.0	5.7		4.6	4.0	5.7		4.6
Max Green Setting (Gmax), s	35.0	45.0		25.0	20.0	45.0		25.0
Max Q Clear Time (g_c+I1), s	4.0	9.8		4.2	2.5	37.5		8.0
Green Ext Time (p_c), s	0.0	8.7		0.3	0.0	7.1		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	20.6
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
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)	50	720	20	155	2232	50	20	20	106	20	20	20
Future Volume (veh/h)	50	720	20	155	2232	50	20	20	106	20	20	20
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1696	1696	1696	1792	1792	1792	1900	1583	1583	1900	1900	1900
Adj Flow Rate, veh/h	52	742	12	160	2301	33	21	21	21	21	21	0
Adj No. of Lanes	1	2	1	1	2	1	0	1	1	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	12	12	12	6	6	6	20	20	20	0	0	0
Cap, veh/h	63	1969	881	202	2319	1037	128	34	218	108	14	0
Arrive On Green	0.04	0.61	0.61	0.12	0.68	0.68	0.04	0.04	0.04	0.04	0.04	0.00
Sat Flow, veh/h	1616	3223	1442	1707	3406	1524	772	772	1346	317	317	0
Grp Volume(v), veh/h	52	742	12	160	2301	33	42	0	21	42	0	0
Grp Sat Flow(s),veh/h/ln	1616	1612	1442	1707	1703	1524	1545	0	1346	634	0	0
Q Serve(g_s), s	1.8	6.7	0.2	5.2	38.1	0.4	0.0	0.0	0.8	1.0	0.0	0.0
Cycle Q Clear(g_c), s	1.8	6.7	0.2	5.2	38.1	0.4	1.5	0.0	0.8	2.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.50		1.00	0.50		0.00
Lane Grp Cap(c), veh/h	63	1969	881	202	2319	1037	163	0	218	122	0	0
V/C Ratio(X)	0.82	0.38	0.01	0.79	0.99	0.03	0.26	0.00	0.10	0.34	0.00	0.00
Avail Cap(c_a), veh/h	409	2194	982	447	2319	1037	574	0	629	611	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	27.3	5.6	4.4	24.6	9.0	3.0	26.9	0.0	20.4	28.3	0.0	0.0
Incr Delay (d2), s/veh	9.2	0.2	0.0	2.7	16.9	0.0	0.8	0.0	0.2	1.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.9	0.1	2.6	22.7	0.2	0.7	0.0	0.3	0.7	0.0	0.0
LnGrp Delay(d),s/veh	36.6	5.8	4.4	27.3	25.9	3.0	27.7	0.0	20.6	30.0	0.0	0.0
LnGrp LOS	D	A	A	C	C	A	C		C	C		
Approach Vol, veh/h		806			2494			63			42	
Approach Delay, s/veh		7.8			25.7			25.4			30.0	
Approach LOS		A			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.8	40.0		6.5	6.8	44.0		6.5
Change Period (Y+Rc), s	4.0	5.0		4.0	4.5	5.0		4.0
Max Green Setting (Gmax), s	15.0	39.0		20.0	14.5	39.0		20.0
Max Q Clear Time (g_c+I1), s	7.2	8.7		3.5	3.8	40.1		4.5
Green Ext Time (p_c), s	0.1	7.3		0.1	0.0	0.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	21.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	50	40	190	50	20	40	750	80	42	2180	50
Future Volume (veh/h)	20	50	40	190	50	20	40	750	80	42	2180	50
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1242	1242	1900	1508	1508	1508	1696	1696	1696	1810	1810	1810
Adj Flow Rate, veh/h	21	53	26	126	156	3	42	789	55	44	2295	27
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	53	53	53	26	26	26	12	12	12	5	5	5
Cap, veh/h	98	65	32	199	209	178	52	1923	860	56	2052	916
Arrive On Green	0.08	0.08	0.08	0.14	0.14	0.14	0.03	0.60	0.60	0.03	0.60	0.60
Sat Flow, veh/h	1183	787	386	1436	1508	1282	1616	3223	1442	1723	3438	1534
Grp Volume(v), veh/h	21	0	79	126	156	3	42	789	55	44	2295	27
Grp Sat Flow(s),veh/h/ln	1183	0	1174	1436	1508	1282	1616	1612	1442	1723	1719	1534
Q Serve(g_s), s	2.2	0.0	8.9	11.1	13.3	0.3	3.5	17.5	2.1	3.4	80.0	1.0
Cycle Q Clear(g_c), s	2.2	0.0	8.9	11.1	13.3	0.3	3.5	17.5	2.1	3.4	80.0	1.0
Prop In Lane	1.00		0.33	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	98	0	97	199	209	178	52	1923	860	56	2052	916
V/C Ratio(X)	0.21	0.00	0.81	0.63	0.75	0.02	0.80	0.41	0.06	0.78	1.12	0.03
Avail Cap(c_a), veh/h	353	0	350	429	450	383	301	1924	861	321	2052	916
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.4	0.0	60.5	54.5	55.4	49.8	64.4	14.4	11.3	64.4	27.0	11.1
Incr Delay (d2), s/veh	1.1	0.0	15.0	11.4	17.2	0.1	10.1	0.2	0.0	8.5	60.5	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	0.8	0.0	3.3	5.0	6.5	0.1	1.7	7.8	0.9	1.8	54.9	0.4
LnGrp Delay(d),s/veh	58.5	0.0	75.4	65.9	72.6	49.9	74.5	14.6	11.4	72.9	87.5	11.1
LnGrp LOS	E		E	E	E	D	E	B	B	E	F	B
Approach Vol, veh/h		100			285			886			2366	
Approach Delay, s/veh		71.9			69.4			17.3			86.4	
Approach LOS		E			E			B			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.4	86.0		23.6	8.3	86.0		16.1
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0
Max Green Setting (Gmax), s	25.0	80.0		40.0	25.0	80.0		40.0
Max Q Clear Time (g_c+I1), s	15.4	19.5		15.3	5.5	82.0		10.9
Green Ext Time (p_c), s	0.0	9.1		3.3	0.0	0.0		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	67.8
HCM 2010 LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	120	52	115	230	30	146
Future Volume (veh/h)	120	52	115	230	30	146
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1532	1900	1667	1667	1545	1545
Adj Flow Rate, veh/h	143	44	137	274	36	48
Adj No. of Lanes	1	0	1	1	1	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	24	24	14	14	23	23
Cap, veh/h	251	77	186	834	262	388
Arrive On Green	0.22	0.22	0.12	0.50	0.18	0.18
Sat Flow, veh/h	1124	346	1587	1667	1471	1313
Grp Volume(v), veh/h	0	187	137	274	36	48
Grp Sat Flow(s),veh/h/ln	0	1470	1587	1667	1471	1313
Q Serve(g_s), s	0.0	3.2	2.3	2.8	0.6	0.7
Cycle Q Clear(g_c), s	0.0	3.2	2.3	2.8	0.6	0.7
Prop In Lane		0.24	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	328	186	834	262	388
V/C Ratio(X)	0.00	0.57	0.74	0.33	0.14	0.12
Avail Cap(c_a), veh/h	0	2387	1897	4966	1444	1442
HCM Platoon Ratio	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	1.00
Uniform Delay (d), s/veh	0.0	9.7	12.0	4.2	9.7	7.2
Incr Delay (d2), s/veh	0.0	1.6	5.6	0.2	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.4	1.3	1.3	0.2	0.3
LnGrp Delay(d),s/veh	0.0	11.3	17.6	4.4	9.9	7.4
LnGrp LOS		B	B	A	A	A
Approach Vol, veh/h	187			411	84	
Approach Delay, s/veh	11.3			8.8	8.5	
Approach LOS	B			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		9.5	7.8	10.7				18.5
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		27.5	33.5	45.5				83.5
Max Q Clear Time (g_c+I1), s		2.7	4.3	5.2				4.8
Green Ext Time (p_c), s		0.2	0.4	1.2				1.7

Intersection Summary	
HCM 2010 Ctrl Delay	9.4
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	20	30	132	20	40	20	810	200	80	2300	30
Future Volume (veh/h)	20	20	30	132	20	40	20	810	200	80	2300	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1462	1900	1900	1484	1900	1727	1727	1900	1776	1776	1900
Adj Flow Rate, veh/h	21	21	13	138	21	36	21	844	197	83	2396	31
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	30	30	30	28	28	28	10	10	10	7	7	7
Cap, veh/h	116	104	55	204	26	40	28	1665	388	104	2301	30
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.02	0.63	0.63	0.06	0.67	0.67
Sat Flow, veh/h	409	569	303	838	145	223	1645	2643	617	1691	3411	44
Grp Volume(v), veh/h	55	0	0	195	0	0	21	524	517	83	1182	1245
Grp Sat Flow(s),veh/h/ln	1281	0	0	1205	0	0	1645	1641	1618	1691	1687	1768
Q Serve(g_s), s	0.0	0.0	0.0	14.5	0.0	0.0	1.5	20.6	20.6	5.7	80.0	80.0
Cycle Q Clear(g_c), s	4.0	0.0	0.0	18.6	0.0	0.0	1.5	20.6	20.6	5.7	80.0	80.0
Prop In Lane	0.38		0.24	0.71		0.18	1.00		0.38	1.00		0.02
Lane Grp Cap(c), veh/h	275	0	0	271	0	0	28	1034	1020	104	1138	1193
V/C Ratio(X)	0.20	0.00	0.00	0.72	0.00	0.00	0.76	0.51	0.51	0.80	1.04	1.04
Avail Cap(c_a), veh/h	466	0	0	450	0	0	347	1107	1092	357	1138	1193
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.3	0.0	0.0	46.9	0.0	0.0	58.0	11.9	11.9	54.9	19.3	19.3
Incr Delay (d2), s/veh	0.4	0.0	0.0	3.6	0.0	0.0	14.4	0.5	0.6	5.1	37.3	38.1
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	1.6	0.0	0.0	6.5	0.0	0.0	0.8	9.5	9.3	2.8	48.5	51.1
LnGrp Delay(d),s/veh	41.7	0.0	0.0	50.5	0.0	0.0	72.5	12.5	12.5	60.0	56.6	57.4
LnGrp LOS	D			D			E	B	B	E	F	F
Approach Vol, veh/h		55			195			1062			2510	
Approach Delay, s/veh		41.7			50.5			13.7			57.1	
Approach LOS		D			D			B			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.3	80.7		26.6	6.0	86.0		26.6
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0
Max Green Setting (Gmax), s	25.0	80.0		40.0	25.0	80.0		40.0
Max Q Clear Time (g_c+I1), s	7.7	22.6		6.0	3.5	82.0		20.6
Green Ext Time (p_c), s	0.1	12.0		0.3	0.0	0.0		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	44.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	20	30	140	20	60	50	940	50	50	2362	50
Future Volume (veh/h)	30	20	30	140	20	60	50	940	50	50	2362	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1597	1597	1881	1881	1900	1712	1712	1712	1776	1776	1900
Adj Flow Rate, veh/h	31	20	0	99	82	34	51	959	36	51	2410	50
Adj No. of Lanes	0	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	19	19	19	1	1	1	11	11	11	7	7	7
Cap, veh/h	38	25	55	142	100	42	53	2370	1060	64	2483	51
Arrive On Green	0.04	0.04	0.00	0.08	0.08	0.08	0.03	0.73	0.73	0.04	0.73	0.73
Sat Flow, veh/h	942	608	1357	1792	1264	524	1630	3252	1455	1691	3380	70
Grp Volume(v), veh/h	51	0	0	99	0	116	51	959	36	51	1198	1262
Grp Sat Flow(s),veh/h/ln	1550	0	1357	1792	0	1789	1630	1626	1455	1691	1687	1763
Q Serve(g_s), s	5.0	0.0	0.0	8.3	0.0	9.8	4.8	17.5	1.1	4.6	100.5	103.0
Cycle Q Clear(g_c), s	5.0	0.0	0.0	8.3	0.0	9.8	4.8	17.5	1.1	4.6	100.5	103.0
Prop In Lane	0.61		1.00	1.00		0.29	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	63	0	55	142	0	142	53	2370	1060	64	1239	1295
V/C Ratio(X)	0.81	0.00	0.00	0.70	0.00	0.82	0.96	0.40	0.03	0.79	0.97	0.97
Avail Cap(c_a), veh/h	70	0	62	197	0	197	53	2370	1060	121	1241	1298
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.4	0.0	0.0	69.2	0.0	69.9	74.5	8.0	5.8	73.6	18.8	19.1
Incr Delay (d2), s/veh	45.9	0.0	0.0	6.1	0.0	16.9	110.0	0.2	0.0	7.8	18.3	19.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	0.0	4.4	0.0	5.5	3.8	7.9	0.4	2.3	52.6	56.3
LnGrp Delay(d),s/veh	119.3	0.0	0.0	75.3	0.0	86.8	184.5	8.2	5.8	81.4	37.0	38.2
LnGrp LOS	F			E		F	F	A	A	F	D	D
Approach Vol, veh/h		51			215			1046			2511	
Approach Delay, s/veh		119.3			81.5			16.7			38.5	
Approach LOS		F			F			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.9	117.9		10.2	9.0	118.8		16.2
Change Period (Y+Rc), s	4.0	5.5		4.0	4.0	5.5		4.0
Max Green Setting (Gmax), s	11.0	107.5		7.0	5.0	113.5		17.0
Max Q Clear Time (g_c+I1), s	10.6	19.5		7.0	6.8	105.0		11.8
Green Ext Time (p_c), s	0.0	12.1		0.0	0.0	8.3		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	36.0
HCM 2010 LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
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)	0	20	20	60	20	20	0	508	50	20	1019	0
Future Volume (veh/h)	0	20	20	60	20	20	0	508	50	20	1019	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1508	1508	1900	1624	1624	1900	1696	1696	1696
Adj Flow Rate, veh/h	0	21	0	64	21	2	0	540	49	21	1084	0
Adj No. of Lanes	1	1	0	2	1	0	1	2	0	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	26	26	26	17	17	17	12	12	12
Cap, veh/h	2	34	0	100	128	12	2	2141	194	29	2600	1163
Arrive On Green	0.00	0.02	0.00	0.04	0.09	0.09	0.00	0.75	0.75	0.02	0.81	0.00
Sat Flow, veh/h	1810	1900	0	2786	1356	129	1547	2862	259	1616	3223	1442
Grp Volume(v), veh/h	0	21	0	64	0	23	0	291	298	21	1084	0
Grp Sat Flow(s),veh/h/ln	1810	1900	0	1393	0	1485	1547	1543	1578	1616	1612	1442
Q Serve(g_s), s	0.0	1.1	0.0	2.2	0.0	1.4	0.0	5.7	5.8	1.3	9.6	0.0
Cycle Q Clear(g_c), s	0.0	1.1	0.0	2.2	0.0	1.4	0.0	5.7	5.8	1.3	9.6	0.0
Prop In Lane	1.00		0.00	1.00		0.09	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	2	34	0	100	0	140	2	1154	1181	29	2600	1163
V/C Ratio(X)	0.00	0.62	0.00	0.64	0.00	0.16	0.00	0.25	0.25	0.73	0.42	0.00
Avail Cap(c_a), veh/h	153	562	0	236	0	167	126	1154	1181	132	2600	1163
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.98	0.00	0.98	0.00	0.96	0.96	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	47.8	0.0	46.6	0.0	40.8	0.0	3.8	3.8	47.9	2.8	0.0
Incr Delay (d2), s/veh	0.0	23.7	0.0	2.5	0.0	0.8	0.0	0.5	0.5	12.4	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	0.0	0.8	0.0	0.9	0.0	0.6	0.0	2.6	2.6	0.7	4.4	0.0
LnGrp Delay(d),s/veh	0.0	71.5	0.0	49.2	0.0	41.6	0.0	4.3	4.3	60.3	3.3	0.0
LnGrp LOS		E		D		D		A	A	E	A	
Approach Vol, veh/h		21			87			589			1105	
Approach Delay, s/veh		71.5			47.2			4.3			4.3	
Approach LOS		E			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.7	79.0	7.5	5.7	0.0	84.8	0.0	13.2
Change Period (Y+Rc), s	4.0	5.7	4.0	4.0	4.0	5.7	4.0	4.0
Max Green Setting (Gmax), s	8.0	35.0	8.3	29.0	8.0	35.0	8.3	11.0
Max Q Clear Time (g_c+I1), s	3.3	7.8	4.2	3.1	0.0	11.6	0.0	3.4
Green Ext Time (p_c), s	0.0	4.8	0.0	0.1	0.0	10.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	7.2
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	30	40	270	50	30	40	452	100	50	1403	40
Future Volume (veh/h)	30	30	40	270	50	30	40	452	100	50	1403	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1462	1462	1900	1827	1827	1900	1776	1776	1900	1845	1845	1900
Adj Flow Rate, veh/h	31	31	42	281	52	31	42	471	86	52	1461	40
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	30	30	30	4	4	4	7	7	7	3	3	3
Cap, veh/h	352	164	223	415	312	186	51	1437	261	66	1780	49
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.03	0.50	0.50	0.04	0.51	0.51
Sat Flow, veh/h	1024	562	761	1292	1066	636	1691	2853	518	1757	3485	95
Grp Volume(v), veh/h	31	0	73	281	0	83	42	277	280	52	734	767
Grp Sat Flow(s),veh/h/ln	1024	0	1323	1292	0	1702	1691	1687	1684	1757	1752	1828
Q Serve(g_s), s	1.9	0.0	3.3	16.7	0.0	2.9	2.0	7.8	7.9	2.3	28.2	28.3
Cycle Q Clear(g_c), s	4.8	0.0	3.3	20.0	0.0	2.9	2.0	7.8	7.9	2.3	28.2	28.3
Prop In Lane	1.00		0.58	1.00		0.37	1.00		0.31	1.00		0.05
Lane Grp Cap(c), veh/h	352	0	387	415	0	498	51	850	848	66	895	934
V/C Ratio(X)	0.09	0.00	0.19	0.68	0.00	0.17	0.82	0.33	0.33	0.79	0.82	0.82
Avail Cap(c_a), veh/h	497	0	574	597	0	738	169	850	848	176	895	934
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.00	0.98	1.00	0.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	0.0	21.2	28.7	0.0	21.0	38.6	11.8	11.8	38.2	16.5	16.5
Incr Delay (d2), s/veh	0.1	0.0	0.2	1.8	0.0	0.1	10.6	1.0	1.0	7.8	8.3	8.1
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	0.5	0.0	1.2	6.1	0.0	1.4	1.1	3.9	3.9	1.3	15.5	16.2
LnGrp Delay(d),s/veh	22.9	0.0	21.4	30.4	0.0	21.2	49.2	12.7	12.8	46.0	24.7	24.6
LnGrp LOS	C		C	C		C	D	B	B	D	C	C
Approach Vol, veh/h		104			364			599			1553	
Approach Delay, s/veh		21.8			28.3			15.3			25.4	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.0	45.6		27.4	6.4	46.2		27.4
Change Period (Y+Rc), s	4.0	5.3		4.0	4.0	5.3		4.0
Max Green Setting (Gmax), s	8.0	24.0		34.7	8.0	24.0		34.7
Max Q Clear Time (g_c+I1), s	4.3	9.9		6.8	4.0	30.3		22.0
Green Ext Time (p_c), s	0.0	4.1		0.5	0.0	0.0		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	23.3
HCM 2010 LOS	C

Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	230	92	500	110	240	1473
Future Volume (veh/h)	230	92	500	110	240	1473
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1792	1900	1845	1845
Adj Flow Rate, veh/h	237	95	515	92	247	1519
Adj No. of Lanes	2	1	2	0	1	2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	6	6	3	3
Cap, veh/h	337	155	1696	302	264	2758
Arrive On Green	0.10	0.10	0.78	0.78	0.15	0.79
Sat Flow, veh/h	3476	1599	2980	514	1757	3597
Grp Volume(v), veh/h	237	95	303	304	247	1519
Grp Sat Flow(s),veh/h/ln	1738	1599	1703	1702	1757	1752
Q Serve(g_s), s	5.3	4.6	4.1	4.1	11.1	13.0
Cycle Q Clear(g_c), s	5.3	4.6	4.1	4.1	11.1	13.0
Prop In Lane	1.00	1.00		0.30	1.00	
Lane Grp Cap(c), veh/h	337	155	999	999	264	2758
V/C Ratio(X)	0.70	0.61	0.30	0.30	0.94	0.55
Avail Cap(c_a), veh/h	726	334	999	999	264	2758
HCM Platoon Ratio	1.00	1.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.96	0.96	0.44	0.44
Uniform Delay (d), s/veh	35.0	34.7	4.1	4.1	33.6	3.2
Incr Delay (d2), s/veh	1.0	1.5	0.7	0.8	22.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	2.1	2.0	2.0	7.0	6.3
LnGrp Delay(d),s/veh	36.0	36.2	4.8	4.8	56.0	3.6
LnGrp LOS	D	D	A	A	E	A
Approach Vol, veh/h	332		607			1766
Approach Delay, s/veh	36.1		4.8			10.9
Approach LOS	D		A			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	16.0	52.3				68.3		11.7
Change Period (Y+Rc), s	4.0	5.3				5.3		4.0
Max Green Setting (Gmax), s	12.0	38.0				54.0		16.7
Max Q Clear Time (g_c+I1), s	13.1	6.1				15.0		7.3
Green Ext Time (p_c), s	0.0	5.9				22.7		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	12.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	130	0	102	0	508	90	80	1623	0
Future Volume (veh/h)	0	0	0	130	0	102	0	508	90	80	1623	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	0.99		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1845	1845	1776	1776	1900	1845	1845	1900
Adj Flow Rate, veh/h	0	0	0	134	0	9	0	524	79	82	1673	0
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	3	3	3	7	7	7	3	3	3
Cap, veh/h	0	2	0	170	0	151	2	1993	299	104	2757	0
Arrive On Green	0.00	0.00	0.00	0.10	0.00	0.10	0.00	0.68	0.68	0.12	1.00	0.00
Sat Flow, veh/h	0	1863	0	1746	0	1558	1691	2942	442	1757	3597	0
Grp Volume(v), veh/h	0	0	0	134	0	9	0	300	303	82	1673	0
Grp Sat Flow(s),veh/h/ln	0	1863	0	1746	0	1558	1691	1687	1697	1757	1752	0
Q Serve(g_s), s	0.0	0.0	0.0	6.0	0.0	0.4	0.0	5.6	5.6	3.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	6.0	0.0	0.4	0.0	5.6	5.6	3.6	0.0	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.26	1.00		0.00
Lane Grp Cap(c), veh/h	0	2	0	170	0	151	2	1143	1150	104	2757	0
V/C Ratio(X)	0.00	0.00	0.00	0.79	0.00	0.06	0.00	0.26	0.26	0.79	0.61	0.00
Avail Cap(c_a), veh/h	0	203	0	218	0	195	169	1143	1150	176	2757	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.96	0.96	0.80	0.80	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	35.3	0.0	32.8	0.0	5.1	5.1	34.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	12.4	0.0	0.1	0.0	0.5	0.5	4.0	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	3.5	0.0	0.2	0.0	2.7	2.8	1.8	0.3	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	47.7	0.0	32.9	0.0	5.6	5.6	38.8	0.8	0.0
LnGrp LOS				D		C		A	A	D	A	
Approach Vol, veh/h		0			143			603			1755	
Approach Delay, s/veh		0.0			46.8			5.6			2.6	
Approach LOS					D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.7	59.5		0.0	0.0	68.2		11.8
Change Period (Y+Rc), s	4.0	5.3		4.0	4.0	5.3		4.0
Max Green Setting (Gmax), s	8.0	36.0		8.7	8.0	36.0		10.0
Max Q Clear Time (g_c+I1), s	5.6	7.6		0.0	0.0	2.0		8.0
Green Ext Time (p_c), s	0.0	5.7		0.0	0.0	23.3		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	5.8
HCM 2010 LOS	A

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	30	50	90	30	70	50	458	70	180	1423	150
Future Volume (veh/h)	70	30	50	90	30	70	50	458	70	180	1423	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1900	1681	1900	1759	1759	1900	1863	1863	1900
Adj Flow Rate, veh/h	71	31	0	92	31	5	51	467	61	184	1452	147
Adj No. of Lanes	1	1	1	0	2	0	1	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	4	4	13	13	13	8	8	8	2	2	2
Cap, veh/h	107	112	95	123	109	18	64	1694	220	168	2015	203
Arrive On Green	0.06	0.06	0.00	0.08	0.08	0.08	0.04	0.57	0.57	0.09	0.62	0.62
Sat Flow, veh/h	1740	1827	1553	1601	1412	228	1675	2975	387	1774	3248	327
Grp Volume(v), veh/h	71	31	0	92	0	36	51	261	267	184	786	813
Grp Sat Flow(s),veh/h/ln	1740	1827	1553	1601	0	1640	1675	1671	1691	1774	1770	1805
Q Serve(g_s), s	3.6	1.5	0.0	5.1	0.0	1.9	2.7	7.2	7.3	8.5	27.3	28.0
Cycle Q Clear(g_c), s	3.6	1.5	0.0	5.1	0.0	1.9	2.7	7.2	7.3	8.5	27.3	28.0
Prop In Lane	1.00		1.00	1.00		0.14	1.00		0.23	1.00		0.18
Lane Grp Cap(c), veh/h	107	112	95	123	0	126	64	951	963	168	1098	1120
V/C Ratio(X)	0.66	0.28	0.00	0.75	0.00	0.28	0.80	0.27	0.28	1.10	0.72	0.73
Avail Cap(c_a), veh/h	323	339	288	267	0	273	140	951	963	168	1098	1120
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	0.00	1.00	0.00	1.00	0.99	0.99	0.99	0.72	0.72	0.72
Uniform Delay (d), s/veh	41.3	40.3	0.0	40.7	0.0	39.2	43.0	9.9	9.9	40.8	11.7	11.8
Incr Delay (d2), s/veh	5.2	1.0	0.0	3.3	0.0	0.5	23.5	0.7	0.7	87.6	2.9	3.0
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	1.9	0.8	0.0	2.4	0.0	0.9	1.7	3.5	3.5	8.2	14.0	14.7
LnGrp Delay(d),s/veh	46.5	41.3	0.0	44.0	0.0	39.6	66.5	10.6	10.6	128.4	14.6	14.8
LnGrp LOS	D	D		D		D	E	B	B	F	B	B
Approach Vol, veh/h		102			128			579			1783	
Approach Delay, s/veh		44.9			42.8			15.5			26.4	
Approach LOS		D			D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.5	56.5		9.5	7.9	61.1		11.4
Change Period (Y+Rc), s	4.0	5.3		4.0	4.5	5.3		4.5
Max Green Setting (Gmax), s	8.5	32.0		16.7	7.5	22.5		15.0
Max Q Clear Time (g_c+I1), s	10.5	9.3		5.6	4.7	30.0		7.1
Green Ext Time (p_c), s	0.0	4.6		0.1	0.0	0.0		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	25.5
HCM 2010 LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	90	150	248	110	330	0	0	1143	420
Future Volume (veh/h)	0	0	0	90	150	248	110	330	0	0	1143	420
Number				7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1767	1900	1863	1759	0	0	1828	1863
Adj Flow Rate, veh/h				97	161	40	118	355	0	0	1229	452
Adj No. of Lanes				0	2	0	1	2	0	0	2	1
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	0	2	8	0	0	4	2
Cap, veh/h				170	297	76	150	2326	0	0	1896	821
Arrive On Green				0.16	0.16	0.16	0.08	0.70	0.00	0.00	0.52	0.52
Sat Flow, veh/h				1061	1859	476	1774	3431	0	0	3656	1583
Grp Volume(v), veh/h				157	0	141	118	355	0	0	1229	452
Grp Sat Flow(s),veh/h/ln				1714	0	1683	1774	1671	0	0	1828	1583
Q Serve(g_s), s				4.1	0.0	3.7	3.2	1.8	0.0	0.0	11.8	9.3
Cycle Q Clear(g_c), s				4.1	0.0	3.7	3.2	1.8	0.0	0.0	11.8	9.3
Prop In Lane				0.62		0.28	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				274	0	269	150	2326	0	0	1896	821
V/C Ratio(X)				0.57	0.00	0.52	0.78	0.15	0.00	0.00	0.65	0.55
Avail Cap(c_a), veh/h				917	0	901	183	2547	0	0	2070	897
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	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				18.9	0.0	18.7	21.8	2.5	0.0	0.0	8.5	7.9
Incr Delay (d2), s/veh				2.3	0.0	1.9	16.6	0.0	0.0	0.0	1.0	1.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.1	0.0	1.9	2.2	0.8	0.0	0.0	6.1	4.3
LnGrp Delay(d),s/veh				21.1	0.0	20.6	38.4	2.6	0.0	0.0	9.5	9.1
LnGrp LOS				C		C	D	A			A	A
Approach Vol, veh/h					298			473			1681	
Approach Delay, s/veh					20.9			11.5			9.4	
Approach LOS					C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		37.8		10.8	8.6	29.2		
Change Period (Y+Rc), s		4.0		3.0	4.5	4.0		
Max Green Setting (Gmax), s		37.0		26.0	5.0	27.5		
Max Q Clear Time (g_c+I1), s		3.8		6.1	5.2	13.8		
Green Ext Time (p_c), s		3.4		1.8	0.0	11.3		

Intersection Summary	
HCM 2010 Ctrl Delay	11.2
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
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)	190	190	110	0	0	0	0	250	220	773	460	0
Future Volume (veh/h)	190	190	110	0	0	0	0	250	220	773	460	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792				0	1624	1624	1810	1810	0
Adj Flow Rate, veh/h	204	204	18				0	269	117	831	495	0
Adj No. of Lanes	1	1	1				0	2	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	6	6				0	17	17	5	5	0
Cap, veh/h	296	310	264				0	545	232	779	2390	0
Arrive On Green	0.17	0.17	0.17				0.00	0.17	0.17	0.45	0.70	0.00
Sat Flow, veh/h	1707	1792	1524				0	3248	1380	1723	3529	0
Grp Volume(v), veh/h	204	204	18				0	269	117	831	495	0
Grp Sat Flow(s),veh/h/ln	1707	1792	1524				0	1624	1380	1723	1719	0
Q Serve(g_s), s	6.0	5.6	0.5				0.0	4.0	4.1	24.0	2.7	0.0
Cycle Q Clear(g_c), s	6.0	5.6	0.5				0.0	4.0	4.1	24.0	2.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	296	310	264				0	545	232	779	2390	0
V/C Ratio(X)	0.69	0.66	0.07				0.00	0.49	0.51	1.07	0.21	0.00
Avail Cap(c_a), veh/h	579	607	516				0	1101	468	779	2913	0
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	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.6	20.5	18.4				0.0	20.1	20.1	14.6	2.9	0.0
Incr Delay (d2), s/veh	2.9	2.4	0.1				0.0	1.5	3.6	51.7	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	3.0	3.0	0.2				0.0	1.9	1.8	22.4	1.3	0.0
LnGrp Delay(d),s/veh	23.5	22.9	18.5				0.0	21.5	23.7	66.2	2.9	0.0
LnGrp LOS	C	C	B					C	C	F	A	
Approach Vol, veh/h		426						386			1326	
Approach Delay, s/veh		23.0						22.2			42.6	
Approach LOS		C						C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	28.0	12.9		12.2		40.9		
Change Period (Y+Rc), s	4.0	* 4		3.0		4.0		
Max Green Setting (Gmax), s	24.0	* 18		18.0		45.0		
Max Q Clear Time (g_c+I1), s	26.0	6.1		8.0		4.7		
Green Ext Time (p_c), s	0.0	2.8		1.3		5.2		

Intersection Summary	
HCM 2010 Ctrl Delay	35.0
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	20	20	130	60	91	50	287	40	213	686	80
Future Volume (veh/h)	20	20	20	130	60	91	50	287	40	213	686	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	120	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1776	1624	1624	1624	1776	1776	1776	1667	1667	1667
Adj Flow Rate, veh/h	21	21	0	100	115	36	53	302	0	224	722	35
Adj No. of Lanes	1	1	1	1	1	2	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	7	7	7	17	17	17	7	7	7	14	14	14
Cap, veh/h	99	104	88	160	168	1534	67	516	231	718	1836	821
Arrive On Green	0.09	0.09	0.00	0.12	0.12	0.12	0.04	0.24	0.00	0.19	0.40	0.40
Sat Flow, veh/h	1691	1776	1509	1547	1624	2761	1691	3374	1509	1587	3167	1417
Grp Volume(v), veh/h	21	21	0	100	115	36	53	302	0	224	722	35
Grp Sat Flow(s),veh/h/ln	1691	1776	1509	1547	1624	1380	1691	1687	1509	1587	1583	1417
Q Serve(g_s), s	0.5	0.5	0.0	2.7	2.9	0.4	1.4	3.3	0.0	5.9	7.7	0.7
Cycle Q Clear(g_c), s	0.5	0.5	0.0	2.7	2.9	0.4	1.4	3.3	0.0	5.9	7.7	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	99	104	88	160	168	1534	67	516	231	718	1836	821
V/C Ratio(X)	0.21	0.20	0.00	0.63	0.68	0.02	0.79	0.59	0.00	0.31	0.39	0.04
Avail Cap(c_a), veh/h	1102	1158	984	849	892	2028	464	2354	1053	1489	4382	1961
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	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	32.8	0.0	31.3	31.5	6.9	34.5	29.2	0.0	18.8	7.9	6.2
Incr Delay (d2), s/veh	0.4	0.4	0.0	1.5	1.8	0.0	7.3	1.1	0.0	0.3	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	292.7	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.4	0.0	2.0	2.3	0.2	1.2	2.9	0.0	73.2	3.8	0.3
LnGrp Delay(d),s/veh	33.2	33.1	0.0	32.8	33.3	6.9	41.9	30.2	0.0	311.7	8.1	6.3
LnGrp LOS	C	C		C	C	A	D	C		F	A	A
Approach Vol, veh/h		42			251			355			981	
Approach Delay, s/veh		33.2			29.3			32.0			77.3	
Approach LOS		C			C			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.1	14.9		7.5	4.9	22.1		9.2
Change Period (Y+Rc), s	4.0	4.5		3.5	3.0	4.5		4.0
Max Green Setting (Gmax), s	41.6	30.5		28.5	12.0	60.5		24.0
Max Q Clear Time (g_c+I1), s	7.9	5.3		2.5	3.4	9.7		4.9
Green Ext Time (p_c), s	0.8	1.7		0.1	0.0	7.9		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	58.9
HCM 2010 LOS	E

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	20	20	120	20	21	20	145	60	36	121	20
Future Vol, veh/h	20	20	20	120	20	21	20	145	60	36	121	20
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	21	21	128	21	22	21	154	64	38	129	21
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Righ	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.6	9.8	9.7	9.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	33%	75%	20%
Vol Thru, %	64%	33%	12%	68%
Vol Right, %	27%	33%	13%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	225	60	161	177
LT Vol	20	20	120	36
Through Vol	145	20	20	121
RT Vol	60	20	21	20
Lane Flow Rate	239	64	171	188
Geometry Grp	1	1	1	1
Degree of Util (X)	0.307	0.089	0.242	0.25
Departure Headway (Hd)	4.62	5.038	5.081	4.789
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	773	705	702	746
Service Time	2.674	3.116	3.147	2.847
HCM Lane V/C Ratio	0.309	0.091	0.244	0.252
HCM Control Delay	9.7	8.6	9.8	9.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.3	0.3	0.9	1

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	85	35	60	0	6	0	50	161	2	0	180	96
Future Vol, veh/h	85	35	60	0	6	0	50	161	2	0	180	96
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	145
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	90	37	64	0	6	0	53	171	2	0	191	102

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	472	470	191	571	571	172	293	0	0	173	0	0
Stage 1	191	191	-	278	278	-	-	-	-	-	-	-
Stage 2	281	279	-	293	293	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	502	492	851	432	431	872	1269	-	-	1404	-	-
Stage 1	811	742	-	728	680	-	-	-	-	-	-	-
Stage 2	726	680	-	715	670	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	479	469	851	362	411	872	1269	-	-	1404	-	-
Mov Cap-2 Maneuver	479	469	-	362	411	-	-	-	-	-	-	-
Stage 1	774	742	-	695	649	-	-	-	-	-	-	-
Stage 2	686	649	-	628	670	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.8	13.9	1.9	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1269	-	-	558	411	1404	-	-
HCM Lane V/C Ratio	0.042	-	-	0.343	0.016	-	-	-
HCM Control Delay (s)	8	0	-	14.8	13.9	0	-	-
HCM Lane LOS	A	A	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.5	0	0	-	-

Intersection	
Intersection Delay, s/veh	12
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	50	80	30	110	30	73	20	110	60	70	200	30
Future Vol, veh/h	50	80	30	110	30	73	20	110	60	70	200	30
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	1	1	1	7	7	7	3	3	3
Mvmt Flow	53	85	32	117	32	78	21	117	64	74	213	32
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.9	11.6	11.1	13.4
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	31%	52%	23%
Vol Thru, %	58%	50%	14%	67%
Vol Right, %	32%	19%	34%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	190	160	213	300
LT Vol	20	50	110	70
Through Vol	110	80	30	200
RT Vol	60	30	73	30
Lane Flow Rate	202	170	227	319
Geometry Grp	1	1	1	1
Degree of Util (X)	0.31	0.269	0.35	0.479
Departure Headway (Hd)	5.514	5.695	5.558	5.407
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	649	628	646	664
Service Time	3.57	3.755	3.612	3.456
HCM Lane V/C Ratio	0.311	0.271	0.351	0.48
HCM Control Delay	11.1	10.9	11.6	13.4
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.3	1.1	1.6	2.6

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	86	180	230	20	50	115
Future Vol, veh/h	86	180	230	20	50	115
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	178	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	91	191	245	21	53	122

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	266	0	-	0	629	256
Stage 1	-	-	-	-	256	-
Stage 2	-	-	-	-	373	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1298	-	-	-	446	783
Stage 1	-	-	-	-	787	-
Stage 2	-	-	-	-	696	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1298	-	-	-	415	783
Mov Cap-2 Maneuver	-	-	-	-	415	-
Stage 1	-	-	-	-	732	-
Stage 2	-	-	-	-	696	-

Approach	EB	WB	SB
HCM Control Delay, s	2.6	0	13.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1298	-	-	-	617
HCM Lane V/C Ratio	0.07	-	-	-	0.284
HCM Control Delay (s)	8	-	-	-	13.1
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	40	271	100	70	40	145	990	40	20	1290	96
Future Volume (veh/h)	71	40	271	100	70	40	145	990	40	20	1290	96
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	76	43	0	106	74	32	154	1053	0	21	1372	97
Adj No. of Lanes	0	1	1	0	1	0	1	2	1	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	204	99	249	190	100	39	191	2272	1016	24	1837	130
Arrive On Green	0.16	0.16	0.00	0.16	0.16	0.16	0.11	0.64	0.00	0.01	0.55	0.55
Sat Flow, veh/h	797	630	1583	751	637	247	1774	3539	1583	1774	3354	236
Grp Volume(v), veh/h	119	0	0	212	0	0	154	1053	0	21	722	747
Grp Sat Flow(s),veh/h/ln	1427	0	1583	1634	0	0	1774	1770	1583	1774	1770	1821
Q Serve(g_s), s	0.0	0.0	0.0	3.6	0.0	0.0	6.3	11.3	0.0	0.9	23.3	23.5
Cycle Q Clear(g_c), s	5.6	0.0	0.0	9.2	0.0	0.0	6.3	11.3	0.0	0.9	23.3	23.5
Prop In Lane	0.64		1.00	0.50		0.15	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	303	0	249	329	0	0	191	2272	1016	24	969	998
V/C Ratio(X)	0.39	0.00	0.00	0.64	0.00	0.00	0.81	0.46	0.00	0.87	0.74	0.75
Avail Cap(c_a), veh/h	579	0	551	643	0	0	261	2605	1165	119	1160	1194
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	0.0	0.0	30.3	0.0	0.0	32.6	6.8	0.0	36.8	12.9	13.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.8	0.0	0.0	8.7	0.2	0.0	27.0	2.5	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.0	4.3	0.0	0.0	3.5	5.5	0.0	0.6	11.9	12.3
LnGrp Delay(d),s/veh	29.1	0.0	0.0	31.1	0.0	0.0	41.3	7.0	0.0	63.8	15.4	15.5
LnGrp LOS	C			C			D	A		E	B	B
Approach Vol, veh/h		119			212			1207			1490	
Approach Delay, s/veh		29.1			31.1			11.4			16.1	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.0	53.0		16.7	12.0	45.9		16.7
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		* 5
Max Green Setting (Gmax), s	5.0	55.0		26.0	11.0	49.0		* 27
Max Q Clear Time (g_c+I1), s	2.9	13.3		7.6	8.3	25.5		11.2
Green Ext Time (p_c), s	0.0	14.3		0.4	0.1	15.4		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	15.8
HCM 2010 LOS	B

Notes

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

HCM 2010 Research does not support Non-NEMA phasing.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	240	1744	150	270	461	370	250	150	900	150	310	758
Future Volume (veh/h)	240	1744	150	270	461	370	250	150	900	150	310	758
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1845	1845	1845
Adj Flow Rate, veh/h	247	1798	99	278	475	0	258	155	505	155	320	209
Adj No. of Lanes	1	3	1	2	1	1	1	1	2	1	1	2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	3	3
Cap, veh/h	269	2325	721	324	744	632	253	426	634	178	344	515
Arrive On Green	0.15	0.46	0.46	0.09	0.40	0.00	0.14	0.23	0.23	0.10	0.19	0.19
Sat Flow, veh/h	1774	5085	1578	3442	1863	1583	1774	1863	2776	1757	1845	2760
Grp Volume(v), veh/h	247	1798	99	278	475	0	258	155	505	155	320	209
Grp Sat Flow(s),veh/h/ln	1774	1695	1578	1721	1863	1583	1774	1863	1388	1757	1845	1380
Q Serve(g_s), s	19.2	41.6	5.1	11.1	28.8	0.0	20.0	9.8	24.0	12.2	23.9	9.3
Cycle Q Clear(g_c), s	19.2	41.6	5.1	11.1	28.8	0.0	20.0	9.8	24.0	12.2	23.9	9.3
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	269	2325	721	324	744	632	253	426	634	178	344	515
V/C Ratio(X)	0.92	0.77	0.14	0.86	0.64	0.00	1.02	0.36	0.80	0.87	0.93	0.41
Avail Cap(c_a), veh/h	329	2325	721	442	744	632	253	612	912	201	540	808
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.5	31.9	22.0	62.5	33.9	0.0	60.0	45.4	50.9	62.0	56.0	50.1
Incr Delay (d2), s/veh	24.3	2.6	0.4	9.3	4.2	0.0	61.2	0.2	1.9	27.3	12.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.2	20.0	2.3	5.7	15.6	0.0	14.1	5.1	9.4	7.2	13.4	3.6
LnGrp Delay(d),s/veh	82.8	34.5	22.4	71.8	38.1	0.0	121.4	45.6	52.9	89.4	68.4	50.3
LnGrp LOS	F	C	C	E	D		F	D	D	F	E	D
Approach Vol, veh/h		2144			753			918			684	
Approach Delay, s/veh		39.5			50.5			70.9			67.6	
Approach LOS		D			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.9	69.1	23.7	30.3	24.9	61.0	17.9	36.2
Change Period (Y+Rc), s	3.7	5.1	3.7	* 4.2	3.7	5.1	3.7	* 4.2
Max Green Setting (Gmax), s	18.0	43.3	20.0	* 41	26.0	35.3	16.0	* 46
Max Q Clear Time (g_c+I1), s	13.1	43.6	22.0	25.9	21.2	30.8	14.2	26.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	52.0
HCM 2010 LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	884	2309	50	132	997	610	50	1241	95	200	431	252
Future Volume (veh/h)	884	2309	50	132	997	610	50	1241	95	200	431	252
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1827	1827	1827	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	921	2405	51	138	1039	0	52	1293	29	208	449	96
Adj No. of Lanes	2	3	0	2	3	1	1	2	1	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	4	4	4	1	1	1	2	2	2
Cap, veh/h	607	2979	63	139	2224	692	67	1156	517	157	1347	601
Arrive On Green	0.18	0.58	0.58	0.04	0.45	0.00	0.04	0.32	0.32	0.09	0.38	0.38
Sat Flow, veh/h	3442	5125	108	3375	4988	1553	1792	3574	1598	1774	3539	1581
Grp Volume(v), veh/h	921	1588	868	138	1039	0	52	1293	29	208	449	96
Grp Sat Flow(s),veh/h/ln	1721	1695	1843	1688	1663	1553	1792	1787	1598	1774	1770	1581
Q Serve(g_s), s	30.0	62.8	63.3	6.9	24.8	0.0	4.9	55.0	2.4	15.0	15.3	6.8
Cycle Q Clear(g_c), s	30.0	62.8	63.3	6.9	24.8	0.0	4.9	55.0	2.4	15.0	15.3	6.8
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	607	1970	1071	139	2224	692	67	1156	517	157	1347	601
V/C Ratio(X)	1.52	0.81	0.81	0.99	0.47	0.00	0.78	1.12	0.06	1.33	0.33	0.16
Avail Cap(c_a), veh/h	607	1970	1071	139	2224	692	116	1156	517	157	1347	601
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.0	28.1	28.2	81.5	33.0	0.0	81.2	57.5	49.1	77.5	37.4	34.7
Incr Delay (d2), s/veh	233.2	0.3	0.6	74.0	0.7	0.0	13.6	65.2	0.1	185.1	0.2	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	33.9	29.4	32.2	4.7	11.5	0.0	2.7	37.6	1.1	15.4	7.5	3.0
LnGrp Delay(d),s/veh	303.2	28.4	28.8	155.5	33.7	0.0	94.7	122.7	49.2	262.6	37.6	34.9
LnGrp LOS	F	C	C	F	C		F	F	D	F	D	C
Approach Vol, veh/h		3377			1177			1374			753	
Approach Delay, s/veh		103.4			48.0			120.1			99.4	
Approach LOS		F			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	107.0	12.3	71.7	37.0	84.0	22.0	62.0
Change Period (Y+Rc), s	7.0	7.2	6.0	7.0	7.0	7.2	7.0	* 7
Max Green Setting (Gmax), s	7.0	65.8	11.0	59.0	30.0	42.8	15.0	* 55
Max Q Clear Time (g_c+I1), s	19.9	65.3	6.9	17.3	32.0	26.8	17.0	57.0
Green Ext Time (p_c), s	0.0	0.5	0.0	5.8	0.0	8.9	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	96.6
HCM 2010 LOS	F

Notes

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	2783	261	120	829	350	90	40	210	250	60	130
Future Volume (veh/h)	81	2783	261	120	829	350	90	40	210	250	60	130
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	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
Adj Sat Flow, veh/h/ln	1881	1881	1881	1792	1792	1792	1881	1881	1881	1792	1792	1792
Adj Flow Rate, veh/h	86	2961	160	128	882	145	96	43	47	266	64	4
Adj No. of Lanes	2	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	6	6	6	1	1	1	6	6	6
Cap, veh/h	137	2335	726	90	2267	705	335	171	144	261	102	85
Arrive On Green	0.04	0.45	0.45	0.05	0.46	0.46	0.19	0.09	0.09	0.15	0.06	0.06
Sat Flow, veh/h	3476	5136	1598	1707	4893	1523	1792	1881	1583	1707	1792	1491
Grp Volume(v), veh/h	86	2961	160	128	882	145	96	43	47	266	64	4
Grp Sat Flow(s),veh/h/ln	1738	1712	1598	1707	1631	1523	1792	1881	1583	1707	1792	1491
Q Serve(g_s), s	2.8	52.0	6.9	6.0	13.5	3.1	5.3	2.4	3.2	17.5	4.0	0.2
Cycle Q Clear(g_c), s	2.8	52.0	6.9	6.0	13.5	3.1	5.3	2.4	3.2	17.5	4.0	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	137	2335	726	90	2267	705	335	171	144	261	102	85
V/C Ratio(X)	0.63	1.27	0.22	1.43	0.39	0.21	0.29	0.25	0.33	1.02	0.63	0.05
Avail Cap(c_a), veh/h	246	2335	726	90	2267	705	335	757	637	261	768	639
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	54.1	31.2	18.9	54.2	20.1	4.2	39.9	48.4	48.7	48.4	52.8	34.6
Incr Delay (d2), s/veh	1.8	124.2	0.2	245.8	0.2	0.2	1.0	1.1	1.9	60.5	8.8	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	0.1	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	51.3	3.1	8.9	6.1	2.5	2.7	1.3	1.5	12.6	2.2	0.1
LnGrp Delay(d),s/veh	55.9	155.4	19.1	300.0	20.2	4.4	40.9	49.5	50.6	109.1	61.6	35.0
LnGrp LOS	E	F	B	F	C	A	D	D	D	F	E	C
Approach Vol, veh/h		3207			1155			186			334	
Approach Delay, s/veh		146.0			49.3			45.3			99.1	
Approach LOS		F			D			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	59.0	28.9	13.5	12.0	60.0	25.0	17.4
Change Period (Y+Rc), s	7.0	7.0	7.5	* 7	7.5	7.0	7.5	7.0
Max Green Setting (Gmax), s	6.0	52.0	15.0	* 49	8.1	49.4	17.5	46.0
Max Q Clear Time (g_c+I1), s	8.0	54.0	7.3	6.0	4.8	15.5	19.5	5.2
Green Ext Time (p_c), s	0.0	0.0	0.3	0.5	0.0	10.1	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	116.0
HCM 2010 LOS	F

Notes

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	2945	1562	90	899	60	221	90	120	60	110	30
Future Volume (veh/h)	50	2945	1562	90	899	60	221	90	120	60	110	30
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1776	1776	1776	1827	1827	1827	1900	1900	1900
Adj Flow Rate, veh/h	54	3167	1345	97	967	40	238	97	54	65	118	15
Adj No. of Lanes	2	3	1	1	3	1	2	1	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	7	7	7	4	4	4	0	0	0
Cap, veh/h	91	3263	1016	78	3207	998	416	219	183	84	150	19
Arrive On Green	0.03	0.64	0.64	0.05	0.66	0.66	0.12	0.12	0.12	0.05	0.05	0.05
Sat Flow, veh/h	3442	5085	1583	1691	4848	1509	3480	1827	1526	1810	3230	404
Grp Volume(v), veh/h	54	3167	1345	97	967	40	238	97	54	65	65	68
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1691	1616	1509	1740	1827	1526	1810	1805	1829
Q Serve(g_s), s	2.0	76.6	83.1	6.0	10.9	1.2	8.4	6.4	4.2	4.6	4.6	4.8
Cycle Q Clear(g_c), s	2.0	76.6	83.1	6.0	10.9	1.2	8.4	6.4	4.2	4.6	4.6	4.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	91	3263	1016	78	3207	998	416	219	183	84	84	85
V/C Ratio(X)	0.59	0.97	1.32	1.24	0.30	0.04	0.57	0.44	0.30	0.78	0.78	0.80
Avail Cap(c_a), veh/h	133	3263	1016	78	3207	998	967	508	424	84	84	85
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	62.3	22.0	23.2	61.7	9.3	7.6	53.9	53.0	52.0	61.1	61.1	61.2
Incr Delay (d2), s/veh	2.3	9.9	152.6	178.7	0.1	0.0	1.8	2.0	1.3	32.8	33.6	38.1
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	38.5	78.9	6.7	4.9	0.5	4.1	3.4	1.8	3.1	3.1	3.3
LnGrp Delay(d),s/veh	64.6	32.0	175.8	240.4	9.3	7.6	55.6	55.0	53.3	93.9	94.7	99.2
LnGrp LOS	E	C	F	F	A	A	E	D	D	F	F	F
Approach Vol, veh/h		4566			1104			389			198	
Approach Delay, s/veh		74.7			29.6			55.1			96.0	
Approach LOS		E			C			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	88.8		10.6	7.4	91.4		20.1
Change Period (Y+Rc), s	4.0	5.7		4.6	4.0	5.7		4.6
Max Green Setting (Gmax), s	6.0	83.1		6.0	5.0	84.1		36.0
Max Q Clear Time (g_c+I1), s	12.0	85.1		6.8	4.0	12.9		10.4
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	11.8		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	66.2
HCM 2010 LOS	E

Notes

User approved pedestrian interval to be less than phase max green.
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)	30	3413	30	100	1030	40	30	20	904	60	20	50
Future Volume (veh/h)	30	3413	30	100	1030	40	30	20	904	60	20	50
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900	1845	1900
Adj Flow Rate, veh/h	32	3593	19	105	1084	35	32	21	944	63	21	40
Adj No. of Lanes	1	2	1	1	2	1	0	1	1	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	41	2688	1203	128	2849	1275	90	49	223	53	6	10
Arrive On Green	0.02	0.77	0.77	0.07	0.81	0.81	0.07	0.07	0.07	0.07	0.07	0.07
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	707	704	1568	216	91	146
Grp Volume(v), veh/h	32	3593	19	105	1084	35	53	0	944	124	0	0
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1568	1411	0	1568	453	0	0
Q Serve(g_s), s	2.6	110.0	0.4	8.5	12.0	0.6	0.0	0.0	10.0	5.0	0.0	0.0
Cycle Q Clear(g_c), s	2.6	110.0	0.4	8.5	12.0	0.6	5.0	0.0	10.0	10.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.60		1.00	0.51		0.32
Lane Grp Cap(c), veh/h	41	2688	1203	128	2849	1275	139	0	223	69	0	0
V/C Ratio(X)	0.79	1.34	0.02	0.82	0.38	0.03	0.38	0.00	4.23	1.79	0.00	0.00
Avail Cap(c_a), veh/h	109	2688	1203	576	3607	1614	139	0	223	69	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	69.7	16.7	3.9	65.6	3.6	2.6	64.2	0.0	61.5	70.4	0.0	0.0
Incr Delay (d2), s/veh	11.7	154.1	0.0	5.0	0.1	0.0	1.7	0.0	1463.7	405.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	109.8	0.2	4.3	5.8	0.3	2.1	0.0	99.6	10.6	0.0	0.0
LnGrp Delay(d),s/veh	81.4	170.8	3.9	70.5	3.7	2.6	65.9	0.0	1525.2	475.4	0.0	0.0
LnGrp LOS	F	F	A	E	A	A	E		F	F		
Approach Vol, veh/h		3644			1224			997			124	
Approach Delay, s/veh		169.1			9.4			1447.7			475.4	
Approach LOS		F			A			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.4	115.0		14.0	7.8	121.6		14.0
Change Period (Y+Rc), s	4.0	5.0		4.0	4.5	5.0		4.0
Max Green Setting (Gmax), s	47.6	110.0		10.0	8.9	147.6		10.0
Max Q Clear Time (g_c+I1), s	10.5	112.0		12.0	4.6	14.0		12.0
Green Ext Time (p_c), s	0.1	0.0		0.0	0.0	14.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	355.7
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	70	30	110	50	33	60	3380	280	20	1040	50
Future Volume (veh/h)	60	70	30	110	50	33	60	3380	280	20	1040	50
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1727	1727	1727	1863	1863	1863	1792	1792	1792
Adj Flow Rate, veh/h	61	71	22	82	94	2	61	3449	263	20	1061	35
Adj No. of Lanes	1	1	0	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	6	6	6	10	10	10	2	2	2	6	6	6
Cap, veh/h	82	63	20	117	123	105	77	2640	1181	25	2442	1092
Arrive On Green	0.05	0.05	0.05	0.07	0.07	0.07	0.04	0.75	0.75	0.01	0.72	0.72
Sat Flow, veh/h	1707	1314	407	1645	1727	1468	1774	3539	1583	1707	3406	1524
Grp Volume(v), veh/h	61	0	93	82	94	2	61	3449	263	20	1061	35
Grp Sat Flow(s),veh/h/ln	1707	0	1721	1645	1727	1468	1774	1770	1583	1707	1703	1524
Q Serve(g_s), s	5.9	0.0	8.0	8.1	8.9	0.2	5.7	124.0	8.4	1.9	21.3	1.1
Cycle Q Clear(g_c), s	5.9	0.0	8.0	8.1	8.9	0.2	5.7	124.0	8.4	1.9	21.3	1.1
Prop In Lane	1.00		0.24	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	82	0	83	117	123	105	77	2640	1181	25	2442	1092
V/C Ratio(X)	0.74	0.00	1.12	0.70	0.76	0.02	0.79	1.31	0.22	0.81	0.43	0.03
Avail Cap(c_a), veh/h	82	0	83	188	197	168	149	2640	1181	92	2442	1092
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	78.1	0.0	79.1	75.5	75.8	71.8	78.8	21.1	6.4	81.7	9.7	6.8
Incr Delay (d2), s/veh	30.0	0.0	136.2	24.0	29.3	0.3	6.6	140.8	0.1	19.9	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	6.9	4.5	5.3	0.1	2.9	111.4	3.7	1.1	9.9	0.5
LnGrp Delay(d),s/veh	108.1	0.0	215.3	99.4	105.1	72.1	85.4	161.9	6.6	101.6	9.8	6.8
LnGrp LOS	F		F	F	F	E	F	F	A	F	A	A
Approach Vol, veh/h		154			178			3773			1116	
Approach Delay, s/veh		172.8			102.1			149.8			11.4	
Approach LOS		F			F			F			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.4	130.0		16.8	11.2	125.2		13.0
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0
Max Green Setting (Gmax), s	9.6	124.0		19.0	14.0	119.0		8.0
Max Q Clear Time (g_c+I1), s	13.9	126.0		10.9	7.7	23.3		10.0
Green Ext Time (p_c), s	0.0	0.0		1.0	0.0	14.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	119.3
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	270	30	100	90	33	744
Future Volume (veh/h)	270	30	100	90	33	744
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	297	29	110	99	36	682
Adj No. of Lanes	1	0	1	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	10	10	2	2	2	2
Cap, veh/h	391	38	148	789	711	767
Arrive On Green	0.25	0.25	0.08	0.42	0.40	0.40
Sat Flow, veh/h	1549	151	1774	1863	1774	1583
Grp Volume(v), veh/h	0	326	110	99	36	682
Grp Sat Flow(s),veh/h/ln	0	1701	1774	1863	1774	1583
Q Serve(g_s), s	0.0	9.1	3.1	1.7	0.6	20.0
Cycle Q Clear(g_c), s	0.0	9.1	3.1	1.7	0.6	20.0
Prop In Lane		0.09	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	429	148	789	711	767
V/C Ratio(X)	0.00	0.76	0.74	0.13	0.05	0.89
Avail Cap(c_a), veh/h	0	1080	1855	3294	711	767
HCM Platoon Ratio	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	1.00
Uniform Delay (d), s/veh	0.0	17.7	22.9	9.0	9.4	12.0
Incr Delay (d2), s/veh	0.0	2.8	7.1	0.1	0.0	12.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.6	1.8	0.9	0.3	11.3
LnGrp Delay(d),s/veh	0.0	20.5	30.0	9.1	9.4	24.5
LnGrp LOS		C	C	A	A	C
Approach Vol, veh/h	326			209	718	
Approach Delay, s/veh	20.5			20.1	23.7	
Approach LOS	C			C	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		25.0	8.8	17.4				26.2
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		20.5	53.5	32.5				90.5
Max Q Clear Time (g_c+I1), s		22.0	5.1	11.1				3.7
Green Ext Time (p_c), s		0.0	0.3	1.9				0.6

Intersection Summary	
HCM 2010 Ctrl Delay	22.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	20	20	202	20	110	20	3580	219	60	1090	30
Future Volume (veh/h)	30	20	20	202	20	110	20	3580	219	60	1090	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1696	1900	1863	1863	1900	1827	1827	1900
Adj Flow Rate, veh/h	32	21	13	213	21	105	21	3768	229	63	1147	31
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	12	12	12	2	2	2	4	4	4
Cap, veh/h	184	119	67	223	19	94	26	2240	135	48	2327	63
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.01	0.66	0.66	0.03	0.67	0.67
Sat Flow, veh/h	679	522	295	836	82	412	1774	3388	204	1740	3453	93
Grp Volume(v), veh/h	66	0	0	339	0	0	21	1947	2050	63	576	602
Grp Sat Flow(s),veh/h/ln	1495	0	0	1331	0	0	1774	1770	1822	1740	1736	1810
Q Serve(g_s), s	0.0	0.0	0.0	35.0	0.0	0.0	2.1	119.0	119.0	5.0	29.2	29.2
Cycle Q Clear(g_c), s	6.0	0.0	0.0	41.0	0.0	0.0	2.1	119.0	119.0	5.0	29.2	29.2
Prop In Lane	0.48		0.20	0.63		0.31	1.00		0.11	1.00		0.05
Lane Grp Cap(c), veh/h	370	0	0	336	0	0	26	1170	1204	48	1170	1220
V/C Ratio(X)	0.18	0.00	0.00	1.01	0.00	0.00	0.79	1.66	1.70	1.30	0.49	0.49
Avail Cap(c_a), veh/h	370	0	0	336	0	0	59	1170	1204	48	1170	1220
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.8	0.0	0.0	71.4	0.0	0.0	88.4	30.5	30.5	87.5	14.3	14.3
Incr Delay (d2), s/veh	0.2	0.0	0.0	51.6	0.0	0.0	17.7	302.8	319.4	231.1	0.5	0.4
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	2.7	0.0	0.0	21.5	0.0	0.0	1.2	156.3	166.4	5.5	14.1	14.7
LnGrp Delay(d),s/veh	56.1	0.0	0.0	123.0	0.0	0.0	106.1	333.3	349.9	318.6	14.8	14.8
LnGrp LOS	E			F			F	F	F	F	B	B
Approach Vol, veh/h		66			339			4018			1241	
Approach Delay, s/veh		56.1			123.0			340.6			30.2	
Approach LOS		E			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.0	125.0		46.0	6.7	127.3		46.0
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0
Max Green Setting (Gmax), s	5.0	119.0		41.0	6.0	118.0		41.0
Max Q Clear Time (g_c+I1), s	7.0	121.0		8.0	4.1	31.2		43.0
Green Ext Time (p_c), s	0.0	0.0		0.3	0.0	14.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	256.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	30	60	90	20	80	50	3659	480	60	1232	20
Future Volume (veh/h)	80	30	60	90	20	80	50	3659	480	60	1232	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1881	1881	1900	1845	1845	1845	1827	1827	1900
Adj Flow Rate, veh/h	82	31	1	76	44	39	52	3772	438	62	1270	20
Adj No. of Lanes	0	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	1	1	1	3	3	3	4	4	4
Cap, veh/h	65	25	79	70	36	32	66	2755	1232	48	2716	43
Arrive On Green	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.79	0.79	0.03	0.78	0.78
Sat Flow, veh/h	1304	493	1583	1792	921	816	1757	3505	1567	1740	3498	55
Grp Volume(v), veh/h	113	0	1	76	0	83	52	3772	438	62	630	660
Grp Sat Flow(s),veh/h/ln	1798	0	1583	1792	0	1737	1757	1752	1567	1740	1736	1817
Q Serve(g_s), s	9.0	0.0	0.1	7.0	0.0	7.0	5.3	141.5	14.9	5.0	22.9	23.0
Cycle Q Clear(g_c), s	9.0	0.0	0.1	7.0	0.0	7.0	5.3	141.5	14.9	5.0	22.9	23.0
Prop In Lane	0.73		1.00	1.00		0.47	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	90	0	79	70	0	68	66	2755	1232	48	1347	1411
V/C Ratio(X)	1.26	0.00	0.01	1.09	0.00	1.23	0.79	1.37	0.36	1.28	0.47	0.47
Avail Cap(c_a), veh/h	90	0	79	70	0	68	107	2755	1232	48	1347	1411
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	85.5	0.0	81.3	86.5	0.0	86.5	85.9	19.3	5.7	87.5	7.1	7.1
Incr Delay (d2), s/veh	179.1	0.0	0.1	134.9	0.0	183.3	7.6	168.5	0.2	223.5	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	0.0	0.0	6.1	0.0	6.8	2.7	131.8	6.5	5.4	11.0	11.5
LnGrp Delay(d),s/veh	264.6	0.0	81.3	222.5	0.0	269.8	93.5	187.7	6.0	311.0	7.4	7.4
LnGrp LOS	F		F	F		F	F	F	A	F	A	A
Approach Vol, veh/h		114			159			4262			1352	
Approach Delay, s/veh		263.0			247.2			167.9			21.3	
Approach LOS		F			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.0	147.0		13.0	10.8	145.2		11.0
Change Period (Y+Rc), s	4.0	5.5		4.0	4.0	5.5		4.0
Max Green Setting (Gmax), s	5.0	141.5		9.0	11.0	135.5		7.0
Max Q Clear Time (g_c+I1), s	7.0	143.5		11.0	7.3	25.0		9.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	18.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	138.2
HCM 2010 LOS	F

Notes

User approved pedestrian interval to be less than phase max green.
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)	0	20	20	70	0	20	20	2889	440	20	791	0
Future Volume (veh/h)	0	20	20	70	0	20	20	2889	440	20	791	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1667	1667	1900	1845	1845	1900	1827	1827	1827
Adj Flow Rate, veh/h	0	22	0	79	0	0	22	3246	488	22	889	0
Adj No. of Lanes	1	1	0	2	1	0	1	2	0	1	2	1
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, %	0	0	0	14	14	14	3	3	3	4	4	4
Cap, veh/h	1	36	0	72	110	0	28	2569	377	27	2908	1301
Arrive On Green	0.00	0.02	0.00	0.02	0.00	0.00	0.02	0.84	0.84	0.02	0.84	0.00
Sat Flow, veh/h	1810	1900	0	3079	1667	0	1757	3068	450	1740	3471	1553
Grp Volume(v), veh/h	0	22	0	79	0	0	22	1819	1915	22	889	0
Grp Sat Flow(s),veh/h/ln	1810	1900	0	1540	1667	0	1757	1752	1765	1740	1736	1553
Q Serve(g_s), s	0.0	2.0	0.0	4.0	0.0	0.0	2.1	142.4	142.4	2.1	9.5	0.0
Cycle Q Clear(g_c), s	0.0	2.0	0.0	4.0	0.0	0.0	2.1	142.4	142.4	2.1	9.5	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	1	36	0	72	110	0	28	1468	1478	27	2908	1301
V/C Ratio(X)	0.00	0.61	0.00	1.09	0.00	0.00	0.80	1.24	1.30	0.80	0.31	0.00
Avail Cap(c_a), veh/h	43	324	0	72	284	0	62	1468	1478	41	2908	1301
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.98	0.00	0.00	0.42	0.42	0.42	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	82.8	0.0	83.0	0.0	0.0	83.4	13.8	13.8	83.4	3.0	0.0
Incr Delay (d2), s/veh	0.0	21.3	0.0	131.8	0.0	0.0	8.1	110.3	135.1	29.9	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.2	0.0	3.0	0.0	0.0	1.1	112.3	123.2	1.3	4.6	0.0
LnGrp Delay(d),s/veh	0.0	104.0	0.0	215.7	0.0	0.0	91.5	124.1	148.9	113.2	3.3	0.0
LnGrp LOS		F		F			F	F	F	F	A	
Approach Vol, veh/h		22			79			3756			911	
Approach Delay, s/veh		104.0			215.7			136.6			5.9	
Approach LOS		F			F			F			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	148.1	8.0	7.2	6.7	148.1	0.0	15.2
Change Period (Y+Rc), s	4.0	5.7	4.0	4.0	4.0	5.7	4.0	4.0
Max Green Setting (Gmax), s	4.0	115.3	4.0	29.0	6.0	113.3	4.0	29.0
Max Q Clear Time (g_c+I1), s	4.1	144.4	6.0	4.0	4.1	11.5	0.0	0.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.0	10.4	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	112.8
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	390	100	200	30	40	30	1480	560	40	511	20
Future Volume (veh/h)	120	390	100	200	30	40	30	1480	560	40	511	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1792	1792	1900	1881	1881	1900	1845	1845	1900
Adj Flow Rate, veh/h	129	419	108	215	32	43	32	1591	575	43	549	20
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	6	6	6	1	1	1	3	3	3
Cap, veh/h	542	580	150	179	282	378	41	1271	433	44	1682	61
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.02	0.49	0.49	0.03	0.49	0.49
Sat Flow, veh/h	1315	1428	368	839	693	931	1792	2618	892	1757	3449	126
Grp Volume(v), veh/h	129	0	527	215	0	75	32	1055	1111	43	279	290
Grp Sat Flow(s),veh/h/ln	1315	0	1796	839	0	1624	1792	1787	1723	1757	1752	1823
Q Serve(g_s), s	10.8	0.0	39.4	25.6	0.0	4.6	2.8	77.7	77.7	3.9	15.5	15.5
Cycle Q Clear(g_c), s	15.4	0.0	39.4	65.0	0.0	4.6	2.8	77.7	77.7	3.9	15.5	15.5
Prop In Lane	1.00		0.20	1.00		0.57	1.00		0.52	1.00		0.07
Lane Grp Cap(c), veh/h	542	0	730	179	0	660	41	868	837	44	855	889
V/C Ratio(X)	0.24	0.00	0.72	1.20	0.00	0.11	0.78	1.22	1.33	0.98	0.33	0.33
Avail Cap(c_a), veh/h	542	0	730	179	0	660	78	868	837	44	855	889
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.00	0.93	1.00	0.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	0.0	39.9	70.4	0.0	29.6	77.8	41.2	41.2	78.0	25.0	25.0
Incr Delay (d2), s/veh	0.2	0.0	3.2	131.6	0.0	0.1	1.1	98.2	148.3	127.1	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	20.3	14.5	0.0	2.1	1.4	62.0	71.4	3.5	7.7	8.1
LnGrp Delay(d),s/veh	34.6	0.0	43.1	202.0	0.0	29.6	78.8	139.3	189.4	205.1	26.0	26.0
LnGrp LOS	C		D	F		C	E	F	F	F	C	C
Approach Vol, veh/h		656			290			2198			612	
Approach Delay, s/veh		41.4			157.4			163.8			38.6	
Approach LOS		D			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	83.0		69.0	7.7	83.3		69.0
Change Period (Y+Rc), s	4.0	5.3		4.0	4.0	5.3		4.0
Max Green Setting (Gmax), s	4.0	77.7		65.0	7.0	74.7		65.0
Max Q Clear Time (g_c+I1), s	5.9	79.7		41.4	4.8	17.5		67.0
Green Ext Time (p_c), s	0.0	0.0		3.7	0.0	6.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	121.5
HCM 2010 LOS	F

Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	160	161	1909	440	132	679
Future Volume (veh/h)	160	161	1909	440	132	679
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1863	1900	1845	1845
Adj Flow Rate, veh/h	168	169	2009	445	139	715
Adj No. of Lanes	2	1	2	0	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	2	2	3	3
Cap, veh/h	348	160	2073	443	132	2883
Arrive On Green	0.10	0.10	0.71	0.71	0.08	0.82
Sat Flow, veh/h	3476	1599	2996	620	1757	3597
Grp Volume(v), veh/h	168	169	1196	1258	139	715
Grp Sat Flow(s),veh/h/ln	1738	1599	1770	1753	1757	1752
Q Serve(g_s), s	5.5	12.0	71.4	85.7	9.0	5.5
Cycle Q Clear(g_c), s	5.5	12.0	71.4	85.7	9.0	5.5
Prop In Lane	1.00	1.00		0.35	1.00	
Lane Grp Cap(c), veh/h	348	160	1264	1252	132	2883
V/C Ratio(X)	0.48	1.06	0.95	1.01	1.05	0.25
Avail Cap(c_a), veh/h	348	160	1264	1252	132	2883
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.09	0.09	0.74	0.74
Uniform Delay (d), s/veh	51.1	54.0	15.1	17.2	55.5	2.4
Incr Delay (d2), s/veh	0.4	87.1	2.1	8.9	82.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.2	0.0
%ile BackOfQ(50%),veh/ln	2.7	9.2	34.9	43.8	7.4	2.6
LnGrp Delay(d),s/veh	51.5	141.1	17.2	26.1	138.6	2.5
LnGrp LOS	D	F	B	F	F	A
Approach Vol, veh/h	337		2454			854
Approach Delay, s/veh	96.4		21.7			24.7
Approach LOS	F		C			C

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	13.0	91.0				104.0		16.0
Change Period (Y+Rc), s	4.0	5.3				5.3		4.0
Max Green Setting (Gmax), s	9.0	85.7				98.7		12.0
Max Q Clear Time (g_c+I1), s	11.0	87.7				7.5		14.0
Green Ext Time (p_c), s	0.0	0.0				8.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	130	0	141	0	2208	260	122	717	0
Future Volume (veh/h)	0	0	0	130	0	141	0	2208	260	122	717	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1881	1881	1881	1900	1845	1845	1900
Adj Flow Rate, veh/h	0	0	0	134	0	11	0	2276	261	126	739	0
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	3	3	3
Cap, veh/h	0	2	0	168	0	150	2	2241	252	117	2814	0
Arrive On Green	0.00	0.00	0.00	0.09	0.00	0.09	0.00	0.69	0.69	0.07	0.80	0.00
Sat Flow, veh/h	0	1863	0	1792	0	1599	1792	3239	364	1757	3597	0
Grp Volume(v), veh/h	0	0	0	134	0	11	0	1236	1301	126	739	0
Grp Sat Flow(s),veh/h/ln	0	1863	0	1792	0	1599	1792	1787	1816	1757	1752	0
Q Serve(g_s), s	0.0	0.0	0.0	6.6	0.0	0.6	0.0	62.2	62.3	6.0	4.7	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	6.6	0.0	0.6	0.0	62.2	62.3	6.0	4.7	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.20	1.00		0.00
Lane Grp Cap(c), veh/h	0	2	0	168	0	150	2	1236	1257	117	2814	0
V/C Ratio(X)	0.00	0.00	0.00	0.80	0.00	0.07	0.00	1.00	1.04	1.08	0.26	0.00
Avail Cap(c_a), veh/h	0	201	0	199	0	178	159	1236	1257	117	2814	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.09	0.09	0.97	0.97	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	39.9	0.0	37.2	0.0	13.9	13.9	42.0	2.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	16.2	0.0	0.2	0.0	7.6	19.1	103.5	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.0	0.0	0.3	0.0	32.5	37.0	6.3	2.3	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	56.1	0.0	37.4	0.0	21.5	32.9	145.6	2.4	0.0
LnGrp LOS				E		D		C	F	F	A	
Approach Vol, veh/h		0			145			2537			865	
Approach Delay, s/veh		0.0			54.7			27.4			23.3	
Approach LOS					D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	67.6		0.0	0.0	77.6		12.4
Change Period (Y+Rc), s	4.0	5.3		4.0	4.0	5.3		4.0
Max Green Setting (Gmax), s	6.0	47.0		9.7	8.0	45.0		10.0
Max Q Clear Time (g_c+I1), s	8.6	64.3		0.0	0.0	6.7		8.6
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	8.6		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	27.5
HCM 2010 LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	40	60	100	30	80	70	2158	120	70	597	180
Future Volume (veh/h)	230	40	60	100	30	80	70	2158	120	70	597	180
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1845	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	237	41	0	103	31	22	72	2225	122	72	615	171
Adj No. of Lanes	1	1	1	0	2	0	1	2	0	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	3	3	3	2	2	2	2	2	2
Cap, veh/h	270	284	241	93	53	38	90	2188	119	78	1727	479
Arrive On Green	0.15	0.15	0.00	0.05	0.05	0.05	0.05	0.64	0.64	0.04	0.63	0.63
Sat Flow, veh/h	1792	1881	1599	1757	1005	713	1774	3413	185	1774	2738	760
Grp Volume(v), veh/h	237	41	0	103	0	53	72	1143	1204	72	397	389
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1757	0	1719	1774	1770	1829	1774	1770	1729
Q Serve(g_s), s	20.7	3.0	0.0	8.5	0.0	4.8	6.4	102.6	102.6	6.5	17.1	17.1
Cycle Q Clear(g_c), s	20.7	3.0	0.0	8.5	0.0	4.8	6.4	102.6	102.6	6.5	17.1	17.1
Prop In Lane	1.00		1.00	1.00		0.42	1.00		0.10	1.00		0.44
Lane Grp Cap(c), veh/h	270	284	241	93	0	91	90	1134	1172	78	1116	1090
V/C Ratio(X)	0.88	0.14	0.00	1.10	0.00	0.58	0.80	1.01	1.03	0.93	0.36	0.36
Avail Cap(c_a), veh/h	408	428	364	93	0	91	145	1134	1172	78	1116	1090
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	0.00	1.00	0.00	1.00	0.42	0.42	0.42	0.97	0.97	0.97
Uniform Delay (d), s/veh	66.5	59.0	0.0	75.8	0.0	74.0	75.1	28.7	28.7	76.2	14.1	14.1
Incr Delay (d2), s/veh	11.7	0.2	0.0	123.9	0.0	6.0	8.0	19.3	24.3	75.6	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	1.6	0.0	7.3	0.0	2.4	3.4	55.9	59.4	4.8	8.5	8.4
LnGrp Delay(d),s/veh	78.1	59.1	0.0	199.7	0.0	80.0	83.1	48.0	53.1	151.8	14.9	15.0
LnGrp LOS	E	E		F		F	F	F	F	F	B	B
Approach Vol, veh/h		278			156			2419			858	
Approach Delay, s/veh		75.3			159.0			51.6			26.4	
Approach LOS		E			F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.0	107.9		28.1	12.6	106.2		13.0
Change Period (Y+Rc), s	4.0	5.3		4.0	4.5	5.3		4.5
Max Green Setting (Gmax), s	7.0	90.3		36.4	13.1	83.7		8.5
Max Q Clear Time (g_c+I1), s	19.5	104.6		22.7	8.4	19.1		10.5
Green Ext Time (p_c), s	0.0	0.0		0.5	0.1	9.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	52.1
HCM 2010 LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	220	20	948	100	1400	0	0	597	160
Future Volume (veh/h)	0	0	0	220	20	948	100	1400	0	0	597	160
Number				7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1827	1900	1863	1863	0	0	1827	1827
Adj Flow Rate, veh/h				227	21	967	103	1443	0	0	615	106
Adj No. of Lanes				0	2	0	1	2	0	0	2	1
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				0	4	0	2	2	0	0	4	4
Cap, veh/h				755	70	733	128	1656	0	0	1352	574
Arrive On Green				0.47	0.47	0.47	0.07	0.47	0.00	0.00	0.37	0.37
Sat Flow, veh/h				1599	148	1553	1774	3632	0	0	3654	1551
Grp Volume(v), veh/h				248	0	967	103	1443	0	0	615	106
Grp Sat Flow(s),veh/h/ln				1747	0	1553	1774	1770	0	0	1827	1551
Q Serve(g_s), s				10.2	0.0	55.0	6.7	42.7	0.0	0.0	14.9	5.4
Cycle Q Clear(g_c), s				10.2	0.0	55.0	6.7	42.7	0.0	0.0	14.9	5.4
Prop In Lane				0.92		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				824	0	733	128	1656	0	0	1352	574
V/C Ratio(X)				0.30	0.00	1.32	0.80	0.87	0.00	0.00	0.45	0.18
Avail Cap(c_a), veh/h				824	0	733	183	1761	0	0	1352	574
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	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				18.9	0.0	30.8	53.3	27.8	0.0	0.0	27.8	24.8
Incr Delay (d2), s/veh				0.2	0.0	153.3	15.5	5.1	0.0	0.0	0.5	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				4.9	0.0	54.6	3.8	21.8	0.0	0.0	7.6	2.3
LnGrp Delay(d),s/veh				19.2	0.0	184.1	68.8	32.9	0.0	0.0	28.3	25.1
LnGrp LOS				B		F	E	C			C	C
Approach Vol, veh/h					1215			1546			721	
Approach Delay, s/veh					150.4			35.3			27.8	
Approach LOS					F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		58.5		58.0	11.4	47.1		
Change Period (Y+Rc), s		4.0		3.0	3.0	4.0		
Max Green Setting (Gmax), s		58.0		55.0	12.0	43.0		
Max Q Clear Time (g_c+I1), s		44.7		57.0	8.7	16.9		
Green Ext Time (p_c), s		9.9		0.0	0.1	8.4		

Intersection Summary	
HCM 2010 Ctrl Delay	73.9
HCM 2010 LOS	E

Notes

User approved pedestrian interval to be less than phase max green.
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)	1060	110	290	0	0	0	0	440	300	477	340	0
Future Volume (veh/h)	1060	110	290	0	0	0	0	440	300	477	340	0
Number	7	4	14				5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1810	1810	1810	1810	0
Adj Flow Rate, veh/h	1199	0	134				0	463	116	502	358	0
Adj No. of Lanes	2	0	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	5	5	5	5	0
Cap, veh/h	1369	0	611				0	654	274	549	1860	0
Arrive On Green	0.39	0.00	0.39				0.00	0.18	0.18	0.32	0.54	0.00
Sat Flow, veh/h	3548	0	1583				0	3619	1516	1723	3529	0
Grp Volume(v), veh/h	1199	0	134				0	463	116	502	358	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1810	1516	1723	1719	0
Q Serve(g_s), s	30.0	0.0	5.4				0.0	11.5	6.5	26.8	5.1	0.0
Cycle Q Clear(g_c), s	30.0	0.0	5.4				0.0	11.5	6.5	26.8	5.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1369	0	611				0	654	274	549	1860	0
V/C Ratio(X)	0.88	0.00	0.22				0.00	0.71	0.42	0.91	0.19	0.00
Avail Cap(c_a), veh/h	1742	0	777				0	869	364	720	2370	0
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	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	27.3	0.0	19.7				0.0	36.8	34.8	31.4	11.3	0.0
Incr Delay (d2), s/veh	4.4	0.0	0.2				0.0	3.2	2.2	14.2	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	15.5	0.0	2.4				0.0	6.0	2.9	14.8	2.4	0.0
LnGrp Delay(d),s/veh	31.7	0.0	19.9				0.0	40.1	37.0	45.5	11.3	0.0
LnGrp LOS	C		B					D	D	D	B	
Approach Vol, veh/h		1333						579			860	
Approach Delay, s/veh		30.5						39.5			31.3	
Approach LOS		C						D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	34.5	21.3		39.9		55.8		
Change Period (Y+Rc), s	4.0	* 4		3.0		4.0		
Max Green Setting (Gmax), s	40.0	* 23		47.0		66.0		
Max Q Clear Time (g_c+I1), s	29.8	13.5		32.0		7.1		
Green Ext Time (p_c), s	1.7	3.8		4.9		3.7		

Intersection Summary	
HCM 2010 Ctrl Delay	32.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	30	110	200	20	362	20	1507	0	417	424	20
Future Volume (veh/h)	140	30	110	200	20	362	20	1507	0	417	424	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1759	1759	1759	1863	1863	1863	1827	1827	1827
Adj Flow Rate, veh/h	172	0	0	228	0	265	21	1603	0	444	451	15
Adj No. of Lanes	2	0	1	2	0	2	1	2	1	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	8	8	8	2	2	2	4	4	4
Cap, veh/h	225	0	100	271	0	1045	28	1696	759	467	2564	1147
Arrive On Green	0.06	0.00	0.00	0.08	0.00	0.08	0.02	0.48	0.00	0.27	0.74	0.74
Sat Flow, veh/h	3619	0	1615	3351	0	2991	1774	3539	1583	1740	3471	1553
Grp Volume(v), veh/h	172	0	0	228	0	265	21	1603	0	444	451	15
Grp Sat Flow(s),veh/h/ln	1810	0	1615	1675	0	1495	1774	1770	1583	1740	1736	1553
Q Serve(g_s), s	6.9	0.0	0.0	9.8	0.0	9.3	1.7	63.2	0.0	36.7	5.7	0.4
Cycle Q Clear(g_c), s	6.9	0.0	0.0	9.8	0.0	9.3	1.7	63.2	0.0	36.7	5.7	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	225	0	100	271	0	1045	28	1696	759	467	2564	1147
V/C Ratio(X)	0.76	0.00	0.00	0.84	0.00	0.25	0.75	0.95	0.00	0.95	0.18	0.01
Avail Cap(c_a), veh/h	692	0	309	275	0	1048	73	1740	778	499	2583	1156
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.6	0.0	0.0	66.4	0.0	34.0	71.8	36.3	0.0	52.6	5.7	5.0
Incr Delay (d2), s/veh	2.0	0.0	0.0	19.0	0.0	0.0	43.8	11.1	0.0	27.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	0.0	5.3	0.0	3.8	1.2	33.3	0.0	21.2	2.7	0.2
LnGrp Delay(d),s/veh	69.7	0.0	0.0	85.4	0.0	34.1	115.6	47.4	0.0	80.3	5.8	5.0
LnGrp LOS	E			F		C	F	D		F	A	A
Approach Vol, veh/h		172			493			1624			910	
Approach Delay, s/veh		69.7			57.8			48.3			42.1	
Approach LOS		E			E			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	43.3	74.7		12.6	5.3	112.7		15.9
Change Period (Y+Rc), s	4.0	4.5		3.5	3.0	4.5		4.0
Max Green Setting (Gmax), s	42.0	72.0		28.0	6.0	109.0		12.0
Max Q Clear Time (g_c+I1), s	39.7	65.2		8.9	3.7	7.7		11.8
Green Ext Time (p_c), s	0.6	5.0		0.3	0.0	1.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	49.1
HCM 2010 LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	167.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	40	20	70	20	71	20	666	170	25	85	20
Future Vol, veh/h	40	40	20	70	20	71	20	666	170	25	85	20
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	49	49	24	85	24	87	24	812	207	30	104	24
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.9	14.1	238.3	12
HCM LOS	B	B	F	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	40%	43%	19%
Vol Thru, %	78%	40%	12%	65%
Vol Right, %	20%	20%	44%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	856	100	161	130
LT Vol	20	40	70	25
Through Vol	666	40	20	85
RT Vol	170	20	71	20
Lane Flow Rate	1044	122	196	159
Geometry Grp	1	1	1	1
Degree of Util (X)	1.478	0.223	0.342	0.262
Departure Headway (Hd)	5.097	7.726	7.35	6.655
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	710	468	493	544
Service Time	3.192	5.726	5.35	4.655
HCM Lane V/C Ratio	1.47	0.261	0.398	0.292
HCM Control Delay	238.3	12.9	14.1	12
HCM Lane LOS	F	B	B	B
HCM 95th-tile Q	49.2	0.8	1.5	1

Intersection	
Int Delay, s/veh	43

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	165	14	50	0	36	0	30	680	0	0	112	96
Future Vol, veh/h	165	14	50	0	36	0	30	680	0	0	112	96
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	145
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	94	83	94	94	94	83	83	94	94	83	83
Heavy Vehicles, %	3	2	3	2	2	2	3	3	2	2	3	3
Mvmt Flow	199	15	60	0	38	0	36	819	0	0	135	116

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1045	1026	135	1122	1142	819	251	0	0	819	0	0
Stage 1	135	135	-	891	891	-	-	-	-	-	-	-
Stage 2	910	891	-	231	251	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.52	6.23	7.12	6.52	6.22	4.13	-	-	4.12	-	-
Critical Hdwy Stg 1	6.13	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.018	3.327	3.518	4.018	3.318	2.227	-	-	2.218	-	-
Pot Cap-1 Maneuver	206	235	911	183	200	375	1309	-	-	810	-	-
Stage 1	866	785	-	337	361	-	-	-	-	-	-	-
Stage 2	328	361	-	772	699	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 168	223	911	156	190	375	1309	-	-	810	-	-
Mov Cap-2 Maneuver	~ 168	223	-	156	190	-	-	-	-	-	-	-
Stage 1	823	785	-	320	343	-	-	-	-	-	-	-
Stage 2	277	343	-	707	699	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	217.5	28.7	0.3	0
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1309	-	-	208	190	810	-	-
HCM Lane V/C Ratio	0.028	-	-	1.317	0.202	-	-	-
HCM Control Delay (s)	7.8	0	-	217.5	28.7	0	-	-
HCM Lane LOS	A	A	-	F	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	15.1	0.7	0	-	-

Notes

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

Intersection	
Intersection Delay, s/veh	28.4
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	220	60	20	50	30	60	30	440	50	72	80	30
Future Vol, veh/h	220	60	20	50	30	60	30	440	50	72	80	30
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	234	64	21	53	32	64	32	468	53	77	85	32
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	19.4	12.9	43	13.6
HCM LOS	C	B	E	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	73%	36%	40%
Vol Thru, %	85%	20%	21%	44%
Vol Right, %	10%	7%	43%	16%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	520	300	140	182
LT Vol	30	220	50	72
Through Vol	440	60	30	80
RT Vol	50	20	60	30
Lane Flow Rate	553	319	149	194
Geometry Grp	1	1	1	1
Degree of Util (X)	0.914	0.598	0.288	0.361
Departure Headway (Hd)	5.949	6.741	6.951	6.718
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	609	533	514	532
Service Time	4.005	4.807	5.035	4.798
HCM Lane V/C Ratio	0.908	0.598	0.29	0.365
HCM Control Delay	43	19.4	12.9	13.6
HCM Lane LOS	E	C	B	B
HCM 95th-tile Q	11.5	3.9	1.2	1.6

Intersection	
Int Delay, s/veh	10.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	494	520	120	40	30	70
Future Vol, veh/h	494	520	120	40	30	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	178	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	555	584	135	45	34	79

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	180	0	-	0	1852	158
Stage 1	-	-	-	-	158	-
Stage 2	-	-	-	-	1694	-
Critical Hdwy	4.16	-	-	-	6.46	6.26
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	2.254	-	-	-	3.554	3.354
Pot Cap-1 Maneuver	1372	-	-	-	80	877
Stage 1	-	-	-	-	861	-
Stage 2	-	-	-	-	160	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1372	-	-	-	48	877
Mov Cap-2 Maneuver	-	-	-	-	48	-
Stage 1	-	-	-	-	512	-
Stage 2	-	-	-	-	160	-

Approach	EB	WB	SB
HCM Control Delay, s	4.6	0	89.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1372	-	-	-	142
HCM Lane V/C Ratio	0.405	-	-	-	0.791
HCM Control Delay (s)	9.4	-	-	-	89.4
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	2	-	-	-	4.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	166	100	205	70	90	50	203	1380	50	40	600	52
Future Volume (veh/h)	166	100	205	70	90	50	203	1380	50	40	600	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.98	1.00		1.00	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
Adj Sat Flow, veh/h/ln	1900	1881	1881	1900	1881	1900	1881	1881	1881	1881	1881	1900
Adj Flow Rate, veh/h	178	108	0	75	97	41	218	1484	0	43	645	50
Adj No. of Lanes	0	1	1	0	1	0	1	2	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	283	127	400	174	213	78	260	1942	869	54	1437	111
Arrive On Green	0.25	0.25	0.00	0.25	0.25	0.25	0.15	0.54	0.00	0.03	0.43	0.43
Sat Flow, veh/h	836	507	1599	451	852	311	1792	3574	1599	1792	3354	260
Grp Volume(v), veh/h	286	0	0	213	0	0	218	1484	0	43	343	352
Grp Sat Flow(s),veh/h/ln	1343	0	1599	1614	0	0	1792	1787	1599	1792	1787	1827
Q Serve(g_s), s	7.7	0.0	0.0	0.0	0.0	0.0	9.4	25.7	0.0	1.9	10.8	10.8
Cycle Q Clear(g_c), s	16.4	0.0	0.0	8.7	0.0	0.0	9.4	25.7	0.0	1.9	10.8	10.8
Prop In Lane	0.62		1.00	0.35		0.19	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	410	0	400	465	0	0	260	1942	869	54	765	782
V/C Ratio(X)	0.70	0.00	0.00	0.46	0.00	0.00	0.84	0.76	0.00	0.80	0.45	0.45
Avail Cap(c_a), veh/h	630	0	646	725	0	0	452	2255	1009	90	767	784
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	0.0	0.0	25.4	0.0	0.0	33.0	14.1	0.0	38.2	16.0	16.0
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.3	0.0	0.0	2.8	1.6	0.0	9.6	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	0.0	0.0	4.1	0.0	0.0	4.9	13.0	0.0	1.1	5.4	5.5
LnGrp Delay(d),s/veh	29.5	0.0	0.0	25.7	0.0	0.0	35.8	15.7	0.0	47.8	16.6	16.6
LnGrp LOS	C			C			D	B		D	B	B
Approach Vol, veh/h		286			213			1702			738	
Approach Delay, s/veh		29.5			25.7			18.3			18.4	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.4	48.1		24.8	15.5	39.0		24.8
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		* 5
Max Green Setting (Gmax), s	4.0	50.0		32.0	20.0	34.0		* 33
Max Q Clear Time (g_c+I1), s	3.9	27.7		18.4	11.4	12.8		10.7
Green Ext Time (p_c), s	0.0	15.4		1.0	0.2	6.1		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	19.9
HCM 2010 LOS	B

Notes

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

HCM 2010 Research does not support Non-NEMA phasing.

CUMULATIVE WITH CENTERPOINT PROJECT CONDITIONS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	938	280	210	443	120	110	60	340	80	490	1651
Future Volume (veh/h)	290	938	280	210	443	120	110	60	340	80	490	1651
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1759	1759	1759	1759	1792	1792	1792	1776	1776	1776
Adj Flow Rate, veh/h	302	977	163	219	461	0	115	62	138	83	510	1256
Adj No. of Lanes	1	3	1	2	1	1	1	1	2	1	1	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	8	8	8	6	6	6	7	7	7
Cap, veh/h	286	1619	503	257	432	367	148	753	1126	101	697	1043
Arrive On Green	0.17	0.34	0.34	0.08	0.25	0.00	0.09	0.42	0.42	0.06	0.39	0.39
Sat Flow, veh/h	1675	4803	1491	3250	1759	1495	1707	1792	2682	1691	1776	2656
Grp Volume(v), veh/h	302	977	163	219	461	0	115	62	138	83	510	1256
Grp Sat Flow(s),veh/h/ln	1675	1601	1491	1625	1759	1495	1707	1792	1341	1691	1776	1328
Q Serve(g_s), s	27.3	27.1	13.0	10.6	39.3	0.0	10.6	3.3	5.0	7.8	39.2	62.8
Cycle Q Clear(g_c), s	27.3	27.1	13.0	10.6	39.3	0.0	10.6	3.3	5.0	7.8	39.2	62.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	286	1619	503	257	432	367	148	753	1126	101	697	1043
V/C Ratio(X)	1.06	0.60	0.32	0.85	1.07	0.00	0.77	0.08	0.12	0.82	0.73	1.20
Avail Cap(c_a), veh/h	286	1619	503	362	432	367	149	753	1126	169	697	1043
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.3	44.1	39.5	72.7	60.4	0.0	71.5	27.9	28.4	74.4	41.4	48.6
Incr Delay (d2), s/veh	68.8	1.7	1.7	9.6	62.4	0.0	20.1	0.0	0.0	6.2	3.5	101.3
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	18.1	12.2	5.6	5.1	26.6	0.0	5.8	1.7	1.9	3.8	19.8	37.7
LnGrp Delay(d),s/veh	135.2	45.8	41.2	82.4	122.7	0.0	91.6	27.9	28.4	80.6	44.9	149.9
LnGrp LOS	F	D	D	F	F		F	C	C	F	D	F
Approach Vol, veh/h		1442			680			315			1849	
Approach Delay, s/veh		64.0			109.7			51.4			117.8	
Approach LOS		E			F			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.4	59.0	17.6	67.0	31.0	44.4	13.2	71.4
Change Period (Y+Rc), s	3.7	5.1	3.7	* 4.2	3.7	5.1	3.7	* 4.2
Max Green Setting (Gmax), s	17.8	48.7	14.0	* 63	27.3	39.2	16.0	* 61
Max Q Clear Time (g_c+I1), s	12.6	29.1	12.6	64.8	29.3	41.3	9.8	7.0
Green Ext Time (p_c), s	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	93.6
HCM 2010 LOS	F

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	291	847	30	134	1630	190	50	360	111	310	1111	954
Future Volume (veh/h)	291	847	30	134	1630	190	50	360	111	310	1111	954
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1712	1712	1900	1743	1743	1743	1827	1827	1827	1863	1863	1863
Adj Flow Rate, veh/h	313	911	30	144	1753	0	54	387	32	333	1195	854
Adj No. of Lanes	2	3	0	2	3	1	1	2	1	1	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	11	11	11	9	9	9	4	4	4	2	2	2
Cap, veh/h	326	1556	51	182	1366	425	68	1047	468	261	1449	648
Arrive On Green	0.10	0.33	0.33	0.06	0.29	0.00	0.04	0.30	0.30	0.15	0.41	0.41
Sat Flow, veh/h	3163	4647	153	3221	4759	1482	1740	3471	1553	1774	3539	1582
Grp Volume(v), veh/h	313	610	331	144	1753	0	54	387	32	333	1195	854
Grp Sat Flow(s),veh/h/ln	1581	1558	1685	1610	1586	1482	1740	1736	1553	1774	1770	1582
Q Serve(g_s), s	16.7	27.6	27.6	7.5	48.8	0.0	5.2	14.9	2.5	25.0	51.2	47.6
Cycle Q Clear(g_c), s	16.7	27.6	27.6	7.5	48.8	0.0	5.2	14.9	2.5	25.0	51.2	47.6
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	326	1043	564	182	1366	425	68	1047	468	261	1449	648
V/C Ratio(X)	0.96	0.59	0.59	0.79	1.28	0.00	0.79	0.37	0.07	1.28	0.82	1.32
Avail Cap(c_a), veh/h	326	1043	564	265	1366	425	72	1123	502	261	1520	679
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.82	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	75.9	46.8	46.8	79.2	60.6	0.0	81.0	46.7	42.3	72.5	44.8	23.5
Incr Delay (d2), s/veh	34.6	2.0	3.6	8.0	133.2	0.0	40.9	0.4	0.1	150.7	4.1	153.9
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	8.9	12.2	13.4	3.5	38.2	0.0	3.3	7.2	1.1	23.2	25.9	48.3
LnGrp Delay(d),s/veh	110.5	48.8	50.4	87.2	193.8	0.0	121.9	47.0	42.4	223.2	48.8	177.4
LnGrp LOS	F	D	D	F	F		F	D	D	F	D	F
Approach Vol, veh/h		1254			1897			473			2382	
Approach Delay, s/veh		64.6			185.7			55.3			119.3	
Approach LOS		E			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.6	64.1	12.7	76.6	24.7	56.0	31.0	58.3
Change Period (Y+Rc), s	7.0	7.2	6.0	7.0	7.2	* 7.2	6.0	7.0
Max Green Setting (Gmax), s	14.0	48.8	7.0	73.0	14.0	* 49	25.0	55.0
Max Q Clear Time (g_c+I1), s	19.5	29.6	7.2	53.2	18.7	50.8	27.0	16.9
Green Ext Time (p_c), s	0.1	8.5	0.0	16.4	0.0	0.0	0.0	4.5

Intersection Summary	
HCM 2010 Ctrl Delay	123.8
HCM 2010 LOS	F

Notes

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	708	192	70	2184	380	93	40	150	310	90	183
Future Volume (veh/h)	93	708	192	70	2184	380	93	40	150	310	90	183
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1696	1696	1696	1759	1759	1759	1863	1863	1863	1776	1776	1776
Adj Flow Rate, veh/h	98	745	89	74	2299	226	98	42	3	326	95	57
Adj No. of Lanes	2	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	12	12	12	8	8	8	2	2	2	7	7	7
Cap, veh/h	89	2283	711	92	2478	772	121	105	89	329	330	281
Arrive On Green	0.03	0.49	0.49	0.05	0.52	0.52	0.07	0.06	0.06	0.19	0.19	0.19
Sat Flow, veh/h	3134	4631	1442	1675	4803	1495	1774	1863	1583	1691	1776	1509
Grp Volume(v), veh/h	98	745	89	74	2299	226	98	42	3	326	95	57
Grp Sat Flow(s),veh/h/ln	1567	1544	1442	1675	1601	1495	1774	1863	1583	1691	1776	1509
Q Serve(g_s), s	4.0	13.8	4.7	6.2	62.9	12.2	7.7	3.1	0.3	27.2	6.5	4.5
Cycle Q Clear(g_c), s	4.0	13.8	4.7	6.2	62.9	12.2	7.7	3.1	0.3	27.2	6.5	4.5
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	89	2283	711	92	2478	772	121	105	89	329	330	281
V/C Ratio(X)	1.11	0.33	0.13	0.81	0.93	0.29	0.81	0.40	0.03	0.99	0.29	0.20
Avail Cap(c_a), veh/h	89	2283	711	142	2494	777	188	605	515	329	740	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	68.8	21.7	19.4	66.1	31.8	19.5	65.0	64.4	63.1	56.9	49.6	48.7
Incr Delay (d2), s/veh	127.3	0.1	0.1	8.8	6.9	0.3	23.6	3.4	0.2	47.5	0.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	5.9	1.9	3.1	29.2	5.1	4.6	1.7	0.1	17.0	3.3	1.9
LnGrp Delay(d),s/veh	196.1	21.8	19.5	74.9	38.7	19.8	88.7	67.9	63.3	104.4	50.2	49.2
LnGrp LOS	F	C	B	E	D	B	F	E	E	F	D	D
Approach Vol, veh/h		932			2599			143			478	
Approach Delay, s/veh		39.9			38.0			82.0			87.1	
Approach LOS		D			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.8	76.8	16.7	33.3	11.5	80.0	35.0	15.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.5	7.0	7.5	7.0
Max Green Setting (Gmax), s	12.0	66.0	15.0	59.0	4.0	73.5	27.5	46.0
Max Q Clear Time (g_c+I1), s	8.2	15.8	9.7	8.5	6.0	64.9	29.2	5.1
Green Ext Time (p_c), s	0.0	8.5	0.2	1.1	0.0	8.1	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	45.6
HCM 2010 LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	833	195	40	2390	30	276	40	110	50	90	100
Future Volume (veh/h)	20	833	195	40	2390	30	276	40	110	50	90	100
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1696	1696	1696	1776	1776	1776	1863	1863	1863	1900	1900	1900
Adj Flow Rate, veh/h	20	850	93	41	2439	16	282	41	18	51	92	6
Adj No. of Lanes	2	3	1	1	3	1	2	1	1	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	12	12	12	7	7	7	2	2	2	0	0	0
Cap, veh/h	56	2487	774	50	2660	828	464	243	205	129	245	16
Arrive On Green	0.02	0.54	0.54	0.03	0.55	0.55	0.13	0.13	0.13	0.07	0.07	0.07
Sat Flow, veh/h	3134	4631	1442	1691	4848	1509	3548	1863	1565	1810	3443	223
Grp Volume(v), veh/h	20	850	93	41	2439	16	282	41	18	51	48	50
Grp Sat Flow(s),veh/h/ln	1567	1544	1442	1691	1616	1509	1774	1863	1565	1810	1805	1861
Q Serve(g_s), s	0.5	8.5	2.6	2.0	37.3	0.4	6.1	1.6	0.8	2.2	2.1	2.1
Cycle Q Clear(g_c), s	0.5	8.5	2.6	2.0	37.3	0.4	6.1	1.6	0.8	2.2	2.1	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	56	2487	774	50	2660	828	464	243	205	129	128	132
V/C Ratio(X)	0.36	0.34	0.12	0.82	0.92	0.02	0.61	0.17	0.09	0.40	0.37	0.38
Avail Cap(c_a), veh/h	768	2554	795	725	2674	832	1087	571	480	554	553	570
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	39.6	10.7	9.4	39.4	16.7	8.4	33.5	31.5	31.2	36.2	36.2	36.2
Incr Delay (d2), s/veh	1.4	0.1	0.1	11.3	5.7	0.0	1.8	0.5	0.3	0.7	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.6	1.1	1.1	17.9	0.2	3.1	0.9	0.4	1.1	1.0	1.1
LnGrp Delay(d),s/veh	41.0	10.8	9.4	50.6	22.4	8.4	35.3	32.0	31.4	37.0	36.8	36.8
LnGrp LOS	D	B	A	D	C	A	D	C	C	D	D	D
Approach Vol, veh/h		963			2496			341			149	
Approach Delay, s/veh		11.3			22.8			34.7			36.9	
Approach LOS		B			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.4	49.5		10.4	5.5	50.5		15.3
Change Period (Y+Rc), s	4.0	5.7		4.6	4.0	5.7		4.6
Max Green Setting (Gmax), s	35.0	45.0		25.0	20.0	45.0		25.0
Max Q Clear Time (g_c+I1), s	4.0	10.5		4.2	2.5	39.3		8.1
Green Ext Time (p_c), s	0.0	9.4		0.3	0.0	5.5		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	21.5
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
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)	50	782	20	155	2291	50	20	20	106	20	20	20
Future Volume (veh/h)	50	782	20	155	2291	50	20	20	106	20	20	20
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1696	1696	1696	1792	1792	1792	1900	1583	1583	1900	1900	1900
Adj Flow Rate, veh/h	52	806	12	160	2362	33	21	21	29	21	21	0
Adj No. of Lanes	1	2	1	1	2	1	0	1	1	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	12	12	12	6	6	6	20	20	20	0	0	0
Cap, veh/h	63	1962	878	201	2311	1034	130	36	222	110	16	0
Arrive On Green	0.04	0.61	0.61	0.12	0.68	0.68	0.05	0.05	0.05	0.05	0.05	0.00
Sat Flow, veh/h	1616	3223	1442	1707	3406	1524	772	772	1346	348	348	0
Grp Volume(v), veh/h	52	806	12	160	2362	33	42	0	29	42	0	0
Grp Sat Flow(s),veh/h/ln	1616	1612	1442	1707	1703	1524	1545	0	1346	696	0	0
Q Serve(g_s), s	1.8	7.5	0.2	5.2	39.0	0.4	0.0	0.0	1.1	1.2	0.0	0.0
Cycle Q Clear(g_c), s	1.8	7.5	0.2	5.2	39.0	0.4	1.5	0.0	1.1	2.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.50		1.00	0.50		0.00
Lane Grp Cap(c), veh/h	63	1962	878	201	2311	1034	167	0	222	127	0	0
V/C Ratio(X)	0.82	0.41	0.01	0.79	1.02	0.03	0.25	0.00	0.13	0.33	0.00	0.00
Avail Cap(c_a), veh/h	408	2187	979	446	2311	1034	573	0	627	607	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	27.4	5.9	4.4	24.7	9.2	3.0	26.8	0.0	20.5	28.3	0.0	0.0
Incr Delay (d2), s/veh	9.3	0.2	0.0	2.7	24.5	0.0	0.8	0.0	0.3	1.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.3	0.1	2.6	25.5	0.2	0.7	0.0	0.4	0.7	0.0	0.0
LnGrp Delay(d),s/veh	36.7	6.1	4.4	27.4	33.7	3.1	27.6	0.0	20.7	29.8	0.0	0.0
LnGrp LOS	D	A	A	C	F	A	C		C	C		
Approach Vol, veh/h		870			2555			71			42	
Approach Delay, s/veh		7.9			32.9			24.8			29.8	
Approach LOS		A			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.8	40.0		6.7	6.8	44.0		6.7
Change Period (Y+Rc), s	4.0	5.0		4.0	4.5	5.0		4.0
Max Green Setting (Gmax), s	15.0	39.0		20.0	14.5	39.0		20.0
Max Q Clear Time (g_c+I1), s	7.2	9.5		3.5	3.8	41.0		4.7
Green Ext Time (p_c), s	0.1	8.0		0.1	0.0	0.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	26.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	50	40	335	50	82	40	750	209	101	2180	50
Future Volume (veh/h)	20	50	40	335	50	82	40	750	209	101	2180	50
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1242	1242	1900	1508	1508	1508	1696	1696	1696	1810	1810	1810
Adj Flow Rate, veh/h	21	53	26	391	0	18	42	789	148	106	2295	25
Adj No. of Lanes	1	1	0	2	0	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	53	53	53	26	26	26	12	12	12	5	5	5
Cap, veh/h	97	66	33	494	0	220	52	1705	763	128	1963	876
Arrive On Green	0.08	0.08	0.08	0.17	0.00	0.17	0.03	0.53	0.53	0.07	0.57	0.57
Sat Flow, veh/h	1183	787	386	2872	0	1282	1616	3223	1442	1723	3438	1534
Grp Volume(v), veh/h	21	0	79	391	0	18	42	789	148	106	2295	25
Grp Sat Flow(s),veh/h/ln	1183	0	1174	1436	0	1282	1616	1612	1442	1723	1719	1534
Q Serve(g_s), s	2.3	0.0	9.3	18.3	0.0	1.7	3.6	21.4	7.6	8.5	80.0	1.0
Cycle Q Clear(g_c), s	2.3	0.0	9.3	18.3	0.0	1.7	3.6	21.4	7.6	8.5	80.0	1.0
Prop In Lane	1.00		0.33	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	97	0	99	494	0	220	52	1705	763	128	1963	876
V/C Ratio(X)	0.22	0.00	0.80	0.79	0.00	0.08	0.80	0.46	0.19	0.83	1.17	0.03
Avail Cap(c_a), veh/h	338	0	337	820	0	366	288	1840	823	307	1963	876
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.1	0.0	63.1	55.6	0.0	48.7	67.3	20.6	17.3	64.0	30.1	13.1
Incr Delay (d2), s/veh	1.1	0.0	13.7	9.8	0.0	0.6	10.0	0.3	0.2	5.1	82.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	3.4	8.0	0.0	0.6	1.8	9.6	3.0	4.2	60.0	0.4
LnGrp Delay(d),s/veh	61.2	0.0	76.7	65.5	0.0	49.3	77.3	20.9	17.5	69.0	112.2	13.1
LnGrp LOS	E		E	E		D	E	C	B	E	F	B
Approach Vol, veh/h		100			409			979			2426	
Approach Delay, s/veh		73.5			64.7			22.8			109.3	
Approach LOS		E			E			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.4	80.1		29.1	8.5	86.0		16.5
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0
Max Green Setting (Gmax), s	25.0	80.0		40.0	25.0	80.0		40.0
Max Q Clear Time (g_c+I1), s	10.5	23.4		20.3	5.6	82.0		11.3
Green Ext Time (p_c), s	0.1	9.9		3.8	0.0	0.0		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	82.1
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	120	52	115	232	38	146
Future Volume (veh/h)	120	52	115	232	38	146
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1532	1900	1667	1667	1545	1545
Adj Flow Rate, veh/h	143	44	137	276	45	49
Adj No. of Lanes	1	0	1	1	1	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	24	24	14	14	23	23
Cap, veh/h	251	77	186	834	262	388
Arrive On Green	0.22	0.22	0.12	0.50	0.18	0.18
Sat Flow, veh/h	1124	346	1587	1667	1471	1313
Grp Volume(v), veh/h	0	187	137	276	45	49
Grp Sat Flow(s),veh/h/ln	0	1470	1587	1667	1471	1313
Q Serve(g_s), s	0.0	3.2	2.3	2.8	0.7	0.8
Cycle Q Clear(g_c), s	0.0	3.2	2.3	2.8	0.7	0.8
Prop In Lane		0.24	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	328	186	834	262	388
V/C Ratio(X)	0.00	0.57	0.74	0.33	0.17	0.13
Avail Cap(c_a), veh/h	0	2387	1897	4965	1443	1442
HCM Platoon Ratio	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	1.00
Uniform Delay (d), s/veh	0.0	9.7	12.0	4.2	9.8	7.2
Incr Delay (d2), s/veh	0.0	1.6	5.6	0.2	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.4	1.3	1.3	0.3	0.3
LnGrp Delay(d),s/veh	0.0	11.3	17.6	4.4	10.1	7.4
LnGrp LOS		B	B	A	B	A
Approach Vol, veh/h	187			413	94	
Approach Delay, s/veh	11.3			8.8	8.7	
Approach LOS	B			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		9.5	7.8	10.8				18.5
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		27.5	33.5	45.5				83.5
Max Q Clear Time (g_c+I1), s		2.8	4.3	5.2				4.8
Green Ext Time (p_c), s		0.3	0.4	1.2				1.8

Intersection Summary	
HCM 2010 Ctrl Delay	9.4
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	20	30	132	20	40	20	939	200	85	2440	30
Future Volume (veh/h)	20	20	30	132	20	40	20	939	200	85	2440	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1462	1900	1900	1484	1900	1727	1727	1900	1776	1776	1900
Adj Flow Rate, veh/h	21	21	13	138	21	36	21	978	199	89	2542	31
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	30	30	30	28	28	28	10	10	10	7	7	7
Cap, veh/h	116	104	55	204	26	40	28	1701	346	111	2303	28
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.02	0.63	0.63	0.07	0.67	0.67
Sat Flow, veh/h	409	569	303	838	145	223	1645	2718	552	1691	3414	42
Grp Volume(v), veh/h	55	0	0	195	0	0	21	590	587	89	1254	1319
Grp Sat Flow(s),veh/h/ln	1281	0	0	1205	0	0	1645	1641	1630	1691	1687	1768
Q Serve(g_s), s	0.0	0.0	0.0	14.5	0.0	0.0	1.5	24.9	25.0	6.2	80.0	80.0
Cycle Q Clear(g_c), s	4.0	0.0	0.0	18.6	0.0	0.0	1.5	24.9	25.0	6.2	80.0	80.0
Prop In Lane	0.38		0.24	0.71		0.18	1.00		0.34	1.00		0.02
Lane Grp Cap(c), veh/h	275	0	0	271	0	0	28	1027	1020	111	1138	1193
V/C Ratio(X)	0.20	0.00	0.00	0.72	0.00	0.00	0.76	0.57	0.58	0.80	1.10	1.11
Avail Cap(c_a), veh/h	466	0	0	450	0	0	347	1107	1100	357	1138	1193
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.3	0.0	0.0	46.9	0.0	0.0	58.0	13.0	13.0	54.6	19.3	19.3
Incr Delay (d2), s/veh	0.4	0.0	0.0	3.6	0.0	0.0	14.4	0.8	0.8	4.9	58.9	60.1
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	1.6	0.0	0.0	6.5	0.0	0.0	0.8	11.4	11.3	3.0	55.3	58.4
LnGrp Delay(d),s/veh	41.7	0.0	0.0	50.5	0.0	0.0	72.5	13.8	13.8	59.6	78.2	79.4
LnGrp LOS	D			D			E	B	B	E	F	F
Approach Vol, veh/h		55			195			1198			2662	
Approach Delay, s/veh		41.7			50.5			14.8			78.2	
Approach LOS		D			D			B			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.8	80.2		26.6	6.0	86.0		26.6
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0
Max Green Setting (Gmax), s	25.0	80.0		40.0	25.0	80.0		40.0
Max Q Clear Time (g_c+I1), s	19.2	27.0		6.0	3.5	82.0		20.6
Green Ext Time (p_c), s	0.1	14.5		0.3	0.0	0.0		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	57.9
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	20	30	140	20	60	50	1069	50	55	2497	50
Future Volume (veh/h)	30	20	30	140	20	60	50	1069	50	55	2497	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1597	1597	1881	1881	1900	1712	1712	1712	1776	1776	1900
Adj Flow Rate, veh/h	31	20	0	99	82	34	51	1091	36	56	2548	50
Adj No. of Lanes	0	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	19	19	19	1	1	1	11	11	11	7	7	7
Cap, veh/h	38	25	55	142	100	41	53	2359	1055	71	2487	49
Arrive On Green	0.04	0.04	0.00	0.08	0.08	0.08	0.03	0.73	0.73	0.04	0.73	0.73
Sat Flow, veh/h	942	608	1357	1792	1264	524	1630	3252	1455	1691	3385	66
Grp Volume(v), veh/h	51	0	0	99	0	116	51	1091	36	56	1266	1332
Grp Sat Flow(s),veh/h/ln	1550	0	1357	1792	0	1789	1630	1626	1455	1691	1687	1764
Q Serve(g_s), s	5.0	0.0	0.0	8.3	0.0	9.9	4.8	21.4	1.1	5.1	113.5	113.5
Cycle Q Clear(g_c), s	5.0	0.0	0.0	8.3	0.0	9.9	4.8	21.4	1.1	5.1	113.5	113.5
Prop In Lane	0.61		1.00	1.00		0.29	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	63	0	55	142	0	142	53	2359	1055	71	1239	1296
V/C Ratio(X)	0.81	0.00	0.00	0.70	0.00	0.82	0.97	0.46	0.03	0.79	1.02	1.03
Avail Cap(c_a), veh/h	70	0	61	197	0	197	53	2359	1055	120	1239	1296
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.5	0.0	0.0	69.3	0.0	70.0	74.7	8.8	6.0	73.4	20.5	20.5
Incr Delay (d2), s/veh	46.0	0.0	0.0	6.2	0.0	17.0	110.7	0.2	0.0	7.3	31.0	32.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	0.0	4.4	0.0	5.6	3.8	9.6	0.4	2.5	62.7	66.0
LnGrp Delay(d),s/veh	119.5	0.0	0.0	75.5	0.0	87.0	185.4	9.0	6.0	80.7	51.5	52.9
LnGrp LOS	F			E		F	F	A	A	F	F	F
Approach Vol, veh/h		51			215			1178			2654	
Approach Delay, s/veh		119.5			81.7			16.5			52.8	
Approach LOS		F			F			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.4	117.6		10.3	9.0	119.0		16.2
Change Period (Y+Rc), s	4.0	5.5		4.0	4.0	5.5		4.0
Max Green Setting (Gmax), s	11.6	107.5		7.0	5.0	113.5		17.0
Max Q Clear Time (g_c+I1), s	7.1	23.4		7.0	6.8	115.5		11.9
Green Ext Time (p_c), s	0.0	15.0		0.0	0.0	0.0		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	44.7
HCM 2010 LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
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)	0	20	20	60	20	20	0	596	50	20	1111	0
Future Volume (veh/h)	0	20	20	60	20	20	0	596	50	20	1111	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1508	1508	1900	1624	1624	1900	1696	1696	1696
Adj Flow Rate, veh/h	0	21	0	64	21	2	0	634	50	21	1182	0
Adj No. of Lanes	1	1	0	2	1	0	1	2	0	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	26	26	26	17	17	17	12	12	12
Cap, veh/h	2	34	0	100	128	12	2	2168	171	29	2600	1163
Arrive On Green	0.00	0.02	0.00	0.04	0.09	0.09	0.00	0.75	0.75	0.02	0.81	0.00
Sat Flow, veh/h	1810	1900	0	2786	1356	129	1547	2898	228	1616	3223	1442
Grp Volume(v), veh/h	0	21	0	64	0	23	0	337	347	21	1182	0
Grp Sat Flow(s),veh/h/ln	1810	1900	0	1393	0	1485	1547	1543	1584	1616	1612	1442
Q Serve(g_s), s	0.0	1.1	0.0	2.2	0.0	1.4	0.0	6.9	6.9	1.3	11.0	0.0
Cycle Q Clear(g_c), s	0.0	1.1	0.0	2.2	0.0	1.4	0.0	6.9	6.9	1.3	11.0	0.0
Prop In Lane	1.00		0.00	1.00		0.09	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	2	34	0	100	0	140	2	1154	1185	29	2600	1163
V/C Ratio(X)	0.00	0.62	0.00	0.64	0.00	0.16	0.00	0.29	0.29	0.73	0.45	0.00
Avail Cap(c_a), veh/h	153	562	0	236	0	167	126	1154	1185	132	2600	1163
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.98	0.00	0.98	0.00	0.95	0.95	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	47.8	0.0	46.6	0.0	40.8	0.0	4.0	4.0	47.9	2.9	0.0
Incr Delay (d2), s/veh	0.0	23.7	0.0	2.5	0.0	0.8	0.0	0.6	0.6	12.4	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.8	0.0	0.9	0.0	0.6	0.0	3.1	3.2	0.7	5.0	0.0
LnGrp Delay(d),s/veh	0.0	71.5	0.0	49.2	0.0	41.6	0.0	4.6	4.6	60.3	3.5	0.0
LnGrp LOS		E		D		D		A	A	E	A	
Approach Vol, veh/h		21			87			684			1203	
Approach Delay, s/veh		71.5			47.2			4.6			4.5	
Approach LOS		E			D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.7	79.0	7.5	5.7	0.0	84.8	0.0	13.2
Change Period (Y+Rc), s	4.0	5.7	4.0	4.0	4.0	5.7	4.0	4.0
Max Green Setting (Gmax), s	8.0	35.0	8.3	29.0	8.0	35.0	8.3	11.0
Max Q Clear Time (g_c+I1), s	3.3	8.9	4.2	3.1	0.0	13.0	0.0	3.4
Green Ext Time (p_c), s	0.0	5.7	0.0	0.1	0.0	11.1	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	7.1
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	30	40	270	50	30	40	493	100	50	1446	40
Future Volume (veh/h)	30	30	40	270	50	30	40	493	100	50	1446	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1462	1462	1900	1827	1827	1900	1776	1776	1900	1845	1845	1900
Adj Flow Rate, veh/h	31	31	42	281	52	31	42	514	88	52	1506	40
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	30	30	30	4	4	4	7	7	7	3	3	3
Cap, veh/h	352	164	223	415	312	186	51	1453	248	66	1782	47
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.03	0.50	0.50	0.04	0.51	0.51
Sat Flow, veh/h	1024	562	761	1292	1066	636	1691	2884	492	1757	3488	93
Grp Volume(v), veh/h	31	0	73	281	0	83	42	300	302	52	755	791
Grp Sat Flow(s),veh/h/ln	1024	0	1323	1292	0	1702	1691	1687	1688	1757	1752	1828
Q Serve(g_s), s	1.9	0.0	3.3	16.7	0.0	2.9	2.0	8.6	8.7	2.3	29.6	29.8
Cycle Q Clear(g_c), s	4.8	0.0	3.3	20.0	0.0	2.9	2.0	8.6	8.7	2.3	29.6	29.8
Prop In Lane	1.00		0.58	1.00		0.37	1.00		0.29	1.00		0.05
Lane Grp Cap(c), veh/h	352	0	387	415	0	498	51	850	851	66	895	934
V/C Ratio(X)	0.09	0.00	0.19	0.68	0.00	0.17	0.82	0.35	0.36	0.79	0.84	0.85
Avail Cap(c_a), veh/h	497	0	574	597	0	738	169	850	851	176	895	934
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.00	0.98	1.00	0.00	1.00	0.93	0.93	0.93	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	0.0	21.2	28.7	0.0	21.0	38.6	12.0	12.0	38.2	16.8	16.9
Incr Delay (d2), s/veh	0.1	0.0	0.2	1.8	0.0	0.1	10.5	1.1	1.1	7.8	9.6	9.4
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	0.5	0.0	1.2	6.1	0.0	1.4	1.1	4.3	4.3	1.3	16.6	17.4
LnGrp Delay(d),s/veh	22.9	0.0	21.4	30.4	0.0	21.2	49.1	13.0	13.1	46.0	26.4	26.2
LnGrp LOS	C		C	C		C	D	B	B	D	C	C
Approach Vol, veh/h		104			364			644			1598	
Approach Delay, s/veh		21.8			28.3			15.4			26.9	
Approach LOS		C			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.0	45.6		27.4	6.4	46.2		27.4
Change Period (Y+Rc), s	4.0	5.3		4.0	4.0	5.3		4.0
Max Green Setting (Gmax), s	8.0	24.0		34.7	8.0	24.0		34.7
Max Q Clear Time (g_c+I1), s	4.3	10.7		6.8	4.0	31.8		22.0
Green Ext Time (p_c), s	0.0	4.3		0.5	0.0	0.0		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	24.2
HCM 2010 LOS	C

Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	230	96	537	110	244	1512
Future Volume (veh/h)	230	96	537	110	244	1512
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1792	1900	1845	1845
Adj Flow Rate, veh/h	237	99	554	94	252	1559
Adj No. of Lanes	2	1	2	0	1	2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	6	6	3	3
Cap, veh/h	337	155	1711	289	264	2758
Arrive On Green	0.10	0.10	0.78	0.78	0.15	0.79
Sat Flow, veh/h	3476	1599	3005	493	1757	3597
Grp Volume(v), veh/h	237	99	323	325	252	1559
Grp Sat Flow(s),veh/h/ln	1738	1599	1703	1705	1757	1752
Q Serve(g_s), s	5.3	4.8	4.5	4.5	11.4	13.7
Cycle Q Clear(g_c), s	5.3	4.8	4.5	4.5	11.4	13.7
Prop In Lane	1.00	1.00		0.29	1.00	
Lane Grp Cap(c), veh/h	337	155	999	1001	264	2758
V/C Ratio(X)	0.70	0.64	0.32	0.32	0.96	0.57
Avail Cap(c_a), veh/h	726	334	999	1001	264	2758
HCM Platoon Ratio	1.00	1.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.96	0.96	0.40	0.40
Uniform Delay (d), s/veh	35.0	34.8	4.1	4.1	33.7	3.3
Incr Delay (d2), s/veh	1.0	1.6	0.8	0.8	24.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	2.2	2.3	2.3	7.3	6.4
LnGrp Delay(d),s/veh	36.0	36.4	4.9	4.9	58.4	3.6
LnGrp LOS	D	D	A	A	E	A
Approach Vol, veh/h	336		648			1811
Approach Delay, s/veh	36.1		4.9			11.2
Approach LOS	D		A			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	16.0	52.2				68.2		11.8
Change Period (Y+Rc), s	4.0	5.3				5.3		4.0
Max Green Setting (Gmax), s	12.0	38.0				54.0		16.7
Max Q Clear Time (g_c+I1), s	13.4	6.5				15.7		7.3
Green Ext Time (p_c), s	0.0	6.4				23.3		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	12.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	130	0	105	0	542	90	84	1658	0
Future Volume (veh/h)	0	0	0	130	0	105	0	542	90	84	1658	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	0.99		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1845	1845	1776	1776	1900	1845	1845	1900
Adj Flow Rate, veh/h	0	0	0	134	0	9	0	559	80	87	1709	0
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	3	3	3	7	7	7	3	3	3
Cap, veh/h	0	2	0	170	0	151	2	1998	285	110	2757	0
Arrive On Green	0.00	0.00	0.00	0.10	0.00	0.10	0.00	0.67	0.67	0.13	1.00	0.00
Sat Flow, veh/h	0	1863	0	1746	0	1558	1691	2965	423	1757	3597	0
Grp Volume(v), veh/h	0	0	0	134	0	9	0	317	322	87	1709	0
Grp Sat Flow(s),veh/h/ln	0	1863	0	1746	0	1558	1691	1687	1701	1757	1752	0
Q Serve(g_s), s	0.0	0.0	0.0	6.0	0.0	0.4	0.0	6.0	6.1	3.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	6.0	0.0	0.4	0.0	6.0	6.1	3.8	0.0	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.25	1.00		0.00
Lane Grp Cap(c), veh/h	0	2	0	170	0	151	2	1137	1146	110	2757	0
V/C Ratio(X)	0.00	0.00	0.00	0.79	0.00	0.06	0.00	0.28	0.28	0.79	0.62	0.00
Avail Cap(c_a), veh/h	0	203	0	218	0	195	169	1137	1146	176	2757	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.95	0.95	0.79	0.79	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	35.3	0.0	32.8	0.0	5.2	5.2	34.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	12.4	0.0	0.1	0.0	0.6	0.6	3.7	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	3.5	0.0	0.2	0.0	2.9	3.0	2.0	0.3	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	47.7	0.0	32.9	0.0	5.8	5.8	38.2	0.8	0.0
LnGrp LOS				D		C		A	A	D	A	
Approach Vol, veh/h		0			143			639			1796	
Approach Delay, s/veh		0.0			46.8			5.8			2.6	
Approach LOS					D			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.0	59.2		0.0	0.0	68.2		11.8
Change Period (Y+Rc), s	4.0	5.3		4.0	4.0	5.3		4.0
Max Green Setting (Gmax), s	8.0	36.0		8.7	8.0	36.0		10.0
Max Q Clear Time (g_c+I1), s	5.8	8.1		0.0	0.0	2.0		8.0
Green Ext Time (p_c), s	0.0	6.1		0.0	0.0	23.9		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	5.9
HCM 2010 LOS	A

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	30	50	90	30	73	50	489	70	183	1455	150
Future Volume (veh/h)	70	30	50	90	30	73	50	489	70	183	1455	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1827	1900	1681	1900	1759	1759	1900	1863	1863	1900
Adj Flow Rate, veh/h	71	31	0	92	31	6	51	499	62	187	1485	147
Adj No. of Lanes	1	1	1	0	2	0	1	2	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	4	4	13	13	13	8	8	8	2	2	2
Cap, veh/h	107	112	95	124	106	20	64	1704	211	168	2019	198
Arrive On Green	0.06	0.06	0.00	0.08	0.08	0.08	0.04	0.57	0.57	0.09	0.62	0.62
Sat Flow, veh/h	1740	1827	1553	1601	1369	265	1675	2994	371	1774	3256	320
Grp Volume(v), veh/h	71	31	0	92	0	37	51	278	283	187	802	830
Grp Sat Flow(s),veh/h/ln	1740	1827	1553	1601	0	1633	1675	1671	1694	1774	1770	1806
Q Serve(g_s), s	3.6	1.5	0.0	5.1	0.0	1.9	2.7	7.7	7.8	8.5	28.3	29.1
Cycle Q Clear(g_c), s	3.6	1.5	0.0	5.1	0.0	1.9	2.7	7.7	7.8	8.5	28.3	29.1
Prop In Lane	1.00		1.00	1.00		0.16	1.00		0.22	1.00		0.18
Lane Grp Cap(c), veh/h	107	112	95	124	0	126	64	951	964	168	1097	1120
V/C Ratio(X)	0.66	0.28	0.00	0.74	0.00	0.29	0.80	0.29	0.29	1.12	0.73	0.74
Avail Cap(c_a), veh/h	323	339	288	267	0	272	140	951	964	168	1097	1120
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	0.00	1.00	0.00	1.00	0.99	0.99	0.99	0.70	0.70	0.70
Uniform Delay (d), s/veh	41.3	40.3	0.0	40.7	0.0	39.2	43.0	10.0	10.0	40.8	11.9	12.0
Incr Delay (d2), s/veh	5.2	1.0	0.0	3.3	0.0	0.5	23.5	0.8	0.8	92.9	3.0	3.1
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	1.9	0.8	0.0	2.4	0.0	0.9	1.7	3.8	3.8	8.5	14.5	15.3
LnGrp Delay(d),s/veh	46.5	41.3	0.0	44.0	0.0	39.7	66.5	10.8	10.8	133.6	14.9	15.2
LnGrp LOS	D	D		D		D	E	B	B	F	B	B
Approach Vol, veh/h		102			129			612			1819	
Approach Delay, s/veh		44.9			42.7			15.4			27.2	
Approach LOS		D			D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.5	56.5		9.5	7.9	61.1		11.4
Change Period (Y+Rc), s	4.0	5.3		4.0	4.5	5.3		4.5
Max Green Setting (Gmax), s	8.5	32.0		16.7	7.5	22.5		15.0
Max Q Clear Time (g_c+I1), s	10.5	9.8		5.6	4.7	31.1		7.1
Green Ext Time (p_c), s	0.0	4.9		0.1	0.0	0.0		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	25.9
HCM 2010 LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	90	150	279	110	330	0	0	1175	420
Future Volume (veh/h)	0	0	0	90	150	279	110	330	0	0	1175	420
Number				7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1764	1900	1863	1759	0	0	1828	1863
Adj Flow Rate, veh/h				97	161	46	118	355	0	0	1263	452
Adj No. of Lanes				0	2	0	1	2	0	0	2	1
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	0	2	8	0	0	4	2
Cap, veh/h				168	294	87	150	2324	0	0	1897	822
Arrive On Green				0.16	0.16	0.16	0.08	0.70	0.00	0.00	0.52	0.52
Sat Flow, veh/h				1037	1811	534	1774	3431	0	0	3656	1583
Grp Volume(v), veh/h				160	0	144	118	355	0	0	1263	452
Grp Sat Flow(s),veh/h/ln				1712	0	1670	1774	1671	0	0	1828	1583
Q Serve(g_s), s				4.2	0.0	3.9	3.2	1.8	0.0	0.0	12.5	9.4
Cycle Q Clear(g_c), s				4.2	0.0	3.9	3.2	1.8	0.0	0.0	12.5	9.4
Prop In Lane				0.61		0.32	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				278	0	271	150	2324	0	0	1897	822
V/C Ratio(X)				0.58	0.00	0.53	0.78	0.15	0.00	0.00	0.67	0.55
Avail Cap(c_a), veh/h				907	0	884	181	2519	0	0	2048	887
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	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				19.0	0.0	18.9	22.0	2.5	0.0	0.0	8.7	8.0
Incr Delay (d2), s/veh				2.3	0.0	1.9	16.9	0.0	0.0	0.0	1.1	1.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				2.2	0.0	1.9	2.3	0.8	0.0	0.0	6.4	4.3
LnGrp Delay(d),s/veh				21.3	0.0	20.8	39.0	2.6	0.0	0.0	9.8	9.2
LnGrp LOS				C		C	D	A			A	A
Approach Vol, veh/h					304			473			1715	
Approach Delay, s/veh					21.1			11.7			9.6	
Approach LOS					C			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		38.1		11.0	8.7	29.5		
Change Period (Y+Rc), s		4.0		3.0	4.5	4.0		
Max Green Setting (Gmax), s		37.0		26.0	5.0	27.5		
Max Q Clear Time (g_c+I1), s		3.8		6.2	5.2	14.5		
Green Ext Time (p_c), s		3.4		1.8	0.0	11.0		

Intersection Summary	
HCM 2010 Ctrl Delay	11.4
HCM 2010 LOS	B

Notes

User approved pedestrian interval to be less than phase max green.
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)	190	190	110	0	0	0	0	250	220	805	460	0
Future Volume (veh/h)	190	190	110	0	0	0	0	250	220	805	460	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1792				0	1624	1624	1810	1810	0
Adj Flow Rate, veh/h	204	204	18				0	269	117	866	495	0
Adj No. of Lanes	1	1	1				0	2	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	6	6				0	17	17	5	5	0
Cap, veh/h	296	310	264				0	545	232	779	2390	0
Arrive On Green	0.17	0.17	0.17				0.00	0.17	0.17	0.45	0.70	0.00
Sat Flow, veh/h	1707	1792	1524				0	3248	1380	1723	3529	0
Grp Volume(v), veh/h	204	204	18				0	269	117	866	495	0
Grp Sat Flow(s),veh/h/ln	1707	1792	1524				0	1624	1380	1723	1719	0
Q Serve(g_s), s	6.0	5.6	0.5				0.0	4.0	4.1	24.0	2.7	0.0
Cycle Q Clear(g_c), s	6.0	5.6	0.5				0.0	4.0	4.1	24.0	2.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	296	310	264				0	545	232	779	2390	0
V/C Ratio(X)	0.69	0.66	0.07				0.00	0.49	0.51	1.11	0.21	0.00
Avail Cap(c_a), veh/h	579	607	516				0	1101	468	779	2913	0
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	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.6	20.5	18.4				0.0	20.1	20.1	14.6	2.9	0.0
Incr Delay (d2), s/veh	2.9	2.4	0.1				0.0	1.5	3.6	67.5	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	3.0	3.0	0.2				0.0	1.9	1.8	25.9	1.3	0.0
LnGrp Delay(d),s/veh	23.5	22.9	18.5				0.0	21.5	23.7	82.1	2.9	0.0
LnGrp LOS	C	C	B					C	C	F	A	
Approach Vol, veh/h		426						386			1361	
Approach Delay, s/veh		23.0						22.2			53.3	
Approach LOS		C						C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	28.0	12.9		12.2		40.9		
Change Period (Y+Rc), s	4.0	* 4		3.0		4.0		
Max Green Setting (Gmax), s	24.0	* 18		18.0		45.0		
Max Q Clear Time (g_c+I1), s	26.0	6.1		8.0		4.7		
Green Ext Time (p_c), s	0.0	2.8		1.3		5.2		

Intersection Summary	
HCM 2010 Ctrl Delay	41.8
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	20	20	130	60	149	50	317	40	243	748	80
Future Volume (veh/h)	20	20	20	130	60	149	50	317	40	243	748	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	120	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1776	1624	1624	1624	1776	1776	1776	1667	1667	1667
Adj Flow Rate, veh/h	21	21	0	100	115	62	53	334	0	256	787	36
Adj No. of Lanes	1	1	1	1	1	2	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	7	7	7	17	17	17	7	7	7	14	14	14
Cap, veh/h	92	96	82	158	166	1582	67	527	236	747	1903	852
Arrive On Green	0.09	0.09	0.00	0.12	0.12	0.12	0.04	0.24	0.00	0.21	0.43	0.43
Sat Flow, veh/h	1691	1776	1509	1547	1624	2761	1691	3374	1509	1587	3167	1417
Grp Volume(v), veh/h	21	21	0	100	115	62	53	334	0	256	787	36
Grp Sat Flow(s),veh/h/ln	1691	1776	1509	1547	1624	1380	1691	1687	1509	1587	1583	1417
Q Serve(g_s), s	0.5	0.5	0.0	2.8	3.1	0.7	1.4	3.9	0.0	7.0	8.8	0.7
Cycle Q Clear(g_c), s	0.5	0.5	0.0	2.8	3.1	0.7	1.4	3.9	0.0	7.0	8.8	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	92	96	82	158	166	1582	67	527	236	747	1903	852
V/C Ratio(X)	0.23	0.22	0.00	0.63	0.69	0.04	0.79	0.63	0.00	0.34	0.41	0.04
Avail Cap(c_a), veh/h	1046	1098	933	738	775	1894	440	2233	999	1481	4295	1921
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	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	35.2	0.0	33.4	33.6	6.9	36.8	31.0	0.0	19.5	7.8	6.1
Incr Delay (d2), s/veh	0.5	0.4	0.0	1.6	1.9	0.0	7.5	1.3	0.0	0.3	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	282.2	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.4	0.0	2.1	2.5	0.3	1.3	3.5	0.0	74.8	4.3	0.3
LnGrp Delay(d),s/veh	35.7	35.6	0.0	35.0	35.6	6.9	44.3	32.3	0.0	302.1	8.1	6.1
LnGrp LOS	D	D		C	D	A	D	C		F	A	A
Approach Vol, veh/h		42			277			387			1079	
Approach Delay, s/veh		35.6			28.9			33.9			77.7	
Approach LOS		D			C			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.6	15.5		7.5	5.0	24.1		9.5
Change Period (Y+Rc), s	4.0	4.5		3.5	3.0	4.5		4.0
Max Green Setting (Gmax), s	43.6	30.5		28.5	12.0	62.5		22.0
Max Q Clear Time (g_c+I1), s	9.0	5.9		2.5	3.4	10.8		5.1
Green Ext Time (p_c), s	1.0	1.9		0.1	0.0	8.9		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	59.7
HCM 2010 LOS	E

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	20	20	120	20	21	20	153	60	36	121	20
Future Vol, veh/h	20	20	20	120	20	21	20	153	60	36	121	20
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	21	21	128	21	22	21	163	64	38	129	21
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Righ	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.6	9.8	9.9	9.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	33%	75%	20%
Vol Thru, %	66%	33%	12%	68%
Vol Right, %	26%	33%	13%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	233	60	161	177
LT Vol	20	20	120	36
Through Vol	153	20	20	121
RT Vol	60	20	21	20
Lane Flow Rate	248	64	171	188
Geometry Grp	1	1	1	1
Degree of Util (X)	0.318	0.09	0.243	0.251
Departure Headway (Hd)	4.625	5.06	5.102	4.799
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	773	701	699	744
Service Time	2.684	3.141	3.17	2.862
HCM Lane V/C Ratio	0.321	0.091	0.245	0.253
HCM Control Delay	9.9	8.6	9.8	9.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.4	0.3	0.9	1

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	85	35	65	0	6	0	50	169	2	0	180	96
Future Vol, veh/h	85	35	65	0	6	0	50	169	2	0	180	96
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	145
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	90	37	69	0	6	0	53	180	2	0	191	102

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	481	479	191	582	580	181	293	0	0	182	0	0
Stage 1	191	191	-	287	287	-	-	-	-	-	-	-
Stage 2	290	288	-	295	293	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	495	486	851	424	426	862	1269	-	-	1393	-	-
Stage 1	811	742	-	720	674	-	-	-	-	-	-	-
Stage 2	718	674	-	713	670	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	472	464	851	353	406	862	1269	-	-	1393	-	-
Mov Cap-2 Maneuver	472	464	-	353	406	-	-	-	-	-	-	-
Stage 1	774	742	-	687	643	-	-	-	-	-	-	-
Stage 2	678	643	-	622	670	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15	14	1.8	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1269	-	-	557	406	1393	-	-
HCM Lane V/C Ratio	0.042	-	-	0.353	0.016	-	-	-
HCM Control Delay (s)	8	0	-	15	14	0	-	-
HCM Lane LOS	A	A	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.6	0	0	-	-

Intersection	
Intersection Delay, s/veh	12.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	50	80	30	110	30	75	20	116	60	75	200	30
Future Vol, veh/h	50	80	30	110	30	75	20	116	60	75	200	30
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	0	1	1	1	7	7	7	3	3	3
Mvmt Flow	53	85	32	117	32	80	21	123	64	80	213	32
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11	11.7	11.2	13.6
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	31%	51%	25%
Vol Thru, %	59%	50%	14%	66%
Vol Right, %	31%	19%	35%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	196	160	215	305
LT Vol	20	50	110	75
Through Vol	116	80	30	200
RT Vol	60	30	75	30
Lane Flow Rate	209	170	229	324
Geometry Grp	1	1	1	1
Degree of Util (X)	0.321	0.272	0.355	0.49
Departure Headway (Hd)	5.544	5.743	5.594	5.435
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	646	623	640	662
Service Time	3.605	3.805	3.653	3.489
HCM Lane V/C Ratio	0.324	0.273	0.358	0.489
HCM Control Delay	11.2	11	11.7	13.6
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.4	1.1	1.6	2.7

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	86	180	232	20	50	115
Future Vol, veh/h	86	180	232	20	50	115
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	178	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	91	191	247	21	53	122

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	268	0	-	0	631	258
Stage 1	-	-	-	-	258	-
Stage 2	-	-	-	-	373	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1296	-	-	-	445	781
Stage 1	-	-	-	-	785	-
Stage 2	-	-	-	-	696	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1296	-	-	-	414	781
Mov Cap-2 Maneuver	-	-	-	-	414	-
Stage 1	-	-	-	-	730	-
Stage 2	-	-	-	-	696	-

Approach	EB	WB	SB
HCM Control Delay, s	2.6	0	13.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1296	-	-	-	616
HCM Lane V/C Ratio	0.071	-	-	-	0.285
HCM Control Delay (s)	8	-	-	-	13.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	40	271	100	70	40	145	990	40	20	1290	96
Future Volume (veh/h)	71	40	271	100	70	40	145	990	40	20	1290	96
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	76	43	0	106	74	32	154	1053	0	21	1372	97
Adj No. of Lanes	0	1	1	0	1	0	1	2	1	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	204	99	249	190	100	39	191	2272	1016	24	1837	130
Arrive On Green	0.16	0.16	0.00	0.16	0.16	0.16	0.11	0.64	0.00	0.01	0.55	0.55
Sat Flow, veh/h	797	630	1583	751	637	247	1774	3539	1583	1774	3354	236
Grp Volume(v), veh/h	119	0	0	212	0	0	154	1053	0	21	722	747
Grp Sat Flow(s),veh/h/ln	1427	0	1583	1634	0	0	1774	1770	1583	1774	1770	1821
Q Serve(g_s), s	0.0	0.0	0.0	3.6	0.0	0.0	6.3	11.3	0.0	0.9	23.3	23.5
Cycle Q Clear(g_c), s	5.6	0.0	0.0	9.2	0.0	0.0	6.3	11.3	0.0	0.9	23.3	23.5
Prop In Lane	0.64		1.00	0.50		0.15	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	303	0	249	329	0	0	191	2272	1016	24	969	998
V/C Ratio(X)	0.39	0.00	0.00	0.64	0.00	0.00	0.81	0.46	0.00	0.87	0.74	0.75
Avail Cap(c_a), veh/h	579	0	551	643	0	0	261	2605	1165	119	1160	1194
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	0.0	0.0	30.3	0.0	0.0	32.6	6.8	0.0	36.8	12.9	13.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.8	0.0	0.0	8.7	0.2	0.0	27.0	2.5	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.0	4.3	0.0	0.0	3.5	5.5	0.0	0.6	11.9	12.3
LnGrp Delay(d),s/veh	29.1	0.0	0.0	31.1	0.0	0.0	41.3	7.0	0.0	63.8	15.4	15.5
LnGrp LOS	C			C			D	A		E	B	B
Approach Vol, veh/h		119			212			1207			1490	
Approach Delay, s/veh		29.1			31.1			11.4			16.1	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.0	53.0		16.7	12.0	45.9		16.7
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		* 5
Max Green Setting (Gmax), s	5.0	55.0		26.0	11.0	49.0		* 27
Max Q Clear Time (g_c+I1), s	2.9	13.3		7.6	8.3	25.5		11.2
Green Ext Time (p_c), s	0.0	14.3		0.4	0.1	15.4		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	15.8
HCM 2010 LOS	B

Notes

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

HCM 2010 Research does not support Non-NEMA phasing.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	240	1780	150	270	463	370	250	150	900	150	310	803
Future Volume (veh/h)	240	1780	150	270	463	370	250	150	900	150	310	803
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1845	1845	1845
Adj Flow Rate, veh/h	247	1835	99	278	477	0	258	155	505	155	320	256
Adj No. of Lanes	1	3	1	2	1	1	1	1	2	1	1	2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	3	3
Cap, veh/h	269	2324	721	324	744	632	253	426	634	178	345	515
Arrive On Green	0.15	0.46	0.46	0.09	0.40	0.00	0.14	0.23	0.23	0.10	0.19	0.19
Sat Flow, veh/h	1774	5085	1578	3442	1863	1583	1774	1863	2776	1757	1845	2760
Grp Volume(v), veh/h	247	1835	99	278	477	0	258	155	505	155	320	256
Grp Sat Flow(s),veh/h/ln	1774	1695	1578	1721	1863	1583	1774	1863	1388	1757	1845	1380
Q Serve(g_s), s	19.2	42.9	5.1	11.1	28.9	0.0	20.0	9.8	24.0	12.2	23.9	11.6
Cycle Q Clear(g_c), s	19.2	42.9	5.1	11.1	28.9	0.0	20.0	9.8	24.0	12.2	23.9	11.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	269	2324	721	324	744	632	253	426	634	178	345	515
V/C Ratio(X)	0.92	0.79	0.14	0.86	0.64	0.00	1.02	0.36	0.80	0.87	0.93	0.50
Avail Cap(c_a), veh/h	329	2324	721	442	744	632	253	612	912	201	540	808
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.5	32.3	22.0	62.5	33.9	0.0	60.0	45.4	50.9	62.0	56.0	51.0
Incr Delay (d2), s/veh	24.3	2.8	0.4	9.3	4.2	0.0	61.2	0.2	1.9	27.3	12.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.2	20.7	2.3	5.7	15.7	0.0	14.1	5.1	9.4	7.2	13.4	4.5
LnGrp Delay(d),s/veh	82.8	35.1	22.4	71.8	38.2	0.0	121.4	45.6	52.9	89.4	68.3	51.3
LnGrp LOS	F	D	C	E	D		F	D	D	F	E	D
Approach Vol, veh/h		2181			755			918			731	
Approach Delay, s/veh		39.9			50.6			70.9			66.8	
Approach LOS		D			D			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.9	69.1	23.7	30.3	24.9	61.0	17.9	36.2
Change Period (Y+Rc), s	3.7	5.1	3.7	* 4.2	3.7	5.1	3.7	* 4.2
Max Green Setting (Gmax), s	18.0	43.3	20.0	* 41	26.0	35.3	16.0	* 46
Max Q Clear Time (g_c+I1), s	13.1	44.9	22.0	25.9	21.2	30.9	14.2	26.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.0	0.2	0.0	0.3

Intersection Summary	
HCM 2010 Ctrl Delay	52.2
HCM 2010 LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	893	2345	50	132	1044	610	50	1241	95	200	431	263
Future Volume (veh/h)	893	2345	50	132	1044	610	50	1241	95	200	431	263
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1827	1827	1827	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	930	2443	51	138	1088	0	52	1293	29	208	449	101
Adj No. of Lanes	2	3	0	2	3	1	1	2	1	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	4	4	4	1	1	1	2	2	2
Cap, veh/h	607	2980	62	139	2224	692	67	1156	517	157	1347	601
Arrive On Green	0.18	0.58	0.58	0.04	0.45	0.00	0.04	0.32	0.32	0.09	0.38	0.38
Sat Flow, veh/h	3442	5127	107	3375	4988	1553	1792	3574	1598	1774	3539	1581
Grp Volume(v), veh/h	930	1613	881	138	1088	0	52	1293	29	208	449	101
Grp Sat Flow(s),veh/h/ln	1721	1695	1844	1688	1663	1553	1792	1787	1598	1774	1770	1581
Q Serve(g_s), s	30.0	64.6	65.2	6.9	26.3	0.0	4.9	55.0	2.4	15.0	15.3	7.2
Cycle Q Clear(g_c), s	30.0	64.6	65.2	6.9	26.3	0.0	4.9	55.0	2.4	15.0	15.3	7.2
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	607	1970	1071	139	2224	692	67	1156	517	157	1347	601
V/C Ratio(X)	1.53	0.82	0.82	0.99	0.49	0.00	0.78	1.12	0.06	1.33	0.33	0.17
Avail Cap(c_a), veh/h	607	1970	1071	139	2224	692	116	1156	517	157	1347	601
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.0	28.4	28.6	81.5	33.4	0.0	81.2	57.5	49.1	77.5	37.4	34.8
Incr Delay (d2), s/veh	239.8	0.4	0.7	74.0	0.8	0.0	13.6	65.2	0.1	185.1	0.2	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	34.5	30.1	33.3	4.7	12.2	0.0	2.7	37.6	1.1	15.4	7.5	3.2
LnGrp Delay(d),s/veh	309.8	28.8	29.3	155.5	34.2	0.0	94.7	122.7	49.2	262.6	37.6	35.1
LnGrp LOS	F	C	C	F	C		F	F	D	F	D	D
Approach Vol, veh/h		3424			1226			1374			758	
Approach Delay, s/veh		105.3			47.8			120.1			99.0	
Approach LOS		F			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	107.0	12.3	71.7	37.0	84.0	22.0	62.0
Change Period (Y+Rc), s	7.0	7.2	6.0	7.0	7.0	7.2	7.0	* 7
Max Green Setting (Gmax), s	7.0	65.8	11.0	59.0	30.0	42.8	15.0	* 55
Max Q Clear Time (g_c+I1), s	19.9	67.2	6.9	17.3	32.0	28.3	17.0	57.0
Green Ext Time (p_c), s	0.0	0.0	0.0	5.8	0.0	8.7	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	97.2
HCM 2010 LOS	F

Notes

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	2828	263	120	887	350	92	40	210	250	60	132
Future Volume (veh/h)	83	2828	263	120	887	350	92	40	210	250	60	132
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	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
Adj Sat Flow, veh/h/ln	1881	1881	1881	1792	1792	1792	1881	1881	1881	1792	1792	1792
Adj Flow Rate, veh/h	88	3009	163	128	944	144	98	43	47	266	64	4
Adj No. of Lanes	2	3	1	1	3	1	1	1	1	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	6	6	6	1	1	1	6	6	6
Cap, veh/h	139	2335	726	90	2264	704	335	171	144	261	102	85
Arrive On Green	0.04	0.45	0.45	0.05	0.46	0.46	0.19	0.09	0.09	0.15	0.06	0.06
Sat Flow, veh/h	3476	5136	1598	1707	4893	1523	1792	1881	1583	1707	1792	1491
Grp Volume(v), veh/h	88	3009	163	128	944	144	98	43	47	266	64	4
Grp Sat Flow(s),veh/h/ln	1738	1712	1598	1707	1631	1523	1792	1881	1583	1707	1792	1491
Q Serve(g_s), s	2.9	52.0	7.1	6.0	14.7	3.1	5.4	2.4	3.2	17.5	4.0	0.2
Cycle Q Clear(g_c), s	2.9	52.0	7.1	6.0	14.7	3.1	5.4	2.4	3.2	17.5	4.0	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	139	2335	726	90	2264	704	335	171	144	261	102	85
V/C Ratio(X)	0.63	1.29	0.22	1.43	0.42	0.20	0.29	0.25	0.33	1.02	0.63	0.05
Avail Cap(c_a), veh/h	246	2335	726	90	2264	704	335	757	637	261	768	639
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	54.1	31.2	18.9	54.2	20.5	4.2	40.0	48.4	48.7	48.4	52.8	34.6
Incr Delay (d2), s/veh	1.8	133.3	0.2	245.8	0.2	0.2	1.0	1.1	1.9	60.5	8.8	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	0.1	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	53.2	3.1	8.9	6.6	2.4	2.8	1.3	1.5	12.6	2.2	0.1
LnGrp Delay(d),s/veh	55.8	164.5	19.2	300.0	20.6	4.4	41.0	49.5	50.6	109.1	61.6	34.9
LnGrp LOS	E	F	B	F	C	A	D	D	D	F	E	C
Approach Vol, veh/h		3260			1216			188			334	
Approach Delay, s/veh		154.3			48.1			45.3			99.1	
Approach LOS		F			D			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	59.0	28.9	13.5	12.1	59.9	25.0	17.4
Change Period (Y+Rc), s	7.0	7.0	7.5	* 7	7.5	7.0	7.5	7.0
Max Green Setting (Gmax), s	6.0	52.0	15.0	* 49	8.1	49.4	17.5	46.0
Max Q Clear Time (g_c+I1), s	2.9	54.0	7.4	6.0	4.9	16.7	19.5	5.2
Green Ext Time (p_c), s	0.0	0.0	0.3	0.5	0.0	10.8	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	120.7
HCM 2010 LOS	F

Notes

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

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	2994	1566	90	961	60	225	90	120	60	110	30
Future Volume (veh/h)	50	2994	1566	90	961	60	225	90	120	60	110	30
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1776	1776	1776	1827	1827	1827	1900	1900	1900
Adj Flow Rate, veh/h	54	3219	1347	97	1033	40	242	97	54	65	118	15
Adj No. of Lanes	2	3	1	1	3	1	2	1	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	7	7	7	4	4	4	0	0	0
Cap, veh/h	91	3259	1015	78	3203	997	420	221	184	84	149	19
Arrive On Green	0.03	0.64	0.64	0.05	0.66	0.66	0.12	0.12	0.12	0.05	0.05	0.05
Sat Flow, veh/h	3442	5085	1583	1691	4848	1509	3480	1827	1526	1810	3230	404
Grp Volume(v), veh/h	54	3219	1347	97	1033	40	242	97	54	65	65	68
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1691	1616	1509	1740	1827	1526	1810	1805	1829
Q Serve(g_s), s	2.0	80.3	83.1	6.0	11.9	1.2	8.5	6.4	4.2	4.6	4.6	4.8
Cycle Q Clear(g_c), s	2.0	80.3	83.1	6.0	11.9	1.2	8.5	6.4	4.2	4.6	4.6	4.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.22
Lane Grp Cap(c), veh/h	91	3259	1015	78	3203	997	420	221	184	84	84	85
V/C Ratio(X)	0.59	0.99	1.33	1.24	0.32	0.04	0.58	0.44	0.29	0.78	0.78	0.80
Avail Cap(c_a), veh/h	133	3259	1015	78	3203	997	966	507	424	84	84	85
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	62.4	22.8	23.3	61.8	9.5	7.7	53.9	52.9	52.0	61.2	61.2	61.2
Incr Delay (d2), s/veh	2.3	13.0	154.2	179.3	0.1	0.0	1.8	2.0	1.2	33.0	33.8	38.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	41.2	79.5	6.7	5.3	0.5	4.2	3.4	1.8	3.1	3.1	3.3
LnGrp Delay(d),s/veh	64.7	35.8	177.4	241.1	9.6	7.7	55.6	54.9	53.2	94.2	95.0	99.6
LnGrp LOS	E	D	F	F	A	A	E	D	D	F	F	F
Approach Vol, veh/h		4620			1170			393			198	
Approach Delay, s/veh		77.4			28.7			55.1			96.3	
Approach LOS		E			C			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	88.8		10.6	7.4	91.4		20.3
Change Period (Y+Rc), s	4.0	5.7		4.6	4.0	5.7		4.6
Max Green Setting (Gmax), s	6.0	83.1		6.0	5.0	84.1		36.0
Max Q Clear Time (g_c+I1), s	3.0	85.1		6.8	4.0	13.9		10.5
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	13.0		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	67.7
HCM 2010 LOS	E

Notes

User approved pedestrian interval to be less than phase max green.
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)	30	3466	30	100	1096	40	30	20	904	60	20	50
Future Volume (veh/h)	30	3466	30	100	1096	40	30	20	904	60	20	50
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1845	1845	1845	1845	1900	1845	1845	1900	1845	1900
Adj Flow Rate, veh/h	32	3648	19	105	1154	35	32	21	944	63	21	40
Adj No. of Lanes	1	2	1	1	2	1	0	1	1	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	41	2688	1203	128	2849	1275	90	49	223	53	6	10
Arrive On Green	0.02	0.77	0.77	0.07	0.81	0.81	0.07	0.07	0.07	0.07	0.07	0.07
Sat Flow, veh/h	1757	3505	1568	1757	3505	1568	707	704	1568	216	91	146
Grp Volume(v), veh/h	32	3648	19	105	1154	35	53	0	944	124	0	0
Grp Sat Flow(s),veh/h/ln	1757	1752	1568	1757	1752	1568	1411	0	1568	453	0	0
Q Serve(g_s), s	2.6	110.0	0.4	8.5	13.2	0.6	0.0	0.0	10.0	5.0	0.0	0.0
Cycle Q Clear(g_c), s	2.6	110.0	0.4	8.5	13.2	0.6	5.0	0.0	10.0	10.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.60		1.00	0.51		0.32
Lane Grp Cap(c), veh/h	41	2688	1203	128	2849	1275	139	0	223	69	0	0
V/C Ratio(X)	0.79	1.36	0.02	0.82	0.40	0.03	0.38	0.00	4.23	1.79	0.00	0.00
Avail Cap(c_a), veh/h	109	2688	1203	576	3607	1614	139	0	223	69	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	69.7	16.7	3.9	65.6	3.7	2.6	64.2	0.0	61.5	70.4	0.0	0.0
Incr Delay (d2), s/veh	11.7	163.2	0.0	5.0	0.1	0.0	1.7	0.0	1463.7	405.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	113.2	0.2	4.3	6.3	0.3	2.1	0.0	99.6	10.6	0.0	0.0
LnGrp Delay(d),s/veh	81.4	179.9	3.9	70.5	3.9	2.6	65.9	0.0	1525.2	475.4	0.0	0.0
LnGrp LOS	F	F	A	E	A	A	E		F	F		
Approach Vol, veh/h		3699			1294			997			124	
Approach Delay, s/veh		178.1			9.2			1447.7			475.4	
Approach LOS		F			A			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.4	115.0		14.0	7.8	121.6		14.0
Change Period (Y+Rc), s	4.0	5.0		4.0	4.5	5.0		4.0
Max Green Setting (Gmax), s	47.6	110.0		10.0	8.9	147.6		10.0
Max Q Clear Time (g_c+I1), s	10.5	112.0		12.0	4.6	15.2		12.0
Green Ext Time (p_c), s	0.1	0.0		0.0	0.0	16.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	355.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	70	30	228	50	86	60	3380	428	86	1040	50
Future Volume (veh/h)	60	70	30	228	50	86	60	3380	428	86	1040	50
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1727	1727	1727	1863	1863	1863	1792	1792	1792
Adj Flow Rate, veh/h	61	71	22	269	0	7	61	3449	397	88	1061	35
Adj No. of Lanes	1	1	0	2	0	1	1	2	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	6	6	6	10	10	10	2	2	2	6	6	6
Cap, veh/h	77	59	18	313	0	140	77	2467	1103	86	2399	1073
Arrive On Green	0.04	0.04	0.04	0.10	0.00	0.10	0.04	0.70	0.70	0.05	0.70	0.70
Sat Flow, veh/h	1707	1314	407	3290	0	1468	1774	3539	1583	1707	3406	1524
Grp Volume(v), veh/h	61	0	93	269	0	7	61	3449	397	88	1061	35
Grp Sat Flow(s),veh/h/ln	1707	0	1721	1645	0	1468	1774	1770	1583	1707	1703	1524
Q Serve(g_s), s	6.3	0.0	8.0	14.3	0.0	0.8	6.1	124.0	18.0	9.0	23.8	1.2
Cycle Q Clear(g_c), s	6.3	0.0	8.0	14.3	0.0	0.8	6.1	124.0	18.0	9.0	23.8	1.2
Prop In Lane	1.00		0.24	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	77	0	77	313	0	140	77	2467	1103	86	2399	1073
V/C Ratio(X)	0.79	0.00	1.20	0.86	0.00	0.05	0.80	1.40	0.36	1.02	0.44	0.03
Avail Cap(c_a), veh/h	77	0	77	351	0	157	140	2467	1103	86	2399	1073
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	84.2	0.0	85.0	79.3	0.0	73.2	84.3	27.0	10.9	84.5	11.3	8.0
Incr Delay (d2), s/veh	42.3	0.0	166.5	23.1	0.0	0.5	6.8	181.8	0.3	102.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	7.4	7.5	0.0	0.3	3.1	122.2	7.9	6.7	11.3	0.5
LnGrp Delay(d),s/veh	126.4	0.0	251.5	102.5	0.0	73.7	91.2	208.7	11.2	186.8	11.5	8.0
LnGrp LOS	F		F	F		E	F	F	B	F	B	A
Approach Vol, veh/h		154			276			3907			1184	
Approach Delay, s/veh		202.0			101.7			186.8			24.4	
Approach LOS		F			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	13.0	130.0		21.9	11.7	131.3		13.0
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0
Max Green Setting (Gmax), s	9.0	124.0		19.0	14.0	119.0		8.0
Max Q Clear Time (g_c+I1), s	11.0	126.0		16.3	8.1	25.8		10.0
Green Ext Time (p_c), s	0.0	0.0		0.6	0.0	14.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	148.2
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	270	30	100	93	41	744
Future Volume (veh/h)	270	30	100	93	41	744
Number	4	14	3	8	5	12
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1900	1863	1863	1863	1863
Adj Flow Rate, veh/h	297	29	110	102	45	683
Adj No. of Lanes	1	0	1	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	10	10	2	2	2	2
Cap, veh/h	391	38	148	789	711	767
Arrive On Green	0.25	0.25	0.08	0.42	0.40	0.40
Sat Flow, veh/h	1549	151	1774	1863	1774	1583
Grp Volume(v), veh/h	0	326	110	102	45	683
Grp Sat Flow(s),veh/h/ln	0	1701	1774	1863	1774	1583
Q Serve(g_s), s	0.0	9.1	3.1	1.7	0.8	20.0
Cycle Q Clear(g_c), s	0.0	9.1	3.1	1.7	0.8	20.0
Prop In Lane		0.09	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	429	148	789	711	767
V/C Ratio(X)	0.00	0.76	0.74	0.13	0.06	0.89
Avail Cap(c_a), veh/h	0	1080	1855	3294	711	767
HCM Platoon Ratio	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	1.00
Uniform Delay (d), s/veh	0.0	17.7	22.9	9.0	9.4	12.0
Incr Delay (d2), s/veh	0.0	2.8	7.1	0.1	0.0	12.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.6	1.8	0.9	0.4	11.3
LnGrp Delay(d),s/veh	0.0	20.5	30.0	9.1	9.5	24.6
LnGrp LOS		C	C	A	A	C
Approach Vol, veh/h	326			212	728	
Approach Delay, s/veh	20.5			19.9	23.7	
Approach LOS	C			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		25.0	8.8	17.4				26.2
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		20.5	53.5	32.5				90.5
Max Q Clear Time (g_c+I1), s		22.0	5.1	11.1				3.7
Green Ext Time (p_c), s		0.0	0.3	1.9				0.6

Intersection Summary	
HCM 2010 Ctrl Delay	22.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	20	20	202	20	110	20	3728	219	65	1203	30
Future Volume (veh/h)	30	20	20	202	20	110	20	3728	219	65	1203	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1696	1900	1863	1863	1900	1827	1827	1900
Adj Flow Rate, veh/h	32	21	13	213	21	105	21	3924	229	68	1266	31
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	12	12	12	2	2	2	4	4	4
Cap, veh/h	184	119	67	223	19	94	26	2246	130	48	2334	57
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.01	0.66	0.66	0.03	0.67	0.67
Sat Flow, veh/h	679	522	295	836	82	412	1774	3397	196	1740	3463	85
Grp Volume(v), veh/h	66	0	0	339	0	0	21	2023	2130	68	634	663
Grp Sat Flow(s),veh/h/ln	1495	0	0	1331	0	0	1774	1770	1823	1740	1736	1812
Q Serve(g_s), s	0.0	0.0	0.0	35.0	0.0	0.0	2.1	119.0	119.0	5.0	33.8	33.8
Cycle Q Clear(g_c), s	6.0	0.0	0.0	41.0	0.0	0.0	2.1	119.0	119.0	5.0	33.8	33.8
Prop In Lane	0.48		0.20	0.63		0.31	1.00		0.11	1.00		0.05
Lane Grp Cap(c), veh/h	370	0	0	336	0	0	26	1170	1205	48	1170	1221
V/C Ratio(X)	0.18	0.00	0.00	1.01	0.00	0.00	0.79	1.73	1.77	1.41	0.54	0.54
Avail Cap(c_a), veh/h	370	0	0	336	0	0	59	1170	1205	48	1170	1221
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.8	0.0	0.0	71.4	0.0	0.0	88.4	30.5	30.5	87.5	15.1	15.1
Incr Delay (d2), s/veh	0.2	0.0	0.0	51.6	0.0	0.0	17.7	331.8	348.5	270.3	0.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	0.0	21.5	0.0	0.0	1.2	165.7	176.3	6.0	16.2	17.0
LnGrp Delay(d),s/veh	56.1	0.0	0.0	123.0	0.0	0.0	106.1	362.3	379.0	357.8	15.7	15.7
LnGrp LOS	E			F			F	F	F	F	B	B
Approach Vol, veh/h		66			339			4174			1365	
Approach Delay, s/veh		56.1			123.0			369.5			32.8	
Approach LOS		E			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.0	125.0		46.0	6.7	127.3		46.0
Change Period (Y+Rc), s	4.0	6.0		5.0	4.0	6.0		5.0
Max Green Setting (Gmax), s	5.0	119.0		41.0	6.0	118.0		41.0
Max Q Clear Time (g_c+I1), s	7.0	121.0		8.0	4.1	35.8		43.0
Green Ext Time (p_c), s	0.0	0.0		0.3	0.0	17.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	274.7
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	30	60	90	20	80	50	3807	480	64	1341	20
Future Volume (veh/h)	80	30	60	90	20	80	50	3807	480	64	1341	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1881	1881	1900	1845	1845	1845	1827	1827	1900
Adj Flow Rate, veh/h	82	31	1	76	44	39	52	3925	441	66	1382	21
Adj No. of Lanes	0	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	1	1	1	3	3	3	4	4	4
Cap, veh/h	65	25	79	70	36	32	66	2755	1232	48	2717	41
Arrive On Green	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.79	0.79	0.03	0.78	0.78
Sat Flow, veh/h	1304	493	1583	1792	921	816	1757	3505	1567	1740	3500	53
Grp Volume(v), veh/h	113	0	1	76	0	83	52	3925	441	66	685	718
Grp Sat Flow(s),veh/h/ln	1798	0	1583	1792	0	1737	1757	1752	1567	1740	1736	1818
Q Serve(g_s), s	9.0	0.0	0.1	7.0	0.0	7.0	5.3	141.5	15.1	5.0	26.2	26.3
Cycle Q Clear(g_c), s	9.0	0.0	0.1	7.0	0.0	7.0	5.3	141.5	15.1	5.0	26.2	26.3
Prop In Lane	0.73		1.00	1.00		0.47	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	90	0	79	70	0	68	66	2755	1232	48	1347	1411
V/C Ratio(X)	1.26	0.00	0.01	1.09	0.00	1.23	0.79	1.42	0.36	1.37	0.51	0.51
Avail Cap(c_a), veh/h	90	0	79	70	0	68	107	2755	1232	48	1347	1411
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	85.5	0.0	81.3	86.5	0.0	86.5	85.9	19.3	5.7	87.5	7.4	7.4
Incr Delay (d2), s/veh	179.1	0.0	0.1	134.9	0.0	183.3	7.6	193.2	0.3	254.5	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	0.0	0.0	6.1	0.0	6.8	2.7	141.3	6.6	5.8	12.5	13.1
LnGrp Delay(d),s/veh	264.6	0.0	81.3	222.5	0.0	269.8	93.5	212.5	6.0	342.0	7.9	7.9
LnGrp LOS	F		F	F		F	F	F	A	F	A	A
Approach Vol, veh/h		114			159			4418			1469	
Approach Delay, s/veh		263.0			247.2			190.5			22.9	
Approach LOS		F			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.0	147.0		13.0	10.8	145.2		11.0
Change Period (Y+Rc), s	4.0	5.5		4.0	4.0	5.5		4.0
Max Green Setting (Gmax), s	5.0	141.5		9.0	11.0	135.5		7.0
Max Q Clear Time (g_c+I1), s	7.0	143.5		11.0	7.3	28.3		9.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	21.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	153.3
HCM 2010 LOS	F

Notes

User approved pedestrian interval to be less than phase max green.
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)	0	20	20	70	0	20	20	2988	440	20	864	0
Future Volume (veh/h)	0	20	20	70	0	20	20	2988	440	20	864	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1667	1667	1900	1845	1845	1900	1827	1827	1827
Adj Flow Rate, veh/h	0	22	0	79	0	0	22	3357	490	22	971	0
Adj No. of Lanes	1	1	0	2	1	0	1	2	0	1	2	1
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, %	0	0	0	14	14	14	3	3	3	4	4	4
Cap, veh/h	1	36	0	72	110	0	28	2580	368	27	2908	1301
Arrive On Green	0.00	0.02	0.00	0.02	0.00	0.00	0.02	0.84	0.84	0.02	0.84	0.00
Sat Flow, veh/h	1810	1900	0	3079	1667	0	1757	3080	439	1740	3471	1553
Grp Volume(v), veh/h	0	22	0	79	0	0	22	1874	1973	22	971	0
Grp Sat Flow(s),veh/h/ln	1810	1900	0	1540	1667	0	1757	1752	1767	1740	1736	1553
Q Serve(g_s), s	0.0	2.0	0.0	4.0	0.0	0.0	2.1	142.4	142.4	2.1	10.7	0.0
Cycle Q Clear(g_c), s	0.0	2.0	0.0	4.0	0.0	0.0	2.1	142.4	142.4	2.1	10.7	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	1	36	0	72	110	0	28	1468	1480	27	2908	1301
V/C Ratio(X)	0.00	0.61	0.00	1.09	0.00	0.00	0.80	1.28	1.33	0.80	0.33	0.00
Avail Cap(c_a), veh/h	43	324	0	72	284	0	62	1468	1480	41	2908	1301
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.98	0.00	0.00	0.39	0.39	0.39	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	82.8	0.0	83.0	0.0	0.0	83.4	13.8	13.8	83.4	3.1	0.0
Incr Delay (d2), s/veh	0.0	21.3	0.0	131.8	0.0	0.0	7.6	126.8	151.8	29.9	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.2	0.0	3.0	0.0	0.0	1.1	119.0	130.2	1.3	5.1	0.0
LnGrp Delay(d),s/veh	0.0	104.0	0.0	215.7	0.0	0.0	91.0	140.6	165.6	113.2	3.4	0.0
LnGrp LOS		F		F			F	F	F	F	A	
Approach Vol, veh/h		22			79			3869			993	
Approach Delay, s/veh		104.0			215.7			153.0			5.9	
Approach LOS		F			F			F			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	148.1	8.0	7.2	6.7	148.1	0.0	15.2
Change Period (Y+Rc), s	4.0	5.7	4.0	4.0	4.0	5.7	4.0	4.0
Max Green Setting (Gmax), s	4.0	115.3	4.0	29.0	6.0	113.3	4.0	29.0
Max Q Clear Time (g_c+I1), s	4.1	144.4	6.0	4.0	4.1	12.7	0.0	0.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.0	12.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	124.4
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	390	100	200	30	40	30	1529	560	40	547	20
Future Volume (veh/h)	120	390	100	200	30	40	30	1529	560	40	547	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1792	1792	1900	1881	1881	1900	1845	1845	1900
Adj Flow Rate, veh/h	129	419	108	215	32	43	32	1644	577	43	588	20
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	6	6	6	1	1	1	3	3	3
Cap, veh/h	542	580	150	179	282	378	41	1281	425	44	1687	57
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.02	0.49	0.49	0.03	0.49	0.49
Sat Flow, veh/h	1315	1428	368	839	693	931	1792	2639	874	1757	3459	118
Grp Volume(v), veh/h	129	0	527	215	0	75	32	1082	1139	43	298	310
Grp Sat Flow(s),veh/h/ln	1315	0	1796	839	0	1624	1792	1787	1726	1757	1752	1824
Q Serve(g_s), s	10.8	0.0	39.4	25.6	0.0	4.6	2.8	77.7	77.7	3.9	16.8	16.8
Cycle Q Clear(g_c), s	15.4	0.0	39.4	65.0	0.0	4.6	2.8	77.7	77.7	3.9	16.8	16.8
Prop In Lane	1.00		0.20	1.00		0.57	1.00		0.51	1.00		0.06
Lane Grp Cap(c), veh/h	542	0	730	179	0	660	41	868	838	44	855	889
V/C Ratio(X)	0.24	0.00	0.72	1.20	0.00	0.11	0.78	1.25	1.36	0.98	0.35	0.35
Avail Cap(c_a), veh/h	542	0	730	179	0	660	78	868	838	44	855	889
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.00	0.93	1.00	0.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	0.0	39.9	70.4	0.0	29.6	77.8	41.2	41.2	78.0	25.3	25.3
Incr Delay (d2), s/veh	0.2	0.0	3.2	131.6	0.0	0.1	1.1	112.0	162.3	127.1	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	20.3	14.5	0.0	2.1	1.4	65.3	74.8	3.5	8.4	8.7
LnGrp Delay(d),s/veh	34.6	0.0	43.1	202.0	0.0	29.6	78.8	153.1	203.4	205.1	26.4	26.4
LnGrp LOS	C		D	F		C	E	F	F	F	C	C
Approach Vol, veh/h		656			290			2253			651	
Approach Delay, s/veh		41.4			157.4			177.5			38.2	
Approach LOS		D			F			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	83.0		69.0	7.7	83.3		69.0
Change Period (Y+Rc), s	4.0	5.3		4.0	4.0	5.3		4.0
Max Green Setting (Gmax), s	4.0	77.7		65.0	7.0	74.7		65.0
Max Q Clear Time (g_c+I1), s	5.9	79.7		41.4	4.8	18.8		67.0
Green Ext Time (p_c), s	0.0	0.0		3.7	0.0	6.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	129.2
HCM 2010 LOS	F

Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	160	165	1954	440	135	712
Future Volume (veh/h)	160	165	1954	440	135	712
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1863	1900	1845	1845
Adj Flow Rate, veh/h	168	174	2057	446	142	749
Adj No. of Lanes	2	1	2	0	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	2	2	3	3
Cap, veh/h	348	160	2081	435	132	2883
Arrive On Green	0.10	0.10	0.71	0.71	0.08	0.82
Sat Flow, veh/h	3476	1599	3008	610	1757	3597
Grp Volume(v), veh/h	168	174	1219	1284	142	749
Grp Sat Flow(s),veh/h/ln	1738	1599	1770	1755	1757	1752
Q Serve(g_s), s	5.5	12.0	76.0	85.7	9.0	5.8
Cycle Q Clear(g_c), s	5.5	12.0	76.0	85.7	9.0	5.8
Prop In Lane	1.00	1.00		0.35	1.00	
Lane Grp Cap(c), veh/h	348	160	1264	1253	132	2883
V/C Ratio(X)	0.48	1.09	0.96	1.02	1.08	0.26
Avail Cap(c_a), veh/h	348	160	1264	1253	132	2883
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.09	0.09	0.74	0.74
Uniform Delay (d), s/veh	51.1	54.0	15.8	17.2	55.5	2.4
Incr Delay (d2), s/veh	0.4	96.7	3.0	14.9	89.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	9.6	37.6	45.9	7.6	2.8
LnGrp Delay(d),s/veh	51.5	150.7	18.7	32.1	145.1	2.6
LnGrp LOS	D	F	B	F	F	A
Approach Vol, veh/h	342		2503			891
Approach Delay, s/veh	101.9		25.6			25.3
Approach LOS	F		C			C

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	13.0	91.0				104.0		16.0
Change Period (Y+Rc), s	4.0	5.3				5.3		4.0
Max Green Setting (Gmax), s	9.0	85.7				98.7		12.0
Max Q Clear Time (g_c+I1), s	11.0	87.7				7.8		14.0
Green Ext Time (p_c), s	0.0	0.0				9.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	32.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	130	0	145	0	2249	260	125	747	0
Future Volume (veh/h)	0	0	0	130	0	145	0	2249	260	125	747	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1881	1881	1881	1881	1900	1845	1845	1900
Adj Flow Rate, veh/h	0	0	0	134	0	12	0	2319	261	129	770	0
Adj No. of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	3	3	3
Cap, veh/h	0	2	0	168	0	150	2	2245	248	117	2814	0
Arrive On Green	0.00	0.00	0.00	0.09	0.00	0.09	0.00	0.69	0.69	0.07	0.80	0.00
Sat Flow, veh/h	0	1863	0	1792	0	1599	1792	3246	359	1757	3597	0
Grp Volume(v), veh/h	0	0	0	134	0	12	0	1257	1323	129	770	0
Grp Sat Flow(s),veh/h/ln	0	1863	0	1792	0	1599	1792	1787	1817	1757	1752	0
Q Serve(g_s), s	0.0	0.0	0.0	6.6	0.0	0.6	0.0	62.3	62.3	6.0	5.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	6.6	0.0	0.6	0.0	62.3	62.3	6.0	5.0	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.20	1.00		0.00
Lane Grp Cap(c), veh/h	0	2	0	168	0	150	2	1236	1257	117	2814	0
V/C Ratio(X)	0.00	0.00	0.00	0.80	0.00	0.08	0.00	1.02	1.05	1.10	0.27	0.00
Avail Cap(c_a), veh/h	0	201	0	199	0	178	159	1236	1257	117	2814	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.09	0.09	0.96	0.96	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	39.9	0.0	37.2	0.0	13.9	13.9	42.0	2.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	16.1	0.0	0.2	0.0	12.4	25.9	111.5	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.0	0.0	0.3	0.0	34.1	39.4	6.5	2.4	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	56.1	0.0	37.4	0.0	26.2	39.8	153.5	2.5	0.0
LnGrp LOS				E		D		F	F	F	A	
Approach Vol, veh/h		0			146			2580			899	
Approach Delay, s/veh		0.0			54.5			33.2			24.1	
Approach LOS					D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	67.6		0.0	0.0	77.6		12.4
Change Period (Y+Rc), s	4.0	5.3		4.0	4.0	5.3		4.0
Max Green Setting (Gmax), s	6.0	47.0		9.7	8.0	45.0		10.0
Max Q Clear Time (g_c+I1), s	8.0	64.3		0.0	0.0	7.0		8.6
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	9.0		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	31.8
HCM 2010 LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	40	60	100	30	83	70	2196	120	72	625	180
Future Volume (veh/h)	230	40	60	100	30	83	70	2196	120	72	625	180
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1881	1881	1900	1845	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	237	41	0	103	31	20	72	2264	122	74	644	172
Adj No. of Lanes	1	1	1	0	2	0	1	2	0	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	3	3	3	2	2	2	2	2	2
Cap, veh/h	271	284	242	93	56	36	90	2189	117	78	1743	465
Arrive On Green	0.15	0.15	0.00	0.05	0.05	0.05	0.05	0.64	0.64	0.04	0.63	0.63
Sat Flow, veh/h	1792	1881	1599	1757	1049	677	1774	3416	182	1774	2765	738
Grp Volume(v), veh/h	237	41	0	103	0	51	72	1162	1224	74	412	404
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1757	0	1725	1774	1770	1829	1774	1770	1733
Q Serve(g_s), s	20.7	3.0	0.0	8.5	0.0	4.6	6.4	102.5	102.5	6.7	17.9	18.0
Cycle Q Clear(g_c), s	20.7	3.0	0.0	8.5	0.0	4.6	6.4	102.5	102.5	6.7	17.9	18.0
Prop In Lane	1.00		1.00	1.00		0.39	1.00		0.10	1.00		0.43
Lane Grp Cap(c), veh/h	271	284	242	93	0	92	90	1134	1172	78	1116	1093
V/C Ratio(X)	0.88	0.14	0.00	1.10	0.00	0.56	0.80	1.03	1.04	0.95	0.37	0.37
Avail Cap(c_a), veh/h	464	487	414	93	0	92	145	1134	1172	78	1116	1093
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	0.00	1.00	0.00	1.00	0.42	0.42	0.42	0.97	0.97	0.97
Uniform Delay (d), s/veh	66.4	58.9	0.0	75.8	0.0	73.9	75.1	28.7	28.7	76.3	14.2	14.2
Incr Delay (d2), s/veh	7.4	0.2	0.0	123.9	0.0	4.4	7.9	24.0	29.8	84.1	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.8	1.6	0.0	7.3	0.0	2.3	3.4	57.3	61.2	5.1	9.0	8.8
LnGrp Delay(d),s/veh	73.8	59.1	0.0	199.7	0.0	78.3	83.0	52.7	58.6	160.4	15.1	15.2
LnGrp LOS	E	E		F		E	F	F	F	F	B	B
Approach Vol, veh/h		278			154			2458			890	
Approach Delay, s/veh		71.7			159.5			56.5			27.2	
Approach LOS		E			F			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.0	107.8		28.2	12.6	106.2		13.0
Change Period (Y+Rc), s	4.0	5.3		4.0	4.5	5.3		4.5
Max Green Setting (Gmax), s	7.0	85.3		41.4	13.1	78.7		8.5
Max Q Clear Time (g_c+I1), s	8.7	104.5		22.7	8.4	20.0		10.5
Green Ext Time (p_c), s	0.0	0.0		0.6	0.1	9.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	54.9
HCM 2010 LOS	D

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	220	20	986	100	1400	0	0	625	160
Future Volume (veh/h)	0	0	0	220	20	986	100	1400	0	0	625	160
Number				7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1827	1900	1863	1863	0	0	1827	1827
Adj Flow Rate, veh/h				227	21	1006	103	1443	0	0	644	108
Adj No. of Lanes				0	2	0	1	2	0	0	2	1
Peak Hour Factor				0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %				0	4	0	2	2	0	0	4	4
Cap, veh/h				755	70	733	128	1656	0	0	1352	574
Arrive On Green				0.47	0.47	0.47	0.07	0.47	0.00	0.00	0.37	0.37
Sat Flow, veh/h				1599	148	1553	1774	3632	0	0	3654	1551
Grp Volume(v), veh/h				248	0	1006	103	1443	0	0	644	108
Grp Sat Flow(s),veh/h/ln				1747	0	1553	1774	1770	0	0	1827	1551
Q Serve(g_s), s				10.2	0.0	55.0	6.7	42.7	0.0	0.0	15.7	5.5
Cycle Q Clear(g_c), s				10.2	0.0	55.0	6.7	42.7	0.0	0.0	15.7	5.5
Prop In Lane				0.92		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				824	0	733	128	1656	0	0	1352	574
V/C Ratio(X)				0.30	0.00	1.37	0.80	0.87	0.00	0.00	0.48	0.19
Avail Cap(c_a), veh/h				824	0	733	183	1761	0	0	1352	574
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	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				18.9	0.0	30.8	53.3	27.8	0.0	0.0	28.1	24.9
Incr Delay (d2), s/veh				0.2	0.0	176.3	15.5	5.1	0.0	0.0	0.6	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.9	0.0	59.3	3.8	21.8	0.0	0.0	8.1	2.4
LnGrp Delay(d),s/veh				19.2	0.0	207.1	68.8	32.9	0.0	0.0	28.6	25.2
LnGrp LOS				B		F	E	C			C	C
Approach Vol, veh/h					1254			1546			752	
Approach Delay, s/veh					169.9			35.3			28.1	
Approach LOS					F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		58.5		58.0	11.4	47.1		
Change Period (Y+Rc), s		4.0		3.0	3.0	4.0		
Max Green Setting (Gmax), s		58.0		55.0	12.0	43.0		
Max Q Clear Time (g_c+I1), s		44.7		57.0	8.7	17.7		
Green Ext Time (p_c), s		9.9		0.0	0.1	8.7		

Intersection Summary	
HCM 2010 Ctrl Delay	81.3
HCM 2010 LOS	F

Notes

User approved pedestrian interval to be less than phase max green.
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)	1060	110	290	0	0	0	0	440	300	505	340	0
Future Volume (veh/h)	1060	110	290	0	0	0	0	440	300	505	340	0
Number	7	4	14				5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1863				0	1810	1810	1810	1810	0
Adj Flow Rate, veh/h	1199	0	133				0	463	115	532	358	0
Adj No. of Lanes	2	0	1				0	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2				0	5	5	5	5	0
Cap, veh/h	1354	0	604				0	638	267	573	1887	0
Arrive On Green	0.38	0.00	0.38				0.00	0.18	0.18	0.33	0.55	0.00
Sat Flow, veh/h	3548	0	1583				0	3619	1516	1723	3529	0
Grp Volume(v), veh/h	1199	0	133				0	463	115	532	358	0
Grp Sat Flow(s),veh/h/ln	1774	0	1583				0	1810	1516	1723	1719	0
Q Serve(g_s), s	31.8	0.0	5.7				0.0	12.2	6.8	30.0	5.3	0.0
Cycle Q Clear(g_c), s	31.8	0.0	5.7				0.0	12.2	6.8	30.0	5.3	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1354	0	604				0	638	267	573	1887	0
V/C Ratio(X)	0.89	0.00	0.22				0.00	0.73	0.43	0.93	0.19	0.00
Avail Cap(c_a), veh/h	1655	0	739				0	826	346	684	2252	0
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	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.1	0.0	21.0				0.0	39.2	37.0	32.4	11.4	0.0
Incr Delay (d2), s/veh	5.3	0.0	0.2				0.0	3.8	2.3	17.6	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	16.5	0.0	2.5				0.0	6.4	3.0	17.0	2.5	0.0
LnGrp Delay(d),s/veh	34.4	0.0	21.2				0.0	43.0	39.3	50.0	11.5	0.0
LnGrp LOS	C		C					D	D	D	B	
Approach Vol, veh/h		1332						578			890	
Approach Delay, s/veh		33.1						42.3			34.5	
Approach LOS		C						D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	37.5	21.8		41.5		59.3		
Change Period (Y+Rc), s	4.0	* 4		3.0		4.0		
Max Green Setting (Gmax), s	40.0	* 23		47.0		66.0		
Max Q Clear Time (g_c+I1), s	32.0	14.2		33.8		7.3		
Green Ext Time (p_c), s	1.5	3.6		4.7		3.7		

Intersection Summary	
HCM 2010 Ctrl Delay	35.4
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	30	110	200	20	427	20	1541	0	443	471	20
Future Volume (veh/h)	140	30	110	200	20	427	20	1541	0	443	471	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1759	1759	1759	1863	1863	1863	1827	1827	1827
Adj Flow Rate, veh/h	172	0	0	228	0	334	21	1639	0	471	501	15
Adj No. of Lanes	2	0	1	2	0	2	1	2	1	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	8	8	8	2	2	2	4	4	4
Cap, veh/h	224	0	100	266	0	1069	28	1681	752	484	2583	1155
Arrive On Green	0.06	0.00	0.00	0.08	0.00	0.08	0.02	0.47	0.00	0.28	0.74	0.74
Sat Flow, veh/h	3619	0	1615	3351	0	2991	1774	3539	1583	1740	3471	1553
Grp Volume(v), veh/h	172	0	0	228	0	334	21	1639	0	471	501	15
Grp Sat Flow(s),veh/h/ln	1810	0	1615	1675	0	1495	1774	1770	1583	1740	1736	1553
Q Serve(g_s), s	7.1	0.0	0.0	10.2	0.0	12.0	1.8	68.4	0.0	40.5	6.5	0.4
Cycle Q Clear(g_c), s	7.1	0.0	0.0	10.2	0.0	12.0	1.8	68.4	0.0	40.5	6.5	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	224	0	100	266	0	1069	28	1681	752	484	2583	1155
V/C Ratio(X)	0.77	0.00	0.00	0.86	0.00	0.31	0.76	0.98	0.00	0.97	0.19	0.01
Avail Cap(c_a), veh/h	671	0	299	266	0	1069	70	1687	755	484	2583	1155
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.8	0.0	0.0	68.7	0.0	35.1	74.1	38.8	0.0	54.0	5.8	5.0
Incr Delay (d2), s/veh	2.1	0.0	0.0	22.1	0.0	0.1	45.5	16.3	0.0	34.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	0.0	0.0	5.5	0.0	5.1	1.2	37.3	0.0	24.1	3.1	0.2
LnGrp Delay(d),s/veh	71.9	0.0	0.0	90.8	0.0	35.2	119.6	55.1	0.0	88.1	5.8	5.0
LnGrp LOS	E			F		D	F	E		F	A	A
Approach Vol, veh/h		172			562			1660			987	
Approach Delay, s/veh		71.9			57.7			55.9			45.1	
Approach LOS		E			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	46.0	76.2		12.8	5.3	116.9		16.0
Change Period (Y+Rc), s	4.0	4.5		3.5	3.0	4.5		4.0
Max Green Setting (Gmax), s	42.0	72.0		28.0	6.0	109.0		12.0
Max Q Clear Time (g_c+I1), s	42.5	70.4		9.1	3.8	8.5		14.0
Green Ext Time (p_c), s	0.0	1.3		0.3	0.0	2.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	53.9
HCM 2010 LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	172.6
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	40	20	70	20	71	20	674	170	25	85	20
Future Vol, veh/h	40	40	20	70	20	71	20	674	170	25	85	20
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	49	49	24	85	24	87	24	822	207	30	104	24
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	13	14.2	244.8	12
HCM LOS	B	B	F	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	40%	43%	19%
Vol Thru, %	78%	40%	12%	65%
Vol Right, %	20%	20%	44%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	864	100	161	130
LT Vol	20	40	70	25
Through Vol	674	40	20	85
RT Vol	170	20	71	20
Lane Flow Rate	1054	122	196	159
Geometry Grp	1	1	1	1
Degree of Util (X)	1.493	0.223	0.342	0.262
Departure Headway (Hd)	5.101	7.756	7.379	6.672
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	706	466	491	542
Service Time	3.193	5.756	5.379	4.672
HCM Lane V/C Ratio	1.493	0.262	0.399	0.293
HCM Control Delay	244.8	13	14.2	12
HCM Lane LOS	F	B	B	B
HCM 95th-tile Q	50.4	0.8	1.5	1

Intersection	
Int Delay, s/veh	45.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	165	14	55	0	36	0	30	688	0	0	112	96
Future Vol, veh/h	165	14	55	0	36	0	30	688	0	0	112	96
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	145
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	94	83	94	94	94	83	83	94	94	83	83
Heavy Vehicles, %	3	2	3	2	2	2	3	3	2	2	3	3
Mvmt Flow	199	15	66	0	38	0	36	829	0	0	135	116

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1055	1036	135	1135	1152	829	251	0	0	829	0	0
Stage 1	135	135	-	901	901	-	-	-	-	-	-	-
Stage 2	920	901	-	234	251	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.52	6.23	7.12	6.52	6.22	4.13	-	-	4.12	-	-
Critical Hdwy Stg 1	6.13	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.018	3.327	3.518	4.018	3.318	2.227	-	-	2.218	-	-
Pot Cap-1 Maneuver	203	232	911	179	198	370	1309	-	-	803	-	-
Stage 1	866	785	-	333	357	-	-	-	-	-	-	-
Stage 2	323	357	-	769	699	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 165	220	911	151	188	370	1309	-	-	803	-	-
Mov Cap-2 Maneuver	~ 165	220	-	151	188	-	-	-	-	-	-	-
Stage 1	822	785	-	316	339	-	-	-	-	-	-	-
Stage 2	272	339	-	700	699	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	228.8	29	0.3	0
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1309	-	-	208	188	803	-	-
HCM Lane V/C Ratio	0.028	-	-	1.346	0.204	-	-	-
HCM Control Delay (s)	7.8	0	-	228.8	29	0	-	-
HCM Lane LOS	A	A	-	F	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	15.7	0.7	0	-	-

Notes

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

Intersection	
Intersection Delay, s/veh	29.8
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	220	60	20	50	30	63	30	445	50	77	80	30
Future Vol, veh/h	220	60	20	50	30	63	30	445	50	77	80	30
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	234	64	21	53	32	67	32	473	53	82	85	32
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	19.8	13	45.8	13.9
HCM LOS	C	B	E	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	73%	35%	41%
Vol Thru, %	85%	20%	21%	43%
Vol Right, %	10%	7%	44%	16%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	525	300	143	187
LT Vol	30	220	50	77
Through Vol	445	60	30	80
RT Vol	50	20	63	30
Lane Flow Rate	559	319	152	199
Geometry Grp	1	1	1	1
Degree of Util (X)	0.929	0.603	0.296	0.374
Departure Headway (Hd)	5.991	6.802	7.006	6.775
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	603	530	510	527
Service Time	4.049	4.872	5.094	4.856
HCM Lane V/C Ratio	0.927	0.602	0.298	0.378
HCM Control Delay	45.8	19.8	13	13.9
HCM Lane LOS	E	C	B	B
HCM 95th-tile Q	12	4	1.2	1.7

Intersection	
Int Delay, s/veh	11

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	494	520	123	40	30	70
Future Vol, veh/h	494	520	123	40	30	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	178	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	6	6	6	6	6	6
Mvmt Flow	555	584	138	45	34	79

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	183	0	-	0	1855	161
Stage 1	-	-	-	-	161	-
Stage 2	-	-	-	-	1694	-
Critical Hdwy	4.16	-	-	-	6.46	6.26
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	2.254	-	-	-	3.554	3.354
Pot Cap-1 Maneuver	1368	-	-	-	79	874
Stage 1	-	-	-	-	858	-
Stage 2	-	-	-	-	160	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1368	-	-	-	47	874
Mov Cap-2 Maneuver	-	-	-	-	47	-
Stage 1	-	-	-	-	510	-
Stage 2	-	-	-	-	160	-

Approach	EB	WB	SB
HCM Control Delay, s	4.6	0	94
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1368	-	-	-	139
HCM Lane V/C Ratio	0.406	-	-	-	0.808
HCM Control Delay (s)	9.4	-	-	-	94
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	2	-	-	-	5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	166	100	205	70	90	50	203	1380	50	40	600	52
Future Volume (veh/h)	166	100	205	70	90	50	203	1380	50	40	600	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	1.00		0.98	1.00		1.00	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
Adj Sat Flow, veh/h/ln	1900	1881	1881	1900	1881	1900	1881	1881	1881	1881	1881	1900
Adj Flow Rate, veh/h	178	108	0	75	97	41	218	1484	0	43	645	50
Adj No. of Lanes	0	1	1	0	1	0	1	2	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	283	127	400	174	213	78	260	1942	869	54	1437	111
Arrive On Green	0.25	0.25	0.00	0.25	0.25	0.25	0.15	0.54	0.00	0.03	0.43	0.43
Sat Flow, veh/h	836	507	1599	451	852	311	1792	3574	1599	1792	3354	260
Grp Volume(v), veh/h	286	0	0	213	0	0	218	1484	0	43	343	352
Grp Sat Flow(s),veh/h/ln	1343	0	1599	1614	0	0	1792	1787	1599	1792	1787	1827
Q Serve(g_s), s	7.7	0.0	0.0	0.0	0.0	0.0	9.4	25.7	0.0	1.9	10.8	10.8
Cycle Q Clear(g_c), s	16.4	0.0	0.0	8.7	0.0	0.0	9.4	25.7	0.0	1.9	10.8	10.8
Prop In Lane	0.62		1.00	0.35		0.19	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	410	0	400	465	0	0	260	1942	869	54	765	782
V/C Ratio(X)	0.70	0.00	0.00	0.46	0.00	0.00	0.84	0.76	0.00	0.80	0.45	0.45
Avail Cap(c_a), veh/h	630	0	646	725	0	0	452	2255	1009	90	767	784
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	0.0	0.0	25.4	0.0	0.0	33.0	14.1	0.0	38.2	16.0	16.0
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.3	0.0	0.0	2.8	1.6	0.0	9.6	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	0.0	0.0	4.1	0.0	0.0	4.9	13.0	0.0	1.1	5.4	5.5
LnGrp Delay(d),s/veh	29.5	0.0	0.0	25.7	0.0	0.0	35.8	15.7	0.0	47.8	16.6	16.6
LnGrp LOS	C			C			D	B		D	B	B
Approach Vol, veh/h		286			213			1702			738	
Approach Delay, s/veh		29.5			25.7			18.3			18.4	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.4	48.1		24.8	15.5	39.0		24.8
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		* 5
Max Green Setting (Gmax), s	4.0	50.0		32.0	20.0	34.0		* 33
Max Q Clear Time (g_c+I1), s	3.9	27.7		18.4	11.4	12.8		10.7
Green Ext Time (p_c), s	0.0	15.4		1.0	0.2	6.1		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	19.9
HCM 2010 LOS	B

Notes

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

Appendix C: Project Operations

FedEx Ground

Expected Traffic Flows for : **Year** **Full Phase**
Terminal **948**

PCE	1	1	1.5	1.5	2	2	2	2			
	Automobile Full Phase		**P&D Van Full Phase**		**Spot Trailers Full Phase**		**Linehaul Full Phase**		**Total Vehicle Flow Full Phase**		
	Arrive	Depart	Arrive	Depart	Arrive	Depart	Arrive	Depart	Arrive	Depart	
00:01 - 01:00	8				4	2	2	1	14	3	00:01 - 01:00
01:01 - 02:00	8	8			3	2	1	1	12	11	01:01 - 02:00
02:01 - 03:00	110				2	4	3	2	116	6	02:01 - 03:00
03:01 - 04:00		8			2	2	2	2	5	12	03:01 - 04:00
04:01 - 05:00					2	1	1	1	3	2	04:01 - 05:00
05:01 - 06:00	8				1		2	0	10	0	05:01 - 06:00
06:01 - 07:00	110	16		67			1	1	111	83	06:01 - 07:00
07:01 - 08:00	126	102	37	67					163	169	07:01 - 08:00
08:01 - 09:00	39	16	37	37			0		77	53	08:01 - 09:00
09:01 - 10:00				37						37	09:01 - 10:00
10:01 - 11:00											10:01 - 11:00
11:01 - 12:00		16					0		0	16	11:01 - 12:00
12:01 - 13:00		24					0	0	0	24	12:01 - 13:00
13:01 - 14:00		24						1		24	13:01 - 14:00
14:01 - 15:00		8					1		1	8	14:01 - 15:00
15:01 - 16:00	16					1	1	1	17	2	15:01 - 16:00
16:01 - 17:00	24	102	67		1	1		1	91	104	16:01 - 17:00
17:01 - 18:00	110	150	67		1	2	1	0	178	151	17:01 - 18:00
18:01 - 19:00	24	16			2	1	1	1	26	17	18:01 - 19:00
19:01 - 20:00		8			2	2	2	2	3	12	19:01 - 20:00
20:01 - 21:00					2	2	1	4	3	6	20:01 - 21:00
21:01 - 22:00	16				1	1	1	2	18	3	21:01 - 22:00
22:01 - 23:00		102			3	3	3	4	7	109	22:01 - 23:00
23:01 - 24:00	8	8			2	3	2	3	11	14	23:01 - 24:00
Total	**606**	**606**	**207**	**207**	**26**	**26**	**25**	**25**	**864**	**864**	**Total**

Appendix D: Signal Warrant Worksheets

FEHR PEERS

Project	Scannell North Richmond
Scenario	Existing Conditions
Peak Hour	Weekday PM

Major Street	Parr Boulevard
Minor Street	Fred Jackson Way

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	0	70
Through	0	0	240	80
Right	640	0	20	0
Total	660	0	260	150

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)	39.5
Approach with Worst Case Delay	NB
Total Vehicles on Approach	660

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)**
Existing Conditions	**7.2**	**660**	**1,070**
Limiting Value	**4**	**100**	**650**
Condition Satisfied?	**Met**	**Met**	**Met**
Warrant Met	**YES**		

FEHR PEERS

Major Street	Parr Boulevard
Minor Street	Fred Jackson Way

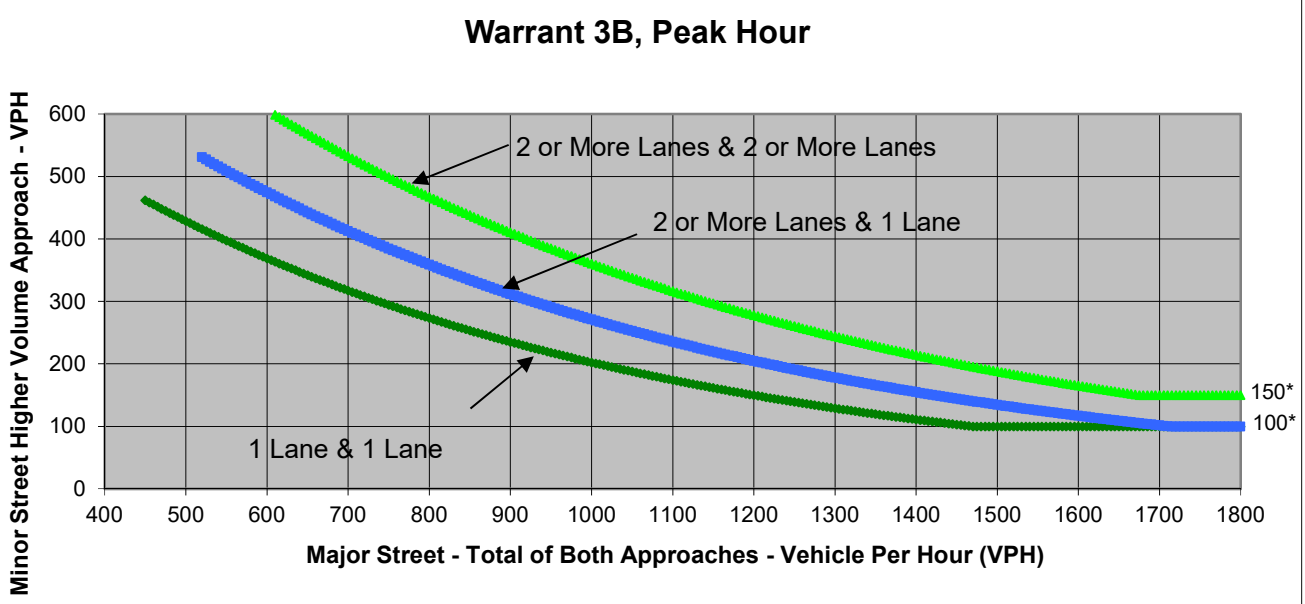
Project	Scannell North Richmond
Scenario	Existing Conditions
Peak Hour	Weekday PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	20	0	0	70
Through	0	0	240	80
Right	640	0	20	0
Total	660	0	260	150

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
	Parr Boulevard	Fred Jackson Way	
Number of Approach Lanes	**1**	**1**	**YES**
Traffic Volume (VPH) *	**410**	**660**	

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