APPENDIX L

Transportation and Traffic Supporting Information

APPENDIX L

Transportation and Traffic Supporting Information

Technical Memorandum

Memorandum Attachment A Distribution

Memorandum Attachment B LOS

omni · means
ENGINEERING SOLUTIONS

Technical Memorandum

To:	Panorama Environmental, Inc.	**Date:**	March 7, 2018
Attn:	Mr. Caitlin Gilleran	**Project:**	Riverside (RTRP) Subsequent EIR
From:	Peter Galloway		
Re:	Supplemental Traffic Analysis for RTRP; Revised Project Construction Activities	**Job No.:**	35-51380-06 11145077 (GHD)
		File No.:	C2121MEM004.docx
CC:	Mr. Jeff Thomas, Senior Planner, Panorama Environmental Inc.		

Project Overview

Southern California Edison (SCE) and the City of Riverside's Municipal Utility Department (known as Riverside Public Utilities [RPU]) jointly planned the Riverside Transmission Reliability Project (RTRP). The RTRP, which consists of the RPU project components and the "previously proposed SCE project", was analyzed in the 2013 RTRP EIR. The previously proposed SCE project consisted of a double-circuit 230 kV overhead transmission line extending from a new 230kV substation to a tie-in at the existing Mira Loma Substation.

SCE has since filed an application, revising several components compared to the previously proposed SCE project. The currently proposed SCE project is referred to as the "Proposed Project" and would consist of the construction, operation, and maintenance of a new approximately 10-mile double-circuit 230 kV transmission line and a new 230 kV substation (Wildlife Substation). The Revised Project elements consisting of a 2-mile underground segment, relocated overhead alignment, relocated distribution line locations, and a new marshalling yard, are referred to as the "Revised Project".

Construction of the proposed project would involve twenty three elements: Survey, Marshalling Yard, Roads & Landing Work, Guard Structure Installation, Install LST Foundations, LST Steel Haul, LST Steel Assembly, LST Erection, TSP Foundation Installation, TSP Haul, TSP Assembly, TSP Erection, Modify Existing LST, Conductor & OPGW Installation, Guard Structure Removal, Vault Installation, Duct Bank Installation, Underground Cable Installation, Cable Splicing, Riser Pole Preparation, Cable Terminating, Trench Restoration/Paving, and Restoration.

The following Technical Memorandum presents the findings of a supplemental traffic analyses for the Revised Project in the City of Jurupa Valley. Specifically, as part of the Subsequent EIR, additional traffic analyses have been performed to evaluate the transportation effects related to all construction activities. While the "Traffic Impact Study for Riverside Transmission Reliability Project – Underground" (*Power Engineers, Inc. May 17, 2017*), henceforth referred to as the "Updated TIS", evaluates all roadways and intersections that would be affected by proposed project activities; the traffic analysis focused on potential impacts to Cantu Galleano Ranch Road and Limonite Avenue. The following sections describe the project components, analysis methodology, and findings related to construction activities associated with the Revised Project.

Project Components/Trip Generation:

The Updated TIS only evaluated the most intense underground construction activity, Underground Vault Installation, and resulting transportation impacts. Based on the proposed project's schedule, many construction activities could occur concurrently which would result in varying increases in numbers of truck and vehicle trips on roadways throughout the proposed project area, dependent upon which activities are occurring. The following Revised Project construction activities could occur concurrently:

- Underground Vault Installation
- Duct Bank Installation
- Underground Cable Installation
- Cable Splicing
- Cable Terminating

Daily, AM and PM peak hour trip generation associated with these construction activities are shown in Table 1 as are the anticipated vehicles and equipment for each activity. Delivery vehicle trips during the AM and PM peak hour trips were made, assuming that a minimum of one vehicle trip would occur during each peak hour. Using the passenger car equivalent (PCE) to convert truck trips into vehicle trips the totals typically result in 2.5 times the number of overall trips (consistent with updated study). As calculated, Revised Project construction activities are expected to generate 450 daily trips. From the 450 daily trips, 240 trips would be to/from the project's north staging yard at Etiwanda Avenue and 210 daily trips would be to/from I-15 via Limonite Avenue and/or Cantu Galleano Ranch Road. During the AM and PM peak hour commute periods, the Revised Project would be expected to generate 195 trips (each period). During the AM peak hour, this would result in 172 trips inbound and 23 trips outbound. During the PM peak hour, the directional flow of construction traffic would be reversed with 23 inbound trips and 172 outbound trips.

Table 1 Revised Project Trip Generation Estimate (PCE)

Activity	Daily Trips		AM Peak Hour			PM Peak Hour		
	Travel To/ From Etiwanda Yard	Travel To/ From I-15	In	Out	Total	In	Out	Total
Underground Alignment								
Underground Vault Installation								
Backhoe/Front Loader	10	0	5	0	5	0	5	5
Excavator	10	0	5	0	5	0	5	5
Pile Driver	5	0	5	0	5	0	5	5
Dump Truck	0	30	15	5	20	5	15	20
Water Truck	10	0	5	0	5	0	5	5
Large Crane	10	0	5	0	5	0	5	5
Concrete Truck	0	60	5	5	10	5	5	10

	Daily Trips		AM Peak Hour			PM Peak Hour		
Flat Bed Truck	0	30	2.5	2.5	5	2.5	2.5	5
Lowboy Truck/Trailer	10	0	5	0	5	0	5	5
Truck Trips Subtotal	*55*	*120*	*52.5*	*12.5*	*65*	*12.5*	*52.5*	*65*
1-Ton Truck, 4x4	20	0	10	0	10	0	10	10
Worker Trips Subtotal	*20*	*0*	*10*	*0*	*10*	*0*	*10*	*10*
Total	**75**	**120**	**62.5**	**12.5**	**75**	**12.5**	**62.5**	**75**
Duct Bank Installation								
Backhoe/Front Loader	10	0	5	0	5	0	5	5
Dump Truck	0	30	15	5	20	5	15	20
Water Truck	10	0	5	0	5	0	5	5
Lowboy Truck/Trailer	10	0	5	0	5	0	5	5
Compressor Trailer	10	0	5	0	5	0	5	5
Excavator	10	0	5	0	5	0	5	5
Pipe Truck/Trailer	10	0	5	0	5	0	5	5
Concrete Truck	0	40	5	5	10	5	5	10
Pile Driver	5	0	2.5	0	2.5	0	2.5	2.5
Truck Trips Subtotal	*65*	*70*	*52.5*	*10*	*62.5*	*10*	*52.5*	*62.5*
1-Ton Truck, 4x4	20	0	10	0	10	0	10	10
Worker Trips Subtotal	*20*	*0*	*10*	*0*	*10*	*0*	*10*	*10*
Total	**85**	**70**	**62.5**	**10**	**72.5**	**10**	**62.5**	**72.5**
Underground Cable Installation								
Cable Dolly/Truck	5	0	2.5	0	2.5	0	2.5	2.5
Large Crane	5	0	2.5	0	2.5	0	2.5	2.5
Puller	5	0	2.5	0	2.5	0	2.5	2.5
Flat Bed Material Truck	0	5	2.5	0	2.5	0	2.5	2.5
Forklift	5	0	2.5	0	2.5	0	2.5	2.5
Truck Trips Subtotal	*20*	*5*	*12.5*	*0*	*12.5*	*0*	*12.5*	*12.5*
1-Ton Truck, 4x4	10	0	5	0	5	0	5	5

	Daily Trips		AM Peak Hour				PM Peak Hour	
Worker Trips Subtotal	*10*	*0*	*5*	*0*	*5*	*0*	*5*	*5*
Total	**30**	**5**	**17.5**	**0**	**17.5**	**0**	**17.5**	**17.5**
Cable Splicing								
Flat Bed Material Truck	0	10	2.5	0	2.5	0	2.5	2.5
Splicing Truck/Trailer	10	0	5	0	5	0	5	5
Truck Trips Subtotal	*10*	*10*	*7.5*	*0*	*7.5*	*0*	*7.5*	*7.5*
1-Ton Truck, 4x4	20	0	10	0	10	0	10	10
Worker Trips Subtotal	*20*	*0*	*10*	*0*	*10*	*0*	*10*	*10*
Total	**30**	**10**	**17.5**	**0**	**17.5**	**0**	**17.5**	**17.5**
Cable Terminating								
Large Crane	5	0	2.5	0	2.5	0	2.5	2.5
Flat Bed Material Truck	0	5	2.5	0	2.5	0	2.5	2.5
Forklift	5	0	2.5	0	2.5	0	2.5	2.5
Truck Trips Subtotal	10	5	5	2.5	7.5	2.5	5	7.5
1-Ton Truck, 4x4	10	0	5	0	5	0	5	5
Worker Trips Subtotal	*10*	*0*	*5*	*0*	*5*	*0*	*5*	*5*
Total	**20**	**5**	**12.5**	**0**	**12.5**	**0**	**12.5**	**12.5**
TOTAL	**240**	**210**	**172.5**	**22.5**	**195**	**22.5**	**172.5**	**195**

Based on the existing daily and peak hour project trips calculated in the updated traffic analysis for the underground construction activities (only); the net increase in proposed project trip has been shown in Table 2. As calculated, the Revised Project with all activities occurring concurrently would generate a net increase of 272 daily trips with 130 AM peak hour and 130 PM peak hour trips, compared to the Updated TIS.

Study Intersections/Roadways/Trip Assignment

Consistent with the Updated TIS analysis prepared for the Revised Project, the same study intersections and roadway segments have been evaluated for this supplemental Revised Project analysis. As shown in Table 3, this included 14 intersections that are either signalized or unsignalized along Cantu Galleano Ranch Road, Wineville Avenue, Bellegrave Avenue, Limonite Avenue, Pats Ranch Road, 64th, 65th, and 68th Streets, Holmes Avenue, and I-15 ramp north-south ramp junction intersections at Limonite Avenue and Cantu Galleano Ranch Road. Select roadway segments were also evaluated for average daily traffic (ADT) volumes and capacities.

Table 2 Net Increase in Project Trip Generation (PCE)

Activity	Daily Trips		AM Peak Hour			PM Peak Hour		
	Travel To/ From Etiwanda Yard	Travel To/ From I-15	In	Out	Total	In	Out	Total
Revised Project (Multiple Activities) – Revised Project (Underground Vault Installation Only) [a]								
Revised Project (Multiple underground construction activities occurring concurrently):								
	240	210	**172**	**23**	**195**	**23**	**172**	**195**
Revised Project (Underground Vault Installation Only):[1]								
	58	120	52	13	65	13	52	65
Net Increase in Revised Project Trips:								
	182	**90**	**120**	**10**	**130**	**10**	**120**	**130**

[a] Rounded to the nearest vehicle.

[1] *Power Engineers, Traffic Impact Study for RTRP---Underground, May 17, 2017*

Revised project trip assignment has been based on the previous distributions found in the updated traffic analysis. Specifically, all materials delivery would be to/from I-15 via Limonite Avenue with 50% using Pats Ranch Road and the remaining 50% on Wineville Avenue. For employee trips originating from the yard; all trips would extend south on Etiwanda Avenue, west on Cantu Galleano Ranch Road, and south on Wineville Avenue to Limonite Avenue. From this area, 50% would continue south on Wineville Avenue and the remaining 50% on Pats Ranch Road. The Updated TIS did not indicate that any construction vehicle trips would traverse along 68th Street between Pats Ranch Road and Wineville Avenue. Underground construction would occur along and on either side of this segment. As such, 50% of delivery vehicles and 50% of construction crew trips are assumed to traverse this segment. Figure 8 has been updated and shown in Attachment A.

Intersection Operations with Net New Revised Project Trips

The net increase in daily and peak hour Revised Project trips were added to the street network based on established trip assignments. Net new project trips were added to the existing plus ambient growth plus project scenario to evaluate the change in intersection and roadway volumes consistent with the previous updated traffic analysis. Revised AM and PM peak hour intersection LOS has been shown in Table 3. As calculated, there would moderate be increases in vehicle delays due to construction activities occurring during the same period. All study intersections would maintain an LOS of D or better during the AM and PM peak hours (refer to Attachment B for intersection LOS sheets). The impact on intersection operations would be **less than significant.**

Roadway Operations with New Revised Project Trips

With the net increase in daily project trips added to the street network; roadway segment capacity was re-evaluated. As shown in Table 4, roadway capacities would remain within established significance thresholds with all roadway segments operating at LOS A-B with the exception of Limonite Avenue west of Veteran's Memorial. No change to the LOS of roadway

operations would occur during construction of the Revised Project. The impact on roadway operations would be **less than significant.**

It is noted that the Updated TIS for the project under-estimated the daily traffic volume projected for Pats Ranch Road north of 65th Street. With proposed project construction volumes, the distribution indicates approximately 50% of the project deliveries and 50% of the associated construction workforce would use Pats Ranch Road. This would equate to 90 daily vehicle trips rather than 60 daily trips (as indicated in the Updated TIS). When adjusted for all concurrent construction activities overall ADT would increase to 225 daily trips from project-related uses.

Intersection Operations with Road Closures

To evaluate proposed construction activities involving the installation of vaults along specific roadways; a hypothetical "worst case" scenario has been evaluated where Pats Ranch Road would be closed to all vehicle traffic between Limonite Avenue and 68th Street to allow for these construction activities. Pats Ranch Road was evaluated based on its greater roadway segment length, higher number of major street access/connections (Mall Entrance, 65th Street, 64th Street, and Ivory Street), increased residential and commercial-retail access, and higher number of signalized and non-signalized intersections when compared to 68th Street. As such, an analysis of a road closure along Pats Ranch Road would result in greater intersection impacts than closures along 68th Street. Road closures during vault installation would affect shorter segments of roadways along the underground alignment, such as Pats Ranch Road between 65th Street and 68th Street, rather than the entire Pats Ranch Road from Limonite Avenue to 68th Street. This detour analysis provides a perspective regarding what types of impacts at intersections could be expected, dependent upon what segment of Pats Ranch Road is closed.

This analysis diverts all vehicle traffic on Pats Ranch Road to Limonite Avenue, Wineville Avenue, and 68th Street during these construction activities. During the AM peak hour, this would amount to approximately 450 northbound vehicles and 265 southbound vehicles having to divert onto or continue on Limonite Avenue, Wineville Avenue, and 68th Street. During the PM peak hour there would be approximately 545 northbound vehicles and 470 southbound vehicles that would have to divert to the same roadways to avoid project construction activities.

With through-traffic diverted from Pats Ranch Road onto Limonite Avenue, Wineville Avenue, and 68th Street, intersection LOS was re-calculated for the AM and PM peak hour and shown in Table 5. As calculated, significant impacts (LOS E or F) could be expected at the Pats Ranch Road/Limonite Avenue as well as five additional intersections; Wineville Avenue/Limonite Avenue, Carnelian Street/68th Street, Wineville Avenue/68th Street/Holmes Avenue, Wineville Avenue/64th Street, and Wineville Avenue/65th Street intersections during the AM and/or PM peak hours. Diverted vehicle traffic from Pats Ranch Road onto Wineville Avenue and 68th Street would contribute to critical through-traffic and turning movements at these locations causing increased vehicle delays and congestion.

Impacts to all six intersections would likely not occur simultaneously as only a segment of Pats Ranch Road would be closed at any one time. For example, a closure on Pats Ranch Road between 65th Street and 68th Street could result in significant decreases in intersection operations at Carnelian Street/68th Street, Wineville Avenue/68th Street/Holmes Avenue, and Wineville Avenue/65th Street. This closure would not necessarily result in significant decreases in intersection operations at Wineville Avenue/64th Street and Wineville Avenue/65th Street because vehicle traffic would take different routes dependent upon the destination of the drivers. Significant impacts at Pats Ranch Road/Limonite Avenue would be expected no matter which

segment of roadway is closed. Roadway segment closures along 68th Street would result in decreased intersection operations as well, including Pats Ranch Road/68th Street, Carnelian Street/68th Street, and Wineville Avenue/68th Street/Holmes Avenue. In addition, north-south traffic volumes on Pats Ranch Road and Wineville Avenue wishing to travel east or west on 68th Street would have to divert at 65th Street. Because of these potential traffic diversions, overall intersection LOS at 65th Street/Pats Ranch Road and 65th Street/Wineville Avenue would likely degrade. However, closures of 68th Street to the east of Holmes Avenue would likely not result in a significant decrease in intersection LOS due to the lower volume of vehicles that traverse that segment of 68th Street and fewer regional connections. This segment of 68th Street (east of Wineville Avenue) provides access primarily to residential and recreational areas (golf course). Most diverted traffic wishing to travel east of Wineville Avenue would likely use Holmes Avenue to access the north-south residential streets (Frank Avenue, Smith Avenue, Dana Avenue) and/or Etiwanda Avenue to the far east. The impact as a result of road closure detours would be **significant** due to the drop in LOS to E or F at several intersections, dependent upon which roadway segment is closed.

Intersection Operations with Lane Closures

A partial roadway closure of Pats Ranch Road was analyzed where a northbound and a southbound travel lane would be closed due to construction activities. With this partial roadway closure in place, intersection LOS at the four affected intersections (Pats Ranch Road/Limonite Avenue, Pats Ranch Road/Mall Entrance, Pats Ranch Road/65th Street, and Pats Ranch Road/68th Street) were re-calculated for the AM and PM peak hours with construction activities. As a result of the partial roadway closure on Pats Ranch Road, all study intersections south of Limonite Avenue would continue to operate at acceptable levels (LOS D or better), as shown in Table 6. However, the intersection of Pats Ranch Ranch/Limonite Avenue would be operating at LOS F (85.7 seconds of delay) during the PM peak hour with a northbound through-lane closed (refer to Attachment B for intersection LOS sheets). The impact as a result of partial roadway closure on Pats Ranch Road would be **significant** due to the degrading in intersection LOS to F at Pats Ranch Road/Limonite Avenue dependent on this northern roadway segment being partially closed.

Vehicle Queuing Analysis on Limonite Avenue

With proposed construction activities expected to cross Limonite Avenue in a north-south direction just east of Pats Ranch Road a vehicle queuing analysis was performed for the roadway assuming a reduction in vehicle travel lanes. Specifically, a one-lane reduction in eastbound and westbound through-traffic was assumed during construction. For eastbound traffic flow on Limonite Avenue, one-through lane was eliminated for construction purposes. In addition, a westbound through-lane was removed. However, the lane closures were not assumed concurrently. As proposed construction progresses across Limonite Avenue only one direction of traffic would be affected at a time. Vehicular queuing projections have been estimated utilizing SimTraffic micro-simulation which is an extension of Synchro. Developed by Trafficware, Simtraffic software utilizes all field obtained inputs from Synchro intersection LOS including signal timing, phasing, and volumes to simulate traffic flows through the study intersections and corridor. Essentially, the software simulates traffic flows on the street network by randomly “seeding” vehicles using all measured/recorded field data. Vehicle queuing projections are provided in terms of the 95th percentile queue lengths. Essentially, calculated vehicle queues would not be exceeded 95 percent of the time. Intersections are designed using the 95th percentile queue lengths for maximum storage capacity. The available storage lengths

for vehicle turn lanes has been based on measurements recorded in the field and corroborated by from aerial photographs of the corridor(s) (Google earth). The results of the vehicle queuing analysis on Limonite Avenue would be as follows:

Limonite Avenue, 95th Percentile Vehicle Queues; AM and PM Peak Hour:

Eastbound Baseline Conditions:	250' AM, 273' PM
Eastbound Lane Closed:	421' AM, 378' PM
Westbound Baseline Conditions:	710' AM, 266' PM
Westbound Lane Closed:	822' AM, 889' PM

As shown above in the vehicle queuing summary, vehicle queues resulting from construction activities across Limonite Avenue would result in additional vehicle queues of 100 feet or more. In the eastbound direction on Limonite Avenue, vehicle queues would increase by 171 feet during the AM peak hour and 105 feet during the PM peak hour. The westbound direction would be somewhat more affected by the reduction in travel lanes due to less right-of-way. During the AM peak hour vehicle queues would extend another 112 feet while during the PM peak hour queues would extend an additional 623 feet. There is currently 800 feet of vehicle storage between the Pats Ranch Road and Wineville Avenue intersections on Limonite Avenue. Therefore, project vehicle queues in the westbound direction would likely cause a **significant** impact during construction activities across Limonite Avenue. Vehicle queues in the eastbound direction could be accommodated with existing storage capacity on Limonite Avenue without affecting I-15 freeway ramp junctions to the west.

Jack and Bore Construction

Jack and bore activities across Limonite Avenue at the intersection with Pats Ranch Road would add construction trips to the adjacent street network. A conservative estimate of 12 construction vehicles associated with these jack and bore activities would generate 24 vehicle trips. Based on the overall project trip distribution; four (4) construction trips would be to/from the I-15 northbound/southbound ramp intersections with the remaining 20 construction trips to/from the staging yard via Wineville Avenue. Based on traffic analysis for the addition of project trips to the Cantu-Galleano Ranch Road and Bellegrave Avenue intersections along Wineville Avenue there would be excess capacity and intersections would operate acceptably (LOS C or better).

Lane closures in Pats Ranch Road would be necessary to conduct jack and bore construction. Impacts would be similar to the partial roadway closure analyzed above. Pats Ranch Ranch/Limonite Avenue would be operating at LOS F with lane closures south of Limonite Avenue. Due to the low volume of mostly local traffic that travels along Pats Ranch Road to the north of Limonite Avenue, lane closures in that area during jack and bore would not be expected to deteriorate intersection operations.

Alternatives Analysis

Vehicle Queuing

An analysis has been undertaken (qualitatively) to evaluate the effects of alternative construction routes for underground trenching. Alternatives 1, 2, and 4 involve underground construction crossing Cantu-Galleano Ranch Road at Wineville Road. Similar to analyses

performed for Limonite Avenue; vehicle queuing analyses were conducted for Cantu Galleano Ranch Road assuming a lane closure in either the eastbound or westbound direction as construction activities progress north-south across the roadway. The 95th percentile vehicle queues for Cantu Galleano Ranch Road have been calculated as follows:

Cantu Galleano Ranch, 95th Percentile Vehicle Queues; AM and PM Peak Hour:

Eastbound Baseline Conditions:	68' AM, 105 PM
Eastbound Lane Closed:	122' AM, 180' PM
Westbound Baseline Conditions:	119' AM, 122' PM
Westbound Lane Closed:	262' AM, 215 PM

As shown above, vehicle queuing on Cantu Galleano Ranch Road would not be excessive with proposed construction activities. This is primarily due to the relative moderate east-west traffic Volumes on Cantu Galleano Ranch Road during the peak commute periods. Vehicle queuing from construction of Alternatives 1, 2, and 4 across Cantu Galleano Ranch Road would result in a **less than significant** impact.

Intersection Operation with Construction Traffic

Excess intersection capacity was also evaluated for the three study intersections located along Limonite Avenue that are projected to operate at LOS D during the PM peak hours with updated construction traffic. These include the I-15 northbound and southbound ramp intersections at Limonite Avenue and the Pats Ranch Road/Limonite Avenue intersection. The premise being that if construction traffic were working on more than one construction activity along Limonite Avenue traffic could increase (or double) beyond what is projected in the updated trip generation table (Table 1—Revised Project Trip Generation Estimate). Based on a two-fold increase in updated project trips on Limonite Avenue at the three subject intersections; PM peak hour intersection LOS would remain at LOS D (55 seconds or less). However, overall vehicle delays would increase from 44-54 seconds of delay during the PM peak hour (refer to Attachment B for intersection LOS sheets). The impact on these intersections from additional construction traffic would be **less than significant.**

Intersection Operation with Road Closures

Traffic volumes at the Cantu Galleano Ranch Road/Etiwanda Avenue intersection were evaluated for excess capacity. As calculated with proposed construction traffic volumes, the Cantu Galleano Ranch Road/Etiwanda Avenue intersection would be functioning at LOS B during both the AM and PM peak hours.

To determine potential capacity at the Cantu Galleano Ranch Road/Etiwanda Avenue intersection, 400 peak hour vehicles were added to through-traffic approach volumes in the north, south, east, and west directions (each direction). With this increase in traffic, signalized intersection would change to LOS C (28.6 seconds delay) during the AM peak hour and LOS C (27.9 seconds delay) during the PM peak hour. (Note that additional volumes were added to through-vehicle movements and not turning movements). However, the indication that the intersection could absorb another 400 peak hour vehicles in each direction without having a significant impact indicates that traffic generated from alternative-driven construction activities would likely not impact this intersection during the AM and/or PM peak hour commute periods.

Again, this is primarily due to the very moderate traffic volumes at the Cantu Galleano Ranch/Etiwanda intersection during the peak AM and PM commute periods. The impact on this intersection from a detour due to a road closure along Wineville Avenue would be **less than significant.**

Alternative 2—Limonite Avenue Lane Closures

With Alternative 2 activities, the construction route would extend from Pats Ranch Road east along Limonite Avenue before extending north up Wineville Avenue (rather than continuing north along Pats Ranch Road from Limonite Avenue under proposed project conditions). During construction activities there would likely be one-lane of through-traffic flow closed to allow for construction activities on Limonite Avenue within the roadway segment. In this roadway segment on Limonite Avenue there are currently two eastbound travel lanes and two eastbound travel lanes with axillary right-turn lanes in each direction.

During the AM peak hour the closure of one westbound through-lane on Limonite Avenue between Pats Ranch Road and Limonite Avenue would cause a **significant impact** at the Pats Ranch Road/Limonite Avenue intersection, as shown in Table 7. Overall intersection LOS during this time period would be F (157 seconds of delay) due to the westbound lane closure. This is not unexpected since westbound vehicle movements along Limonite Avenue make up the peak commute direction during the AM peak hour. Closure of an eastbound through-lane on Limonite Avenue during this same AM time period would not cause a significant impact.

During the PM peak hour there would be significant impacts in both the eastbound and westbound directions on Limonite Avenue with a lane closure, as shown in Table 7. Specifically, with an eastbound travel lane closed on the roadway segment the Wineville Avenue/Limonite Avenue intersection would be operating at LOS F (115.6 seconds of delay) during the PM peak hour. With a westbound travel lane (through-lane) closed for construction activities, the Pats Ranch Road/Limonite Avenue would be operating at LOS F (93.7 seconds) during the PM peak hour. Both of these operational levels at the Wineville Avenue and Pats Ranch Road intersections on Limonite Avenue would be considered a **significant impact** (see intersection LOS sheets—attached).

Summary/Recommendations

Concurrent Revised Project construction activities would result in a net increase of 272 daily trips with 130 AM peak hour and 130 PM peak hour trips added to the adjacent street network. These daily and peak hour trips would be in addition to the 178 daily trips and 65 AM peak hour and 65 PM peak hour trips analyzed in the Updated TIS (Powers Engineers, Inc.). As a result of these additional construction activities, study intersection LOS would change at eight of the 14 study locations with commensurate increases in vehicle delays. All project study intersections would continue to operate within acceptable conditions (LOS A-D).

Roadway segment operation would remain acceptable (LOS D or better) with Revised Project traffic volumes.

It is noted that Revised Project construction activities would require partial or full lane closures for underground trenching and/or vault installations. Along both parallel and perpendicular routes, this would likely require active traffic control with the goal of keeping one lane open in each direction at all times. Where construction activities must cross east-west facilities that

include Limonite Avenue and/or Cantu Galleano Ranch Road, both roadways and adjacent intersections could be significantly impacted. In addition, under Alternative 2 the roadway segment of Limonite Avenue between Pats Ranch Road and Wineville Avenue would experience a lane closure due to construction activities. As a result of this temporary lane closure the Pats Ranch Road/Limonite Avenue intersection would be operating at LOS F during the AM peak hour (westbound lane closure). During the PM peak hour, both the Wineville Avenue/Limonite Avenue and Pats Ranch Road/Limonite Avenue intersections would be operating at LOS F dependent on an eastbound or westbound lane closure.

To reduce vehicle delays and congestion during Revised Project construction activities, the following measures are recommended:

Prepare Traffic Control Plans: Prior to the start of construction, owner operators shall submit Motorized and non-motorized Traffic Control Plans (TCPs) to all agencies with jurisdiction over public roads that would be directly affected by construction activities (where road closures or encroachments would be necessary).

At a minimum, the TCPs shall include the following details and traffic control measures:

- Locations of all roads that would need to be temporarily closed due to construction activities.
- Define the use of flag persons, warning signs, lights, barricades, cones, and other necessary measures for each construction closure.
- Include measures to avoid disruptions or delays in access for emergency service vehicles and to keep emergency service agencies fully informed of road closures, detours, and delays.
- Police departments, fire departments, ambulance services, and paramedic services shall be notified at least one month in advance of each closure by SCE.
- Time worker commutes and material deliveries to avoid peak (AM and PM) commuting hours.

Avoid Peak-Period Construction: To minimize traffic congestion and delays during construction to the extent feasible, SCE shall restrict all necessary lane and road closures or obstructions on major roadways associated with project construction activities to off-peak periods. Lane and road closures should be avoided during the 6:00 a.m. to 9:00 a.m. timeframe and the 3:30 to 6:30 p.m. timeframe, or as otherwise defined within the TCPs.

Table 3 Changes in Level of Service

		Baseline				Baseline Plus Construction Traffic				Change in Delay	
		AM Peak		PM Peak		AM Peak		PM Peak		AM Peak	PM Peak
	Study Intersections	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS		
1	I-15 SB Ramps/ Limonite Avenue	31.6	C	43.7	C	33.3	C	44.0	D	1.7	0.3
2	I-15 NB Ramps/ Limonite Avenue	35.2	D	45.4	D	35.2	D	46.8	D	----	1.4
3	Pats Ranch Road/ Limonite Avenue	27.5	C	40.0	D	33.5	C	44.4.0	D	6.0	4.4
4	Wineville Avenue/ Limonite Avenue	21.6	C	25.1	C	24.7	C	29.6	C	3.1	4.5
5	Pats Ranch Road/ Mall Entrance	8.2	A	17.8	B	8.8	A	16.2	B	0.6	----
6	Pats Ranch Road/ 65th Street	19.6	B	19.3	B	18.3	B	18.8	B	----	----
7	Pats Ranch Road/ 68th Street	18.5	B	17.9	B	22.1	C	18.6	B	3.6	0.7
8	Carnelian Street/ 68th Street [a]	10.3	B	8.4	A	11.9	B	8.9	A	1.6	0.5
9	Wineville Avenue/ Holmes Ave and 68th Street [a]	12.5	B	11.6	B	15.0	B	12.2	B	2.5	0.6
10	Etiwanda Avenue/ Cantu-Galleano Ranch Road	14.8	B	17.1	B	15.3	B	17.5	B	0.5	0.4
11	Wineville Avenue/ Cantu-Galleano Ranch Road	32.3	C	28.4	C	32.3	C	29.7	C	----	1.3
12	Wineville Avenue/ Bellegrave Avenue	18.8	B	18.1	B	19.5	B	19.2	B	0.7	1.1
13	Wineville Avenue/ 64th Street [a]	3.0	A	3.4	A	11.8	B	3.4	A	8.8	----
14	Wineville Avenue/ 65th Street [a]	8.7	A	8.4	A	9.3	A	9.1	A	0.6	0.7

[a] Stop controlled intersection.

Source: (KOA Corporation 2017)

Table 4 Changes in Daily Traffic Volumes

	Roadway Segment	Capacity	Baseline Volume	Baseline LOS	Baseline Plus Construction Volume	Change in Volume	Baseline Plus Construction Vol/Cap	Baseline Plus Construction LOS
A	Limonite Avenue West of Veterans Memorial	53,900	46,416	D	46,521	105	0.863	D
B	Limonite Avenue West of Wineville Avenue	53,900	34,070	B	34,295	225	0.636	B
C	Pats Ranch Road North of 65th Street	25,900	7,798	A	8,023	225	0.310	A
D	68th Street West of Pats Ranch Road	34,100	12,443	A	12,443	0	0.365	A
E	68th Street East of Pats Ranch Road	34,100	6,799	A	7,024	225	0.206	A
F	68th Street East of Wineville Avenue	13,000	1,265	A	1,490	225	0.114	A
G	Wineville Avenue South of Cantu-Galleano Ranch Road	34,100	9,123	A	9,363	240	0.275	A
H	Cantu-Galleano Ranch Road East of Wineville Avenue	34,100	7,830	A	8,070	240	0.237	A
I	Wineville Avenue South of 64th Street	34,100	3,293	A	3,518	225	0.103	A

Source: (KOA Corporation 2017)

Table 5 Changes in Level of Service: Pats Ranch Road Traffic Diversion

		Baseline Plus Construction Traffic				Baseline Plus Construction Traffic Pats Ranch Road Diverted			
		AM Peak		PM Peak		AM Peak		PM Peak	
	Study Intersections	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	I-15 SB Ramps/ Limonite Avenue	33.3	C	44.0	D	33.3	C	44.0	D
2	I-15 NB Ramps/ Limonite Avenue	35.2	D	46.8	D	35.2	D	46.8	D
3	Pats Ranch Road/ Limonite Avenue	39.9	D	**75.0**	**E**	17.2	B	17.5	B
4	Wineville Avenue/ Limonite Avenue	24.7	C	29.6	C	**99.4**	**F**	**106.1**	**F**
5	Pats Ranch Road/ Mall Entrance [a]	9.9	A	21.1	C	-	-	-	-
6	Pats Ranch Road/ 65th Street [a]	19.6	B	20.4	C	-	-	-	-
7	Pats Ranch Road/ 68th Street	31.6	C	21.2	C	31.6	C	21.2	C
8	Carnelian Street/ 68th Street [a]	15.6	C	12.8	B	**83.7**	**F**	**163**	**F**
9	Wineville Avenue/ Holmes Ave and 68th Street [a]	15.6	C	14.5	B	**142.0**	**F**	**78.9**	**F**
10	Etiwanda Avenue/ Cantu-Galleano Ranch Road	15.3	B	17.5	B	15.3	B	17.5	B
11	Wineville Avenue/ Cantu-Galleano Ranch Road	32.3	C	29.7	C	32.3	C	29.7	C
12	Wineville Avenue/ Bellegrave Avenue	19.5	B	19.2	B	19.5	B	19.2	B
13	Wineville Avenue/ 64th Street [a]	11.8	B	3.4	A	24.7	C	**60.7**	**F**
14	Wineville Avenue/ 65th Street [a]	9.3	A	9.1	A	**46.6**	**E**	**113.1**	**F**

[a] With roadway closure on Pats Ranch Road, traffic volumes at the Mall Entrance and 65th Street would be greatly reduced. However, due to construction activities (including one-way traffic, flagman, and traffic control) it is estimated that overall vehicle delays would be LOS D or better with access to local and business traffic (only).

[b] Stop-controlled intersection.

Source: (KOA Corporation 2017)

Table 6 Changes in Level of Service with Construction Traffic and Pats Ranch Road Lane Closures

		Baseline Plus Construction Traffic Lane Closure on Pats Ranch Road				Change in Delay [a]	
		AM Peak		PM Peak		AM Peak	PM Peak
Number	Study Intersections	Delay [a]	LOS	Delay [a]	LOS		
Northbound Closure							
3	Pats Ranch Road/ Limonite Avenue	40.0	D	**85.7**	**F**	12.5	45.7
5	Pats Ranch Road/ Mall Entrance	9.5	A	18.7	B	1.3	0.9
6	Pats Ranch Road/ 65th Street	18.9	B	19.4	B	----	01
7	Pats Ranch Road/ 68th Street	22.1	C	15.2	B	3.6	----
Southbound Closure							
3	Pats Ranch Road/ Limonite Avenue	29.7	C	44.4	D	2.2	4.4
5	Pats Ranch Road/ Mall Entrance	9,2	A	17.8	B	1.0	----
6	Pats Ranch Road/ 65th Street	18.4	B	19.6	B	-----	0.3
7	Pats Ranch Road/ 68th Street	23.3	C	18.6	B	4.8	0.7

[a] Delay is measured in seconds.

Table 7 Changes in Level of Service with Alternative 2 Construction Traffic with Limonite Avenue Lane Closures

		Baseline Plus Construction Traffic Lane Closure on Limonite Avenue			
		AM Peak		PM Peak	
	Study Intersections	Delay [a]	LOS	Delay [a]	LOS
Westbound Closure					
3	Pats Ranch Road/ Limonite Avenue	**157.0**	**F**	**93.7**	**F**
4	Wineville Avenue/ Limonite Avenue	24.7	C	29.6	C
Eastbound Closure					
3	Pats Ranch Road/ Limonite Avenue	33.5	C	50.7	D
4	Wineville Avenue/ Limonite Avenue	26.4	C	**115.6**	**F**

[a] Delay is measured in seconds.

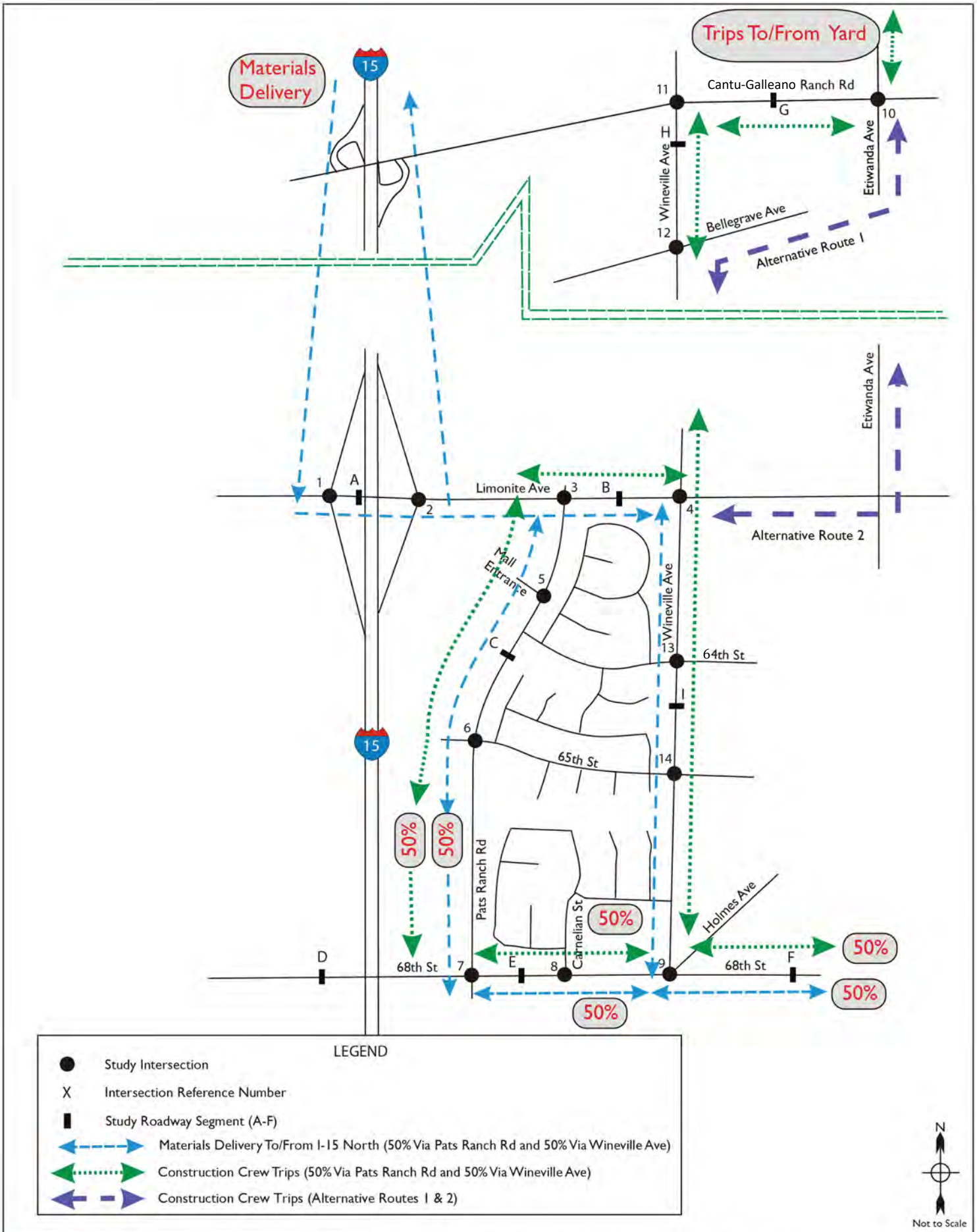
APPENDIX L

Transportation and Traffic Supporting Information

Technical Memorandum

Memorandum Attachment A Distribution

Memorandum Attachment B LOS



KOA CORPORATION
PLANNING & ENGINEERING

Riverside Transmission Reliability Project, Jurupa Valley, California — Figure 8

Revised Project Trip Distribution

APPENDIX L

Transportation and Traffic Supporting Information

Technical Memorandum

Memorandum Attachment A Distribution

Memorandum Attachment B LOS

Level-of-Service (LOS) Calculations: Updated Project –All Construction Activities (Supplemental Analysis)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰↰	↑↑					↰	↕	↱
Traffic Volume (veh/h)	0	1174	505	651	697	0	0	0	0	211	2	469
Future Volume (veh/h)	0	1174	505	651	697	0	0	0	0	211	2	469
Number	5	2	12	1	6	16				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	1276	549	708	758	0				153	0	592
Adj No. of Lanes	0	2	1	2	2	0				1	0	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1540	689	801	2532	0				337	0	601
Arrive On Green	0.00	0.43	0.43	0.23	0.72	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	3632	1583	3442	3632	0				1774	0	3167
Grp Volume(v), veh/h	0	1276	549	708	758	0				153	0	592
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	30.2	28.4	18.8	7.4	0.0				7.3	0.0	17.7
Cycle Q Clear(g_c), s	0.0	30.2	28.4	18.8	7.4	0.0				7.3	0.0	17.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1540	689	801	2532	0				337	0	601
V/C Ratio(X)	0.00	0.83	0.80	0.88	0.30	0.00				0.45	0.00	0.99
Avail Cap(c_a), veh/h	0	1605	718	925	2724	0				337	0	601
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	23.7	23.2	35.1	4.9	0.0				34.1	0.0	38.3
Incr Delay (d2), s/veh	0.0	3.7	6.1	9.2	0.1	0.0				4.4	0.0	33.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	15.5	13.5	10.0	3.6	0.0				4.0	0.0	10.5
LnGrp Delay(d),s/veh	0.0	27.3	29.2	44.3	5.0	0.0				38.4	0.0	71.5
LnGrp LOS		C	C	D	A					D		E
Approach Vol, veh/h		1825			1466						745	
Approach Delay, s/veh		27.9			23.9						64.7	
Approach LOS		C			C						E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	26.6	45.8				72.3		22.5
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	25.5	43.0				73.0		18.0
Max Q Clear Time (g_c+I1), s	20.8	32.2				9.4		19.7
Green Ext Time (p_c), s	1.2	9.0				31.1		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		33.3
HCM 2010 LOS		C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	839	555	0	0	1133	346	229	2	320	0	0	0
Future Volume (veh/h)	839	555	0	0	1133	346	229	2	320	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	912	603	0	0	1232	376	373	0	216			
Adj No. of Lanes	2	2	0	0	2	1	2	0	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	981	2584	0	0	1416	633	639	0	285			
Arrive On Green	0.29	0.73	0.00	0.00	0.40	0.40	0.18	0.00	0.18			
Sat Flow, veh/h	3442	3632	0	0	3632	1583	3548	0	1583			
Grp Volume(v), veh/h	912	603	0	0	1232	376	373	0	216			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	25.8	5.5	0.0	0.0	32.0	18.7	9.6	0.0	13.0			
Cycle Q Clear(g_c), s	25.8	5.5	0.0	0.0	32.0	18.7	9.6	0.0	13.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	981	2584	0	0	1416	633	639	0	285			
V/C Ratio(X)	0.93	0.23	0.00	0.00	0.87	0.59	0.58	0.00	0.76			
Avail Cap(c_a), veh/h	1015	2584	0	0	1416	633	639	0	285			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	34.8	4.4	0.0	0.0	27.6	23.6	37.6	0.0	38.9			
Incr Delay (d2), s/veh	14.1	0.2	0.0	0.0	7.6	4.1	3.9	0.0	17.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.1	2.8	0.0	0.0	17.1	8.9	5.1	0.0	7.0			
LnGrp Delay(d),s/veh	48.9	4.6	0.0	0.0	35.2	27.7	41.4	0.0	56.0			
LnGrp LOS	D	A			D	C	D		E			
Approach Vol, veh/h		1515			1608			589				
Approach Delay, s/veh		31.3			33.4			46.8				
Approach LOS		C			C			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		77.5			33.0	44.5		22.5
Change Period (Y+Rc), s		4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s		73.0			29.5	39.0		18.0
Max Q Clear Time (g_c+I1), s		7.5			27.8	34.0		15.0
Green Ext Time (p_c), s		24.5			0.7	4.2		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	34.7
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	653	139	117	1079	2	356	3	98	1	8	31
Future Volume (veh/h)	20	653	139	117	1079	2	356	3	98	1	8	31
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	1863	1863	1900
Adj Flow Rate, veh/h	22	710	151	127	1173	0	387	3	107	1	9	34
Adj No. of Lanes	1	2	1	1	2	1	2	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	1129	505	158	1362	609	489	737	626	2	87	330
Arrive On Green	0.02	0.32	0.32	0.09	0.38	0.00	0.14	0.40	0.40	0.00	0.25	0.25
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	1863	1583	1774	342	1293
Grp Volume(v), veh/h	22	710	151	127	1173	0	387	3	107	1	0	43
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1863	1583	1774	0	1635
Q Serve(g_s), s	1.1	15.8	6.6	6.5	28.1	0.0	10.0	0.1	4.0	0.1	0.0	1.9
Cycle Q Clear(g_c), s	1.1	15.8	6.6	6.5	28.1	0.0	10.0	0.1	4.0	0.1	0.0	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.79
Lane Grp Cap(c), veh/h	41	1129	505	158	1362	609	489	737	626	2	0	417
V/C Ratio(X)	0.53	0.63	0.30	0.80	0.86	0.00	0.79	0.00	0.17	0.41	0.00	0.10
Avail Cap(c_a), veh/h	96	1129	505	225	1362	609	876	737	626	96	0	417
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	0.00	1.00
Uniform Delay (d), s/veh	44.6	26.8	23.7	41.2	26.1	0.0	38.3	16.9	18.1	46.0	0.0	26.3
Incr Delay (d2), s/veh	10.1	2.7	1.5	12.8	7.4	0.0	2.9	0.0	0.6	84.6	0.0	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	0.7	8.1	3.1	3.7	15.1	0.0	5.0	0.0	1.8	0.1	0.0	0.9
LnGrp Delay(d),s/veh	54.7	29.4	25.2	54.1	33.5	0.0	41.2	16.9	18.7	130.6	0.0	26.8
LnGrp LOS	D	C	C	D	C		D	B	B	F		C
Approach Vol, veh/h		883			1300			497			44	
Approach Delay, s/veh		29.3			35.5			36.2			29.2	
Approach LOS		C			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	33.9	17.6	28.0	6.7	40.0	4.6	41.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	11.7	28.8	23.5	18.0	5.0	35.5	5.0	36.5
Max Q Clear Time (g_c+I1), s	8.5	17.8	12.0	3.9	3.1	30.1	2.1	6.0
Green Ext Time (p_c), s	0.1	8.2	1.1	0.4	0.0	4.4	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	33.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	139	537	82	34	880	52	104	106	54	41	106	220
Future Volume (veh/h)	139	537	82	34	880	52	104	106	54	41	106	220
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	1900	1863	1863	1863
Adj Flow Rate, veh/h	151	584	89	37	957	57	113	115	59	45	115	239
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	187	1566	701	64	1320	591	145	485	235	120	692	310
Arrive On Green	0.11	0.44	0.44	0.04	0.37	0.37	0.08	0.21	0.21	0.07	0.20	0.20
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	2313	1122	1774	3539	1583
Grp Volume(v), veh/h	151	584	89	37	957	57	113	86	88	45	115	239
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1770	1665	1774	1770	1583
Q Serve(g_s), s	6.1	8.1	2.4	1.5	17.1	1.7	4.6	3.0	3.2	1.8	2.0	10.5
Cycle Q Clear(g_c), s	6.1	8.1	2.4	1.5	17.1	1.7	4.6	3.0	3.2	1.8	2.0	10.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.67	1.00		1.00
Lane Grp Cap(c), veh/h	187	1566	701	64	1320	591	145	371	349	120	692	310
V/C Ratio(X)	0.81	0.37	0.13	0.58	0.73	0.10	0.78	0.23	0.25	0.37	0.17	0.77
Avail Cap(c_a), veh/h	205	1566	701	147	1320	591	279	432	406	433	1171	524
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	32.2	13.7	12.1	35.0	19.9	15.0	33.2	24.2	24.3	32.9	24.7	28.1
Incr Delay (d2), s/veh	19.4	0.7	0.4	8.0	3.5	0.3	8.6	0.3	0.4	1.9	0.1	4.1
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	4.1	1.1	0.9	9.0	0.8	2.6	1.5	1.5	0.9	1.0	5.0
LnGrp Delay(d),s/veh	51.6	14.4	12.5	43.0	23.4	15.4	41.8	24.5	24.7	34.8	24.8	32.2
LnGrp LOS	D	B	B	D	C	B	D	C	C	C	C	C
Approach Vol, veh/h		824			1051			287			399	
Approach Delay, s/veh		21.0			23.6			31.4			30.3	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	37.1	10.5	18.9	12.3	32.0	9.5	20.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	6.5	29.9	11.6	24.4	8.5	27.5	18.0	18.0
Max Q Clear Time (g_c+I1), s	13.5	10.1	6.6	12.5	8.1	19.1	3.8	5.2
Green Ext Time (p_c), s	0.0	10.5	0.1	1.9	0.0	5.7	0.1	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	24.7
HCM 2010 LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	69	4	13	389	231	15
Future Volume (veh/h)	69	4	13	389	231	15
Number	5	12	3	8	4	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	75	4	14	423	251	16
Adj No. of Lanes	2	1	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	236	109	780	2613	717	321
Arrive On Green	0.07	0.07	0.44	0.74	0.20	0.20
Sat Flow, veh/h	3442	1583	1774	3632	3632	1583
Grp Volume(v), veh/h	75	4	14	423	251	16
Grp Sat Flow(s),veh/h/ln	1721	1583	1774	1770	1770	1583
Q Serve(g_s), s	1.0	0.1	0.2	1.7	2.8	0.4
Cycle Q Clear(g_c), s	1.0	0.1	0.2	1.7	2.8	0.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	236	109	780	2613	717	321
V/C Ratio(X)	0.32	0.04	0.02	0.16	0.35	0.05
Avail Cap(c_a), veh/h	1881	865	780	4211	2314	1035
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	20.3	7.4	1.8	16.0	15.0
Incr Delay (d2), s/veh	0.8	0.1	0.0	0.0	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	0.5	0.1	0.1	0.8	1.4	0.2
LnGrp Delay(d),s/veh	21.4	20.4	7.4	1.8	16.3	15.1
LnGrp LOS	C	C	A	A	B	B
Approach Vol, veh/h	79			437	267	
Approach Delay, s/veh	21.4			2.0	16.2	
Approach LOS	C			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		7.7	25.0	13.9				38.9
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		25.5	20.5	30.5				55.5
Max Q Clear Time (g_c+I1), s		3.0	2.2	4.8				3.7
Green Ext Time (p_c), s		0.2	0.0	4.6				5.0

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)	17	1	17	46	6	36	46	317	24	8	228	6
Future Volume (veh/h)	17	1	17	46	6	36	46	317	24	8	228	6
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	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	18	1	18	50	7	39	50	345	26	9	248	7
Adj No. of Lanes	1	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	858	44	792	483	89	320	87	694	52	21	602	269
Arrive On Green	0.52	0.52	0.52	0.52	0.52	0.52	0.05	0.21	0.21	0.01	0.17	0.17
Sat Flow, veh/h	1354	84	1512	724	170	612	1774	3338	250	1774	3539	1583
Grp Volume(v), veh/h	18	0	19	96	0	0	50	182	189	9	248	7
Grp Sat Flow(s),veh/h/ln	1354	0	1596	1507	0	0	1774	1770	1819	1774	1770	1583
Q Serve(g_s), s	0.0	0.0	0.3	0.0	0.0	0.0	1.4	4.8	4.8	0.3	3.3	0.2
Cycle Q Clear(g_c), s	0.3	0.0	0.3	1.5	0.0	0.0	1.4	4.8	4.8	0.3	3.3	0.2
Prop In Lane	1.00		0.95	0.52		0.41	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	858	0	835	893	0	0	87	368	378	21	602	269
V/C Ratio(X)	0.02	0.00	0.02	0.11	0.00	0.00	0.57	0.50	0.50	0.43	0.41	0.03
Avail Cap(c_a), veh/h	858	0	835	893	0	0	388	1398	1437	253	2527	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	6.0	0.0	6.0	6.3	0.0	0.0	24.4	18.4	18.4	25.8	19.4	18.2
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.2	0.0	0.0	5.8	1.0	1.0	13.6	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	0.1	0.0	0.1	0.8	0.0	0.0	0.8	2.4	2.5	0.2	1.6	0.1
LnGrp Delay(d),s/veh	6.1	0.0	6.1	6.6	0.0	0.0	30.2	19.4	19.4	39.4	19.9	18.2
LnGrp LOS	A		A	A			C	B	B	D	B	B
Approach Vol, veh/h		37			96			421			264	
Approach Delay, s/veh		6.1			6.6			20.7			20.5	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		32.0	7.1	13.4		32.0	5.1	15.4
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		27.5	11.5	37.5		27.5	7.5	41.5
Max Q Clear Time (g_c+I1), s		2.3	3.4	5.3		3.5	2.3	6.8
Green Ext Time (p_c), s		0.7	0.0	3.7		0.6	0.0	3.7

Intersection Summary	
HCM 2010 Ctrl Delay	18.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	318	570	8	1	426	53	2	4	0	81	29	191
Future Volume (veh/h)	318	570	8	1	426	53	2	4	0	81	29	191
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	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	346	620	9	1	463	58	2	4	0	88	32	208
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	396	1662	24	3	861	385	117	280	0	147	312	265
Arrive On Green	0.22	0.47	0.47	0.00	0.24	0.24	0.07	0.15	0.00	0.08	0.17	0.17
Sat Flow, veh/h	1774	3571	52	1774	3539	1583	1774	1863	0	1774	1863	1583
Grp Volume(v), veh/h	346	307	322	1	463	58	2	4	0	88	32	208
Grp Sat Flow(s),veh/h/ln	1774	1770	1854	1774	1770	1583	1774	1863	0	1774	1863	1583
Q Serve(g_s), s	11.3	6.7	6.7	0.0	6.8	1.7	0.1	0.1	0.0	2.9	0.9	7.6
Cycle Q Clear(g_c), s	11.3	6.7	6.7	0.0	6.8	1.7	0.1	0.1	0.0	2.9	0.9	7.6
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	396	823	863	3	861	385	117	280	0	147	312	265
V/C Ratio(X)	0.87	0.37	0.37	0.34	0.54	0.15	0.02	0.01	0.00	0.60	0.10	0.78
Avail Cap(c_a), veh/h	428	914	957	148	1267	567	532	558	0	532	558	475
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	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.5	10.4	10.4	29.9	19.8	17.8	26.2	21.7	0.0	26.6	21.2	23.9
Incr Delay (d2), s/veh	16.9	0.3	0.3	56.6	0.5	0.2	0.1	0.0	0.0	3.8	0.1	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	3.3	3.5	0.1	3.4	0.8	0.0	0.1	0.0	1.6	0.5	3.7
LnGrp Delay(d),s/veh	39.4	10.7	10.7	86.5	20.3	18.0	26.3	21.7	0.0	30.4	21.3	29.0
LnGrp LOS	D	B	B	F	C	B	C	C		C	C	C
Approach Vol, veh/h		975			522			6			328	
Approach Delay, s/veh		20.9			20.2			23.3			28.6	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.6	32.4	8.5	14.6	17.9	19.1	9.5	13.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	31.0	18.0	18.0	14.5	21.5	18.0	18.0
Max Q Clear Time (g_c+I1), s	2.0	8.7	2.1	9.6	13.3	8.8	4.9	2.1
Green Ext Time (p_c), s	0.0	7.7	0.0	0.5	0.2	5.8	0.1	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	22.1
HCM 2010 LOS	C

Intersection	
Intersection Delay, s/veh	11.9
Intersection LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	246	403	355	89	2	120
Future Vol, veh/h	246	403	355	89	2	120
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	267	438	386	97	2	130
Number of Lanes	1	2	2	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	3	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	3
HCM Control Delay	11.1	13.4	11.1
HCM LOS	B	B	B

Lane	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	0%	0%	0%	2%
Vol Thru, %	0%	100%	100%	100%	57%	0%
Vol Right, %	0%	0%	0%	0%	43%	98%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	246	202	202	237	207	122
LT Vol	246	0	0	0	0	2
Through Vol	0	202	202	237	118	0
RT Vol	0	0	0	0	89	120
Lane Flow Rate	267	219	219	257	225	133
Geometry Grp	7	7	7	8	8	7
Degree of Util (X)	0.453	0.341	0.234	0.453	0.378	0.234
Departure Headway (Hd)	6.105	5.6	3.848	6.341	6.038	6.365
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	591	644	933	569	595	564
Service Time	3.834	3.329	1.576	4.077	3.774	4.109
HCM Lane V/C Ratio	0.452	0.34	0.235	0.452	0.378	0.236
HCM Control Delay	13.8	11.2	7.8	14.2	12.4	11.1
HCM Lane LOS	B	B	A	B	B	B
HCM 95th-tile Q	2.3	1.5	0.9	2.3	1.8	0.9

Intersection	
Intersection Delay, s/veh	15
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	80	233	31	0	263	14	45	32	1	12	97	140
Future Vol, veh/h	80	233	31	0	263	14	45	32	1	12	97	140
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	87	253	34	0	286	15	49	35	1	13	105	152
Number of Lanes	1	1	0	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	15.5	18.3	11.7	11.8
HCM LOS	C	C	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	97%	0%	88%	95%	0%	100%	0%
Vol Right, %	0%	3%	0%	12%	5%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	45	33	80	264	277	12	97	140
LT Vol	45	0	80	0	0	12	0	0
Through Vol	0	32	0	233	263	0	97	0
RT Vol	0	1	0	31	14	0	0	140
Lane Flow Rate	49	36	87	287	301	13	105	152
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.113	0.077	0.175	0.532	0.572	0.028	0.212	0.276
Departure Headway (Hd)	8.289	7.751	7.262	6.672	6.841	7.753	7.242	6.526
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	432	462	496	542	530	462	496	551
Service Time	6.041	5.502	4.978	4.389	4.556	5.495	4.983	4.267
HCM Lane V/C Ratio	0.113	0.078	0.175	0.53	0.568	0.028	0.212	0.276
HCM Control Delay	12.1	11.2	11.5	16.7	18.3	10.7	11.9	11.8
HCM Lane LOS	B	B	B	C	C	B	B	B
HCM 95th-tile Q	0.4	0.2	0.6	3.1	3.6	0.1	0.8	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	17	68	15	6	23	190	439	35	47	156	105
Future Volume (veh/h)	96	17	68	15	6	23	190	439	35	47	156	105
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	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	104	18	74	16	7	25	207	477	38	51	170	114
Adj No. of Lanes	1	2	1	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	153	583	261	36	35	127	276	1019	81	96	726	325
Arrive On Green	0.09	0.16	0.16	0.02	0.10	0.10	0.16	0.31	0.31	0.05	0.21	0.21
Sat Flow, veh/h	1774	3539	1583	1774	358	1279	1774	3322	264	1774	3539	1583
Grp Volume(v), veh/h	104	18	74	16	0	32	207	253	262	51	170	114
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	0	1637	1774	1770	1816	1774	1770	1583
Q Serve(g_s), s	2.3	0.2	1.6	0.4	0.0	0.7	4.4	4.6	4.6	1.1	1.6	2.4
Cycle Q Clear(g_c), s	2.3	0.2	1.6	0.4	0.0	0.7	4.4	4.6	4.6	1.1	1.6	2.4
Prop In Lane	1.00		1.00	1.00		0.78	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	153	583	261	36	0	162	276	543	557	96	726	325
V/C Ratio(X)	0.68	0.03	0.28	0.44	0.00	0.20	0.75	0.47	0.47	0.53	0.23	0.35
Avail Cap(c_a), veh/h	559	2455	1098	246	0	846	917	1406	1443	336	1651	739
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	13.9	14.5	19.2	0.0	16.4	16.0	11.1	11.1	18.3	13.2	13.5
Incr Delay (d2), s/veh	5.3	0.0	0.6	8.3	0.0	0.6	4.1	0.6	0.6	4.5	0.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.1	0.7	0.3	0.0	0.3	2.4	2.3	2.3	0.7	0.8	1.1
LnGrp Delay(d),s/veh	22.9	13.9	15.1	27.5	0.0	17.0	20.1	11.7	11.7	22.7	13.3	14.1
LnGrp LOS	C	B	B	C		B	C	B	B	C	B	B
Approach Vol, veh/h		196			48			722			335	
Approach Delay, s/veh		19.1			20.5			14.1			15.0	
Approach LOS		B			C			B			B	

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	5.3	11.0	10.7	12.6	7.9	8.4	6.6	16.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	27.5	20.5	18.5	12.5	20.5	7.5	31.5
Max Q Clear Time (g_c+I1), s	2.4	3.6	6.4	4.4	4.3	2.7	3.1	6.6
Green Ext Time (p_c), s	0.0	0.4	0.5	3.7	0.1	0.4	0.0	4.5

Intersection Summary	
HCM 2010 Ctrl Delay	15.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	157	134	176	80	259	26	315	224	57	8	35	48
Future Volume (veh/h)	157	134	176	80	259	26	315	224	57	8	35	48
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	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	171	146	191	87	282	28	342	243	62	9	38	52
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	210	709	317	112	472	47	385	675	172	20	470	420
Arrive On Green	0.12	0.20	0.20	0.06	0.15	0.15	0.22	0.47	0.47	0.01	0.27	0.27
Sat Flow, veh/h	1774	3539	1583	1774	3255	321	1774	1433	366	1774	1770	1583
Grp Volume(v), veh/h	171	146	191	87	152	158	342	0	305	9	38	52
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1806	1774	0	1798	1774	1770	1583
Q Serve(g_s), s	6.7	2.4	7.8	3.4	5.7	5.8	13.2	0.0	7.6	0.4	1.1	1.8
Cycle Q Clear(g_c), s	6.7	2.4	7.8	3.4	5.7	5.8	13.2	0.0	7.6	0.4	1.1	1.8
Prop In Lane	1.00		1.00	1.00		0.18	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	210	709	317	112	257	262	385	0	847	20	470	420
V/C Ratio(X)	0.82	0.21	0.60	0.78	0.59	0.60	0.89	0.00	0.36	0.44	0.08	0.12
Avail Cap(c_a), veh/h	218	1005	449	165	450	459	413	0	847	125	470	420
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	23.6	25.8	32.7	28.3	28.4	26.9	0.0	11.9	34.8	19.5	19.8
Incr Delay (d2), s/veh	20.3	0.1	1.8	12.9	2.2	2.2	19.5	0.0	1.2	14.4	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	1.2	3.5	2.1	2.9	3.1	8.5	0.0	4.0	0.3	0.6	0.8
LnGrp Delay(d),s/veh	50.8	23.8	27.6	45.6	30.5	30.6	46.3	0.0	13.1	49.2	19.9	20.4
LnGrp LOS	D	C	C	D	C	C	D		B	D	B	C
Approach Vol, veh/h		508			397			647			99	
Approach Delay, s/veh		34.3			33.8			30.7			22.8	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.3	37.9	9.0	18.7	19.9	23.3	12.9	14.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	30.3	6.6	20.1	16.5	18.8	8.7	18.0
Max Q Clear Time (g_c+I1), s	2.4	9.6	5.4	9.8	15.2	3.8	8.7	7.8
Green Ext Time (p_c), s	0.0	2.3	0.0	2.5	0.2	2.1	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	32.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	252	30	88	187	125	28	221	78	56	146	20
Future Volume (veh/h)	124	252	30	88	187	125	28	221	78	56	146	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	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	135	274	33	96	203	136	30	240	85	61	159	22
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	264	617	276	234	587	262	114	1383	619	186	1457	652
Arrive On Green	0.08	0.17	0.17	0.07	0.17	0.17	0.03	0.39	0.39	0.05	0.41	0.41
Sat Flow, veh/h	3442	3539	1583	3442	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	135	274	33	96	203	136	30	240	85	61	159	22
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1721	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	2.2	4.0	1.0	1.5	2.9	4.5	0.5	2.6	2.0	1.0	1.6	0.5
Cycle Q Clear(g_c), s	2.2	4.0	1.0	1.5	2.9	4.5	0.5	2.6	2.0	1.0	1.6	0.5
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	264	617	276	234	587	262	114	1383	619	186	1457	652
V/C Ratio(X)	0.51	0.44	0.12	0.41	0.35	0.52	0.26	0.17	0.14	0.33	0.11	0.03
Avail Cap(c_a), veh/h	508	1260	564	448	1198	536	329	1383	619	388	1457	652
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	25.5	21.3	20.0	25.7	21.3	21.9	27.2	11.5	11.3	26.2	10.4	10.1
Incr Delay (d2), s/veh	1.5	0.5	0.2	1.1	0.4	1.6	1.2	0.3	0.5	1.0	0.2	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	2.0	0.5	0.8	1.4	2.1	0.3	1.3	0.9	0.5	0.8	0.2
LnGrp Delay(d),s/veh	27.1	21.8	20.2	26.9	21.6	23.5	28.4	11.7	11.8	27.2	10.6	10.2
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h		442			435			355			242	
Approach Delay, s/veh		23.3			23.4			13.1			14.7	
Approach LOS		C			C			B			B	

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	7.6	27.0	8.4	14.5	6.4	28.2	8.9	14.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	6.5	22.5	7.5	20.5	5.5	23.5	8.5	19.5
Max Q Clear Time (g_c+I1), s	3.0	4.6	3.5	6.0	2.5	3.6	4.2	6.5
Green Ext Time (p_c), s	0.0	2.7	0.1	3.2	0.0	2.8	0.1	3.0

Intersection Summary	
HCM 2010 Ctrl Delay	19.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑		↰	↑↑	
Traffic Vol, veh/h	11	6	14	9	15	58	6	205	15	11	189	4
Future Vol, veh/h	11	6	14	9	15	58	6	205	15	11	189	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	7	15	10	16	63	7	223	16	12	205	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	516	484	105	374	478	231	210	0	0	239	0	0
Stage 1	232	232	-	244	244	-	-	-	-	-	-	-
Stage 2	284	252	-	130	234	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.93	7.33	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	456	482	930	570	486	807	1359	-	-	1326	-	-
Stage 1	751	712	-	759	703	-	-	-	-	-	-	-
Stage 2	722	698	-	861	711	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	405	475	930	549	479	807	1359	-	-	1326	-	-
Mov Cap-2 Maneuver	405	475	-	549	479	-	-	-	-	-	-	-
Stage 1	747	706	-	755	699	-	-	-	-	-	-	-
Stage 2	647	694	-	831	705	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.8	11	0.2	0.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1359	-	-	565	686	1326	-	-
HCM Lane V/C Ratio	0.005	-	-	0.06	0.13	0.009	-	-
HCM Control Delay (s)	7.7	-	-	11.8	11	7.7	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.4	0	-	-

Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕			↰	↑	
Traffic Vol, veh/h	0	10	3	15	0	12	7	31	0	9	187	15
Future Vol, veh/h	0	10	3	15	0	12	7	31	0	9	187	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	11	3	16	0	13	8	34	0	10	203	16
Number of Lanes	0	0	1	0	0	0	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	1
HCM Control Delay	8.5	8.6	10.2
HCM LOS	A	A	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	36%	24%	100%	0%	0%
Vol Thru, %	0%	93%	11%	14%	0%	100%	88%
Vol Right, %	0%	7%	54%	62%	0%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	9	202	28	50	9	133	75
LT Vol	9	0	10	12	9	0	0
Through Vol	0	187	3	7	0	133	66
RT Vol	0	15	15	31	0	0	9
Lane Flow Rate	10	220	30	54	10	144	82
Geometry Grp	8	8	7	7	7	7	7
Degree of Util (X)	0.016	0.317	0.046	0.081	0.015	0.199	0.111
Departure Headway (Hd)	5.747	5.193	5.498	5.348	5.465	4.962	4.878
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	623	692	649	668	655	724	734
Service Time	3.484	2.93	3.251	3.096	3.195	2.692	2.608
HCM Lane V/C Ratio	0.016	0.318	0.046	0.081	0.015	0.199	0.112
HCM Control Delay	8.6	10.3	8.5	8.6	8.3	8.9	8.2
HCM Lane LOS	A	B	A	A	A	A	A
HCM 95th-tile Q	0	1.4	0.1	0.3	0	0.7	0.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	9	199	9
Future Vol, veh/h	0	9	199	9
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	10	216	10
Number of Lanes	0	1	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	8.6
HCM LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰↰	↑↑					↰	↕	↱
Traffic Volume (veh/h)	0	1150	517	470	1059	0	0	0	0	299	1	837
Future Volume (veh/h)	0	1150	517	470	1059	0	0	0	0	299	1	837
Number	5	2	12	1	6	16				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	1250	562	511	1151	0				217	0	1026
Adj No. of Lanes	0	2	1	2	2	0				1	0	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1384	619	563	2141	0				523	0	934
Arrive On Green	0.00	0.39	0.39	0.16	0.60	0.00				0.29	0.00	0.29
Sat Flow, veh/h	0	3632	1583	3442	3632	0				1774	0	3167
Grp Volume(v), veh/h	0	1250	562	511	1151	0				217	0	1026
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	29.9	30.1	13.1	17.1	0.0				8.8	0.0	26.5
Cycle Q Clear(g_c), s	0.0	29.9	30.1	13.1	17.1	0.0				8.8	0.0	26.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1384	619	563	2141	0				523	0	934
V/C Ratio(X)	0.00	0.90	0.91	0.91	0.54	0.00				0.41	0.00	1.10
Avail Cap(c_a), veh/h	0	1391	622	563	2147	0				523	0	934
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	25.7	25.8	36.9	10.4	0.0				25.4	0.0	31.7
Incr Delay (d2), s/veh	0.0	8.5	17.1	18.5	0.3	0.0				2.4	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	16.2	16.1	7.7	8.4	0.0				4.7	0.0	19.4
LnGrp Delay(d),s/veh	0.0	34.3	43.0	55.4	10.7	0.0				27.9	0.0	91.8
LnGrp LOS		C	D	E	B					C		F
Approach Vol, veh/h		1812			1662						1243	
Approach Delay, s/veh		37.0			24.4						80.6	
Approach LOS		D			C						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	19.2	39.6				58.8		31.0
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	14.7	35.3				54.5		26.5
Max Q Clear Time (g_c+I1), s	15.1	32.1				19.1		28.5
Green Ext Time (p_c), s	0.0	3.0				26.5		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		44.0
HCM 2010 LOS		D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	480	965	0	0	1092	307	429	0	796	0	0	0
Future Volume (veh/h)	480	965	0	0	1092	307	429	0	796	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	522	1049	0	0	1187	334	311	0	1031			
Adj No. of Lanes	2	2	0	0	2	1	1	0	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	605	2183	0	0	1383	619	503	0	897			
Arrive On Green	0.18	0.62	0.00	0.00	0.39	0.39	0.28	0.00	0.28			
Sat Flow, veh/h	3442	3632	0	0	3632	1583	1774	0	3167			
Grp Volume(v), veh/h	522	1049	0	0	1187	334	311	0	1031			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	13.3	14.5	0.0	0.0	27.7	14.7	13.7	0.0	25.5			
Cycle Q Clear(g_c), s	13.3	14.5	0.0	0.0	27.7	14.7	13.7	0.0	25.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	605	2183	0	0	1383	619	503	0	897			
V/C Ratio(X)	0.86	0.48	0.00	0.00	0.86	0.54	0.62	0.00	1.15			
Avail Cap(c_a), veh/h	688	2183	0	0	1383	619	503	0	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	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	36.0	9.4	0.0	0.0	25.1	21.2	28.0	0.0	32.3			
Incr Delay (d2), s/veh	10.0	0.8	0.0	0.0	7.1	3.4	5.6	0.0	80.1			
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	7.1	7.2	0.0	0.0	14.9	7.0	7.4	0.0	21.1			
LnGrp Delay(d),s/veh	46.0	10.2	0.0	0.0	32.2	24.5	33.7	0.0	112.3			
LnGrp LOS	D	B			C	C	C		F			
Approach Vol, veh/h		1571			1521			1342				
Approach Delay, s/veh		22.1			30.5			94.1				
Approach LOS		C			C			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		60.0			20.3	39.7		30.0
Change Period (Y+Rc), s		4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s		55.5			18.0	33.0		25.5
Max Q Clear Time (g_c+I1), s		16.5			15.3	29.7		27.5
Green Ext Time (p_c), s		24.8			0.6	3.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	46.8
HCM 2010 LOS	D

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	1257	255	204	990	0	367	18	177	0	8	29
Future Volume (veh/h)	36	1257	255	204	990	0	367	18	177	0	8	29
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	1863	1863	1900
Adj Flow Rate, veh/h	39	1366	277	222	1076	0	399	20	192	0	9	32
Adj No. of Lanes	1	2	1	1	2	1	2	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	59	1384	619	229	1723	771	413	643	546	2	65	230
Arrive On Green	0.03	0.39	0.39	0.13	0.49	0.00	0.12	0.34	0.34	0.00	0.18	0.18
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	1863	1583	1774	359	1278
Grp Volume(v), veh/h	39	1366	277	222	1076	0	399	20	192	0	0	41
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1863	1583	1774	0	1637
Q Serve(g_s), s	2.2	38.3	12.9	12.5	22.4	0.0	11.5	0.7	9.0	0.0	0.0	2.1
Cycle Q Clear(g_c), s	2.2	38.3	12.9	12.5	22.4	0.0	11.5	0.7	9.0	0.0	0.0	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.78
Lane Grp Cap(c), veh/h	59	1384	619	229	1723	771	413	643	546	2	0	295
V/C Ratio(X)	0.66	0.99	0.45	0.97	0.62	0.00	0.97	0.03	0.35	0.00	0.00	0.14
Avail Cap(c_a), veh/h	115	1384	619	229	1723	771	413	643	546	89	0	295
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	0.00	0.00	1.00
Uniform Delay (d), s/veh	47.8	30.2	22.5	43.4	18.9	0.0	43.8	21.7	24.4	0.0	0.0	34.5
Incr Delay (d2), s/veh	12.2	21.3	2.3	50.9	1.7	0.0	35.4	0.1	1.8	0.0	0.0	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	1.3	22.7	6.0	9.3	11.3	0.0	7.5	0.4	4.2	0.0	0.0	1.0
LnGrp Delay(d),s/veh	60.0	51.5	24.8	94.2	20.6	0.0	79.2	21.8	26.2	0.0	0.0	35.5
LnGrp LOS	E	D	C	F	C		E	C	C			D
Approach Vol, veh/h		1682			1298			611			41	
Approach Delay, s/veh		47.3			33.2			60.7			35.5	
Approach LOS		D			C			E			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	17.4	43.6	16.5	22.5	7.8	53.2	0.0	39.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	12.9	39.1	12.0	18.0	6.5	45.5	5.0	25.0
Max Q Clear Time (g_c+I1), s	14.5	40.3	13.5	4.1	4.2	24.4	0.0	11.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.8	0.0	16.9	0.0	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	44.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	233	1132	90	32	849	59	93	44	67	67	117	254
Future Volume (veh/h)	233	1132	90	32	849	59	93	44	67	67	117	254
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	1900	1863	1863	1863
Adj Flow Rate, veh/h	253	1230	98	35	923	64	101	48	73	73	127	276
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	292	1556	696	61	1095	490	130	389	348	120	758	339
Arrive On Green	0.16	0.44	0.44	0.03	0.31	0.31	0.07	0.22	0.22	0.07	0.21	0.21
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	1770	1583	1774	3539	1583
Grp Volume(v), veh/h	253	1230	98	35	923	64	101	48	73	73	127	276
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	10.5	22.6	2.8	1.5	18.4	2.2	4.2	1.6	2.9	3.0	2.2	12.5
Cycle Q Clear(g_c), s	10.5	22.6	2.8	1.5	18.4	2.2	4.2	1.6	2.9	3.0	2.2	12.5
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	292	1556	696	61	1095	490	130	389	348	120	758	339
V/C Ratio(X)	0.87	0.79	0.14	0.57	0.84	0.13	0.77	0.12	0.21	0.61	0.17	0.81
Avail Cap(c_a), veh/h	296	1556	696	117	1095	490	275	421	377	422	1137	509
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	30.8	18.2	12.6	36.0	24.4	18.8	34.4	23.6	24.1	34.3	24.2	28.3
Incr Delay (d2), s/veh	22.5	4.2	0.4	8.2	7.9	0.6	9.4	0.1	0.3	4.9	0.1	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	11.8	1.3	0.9	10.2	1.0	2.4	0.8	1.3	1.6	1.1	6.0
LnGrp Delay(d),s/veh	53.2	22.4	13.1	44.2	32.3	19.3	43.8	23.8	24.4	39.1	24.3	34.4
LnGrp LOS	D	C	B	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		1581			1022			222			476	
Approach Delay, s/veh		26.7			31.9			33.1			32.4	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	37.7	10.1	20.7	17.0	27.9	9.6	21.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.6	31.0	11.7	24.3	12.6	23.4	18.0	18.0
Max Q Clear Time (g_c+I1), s	13.5	24.6	6.2	14.5	12.5	20.4	5.0	4.9
Green Ext Time (p_c), s	0.0	5.5	0.1	1.7	0.0	2.7	0.1	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	29.6
HCM 2010 LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	329	100	87	239	315	54
Future Volume (veh/h)	329	100	87	239	315	54
Number	5	12	3	8	4	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	358	109	95	260	342	59
Adj No. of Lanes	2	1	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	563	259	681	2364	709	317
Arrive On Green	0.16	0.16	0.38	0.67	0.20	0.20
Sat Flow, veh/h	3442	1583	1774	3632	3632	1583
Grp Volume(v), veh/h	358	109	95	260	342	59
Grp Sat Flow(s),veh/h/ln	1721	1583	1774	1770	1770	1583
Q Serve(g_s), s	5.2	3.3	1.9	1.4	4.6	1.7
Cycle Q Clear(g_c), s	5.2	3.3	1.9	1.4	4.6	1.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	563	259	681	2364	709	317
V/C Ratio(X)	0.64	0.42	0.14	0.11	0.48	0.19
Avail Cap(c_a), veh/h	1642	756	681	3676	2020	904
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.9	20.1	10.7	3.2	18.9	17.8
Incr Delay (d2), s/veh	1.2	1.1	0.4	0.0	0.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	1.5	1.0	0.7	2.3	0.7
LnGrp Delay(d),s/veh	22.1	21.2	11.2	3.2	19.4	18.0
LnGrp LOS	C	C	B	A	B	B
Approach Vol, veh/h	467			355	401	
Approach Delay, s/veh	21.9			5.3	19.2	
Approach LOS	C			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		13.2	25.0	15.2				40.2
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		25.5	20.5	30.5				55.5
Max Q Clear Time (g_c+I1), s		7.2	3.9	6.6				3.4
Green Ext Time (p_c), s		1.6	0.2	4.1				4.5

Intersection Summary	
HCM 2010 Ctrl Delay	16.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	10	26	9	9	25	83	277	20	35	346	6
Future Volume (veh/h)	23	10	26	9	9	25	83	277	20	35	346	6
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	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	25	11	28	10	10	27	90	301	22	38	376	7
Adj No. of Lanes	1	1	0	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	773	215	548	193	206	428	123	813	59	72	758	339
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.07	0.24	0.24	0.04	0.21	0.21
Sat Flow, veh/h	1365	466	1187	240	446	926	1774	3346	243	1774	3539	1583
Grp Volume(v), veh/h	25	0	39	47	0	0	90	158	165	38	376	7
Grp Sat Flow(s),veh/h/ln	1365	0	1653	1611	0	0	1774	1770	1820	1774	1770	1583
Q Serve(g_s), s	0.0	0.0	0.7	0.0	0.0	0.0	2.6	3.9	4.0	1.1	5.0	0.2
Cycle Q Clear(g_c), s	0.4	0.0	0.7	0.8	0.0	0.0	2.6	3.9	4.0	1.1	5.0	0.2
Prop In Lane	1.00		0.72	0.21		0.57	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	773	0	764	827	0	0	123	430	442	72	758	339
V/C Ratio(X)	0.03	0.00	0.05	0.06	0.00	0.00	0.73	0.37	0.37	0.53	0.50	0.02
Avail Cap(c_a), veh/h	773	0	764	827	0	0	652	2019	2076	385	3504	1568
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	7.8	0.0	7.9	7.9	0.0	0.0	24.2	16.7	16.7	24.9	18.3	16.4
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.1	0.0	0.0	8.1	0.5	0.5	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	0.2	0.0	0.3	0.4	0.0	0.0	1.6	2.0	2.1	0.7	2.5	0.1
LnGrp Delay(d),s/veh	7.9	0.0	8.0	8.0	0.0	0.0	32.3	17.2	17.2	30.9	18.8	16.5
LnGrp LOS	A		A	A			C	B	B	C	B	B
Approach Vol, veh/h		64			47			413			421	
Approach Delay, s/veh		7.9			8.0			20.5			19.9	
Approach LOS		A			A			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		29.0	8.2	15.9		29.0	6.6	17.4
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		24.5	19.5	52.5		24.5	11.5	60.5
Max Q Clear Time (g_c+I1), s		2.7	4.6	7.0		2.8	3.1	6.0
Green Ext Time (p_c), s		0.5	0.2	4.4		0.5	0.0	4.4

Intersection Summary	
HCM 2010 Ctrl Delay	18.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	386	0	2	260	94	4	13	3	13	0	255
Future Volume (veh/h)	252	386	0	2	260	94	4	13	3	13	0	255
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	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	274	420	0	2	283	102	4	14	3	14	0	277
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	338	1369	0	5	704	315	68	236	50	172	404	344
Arrive On Green	0.19	0.39	0.00	0.00	0.20	0.20	0.04	0.16	0.16	0.10	0.00	0.22
Sat Flow, veh/h	1774	3632	0	1774	3539	1583	1774	1488	319	1774	1863	1583
Grp Volume(v), veh/h	274	420	0	2	283	102	4	0	17	14	0	277
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	1583	1774	0	1806	1774	1863	1583
Q Serve(g_s), s	7.5	4.2	0.0	0.1	3.5	2.8	0.1	0.0	0.4	0.4	0.0	8.4
Cycle Q Clear(g_c), s	7.5	4.2	0.0	0.1	3.5	2.8	0.1	0.0	0.4	0.4	0.0	8.4
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	338	1369	0	5	704	315	68	0	286	172	404	344
V/C Ratio(X)	0.81	0.31	0.00	0.41	0.40	0.32	0.06	0.00	0.06	0.08	0.00	0.81
Avail Cap(c_a), veh/h	507	2164	0	175	1501	671	630	0	641	630	661	562
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.6	10.8	0.0	25.2	17.7	17.4	23.5	0.0	18.1	20.8	0.0	18.8
Incr Delay (d2), s/veh	5.9	0.1	0.0	47.5	0.4	0.6	0.4	0.0	0.1	0.2	0.0	4.5
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	4.2	2.1	0.0	0.1	1.8	1.3	0.1	0.0	0.2	0.2	0.0	4.1
LnGrp Delay(d),s/veh	25.6	10.9	0.0	72.7	18.0	18.0	23.9	0.0	18.2	21.0	0.0	23.3
LnGrp LOS	C	B		E	B	B	C		B	C		C
Approach Vol, veh/h		694			387			21			291	
Approach Delay, s/veh		16.7			18.3			19.3			23.2	
Approach LOS		B			B			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.6	24.1	6.4	15.5	14.2	14.6	9.4	12.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	31.0	18.0	18.0	14.5	21.5	18.0	18.0
Max Q Clear Time (g_c+I1), s	2.1	6.2	2.1	10.4	9.5	5.5	2.4	2.4
Green Ext Time (p_c), s	0.0	5.3	0.0	0.6	0.4	4.6	0.0	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	18.6
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	47	407	236	12	9	64
Future Vol, veh/h	47	407	236	12	9	64
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	51	442	257	13	10	70
Number of Lanes	1	2	2	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	3	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	3
HCM Control Delay	8.4	9.9	9
HCM LOS	A	A	A

Lane	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	0%	0%	0%	12%
Vol Thru, %	0%	100%	100%	100%	87%	0%
Vol Right, %	0%	0%	0%	0%	13%	88%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	47	204	204	157	91	73
LT Vol	47	0	0	0	0	9
Through Vol	0	204	204	157	79	0
RT Vol	0	0	0	0	12	64
Lane Flow Rate	51	221	221	171	99	79
Geometry Grp	7	7	7	8	8	7
Degree of Util (X)	0.078	0.308	0.201	0.264	0.15	0.121
Departure Headway (Hd)	5.52	5.017	3.275	5.561	5.468	5.505
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	649	717	1093	645	653	648
Service Time	3.251	2.748	1.005	3.313	3.219	3.266
HCM Lane V/C Ratio	0.079	0.308	0.202	0.265	0.152	0.122
HCM Control Delay	8.7	10	6.8	10.3	9.2	9
HCM Lane LOS	A	A	A	B	A	A
HCM 95th-tile Q	0.3	1.3	0.7	1.1	0.5	0.4

Intersection	
Intersection Delay, s/veh	12.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	88	211	52	58	49	3	0	158	3	30	85	1
Future Vol, veh/h	88	211	52	58	49	3	0	158	3	30	85	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	96	229	57	63	53	3	0	172	3	33	92	1
Number of Lanes	1	1	0	0	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	1	2
HCM Control Delay	12.8	11.5	12.3	10.7
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	0%	0%	100%	0%	53%	100%	0%	0%
Vol Thru, %	100%	98%	0%	80%	45%	0%	100%	0%
Vol Right, %	0%	2%	0%	20%	3%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	161	88	263	110	30	85	1
LT Vol	0	0	88	0	58	30	0	0
Through Vol	0	158	0	211	49	0	85	0
RT Vol	0	3	0	52	3	0	0	1
Lane Flow Rate	0	175	96	286	120	33	92	1
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0	0.317	0.172	0.462	0.225	0.065	0.171	0.002
Departure Headway (Hd)	6.543	6.53	6.466	5.823	6.785	7.16	6.652	5.942
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	0	550	555	617	528	499	538	600
Service Time	4.297	4.284	4.211	3.567	4.542	4.916	4.408	3.697
HCM Lane V/C Ratio	0	0.318	0.173	0.464	0.227	0.066	0.171	0.002
HCM Control Delay	9.3	12.3	10.6	13.5	11.5	10.4	10.8	8.7
HCM Lane LOS	N	B	B	B	B	B	B	A
HCM 95th-tile Q	0	1.4	0.6	2.4	0.9	0.2	0.6	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	149	10	146	64	34	30	144	257	35	25	448	96
Future Volume (veh/h)	149	10	146	64	34	30	144	257	35	25	448	96
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	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	162	11	159	70	37	33	157	279	38	27	487	104
Adj No. of Lanes	1	2	1	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	580	259	115	99	89	209	1058	143	57	890	398
Arrive On Green	0.12	0.16	0.16	0.06	0.11	0.11	0.12	0.34	0.34	0.03	0.25	0.25
Sat Flow, veh/h	1774	3539	1583	1774	909	811	1774	3135	423	1774	3539	1583
Grp Volume(v), veh/h	162	11	159	70	0	70	157	156	161	27	487	104
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	0	1720	1774	1770	1788	1774	1770	1583
Q Serve(g_s), s	4.0	0.1	4.2	1.7	0.0	1.7	3.8	2.9	2.9	0.7	5.4	2.4
Cycle Q Clear(g_c), s	4.0	0.1	4.2	1.7	0.0	1.7	3.8	2.9	2.9	0.7	5.4	2.4
Prop In Lane	1.00		1.00	1.00		0.47	1.00		0.24	1.00		1.00
Lane Grp Cap(c), veh/h	212	580	259	115	0	188	209	597	604	57	890	398
V/C Ratio(X)	0.76	0.02	0.61	0.61	0.00	0.37	0.75	0.26	0.27	0.48	0.55	0.26
Avail Cap(c_a), veh/h	495	2173	972	218	0	787	812	1244	1257	297	1462	654
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.1	15.7	17.4	20.4	0.0	18.5	19.1	10.8	10.8	21.3	14.6	13.4
Incr Delay (d2), s/veh	5.7	0.0	2.3	5.1	0.0	1.2	5.3	0.2	0.2	6.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.1	2.0	1.0	0.0	0.9	2.2	1.4	1.5	0.4	2.6	1.1
LnGrp Delay(d),s/veh	24.8	15.7	19.8	25.5	0.0	19.7	24.4	11.0	11.0	27.5	15.1	13.8
LnGrp LOS	C	B	B	C		B	C	B	B	C	B	B
Approach Vol, veh/h		332			140			474			618	
Approach Delay, s/veh		22.1			22.6			15.5			15.4	
Approach LOS		C			C			B			B	

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	7.4	11.8	9.8	15.8	9.9	9.4	5.9	19.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	27.5	20.5	18.5	12.5	20.5	7.5	31.5
Max Q Clear Time (g_c+I1), s	3.7	6.2	5.8	7.4	6.0	3.7	2.7	4.9
Green Ext Time (p_c), s	0.0	0.9	0.3	3.9	0.2	0.8	0.0	5.5

Intersection Summary	
HCM 2010 Ctrl Delay	17.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	123	206	146	123	257	17	196	76	94	7	92	168
Future Volume (veh/h)	123	206	146	123	257	17	196	76	94	7	92	168
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	1863	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	134	224	159	134	279	18	213	83	102	8	100	183
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	171	547	245	171	522	34	260	386	475	18	656	587
Arrive On Green	0.10	0.15	0.15	0.10	0.15	0.15	0.15	0.51	0.51	0.01	0.37	0.37
Sat Flow, veh/h	1774	3539	1583	1774	3377	217	1774	762	936	1774	1770	1583
Grp Volume(v), veh/h	134	224	159	134	145	152	213	0	185	8	100	183
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1824	1774	0	1698	1774	1770	1583
Q Serve(g_s), s	5.7	4.4	7.3	5.7	5.9	6.0	9.1	0.0	4.7	0.3	2.9	6.4
Cycle Q Clear(g_c), s	5.7	4.4	7.3	5.7	5.9	6.0	9.1	0.0	4.7	0.3	2.9	6.4
Prop In Lane	1.00		1.00	1.00		0.12	1.00		0.55	1.00		1.00
Lane Grp Cap(c), veh/h	171	547	245	171	274	282	260	0	861	18	656	587
V/C Ratio(X)	0.78	0.41	0.65	0.78	0.53	0.54	0.82	0.00	0.21	0.44	0.15	0.31
Avail Cap(c_a), veh/h	399	886	397	399	443	457	536	0	861	125	656	587
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	1.00	1.00
Uniform Delay (d), s/veh	34.4	29.7	30.9	34.4	30.3	30.3	32.2	0.0	10.6	38.3	16.3	17.4
Incr Delay (d2), s/veh	7.6	0.5	2.9	7.5	1.6	1.6	6.3	0.0	0.6	16.0	0.5	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	3.2	2.2	3.4	3.2	3.0	3.1	4.9	0.0	2.3	0.2	1.5	3.0
LnGrp Delay(d),s/veh	41.9	30.2	33.8	41.9	31.9	31.9	38.5	0.0	11.2	54.3	16.8	18.8
LnGrp LOS	D	C	C	D	C	C	D		B	D	B	B
Approach Vol, veh/h		517			431			398			291	
Approach Delay, s/veh		34.4			35.0			25.8			19.1	
Approach LOS		C			D			C			B	

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	5.3	44.0	12.0	16.5	15.9	33.4	12.0	16.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	39.5	17.5	19.5	23.5	21.5	17.5	19.5
Max Q Clear Time (g_c+I1), s	2.3	6.7	7.7	9.3	11.1	8.4	7.7	8.0
Green Ext Time (p_c), s	0.0	3.2	0.2	2.7	0.5	2.4	0.2	2.9

Intersection Summary	
HCM 2010 Ctrl Delay	29.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	272	42	68	196	88	28	139	101	130	161	41
Future Volume (veh/h)	31	272	42	68	196	88	28	139	101	130	161	41
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	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	34	296	46	74	213	96	30	151	110	141	175	45
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	125	589	263	206	672	301	114	1369	613	266	1526	683
Arrive On Green	0.04	0.17	0.17	0.06	0.19	0.19	0.03	0.39	0.39	0.08	0.43	0.43
Sat Flow, veh/h	3442	3539	1583	3442	3539	1583	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	34	296	46	74	213	96	30	151	110	141	175	45
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1721	1770	1583	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	0.6	4.4	1.5	1.2	3.0	3.0	0.5	1.6	2.7	2.3	1.7	1.0
Cycle Q Clear(g_c), s	0.6	4.4	1.5	1.2	3.0	3.0	0.5	1.6	2.7	2.3	1.7	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	125	589	263	206	672	301	114	1369	613	266	1526	683
V/C Ratio(X)	0.27	0.50	0.17	0.36	0.32	0.32	0.26	0.11	0.18	0.53	0.11	0.07
Avail Cap(c_a), veh/h	503	1248	558	444	1187	531	326	1369	613	385	1526	683
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	27.3	22.0	20.8	26.3	20.3	20.3	27.4	11.4	11.7	25.8	9.9	9.7
Incr Delay (d2), s/veh	1.2	0.7	0.3	1.0	0.3	0.6	1.2	0.2	0.6	1.6	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	0.3	2.2	0.7	0.6	1.5	1.4	0.3	0.8	1.3	1.1	0.9	0.4
LnGrp Delay(d),s/veh	28.4	22.7	21.1	27.3	20.6	20.9	28.6	11.6	12.4	27.5	10.1	9.9
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	A
Approach Vol, veh/h		376			383			291			361	
Approach Delay, s/veh		23.0			22.0			13.6			16.8	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	27.0	8.0	14.2	6.4	29.6	6.6	15.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	6.5	22.5	7.5	20.5	5.5	23.5	8.5	19.5
Max Q Clear Time (g_c+I1), s	4.3	4.7	3.2	6.4	2.5	3.7	2.6	5.0
Green Ext Time (p_c), s	0.1	2.4	0.1	3.3	0.0	2.5	0.0	3.3

Intersection Summary	
HCM 2010 Ctrl Delay	19.2
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑		↰	↑↑	
Traffic Vol, veh/h	6	22	6	13	21	29	8	184	19	36	164	11
Future Vol, veh/h	6	22	6	13	21	29	8	184	19	36	164	11
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	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	24	7	14	23	32	9	200	21	39	178	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	517	500	95	407	496	210	190	0	0	221	0	0
Stage 1	262	262	-	228	228	-	-	-	-	-	-	-
Stage 2	255	238	-	179	268	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.93	7.33	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	455	472	944	541	474	830	1382	-	-	1347	-	-
Stage 1	721	691	-	774	715	-	-	-	-	-	-	-
Stage 2	749	708	-	806	687	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	410	455	944	502	457	830	1382	-	-	1347	-	-
Mov Cap-2 Maneuver	410	455	-	502	457	-	-	-	-	-	-	-
Stage 1	716	671	-	769	710	-	-	-	-	-	-	-
Stage 2	693	703	-	750	667	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.9	11.9	0.3	1.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1382	-	-	490	590	1347	-	-
HCM Lane V/C Ratio	0.006	-	-	0.075	0.116	0.029	-	-
HCM Control Delay (s)	7.6	-	-	12.9	11.9	7.8	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.4	0.1	-	-

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕			↰	↑	
Traffic Vol, veh/h	0	10	14	9	0	13	9	15	0	7	183	13
Future Vol, veh/h	0	10	14	9	0	13	9	15	0	7	183	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	11	15	10	0	14	10	16	0	8	199	14
Number of Lanes	0	0	1	0	0	0	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	1
HCM Control Delay	8.6	8.5	9.9
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	30%	35%	100%	0%	0%
Vol Thru, %	0%	93%	42%	24%	0%	100%	81%
Vol Right, %	0%	7%	27%	41%	0%	0%	19%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	7	196	33	37	14	102	63
LT Vol	7	0	10	13	14	0	0
Through Vol	0	183	14	9	0	102	51
RT Vol	0	13	9	15	0	0	12
Lane Flow Rate	8	213	36	40	15	111	68
Geometry Grp	8	8	7	7	7	7	7
Degree of Util (X)	0.012	0.302	0.055	0.061	0.023	0.152	0.091
Departure Headway (Hd)	5.648	5.099	5.519	5.446	5.434	4.932	4.798
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	634	705	648	657	660	728	748
Service Time	3.376	2.828	3.262	3.187	3.158	2.656	2.522
HCM Lane V/C Ratio	0.013	0.302	0.056	0.061	0.023	0.152	0.091
HCM Control Delay	8.4	10	8.6	8.5	8.3	8.5	8
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0	1.3	0.2	0.2	0.1	0.5	0.3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	14	153	12
Future Vol, veh/h	0	14	153	12
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	15	166	13
Number of Lanes	0	1	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	8.3
HCM LOS	A

Level-of-Service (LOS) Calculations: Updated Project with Traffic Diverted Pats Ranch Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰↰	↑↑					↰	↕	↱
Traffic Volume (veh/h)	0	1174	505	651	697	0	0	0	0	211	2	469
Future Volume (veh/h)	0	1174	505	651	697	0	0	0	0	211	2	469
Number	5	2	12	1	6	16				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	1276	549	708	758	0				153	0	592
Adj No. of Lanes	0	2	1	2	2	0				1	0	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1540	689	801	2532	0				337	0	601
Arrive On Green	0.00	0.43	0.43	0.23	0.72	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	3632	1583	3442	3632	0				1774	0	3167
Grp Volume(v), veh/h	0	1276	549	708	758	0				153	0	592
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	30.2	28.4	18.8	7.4	0.0				7.3	0.0	17.7
Cycle Q Clear(g_c), s	0.0	30.2	28.4	18.8	7.4	0.0				7.3	0.0	17.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1540	689	801	2532	0				337	0	601
V/C Ratio(X)	0.00	0.83	0.80	0.88	0.30	0.00				0.45	0.00	0.99
Avail Cap(c_a), veh/h	0	1605	718	925	2724	0				337	0	601
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	23.7	23.2	35.1	4.9	0.0				34.1	0.0	38.3
Incr Delay (d2), s/veh	0.0	3.7	6.1	9.2	0.1	0.0				4.4	0.0	33.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	15.5	13.5	10.0	3.6	0.0				4.0	0.0	10.5
LnGrp Delay(d),s/veh	0.0	27.3	29.2	44.3	5.0	0.0				38.4	0.0	71.5
LnGrp LOS		C	C	D	A					D		E
Approach Vol, veh/h		1825			1466						745	
Approach Delay, s/veh		27.9			23.9						64.7	
Approach LOS		C			C						E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	26.6	45.8				72.3		22.5
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	25.5	43.0				73.0		18.0
Max Q Clear Time (g_c+I1), s	20.8	32.2				9.4		19.7
Green Ext Time (p_c), s	1.2	9.0				31.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	33.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	839	555	0	0	1133	346	229	2	320	0	0	0
Future Volume (veh/h)	839	555	0	0	1133	346	229	2	320	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	912	603	0	0	1232	376	373	0	216			
Adj No. of Lanes	2	2	0	0	2	1	2	0	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	981	2584	0	0	1416	633	639	0	285			
Arrive On Green	0.29	0.73	0.00	0.00	0.40	0.40	0.18	0.00	0.18			
Sat Flow, veh/h	3442	3632	0	0	3632	1583	3548	0	1583			
Grp Volume(v), veh/h	912	603	0	0	1232	376	373	0	216			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	25.8	5.5	0.0	0.0	32.0	18.7	9.6	0.0	13.0			
Cycle Q Clear(g_c), s	25.8	5.5	0.0	0.0	32.0	18.7	9.6	0.0	13.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	981	2584	0	0	1416	633	639	0	285			
V/C Ratio(X)	0.93	0.23	0.00	0.00	0.87	0.59	0.58	0.00	0.76			
Avail Cap(c_a), veh/h	1015	2584	0	0	1416	633	639	0	285			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	34.8	4.4	0.0	0.0	27.6	23.6	37.6	0.0	38.9			
Incr Delay (d2), s/veh	14.1	0.2	0.0	0.0	7.6	4.1	3.9	0.0	17.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.1	2.8	0.0	0.0	17.1	8.9	5.1	0.0	7.0			
LnGrp Delay(d),s/veh	48.9	4.6	0.0	0.0	35.2	27.7	41.4	0.0	56.0			
LnGrp LOS	D	A			D	C	D		E			
Approach Vol, veh/h		1515			1608			589				
Approach Delay, s/veh		31.3			33.4			46.8				
Approach LOS		C			C			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		77.5			33.0	44.5		22.5
Change Period (Y+Rc), s		4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s		73.0			29.5	39.0		18.0
Max Q Clear Time (g_c+I1), s		7.5			27.8	34.0		15.0
Green Ext Time (p_c), s		24.5			0.7	4.2		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	34.7
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	792	0	0	1435	2	0	0	0	9	0	31
Future Volume (veh/h)	20	792	0	0	1435	2	0	0	0	9	0	31
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	1863	1863	1900
Adj Flow Rate, veh/h	22	861	0	0	1560	0	0	0	0	10	0	34
Adj No. of Lanes	1	2	1	1	2	1	2	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	43	2152	963	2	1876	839	4	404	343	22	0	449
Arrive On Green	0.02	0.61	0.00	0.00	0.53	0.00	0.00	0.00	0.00	0.01	0.00	0.28
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	1863	1583	1774	0	1583
Grp Volume(v), veh/h	22	861	0	0	1560	0	0	0	0	10	0	34
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1863	1583	1774	0	1583
Q Serve(g_s), s	1.0	10.5	0.0	0.0	30.8	0.0	0.0	0.0	0.0	0.5	0.0	1.3
Cycle Q Clear(g_c), s	1.0	10.5	0.0	0.0	30.8	0.0	0.0	0.0	0.0	0.5	0.0	1.3
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	43	2152	963	2	1876	839	4	404	343	22	0	449
V/C Ratio(X)	0.52	0.40	0.00	0.00	0.83	0.00	0.00	0.00	0.00	0.45	0.00	0.08
Avail Cap(c_a), veh/h	107	2152	963	107	1876	839	207	404	343	107	0	449
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	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.0	8.4	0.0	0.0	16.4	0.0	0.0	0.0	0.0	40.7	0.0	21.8
Incr Delay (d2), s/veh	9.4	0.6	0.0	0.0	4.5	0.0	0.0	0.0	0.0	13.9	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	5.2	0.0	0.0	16.1	0.0	0.0	0.0	0.0	0.3	0.0	0.6
LnGrp Delay(d),s/veh	49.4	9.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	54.6	0.0	22.1
LnGrp LOS	D	A			C					D		C
Approach Vol, veh/h		883			1560			0			44	
Approach Delay, s/veh		10.0			20.9			0.0			29.5	
Approach LOS		A			C						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	55.0	0.0	28.0	6.5	48.5	5.5	22.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	44.0	5.0	18.0	5.0	44.0	5.0	18.0
Max Q Clear Time (g_c+I1), s	0.0	12.5	0.0	3.3	3.0	32.8	2.5	0.0
Green Ext Time (p_c), s	0.0	22.0	0.0	0.1	0.0	9.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	139	537	229	119	795	52	460	111	69	41	127	199
Future Volume (veh/h)	139	537	229	119	795	52	460	111	69	41	127	199
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	1900	1863	1863	1863
Adj Flow Rate, veh/h	151	584	249	129	864	57	500	121	75	45	138	216
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	186	1335	597	137	1237	553	260	552	321	112	610	273
Arrive On Green	0.10	0.38	0.38	0.08	0.35	0.35	0.15	0.26	0.26	0.06	0.17	0.17
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	2157	1254	1774	3539	1583
Grp Volume(v), veh/h	151	584	249	129	864	57	500	98	98	45	138	216
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1770	1641	1774	1770	1583
Q Serve(g_s), s	6.6	9.8	9.2	5.7	16.7	1.9	11.6	3.5	3.8	1.9	2.7	10.4
Cycle Q Clear(g_c), s	6.6	9.8	9.2	5.7	16.7	1.9	11.6	3.5	3.8	1.9	2.7	10.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.76	1.00		1.00
Lane Grp Cap(c), veh/h	186	1335	597	137	1237	553	260	453	420	112	610	273
V/C Ratio(X)	0.81	0.44	0.42	0.94	0.70	0.10	1.93	0.22	0.23	0.40	0.23	0.79
Avail Cap(c_a), veh/h	190	1335	597	137	1237	553	260	453	420	403	1089	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	34.7	18.4	18.2	36.4	22.2	17.4	33.8	23.2	23.4	35.7	28.2	31.4
Incr Delay (d2), s/veh	22.6	1.0	2.1	60.3	3.3	0.4	430.7	0.2	0.3	2.3	0.2	5.1
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	4.4	4.9	4.4	5.1	8.6	0.9	36.7	1.7	1.7	1.0	1.3	4.9
LnGrp Delay(d),s/veh	57.3	19.5	20.4	96.7	25.5	17.8	464.5	23.5	23.6	38.0	28.4	36.5
LnGrp LOS	E	B	C	F	C	B	F	C	C	D	C	D
Approach Vol, veh/h		984			1050			696			399	
Approach Delay, s/veh		25.5			33.8			340.3			33.9	
Approach LOS		C			C			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	34.4	16.1	18.2	12.8	32.2	9.5	24.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	6.1	29.9	11.6	24.4	8.5	27.5	18.0	18.0
Max Q Clear Time (g_c+I1), s	7.7	11.8	13.6	12.4	8.6	18.7	3.9	5.8
Green Ext Time (p_c), s	0.0	9.9	0.0	1.3	0.0	6.0	0.1	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	99.4
HCM 2010 LOS	F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0
Number	5	12	3	8	4	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	0	0	0	0	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	9999	9999	9999	9999	9999	9999
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	1583	1774	1863	-83824	1583
Grp Volume(v), veh/h	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1863	1863	1583
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c),						43328
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a),						39904
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS						
Approach Vol, veh/h	0			0	0	
Approach Delay, s/veh	0.0			0.0	0.0	
Approach LOS						

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		0.0	0.0	0.0				0.0
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		25.5	20.5	30.5				55.5
Max Q Clear Time (g_c+I1), s		0.0	0.0	0.0				0.0
Green Ext Time (p_c), s		0.0	0.0	0.0				0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	35	0	0	0	0	0	0	0	0	0	0
Future Volume (veh/h)	0	35	0	0	0	0	0	0	0	0	0	0
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	38	0	0	0	0	0	0	0	0	0	0
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	225	1601	0	0	1601	0	6	6	0	6	6	0
Arrive On Green	0.00	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	1863	0	0	1863	0	1774	1863	0	1774	1863	0
Grp Volume(v), veh/h	0	38	0	0	0	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1863	0	0	1863	0	1774	1863	0	1774	1863	0
Q Serve(g_s), s	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	225	1601	0	0	1601	0	6	6	0	6	6	0
V/C Ratio(X)	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	225	1601	0	0	1601	0	638	2416	0	416	2183	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	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS		A										
Approach Vol, veh/h		38			0			0			0	
Approach Delay, s/veh		0.4			0.0			0.0			0.0	
Approach LOS		A										

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		32.0	0.0	0.0		32.0	0.0	0.0
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		27.5	11.5	37.5		27.5	7.5	41.5
Max Q Clear Time (g_c+I1), s		2.1	0.0	0.0		0.0	0.0	0.0
Green Ext Time (p_c), s		0.1	0.0	0.0		0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.4
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	888	8	30	590	0	2	0	5	0	0	0
Future Volume (veh/h)	0	888	8	30	590	0	2	0	5	0	0	0
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	1863	1863	1863	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	965	9	33	641	0	2	0	5	0	0	0
Adj No. of Lanes	1	1	0	1	1	1	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	4	1062	10	66	1318	1120	16	0	165	0	4	0
Arrive On Green	0.00	0.58	0.58	0.04	0.71	0.00	0.01	0.00	0.10	0.00	0.00	0.00
Sat Flow, veh/h	1774	1843	17	1774	1863	1583	1774	0	1583	0	1863	0
Grp Volume(v), veh/h	0	0	974	33	641	0	2	0	5	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	0	1860	1774	1863	1583	1774	0	1583	0	1863	0
Q Serve(g_s), s	0.0	0.0	22.3	0.9	7.3	0.0	0.1	0.0	0.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	22.3	0.9	7.3	0.0	0.1	0.0	0.1	0.0	0.0	0.0
Prop In Lane	1.00		0.01	1.00		1.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	4	0	1072	66	1318	1120	16	0	165	0	4	0
V/C Ratio(X)	0.00	0.00	0.91	0.50	0.49	0.00	0.12	0.00	0.03	0.00	0.00	0.00
Avail Cap(c_a), veh/h	537	0	1204	185	1318	1120	667	0	595	0	700	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	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	9.0	22.6	3.1	0.0	23.5	0.0	19.3	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	9.5	5.8	0.3	0.0	3.2	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	13.9	0.5	3.7	0.0	0.0	0.0	0.1	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	18.5	28.4	3.4	0.0	26.8	0.0	19.3	0.0	0.0	0.0
LnGrp LOS			B	C	A		C		B			
Approach Vol, veh/h		974			674			7			0	
Approach Delay, s/veh		18.5			4.6			21.5			0.0	
Approach LOS		B			A			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	32.1	4.9	4.6	0.0	38.4	0.0	9.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.8	31.0	18.0	18.0	14.5	21.5	18.0	18.0
Max Q Clear Time (g_c+I1), s	11.3	24.3	2.1	0.0	0.0	9.3	0.0	2.1
Green Ext Time (p_c), s	0.0	3.3	0.0	0.0	0.0	8.6	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.9
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	83.7
Intersection LOS	F

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Lane Configurations									
Traffic Vol, veh/h	0	246	725	0	519	89	0	2	120
Future Vol, veh/h	0	246	725	0	519	89	0	2	120
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	267	788	0	564	97	0	2	130
Number of Lanes	0	1	1	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	2
HCM Control Delay	116.6	45.6	11.7
HCM LOS	F	E	B

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	0%	0%	2%
Vol Thru, %	0%	100%	100%	0%	0%
Vol Right, %	0%	0%	0%	100%	98%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	246	725	519	89	122
LT Vol	246	0	0	0	2
Through Vol	0	725	519	0	0
RT Vol	0	0	0	89	120
Lane Flow Rate	267	788	564	97	133
Geometry Grp	7	7	7	7	2
Degree of Util (X)	0.467	1.266	0.953	0.145	0.231
Departure Headway (Hd)	6.29	5.784	6.364	5.654	6.682
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	575	630	575	638	541
Service Time	4.005	3.499	4.064	3.354	4.682
HCM Lane V/C Ratio	0.464	1.251	0.981	0.152	0.246
HCM Control Delay	14.4	151.3	51.8	9.3	11.7
HCM Lane LOS	B	F	F	A	B
HCM 95th-tile Q	2.5	30.4	12.7	0.5	0.9

Intersection	
Intersection Delay, s/veh	142
Intersection LOS	F

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR	SWU	SWL	SWR
Lane Configurations												
Traffic Vol, veh/h	0	233	31	0	218	59	0	97	333	0	37	41
Future Vol, veh/h	0	233	31	0	218	59	0	97	333	0	37	41
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	253	34	0	237	64	0	105	362	0	40	45
Number of Lanes	0	0	0	0	0	1	0	1	1	0	1	0

Approach	WB	SW
Opposing Approach	EB	
Opposing Lanes	1	0
Conflicting Approach Left		WB
Conflicting Lanes Left	0	1
Conflicting Approach Right	SB	SB
Conflicting Lanes Right	3	3
HCM Control Delay	27.7	15.1
HCM LOS	D	C

Lane	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3	SWLn1
Vol Left, %	95%	0%	100%	100%	0%	40%
Vol Thru, %	5%	78%	0%	0%	0%	0%
Vol Right, %	0%	22%	0%	0%	100%	60%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	666	278	83	97	333	92
LT Vol	635	0	83	97	0	37
Through Vol	31	218	0	0	0	0
RT Vol	0	60	0	0	333	55
Lane Flow Rate	724	302	90	105	362	100
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	1.595	0.647	0.202	0.236	0.691	0.231
Departure Headway (Hd)	7.933	9.377	9.659	9.659	8.407	9.563
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	463	390	374	374	434	378
Service Time	5.718	7.077	7.359	7.359	6.107	7.263
HCM Lane V/C Ratio	1.564	0.774	0.241	0.281	0.834	0.265
HCM Control Delay	298.5	27.7	14.8	15.3	27.9	15.1
HCM Lane LOS	F	D	B	C	D	C
HCM 95th-tile Q	40.1	4.4	0.7	0.9	5.1	0.9

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↕		↰	↑↕	
Traffic Vol, veh/h	11	6	14	9	15	58	6	580	15	11	453	4
Future Vol, veh/h	11	6	14	9	15	58	6	580	15	11	453	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	7	15	10	16	63	7	630	16	12	492	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1209	1178	248	925	1173	639	497	0	0	647	0	0
Stage 1	518	518	-	652	652	-	-	-	-	-	-	-
Stage 2	691	660	-	273	521	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.93	7.33	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	149	190	753	236	191	475	1065	-	-	937	-	-
Stage 1	510	532	-	456	463	-	-	-	-	-	-	-
Stage 2	434	459	-	710	531	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	119	186	753	222	187	475	1065	-	-	937	-	-
Mov Cap-2 Maneuver	119	186	-	222	187	-	-	-	-	-	-	-
Stage 1	507	525	-	453	460	-	-	-	-	-	-	-
Stage 2	361	456	-	678	524	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	24.7	19.4	0.1	0.2
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1065	-	-	216	338	937	-	-
HCM Lane V/C Ratio	0.006	-	-	0.156	0.264	0.013	-	-
HCM Control Delay (s)	8.4	-	-	24.7	19.4	8.9	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	1	0	-	-

Intersection	
Intersection Delay, s/veh	46.6
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕			↰	↑	
Traffic Vol, veh/h	0	27	3	32	0	12	7	31	0	9	562	15
Future Vol, veh/h	0	27	3	32	0	12	7	31	0	9	562	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	29	3	35	0	13	8	34	0	10	611	16
Number of Lanes	0	0	1	0	0	0	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	1
HCM Control Delay	11.3	10.9	80.8
HCM LOS	B	B	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	44%	24%	100%	0%	0%
Vol Thru, %	0%	97%	5%	14%	0%	100%	94%
Vol Right, %	0%	3%	52%	62%	0%	0%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	9	577	62	50	9	309	163
LT Vol	9	0	27	12	9	0	0
Through Vol	0	562	3	7	0	309	154
RT Vol	0	15	32	31	0	0	9
Lane Flow Rate	10	627	67	54	10	336	178
Geometry Grp	8	8	7	7	7	7	7
Degree of Util (X)	0.018	1.072	0.134	0.108	0.017	0.521	0.274
Departure Headway (Hd)	6.677	6.154	7.483	7.36	6.289	5.782	5.743
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	539	596	482	490	573	627	630
Service Time	4.381	3.858	5.183	5.06	3.989	3.482	3.443
HCM Lane V/C Ratio	0.019	1.052	0.139	0.11	0.017	0.536	0.283
HCM Control Delay	9.5	81.9	11.3	10.9	9.1	14.6	10.6
HCM Lane LOS	A	F	B	B	A	B	B
HCM 95th-tile Q	0.1	18.2	0.5	0.4	0.1	3	1.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	9	463	9
Future Vol, veh/h	0	9	463	9
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	10	503	10
Number of Lanes	0	1	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	13.1
HCM LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1150	517	470	1059	0	0	0	0	299	1	837
Future Volume (veh/h)	0	1150	517	470	1059	0	0	0	0	299	1	837
Number	5	2	12	1	6	16				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	1250	562	511	1151	0				217	0	1026
Adj No. of Lanes	0	2	1	2	2	0				1	0	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1384	619	563	2141	0				523	0	934
Arrive On Green	0.00	0.39	0.39	0.16	0.60	0.00				0.29	0.00	0.29
Sat Flow, veh/h	0	3632	1583	3442	3632	0				1774	0	3167
Grp Volume(v), veh/h	0	1250	562	511	1151	0				217	0	1026
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	29.9	30.1	13.1	17.1	0.0				8.8	0.0	26.5
Cycle Q Clear(g_c), s	0.0	29.9	30.1	13.1	17.1	0.0				8.8	0.0	26.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1384	619	563	2141	0				523	0	934
V/C Ratio(X)	0.00	0.90	0.91	0.91	0.54	0.00				0.41	0.00	1.10
Avail Cap(c_a), veh/h	0	1391	622	563	2147	0				523	0	934
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	25.7	25.8	36.9	10.4	0.0				25.4	0.0	31.7
Incr Delay (d2), s/veh	0.0	8.5	17.1	18.5	0.3	0.0				2.4	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	16.2	16.1	7.7	8.4	0.0				4.7	0.0	19.4
LnGrp Delay(d),s/veh	0.0	34.3	43.0	55.4	10.7	0.0				27.9	0.0	91.8
LnGrp LOS		C	D	E	B					C		F
Approach Vol, veh/h		1812			1662						1243	
Approach Delay, s/veh		37.0			24.4						80.6	
Approach LOS		D			C						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	19.2	39.6				58.8		31.0
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	14.7	35.3				54.5		26.5
Max Q Clear Time (g_c+I1), s	15.1	32.1				19.1		28.5
Green Ext Time (p_c), s	0.0	3.0				26.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	44.0
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	480	965	0	0	1092	307	429	0	796	0	0	0
Future Volume (veh/h)	480	965	0	0	1092	307	429	0	796	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	522	1049	0	0	1187	334	311	0	1031			
Adj No. of Lanes	2	2	0	0	2	1	1	0	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	605	2183	0	0	1383	619	503	0	897			
Arrive On Green	0.18	0.62	0.00	0.00	0.39	0.39	0.28	0.00	0.28			
Sat Flow, veh/h	3442	3632	0	0	3632	1583	1774	0	3167			
Grp Volume(v), veh/h	522	1049	0	0	1187	334	311	0	1031			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	13.3	14.5	0.0	0.0	27.7	14.7	13.7	0.0	25.5			
Cycle Q Clear(g_c), s	13.3	14.5	0.0	0.0	27.7	14.7	13.7	0.0	25.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	605	2183	0	0	1383	619	503	0	897			
V/C Ratio(X)	0.86	0.48	0.00	0.00	0.86	0.54	0.62	0.00	1.15			
Avail Cap(c_a), veh/h	688	2183	0	0	1383	619	503	0	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	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	36.0	9.4	0.0	0.0	25.1	21.2	28.0	0.0	32.3			
Incr Delay (d2), s/veh	10.0	0.8	0.0	0.0	7.1	3.4	5.6	0.0	80.1			
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	7.1	7.2	0.0	0.0	14.9	7.0	7.4	0.0	21.1			
LnGrp Delay(d),s/veh	46.0	10.2	0.0	0.0	32.2	24.5	33.7	0.0	112.3			
LnGrp LOS	D	B			C	C	C		F			
Approach Vol, veh/h		1571			1521			1342				
Approach Delay, s/veh		22.1			30.5			94.1				
Approach LOS		C			C			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		60.0			20.3	39.7		30.0
Change Period (Y+Rc), s		4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s		55.5			18.0	33.0		25.5
Max Q Clear Time (g_c+I1), s		16.5			15.3	29.7		27.5
Green Ext Time (p_c), s		24.8			0.6	3.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	46.8
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	1512	0	0	1357	0	0	0	0	8	0	29
Future Volume (veh/h)	36	1512	0	0	1357	0	0	0	0	8	0	29
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	1863	1863	1900
Adj Flow Rate, veh/h	39	1643	0	0	1475	0	0	0	0	9	0	32
Adj No. of Lanes	1	2	1	1	2	1	2	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	63	2171	971	2	1855	830	4	399	340	20	0	442
Arrive On Green	0.04	0.61	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.01	0.00	0.28
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	1863	1583	1774	0	1583
Grp Volume(v), veh/h	39	1643	0	0	1475	0	0	0	0	9	0	32
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1863	1583	1774	0	1583
Q Serve(g_s), s	1.8	28.1	0.0	0.0	28.5	0.0	0.0	0.0	0.0	0.4	0.0	1.2
Cycle Q Clear(g_c), s	1.8	28.1	0.0	0.0	28.5	0.0	0.0	0.0	0.0	0.4	0.0	1.2
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	63	2171	971	2	1855	830	4	399	340	20	0	442
V/C Ratio(X)	0.62	0.76	0.00	0.00	0.79	0.00	0.00	0.00	0.00	0.45	0.00	0.07
Avail Cap(c_a), veh/h	106	2171	971	106	1855	830	205	399	340	106	0	442
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	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.9	11.7	0.0	0.0	16.3	0.0	0.0	0.0	0.0	41.2	0.0	22.2
Incr Delay (d2), s/veh	9.4	2.5	0.0	0.0	3.6	0.0	0.0	0.0	0.0	15.0	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	14.2	0.0	0.0	14.7	0.0	0.0	0.0	0.0	0.3	0.0	0.6
LnGrp Delay(d),s/veh	49.4	14.2	0.0	0.0	19.9	0.0	0.0	0.0	0.0	56.2	0.0	22.6
LnGrp LOS	D	B			B					E		C
Approach Vol, veh/h		1682			1475			0			41	
Approach Delay, s/veh		15.0			19.9			0.0			30.0	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	56.0	0.0	27.9	7.5	48.5	5.4	22.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	44.0	5.0	18.0	5.0	44.0	5.0	18.0
Max Q Clear Time (g_c+I1), s	0.0	30.1	0.0	3.2	3.8	30.5	2.4	0.0
Green Ext Time (p_c), s	0.0	12.9	0.0	0.1	0.0	12.5	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	986	355	189	692	59	460	75	213	67	164	207
Future Volume (veh/h)	202	986	355	189	692	59	460	75	213	67	164	207
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	1900	1863	1863	1863
Adj Flow Rate, veh/h	220	1072	386	205	752	64	500	82	232	73	178	225
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	258	1369	612	111	1075	481	259	460	412	118	638	286
Arrive On Green	0.15	0.39	0.39	0.06	0.30	0.30	0.15	0.26	0.26	0.07	0.18	0.18
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	1770	1583	1774	3539	1583
Grp Volume(v), veh/h	220	1072	386	205	752	64	500	82	232	73	178	225
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	9.7	21.4	15.8	5.0	15.1	2.4	11.7	2.9	10.2	3.2	3.5	10.9
Cycle Q Clear(g_c), s	9.7	21.4	15.8	5.0	15.1	2.4	11.7	2.9	10.2	3.2	3.5	10.9
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	258	1369	612	111	1075	481	259	460	412	118	638	286
V/C Ratio(X)	0.85	0.78	0.63	1.85	0.70	0.13	1.93	0.18	0.56	0.62	0.28	0.79
Avail Cap(c_a), veh/h	279	1369	612	111	1075	481	259	460	412	398	1073	480
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	33.4	21.6	19.9	37.6	24.7	20.3	34.2	23.0	25.7	36.4	28.4	31.4
Incr Delay (d2), s/veh	20.5	4.5	4.9	416.2	3.8	0.6	432.8	0.2	1.8	5.2	0.2	4.8
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	6.2	11.3	7.7	15.2	7.9	1.1	36.8	1.4	4.6	1.8	1.7	5.1
LnGrp Delay(d),s/veh	53.9	26.2	24.8	453.7	28.5	20.8	467.0	23.2	27.5	41.7	28.6	36.2
LnGrp LOS	D	C	C	F	C	C	F	C	C	D	C	D
Approach Vol, veh/h		1678			1021			814			476	
Approach Delay, s/veh		29.5			113.4			297.1			34.2	
Approach LOS		C			F			F			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	35.5	16.2	19.0	16.2	28.8	9.8	25.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	31.0	11.7	24.3	12.6	23.4	18.0	18.0
Max Q Clear Time (g_c+I1), s	7.0	23.4	13.7	12.9	11.7	17.1	5.2	12.2
Green Ext Time (p_c), s	0.0	6.2	0.0	1.6	0.1	5.3	0.1	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	106.1
HCM 2010 LOS	F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (veh/h)	0	0	0	0	0	0
Number	5	12	3	8	4	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	0	0	0	0	0
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	9999	9999	9999	9999	9999	9999
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1774	1583	1774	1863	-83824	1583
Grp Volume(v), veh/h	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1863	1863	1583
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	[illegible]					43328
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	[illegible]					39904
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS						
Approach Vol, veh/h	0			0	0	
Approach Delay, s/veh	0.0			0.0	0.0	
Approach LOS						

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		0.0	0.0	0.0				0.0
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		25.5	20.5	30.5				55.5
Max Q Clear Time (g_c+I1), s		0.0	0.0	0.0				0.0
Green Ext Time (p_c), s		0.0	0.0	0.0				0.0

Intersection Summary	
HCM 2010 Ctrl Delay	0.0
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	59	0	0	43	0	0	0	0	0	0	0
Future Volume (veh/h)	0	59	0	0	43	0	0	0	0	0	0	0
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	0	64	0	0	47	0	0	0	0	0	0	0
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	248	1574	0	0	1574	0	6	6	0	6	6	0
Arrive On Green	0.00	0.84	0.00	0.00	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1353	1863	0	0	1863	0	1774	1863	0	1774	1863	0
Grp Volume(v), veh/h	0	64	0	0	47	0	0	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1353	1863	0	0	1863	0	1774	1863	0	1774	1863	0
Q Serve(g_s), s	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	248	1574	0	0	1574	0	6	6	0	6	6	0
V/C Ratio(X)	0.00	0.04	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	248	1574	0	0	1574	0	1193	3886	0	703	3372	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	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.4	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS		A			A							
Approach Vol, veh/h		64			47			0			0	
Approach Delay, s/veh		0.4			0.4			0.0			0.0	
Approach LOS		A			A							

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		29.0	0.0	0.0		29.0	0.0	0.0
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		24.5	19.5	52.5		24.5	11.5	60.5
Max Q Clear Time (g_c+I1), s		2.2	0.0	0.0		2.1	0.0	0.0
Green Ext Time (p_c), s		0.5	0.0	0.0		0.5	0.0	0.0

Intersection Summary		
HCM 2010 Ctrl Delay		0.4
HCM 2010 LOS		A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	930	0	2	729	0	4	0	16	0	0	0
Future Volume (veh/h)	0	930	0	2	729	0	4	0	16	0	0	0
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	1863	1863	1863	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	1011	0	2	792	0	4	0	17	0	0	0
Adj No. of Lanes	1	1	0	1	1	1	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	4	1110	0	5	1297	1102	45	0	172	0	4	0
Arrive On Green	0.00	0.60	0.00	0.00	0.70	0.00	0.03	0.00	0.11	0.00	0.00	0.00
Sat Flow, veh/h	1774	1863	0	1774	1863	1583	1774	0	1583	0	1863	0
Grp Volume(v), veh/h	0	1011	0	2	792	0	4	0	17	0	0	0
Grp Sat Flow(s),veh/h/ln	1774	1863	0	1774	1863	1583	1774	0	1583	0	1863	0
Q Serve(g_s), s	0.0	22.1	0.0	0.1	10.4	0.0	0.1	0.0	0.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	22.1	0.0	0.1	10.4	0.0	0.1	0.0	0.4	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	4	1110	0	5	1297	1102	45	0	172	0	4	0
V/C Ratio(X)	0.00	0.91	0.00	0.41	0.61	0.00	0.09	0.00	0.10	0.00	0.00	0.00
Avail Cap(c_a), veh/h	558	1253	0	193	1297	1102	693	0	619	0	728	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	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	8.2	0.0	22.9	3.7	0.0	21.9	0.0	18.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	9.4	0.0	47.3	0.8	0.0	0.8	0.0	0.2	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	13.8	0.0	0.1	5.4	0.0	0.1	0.0	0.2	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	17.6	0.0	70.3	4.5	0.0	22.7	0.0	18.8	0.0	0.0	0.0
LnGrp LOS		B		E	A		C		B			
Approach Vol, veh/h		1011			794			21			0	
Approach Delay, s/veh		17.6			4.7			19.5			0.0	
Approach LOS		B			A			B				

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	4.6	31.9	5.7	3.8	0.0	36.6	0.0	9.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.8	31.0	18.0	18.0	14.5	21.5	18.0	18.0
Max Q Clear Time (g_c+I1), s	2.1	24.1	2.1	0.0	0.0	12.4	0.0	2.4
Green Ext Time (p_c), s	0.0	3.3	0.0	0.0	0.0	7.3	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.0
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	163
Intersection LOS	F

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Lane Configurations									
Traffic Vol, veh/h	0	47	891	0	705	12	0	9	64
Future Vol, veh/h	0	47	891	0	705	12	0	9	64
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	51	968	0	766	13	0	10	70
Number of Lanes	0	1	1	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	2
HCM Control Delay	216	109.1	11.6
HCM LOS	F	F	B

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	0%	0%	12%
Vol Thru, %	0%	100%	100%	0%	0%
Vol Right, %	0%	0%	0%	100%	88%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	47	891	705	12	73
LT Vol	47	0	0	0	9
Through Vol	0	891	705	0	0
RT Vol	0	0	0	12	64
Lane Flow Rate	51	968	766	13	79
Geometry Grp	7	7	7	7	2
Degree of Util (X)	0.084	1.449	1.161	0.017	0.144
Departure Headway (Hd)	6.079	5.574	5.841	5.132	7.337
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	593	659	628	702	492
Service Time	3.779	3.274	3.541	2.832	5.337
HCM Lane V/C Ratio	0.086	1.469	1.22	0.019	0.161
HCM Control Delay	9.3	226.9	110.8	7.9	11.6
HCM Lane LOS	A	F	F	A	B
HCM 95th-tile Q	0.3	44.2	23.7	0.1	0.5

Intersection	
Intersection Delay, s/veh	278.9
Intersection LOS	F

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR	SWU	SWL	SWR
Lane Configurations												
Traffic Vol, veh/h	0	211	52	0	0	158	0	85	1	0	527	49
Future Vol, veh/h	0	211	52	0	0	158	0	85	1	0	527	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	229	57	0	0	172	0	92	1	0	573	53
Number of Lanes	0	0	0	0	0	1	0	1	1	0	1	0

Approach	WB	SW
Opposing Approach	EB	
Opposing Lanes	1	0
Conflicting Approach Left		WB
Conflicting Lanes Left	0	1
Conflicting Approach Right	SB	SB
Conflicting Lanes Right	3	3
HCM Control Delay	17.4	149.5
HCM LOS	C	F

Lane	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3	SWLn1
Vol Left, %	94%	0%	100%	100%	0%	91%
Vol Thru, %	6%	0%	0%	0%	0%	0%
Vol Right, %	0%	100%	0%	0%	100%	9%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	895	161	30	85	1	579
LT Vol	843	0	30	85	0	527
Through Vol	52	0	0	0	0	0
RT Vol	0	161	0	0	1	52
Lane Flow Rate	973	175	33	92	1	629
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	1.93	0.363	0.08	0.226	0.002	1.235
Departure Headway (Hd)	7.524	9.418	10.828	10.828	9.562	8.192
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	496	385	333	334	377	447
Service Time	5.224	7.118	8.528	8.528	7.262	5.892
HCM Lane V/C Ratio	1.962	0.455	0.099	0.275	0.003	1.407
HCM Control Delay	443.8	17.4	14.5	16.7	12.3	149.5
HCM Lane LOS	F	C	B	C	B	F
HCM 95th-tile Q	61.3	1.6	0.3	0.9	0	22.1

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑		↰	↑↑	
Traffic Vol, veh/h	6	22	6	13	21	29	8	728	19	36	633	11
Future Vol, veh/h	6	22	6	13	21	29	8	728	19	36	633	11
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	-	-	-	-	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	24	7	14	23	32	9	791	21	39	688	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1618	1601	350	1253	1597	802	700	0	0	812	0	0
Stage 1	772	772	-	819	819	-	-	-	-	-	-	-
Stage 2	846	829	-	434	778	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.93	7.33	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	76	105	647	138	106	383	895	-	-	812	-	-
Stage 1	359	408	-	369	388	-	-	-	-	-	-	-
Stage 2	356	384	-	571	406	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	55	99	647	106	100	383	895	-	-	812	-	-
Mov Cap-2 Maneuver	55	99	-	106	100	-	-	-	-	-	-	-
Stage 1	355	388	-	365	384	-	-	-	-	-	-	-
Stage 2	304	380	-	505	387	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	60.7	45.9	0.1	0.5
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	895	-	-	100	154	812	-	-
HCM Lane V/C Ratio	0.01	-	-	0.37	0.445	0.048	-	-
HCM Control Delay (s)	9.1	-	-	60.7	45.9	9.7	-	-
HCM Lane LOS	A	-	-	F	E	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.5	2	0.2	-	-

Intersection	
Intersection Delay, s/veh	113.1
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕			↰	↑	
Traffic Vol, veh/h	0	10	14	9	0	13	9	15	0	7	727	13
Future Vol, veh/h	0	10	14	9	0	13	9	15	0	7	727	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	11	15	10	0	14	10	16	0	8	790	14
Number of Lanes	0	0	1	0	0	0	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	1
HCM Control Delay	11.6	11.5	206.4
HCM LOS	B	B	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	30%	35%	100%	0%	0%
Vol Thru, %	0%	98%	42%	24%	0%	100%	95%
Vol Right, %	0%	2%	27%	41%	0%	0%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	7	740	33	37	14	415	219
LT Vol	7	0	10	13	14	0	0
Through Vol	0	727	14	9	0	415	207
RT Vol	0	13	9	15	0	0	12
Lane Flow Rate	8	804	36	40	15	451	238
Geometry Grp	8	8	7	7	7	7	7
Degree of Util (X)	0.014	1.399	0.074	0.083	0.025	0.676	0.355
Departure Headway (Hd)	6.778	6.262	8.197	8.105	6.264	5.757	5.719
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	531	587	440	445	575	631	634
Service Time	4.478	3.962	5.897	5.805	3.964	3.457	3.419
HCM Lane V/C Ratio	0.015	1.37	0.082	0.09	0.026	0.715	0.375
HCM Control Delay	9.6	208.3	11.6	11.5	9.1	19.6	11.5
HCM Lane LOS	A	F	B	B	A	C	B
HCM 95th-tile Q	0	36.9	0.2	0.3	0.1	5.2	1.6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	14	622	12
Future Vol, veh/h	0	14	622	12
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	15	676	13
Number of Lanes	0	1	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	16.6
HCM LOS	C

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	817	58	0	1467	0	0	0	0	0	0	12
Future Vol, veh/h	0	817	58	0	1467	0	0	0	0	0	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	210	-	110	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	888	63	0	1595	0	0	0	0	0	0	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1595	0	0	-	-	0	-	-	444	-	-	797
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	-	-	-	7.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	-	-	-	-	-	3.92	-	-	3.32
Pot Cap-1 Maneuver	407	-	-	0	-	-	0	0	480	0	0	329
Stage 1	-	-	-	0	-	-	0	0	-	0	0	-
Stage 2	-	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	407	-	-	-	-	-	-	-	480	-	-	329
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	16.4
HCM LOS			A	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	-	407	-	-	-	-	329
HCM Lane V/C Ratio	-	-	-	-	-	-	0.04
HCM Control Delay (s)	0	0	-	-	-	-	16.4
HCM Lane LOS	A	A	-	-	-	-	C
HCM 95th %tile Q(veh)	-	0	-	-	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	200	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	1022	1083	1621	-	-	0
Stage 1	1022	-	-	-	-	0
Stage 2	-	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	1022	1083	1621	-	-	-
Mov Cap-2 Maneuver	933	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	1621	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	0	-	0	-
HCM Lane LOS	A	-	A	-
HCM 95th %tile Q(veh)	0	-	-	-

Level-of-Service (LOS) Calculations: Updated Project (Two-Fold) at I-15 NB & SB Ramps and Pats Ranch Road at Limonite Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰↰	↑↑					↰	✣	↱
Traffic Volume (veh/h)	0	1174	505	651	697	0	0	0	0	289	2	469
Future Volume (veh/h)	0	1174	505	651	697	0	0	0	0	289	2	469
Number	5	2	12	1	6	16				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	1276	549	708	758	0				210	0	623
Adj No. of Lanes	0	2	1	2	2	0				1	0	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1540	689	801	2532	0				337	0	601
Arrive On Green	0.00	0.43	0.43	0.23	0.72	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	3632	1583	3442	3632	0				1774	0	3167
Grp Volume(v), veh/h	0	1276	549	708	758	0				210	0	623
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	30.2	28.4	18.8	7.4	0.0				10.3	0.0	18.0
Cycle Q Clear(g_c), s	0.0	30.2	28.4	18.8	7.4	0.0				10.3	0.0	18.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1540	689	801	2532	0				337	0	601
V/C Ratio(X)	0.00	0.83	0.80	0.88	0.30	0.00				0.62	0.00	1.04
Avail Cap(c_a), veh/h	0	1605	718	925	2724	0				337	0	601
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	23.7	23.2	35.1	4.9	0.0				35.3	0.0	38.4
Incr Delay (d2), s/veh	0.0	3.7	6.1	9.2	0.1	0.0				8.4	0.0	46.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	15.5	13.5	10.0	3.6	0.0				5.9	0.0	11.7
LnGrp Delay(d),s/veh	0.0	27.3	29.2	44.3	5.0	0.0				43.8	0.0	84.9
LnGrp LOS		C	C	D	A					D		F
Approach Vol, veh/h		1825			1466						833	
Approach Delay, s/veh		27.9			23.9						74.6	
Approach LOS		C			C						E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	26.6	45.8				72.3		22.5
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	25.5	43.0				73.0		18.0
Max Q Clear Time (g_c+I1), s	20.8	32.2				9.4		20.0
Green Ext Time (p_c), s	1.2	9.0				31.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	35.9
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	839	633	0	0	1133	358	229	2	320	0	0	0
Future Volume (veh/h)	839	633	0	0	1133	358	229	2	320	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	912	688	0	0	1232	389	373	0	216			
Adj No. of Lanes	2	2	0	0	2	1	2	0	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	952	2477	0	0	1321	591	710	0	317			
Arrive On Green	0.28	0.70	0.00	0.00	0.37	0.37	0.20	0.00	0.20			
Sat Flow, veh/h	3442	3632	0	0	3632	1583	3548	0	1583			
Grp Volume(v), veh/h	912	688	0	0	1232	389	373	0	216			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	23.5	6.5	0.0	0.0	30.1	18.4	8.5	0.0	11.4			
Cycle Q Clear(g_c), s	23.5	6.5	0.0	0.0	30.1	18.4	8.5	0.0	11.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	952	2477	0	0	1321	591	710	0	317			
V/C Ratio(X)	0.96	0.28	0.00	0.00	0.93	0.66	0.53	0.00	0.68			
Avail Cap(c_a), veh/h	952	2477	0	0	1321	591	710	0	317			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	32.0	5.0	0.0	0.0	27.1	23.4	32.2	0.0	33.3			
Incr Delay (d2), s/veh	19.7	0.3	0.0	0.0	13.1	5.7	2.8	0.0	11.3			
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	13.7	3.2	0.0	0.0	17.0	8.9	4.4	0.0	6.0			
LnGrp Delay(d),s/veh	51.7	5.3	0.0	0.0	40.2	29.1	35.0	0.0	44.7			
LnGrp LOS	D	A			D	C	C		D			
Approach Vol, veh/h		1600			1621			589				
Approach Delay, s/veh		31.8			37.6			38.5				
Approach LOS		C			D			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		67.5			29.4	38.1		22.5
Change Period (Y+Rc), s		4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s		63.0			24.9	33.6		18.0
Max Q Clear Time (g_c+I1), s		8.5			25.5	32.1		13.4
Green Ext Time (p_c), s		24.8			0.0	1.4		1.0

Intersection Summary	
HCM 2010 Ctrl Delay	35.3
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	693	187	165	1091	2	356	3	109	1	8	31
Future Volume (veh/h)	20	693	187	165	1091	2	356	3	109	1	8	31
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	1863	1863	1900
Adj Flow Rate, veh/h	22	753	203	179	1186	0	387	3	118	1	9	34
Adj No. of Lanes	1	2	1	1	2	1	2	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	1076	481	211	1416	633	486	718	610	2	84	318
Arrive On Green	0.02	0.30	0.30	0.12	0.40	0.00	0.14	0.39	0.39	0.00	0.25	0.25
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	1863	1583	1774	342	1293
Grp Volume(v), veh/h	22	753	203	179	1186	0	387	3	118	1	0	43
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1863	1583	1774	0	1635
Q Serve(g_s), s	1.2	17.8	9.7	9.4	28.6	0.0	10.3	0.1	4.7	0.1	0.0	1.9
Cycle Q Clear(g_c), s	1.2	17.8	9.7	9.4	28.6	0.0	10.3	0.1	4.7	0.1	0.0	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.79
Lane Grp Cap(c), veh/h	41	1076	481	211	1416	633	486	718	610	2	0	402
V/C Ratio(X)	0.53	0.70	0.42	0.85	0.84	0.00	0.80	0.00	0.19	0.41	0.00	0.11
Avail Cap(c_a), veh/h	94	1076	481	219	1416	633	854	718	610	94	0	402
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	0.00	1.00
Uniform Delay (d), s/veh	45.7	29.1	26.3	40.9	25.6	0.0	39.4	17.9	19.3	47.2	0.0	27.7
Incr Delay (d2), s/veh	10.3	3.8	2.7	24.8	6.1	0.0	3.0	0.0	0.7	84.6	0.0	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	0.7	9.2	4.6	6.0	15.2	0.0	5.1	0.1	2.2	0.1	0.0	0.9
LnGrp Delay(d),s/veh	56.1	32.9	29.0	65.7	31.7	0.0	42.4	17.9	20.0	131.9	0.0	28.2
LnGrp LOS	E	C	C	E	C		D	B	C	F		C
Approach Vol, veh/h		978			1365			508			44	
Approach Delay, s/veh		32.6			36.2			37.1			30.6	
Approach LOS		C			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.8	33.3	17.9	27.8	6.7	42.4	4.6	41.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	11.7	28.8	23.5	18.0	5.0	35.5	5.0	36.5
Max Q Clear Time (g_c+I1), s	11.4	19.8	12.3	3.9	3.2	30.6	2.1	6.7
Green Ext Time (p_c), s	0.0	7.1	1.1	0.5	0.0	4.1	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	35.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1150	517	470	1059	0	0	0	0	310	1	837
Future Volume (veh/h)	0	1150	517	470	1059	0	0	0	0	310	1	837
Number	5	2	12	1	6	16				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	1250	562	511	1151	0				225	0	1031
Adj No. of Lanes	0	2	1	2	2	0				1	0	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1384	619	563	2141	0				523	0	934
Arrive On Green	0.00	0.39	0.39	0.16	0.60	0.00				0.29	0.00	0.29
Sat Flow, veh/h	0	3632	1583	3442	3632	0				1774	0	3167
Grp Volume(v), veh/h	0	1250	562	511	1151	0				225	0	1031
Grp Sat Flow(s),veh/h/ln	0	1770	1583	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	29.9	30.1	13.1	17.1	0.0				9.2	0.0	26.5
Cycle Q Clear(g_c), s	0.0	29.9	30.1	13.1	17.1	0.0				9.2	0.0	26.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1384	619	563	2141	0				523	0	934
V/C Ratio(X)	0.00	0.90	0.91	0.91	0.54	0.00				0.43	0.00	1.10
Avail Cap(c_a), veh/h	0	1391	622	563	2147	0				523	0	934
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	25.7	25.8	36.9	10.4	0.0				25.6	0.0	31.7
Incr Delay (d2), s/veh	0.0	8.5	17.1	18.5	0.3	0.0				2.6	0.0	62.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	16.2	16.1	7.7	8.4	0.0				4.9	0.0	19.6
LnGrp Delay(d),s/veh	0.0	34.3	43.0	55.4	10.7	0.0				28.1	0.0	93.8
LnGrp LOS		C	D	E	B					C		F
Approach Vol, veh/h		1812			1662						1256	
Approach Delay, s/veh		37.0			24.4						82.0	
Approach LOS		D			C						F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	19.2	39.6				58.8		31.0
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	14.7	35.3				54.5		26.5
Max Q Clear Time (g_c+I1), s	15.1	32.1				19.1		28.5
Green Ext Time (p_c), s	0.0	3.0				26.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	44.5
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	480	976	0	0	1092	385	429	0	796	0	0	0
Future Volume (veh/h)	480	976	0	0	1092	385	429	0	796	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	522	1061	0	0	1187	418	311	0	1031			
Adj No. of Lanes	2	2	0	0	2	1	1	0	2			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	615	2203	0	0	1383	619	482	0	861			
Arrive On Green	0.18	0.62	0.00	0.00	0.39	0.39	0.27	0.00	0.27			
Sat Flow, veh/h	3442	3632	0	0	3632	1583	1774	0	3167			
Grp Volume(v), veh/h	522	1061	0	0	1187	418	311	0	1031			
Grp Sat Flow(s),veh/h/ln	1721	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	12.5	13.7	0.0	0.0	26.1	18.6	13.2	0.0	23.1			
Cycle Q Clear(g_c), s	12.5	13.7	0.0	0.0	26.1	18.6	13.2	0.0	23.1			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	615	2203	0	0	1383	619	482	0	861			
V/C Ratio(X)	0.85	0.48	0.00	0.00	0.86	0.68	0.65	0.00	1.20			
Avail Cap(c_a), veh/h	729	2203	0	0	1383	619	482	0	861			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	33.8	8.7	0.0	0.0	23.7	21.4	27.3	0.0	31.0			
Incr Delay (d2), s/veh	8.2	0.8	0.0	0.0	7.1	5.8	6.5	0.0	100.3			
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	6.6	6.9	0.0	0.0	14.1	9.1	7.3	0.0	22.0			
LnGrp Delay(d),s/veh	42.0	9.4	0.0	0.0	30.8	27.3	33.8	0.0	131.3			
LnGrp LOS	D	A			C	C	C		F			
Approach Vol, veh/h		1583			1605			1342				
Approach Delay, s/veh		20.1			29.9			108.7				
Approach LOS		C			C			F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		57.4			19.7	37.7		27.6
Change Period (Y+Rc), s		4.5			4.5	4.5		4.5
Max Green Setting (Gmax), s		52.9			18.0	30.4		23.1
Max Q Clear Time (g_c+I1), s		15.7			14.5	28.1		25.1
Green Ext Time (p_c), s		24.8			0.7	2.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	49.8
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	1259	264	206	1030	0	405	18	225	0	8	29
Future Volume (veh/h)	36	1259	264	206	1030	0	405	18	225	0	8	29
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	1863	1863	1900
Adj Flow Rate, veh/h	39	1368	287	224	1120	0	440	20	245	0	9	32
Adj No. of Lanes	1	2	1	1	2	1	2	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	60	1288	576	194	1556	696	525	720	612	2	67	239
Arrive On Green	0.03	0.36	0.36	0.11	0.44	0.00	0.15	0.39	0.39	0.00	0.19	0.19
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	1863	1583	1774	359	1278
Grp Volume(v), veh/h	39	1368	287	224	1120	0	440	20	245	0	0	41
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1863	1583	1774	0	1637
Q Serve(g_s), s	2.1	35.0	13.5	10.5	25.0	0.0	11.9	0.6	10.8	0.0	0.0	2.0
Cycle Q Clear(g_c), s	2.1	35.0	13.5	10.5	25.0	0.0	11.9	0.6	10.8	0.0	0.0	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.78
Lane Grp Cap(c), veh/h	60	1288	576	194	1556	696	525	720	612	2	0	306
V/C Ratio(X)	0.65	1.06	0.50	1.16	0.72	0.00	0.84	0.03	0.40	0.00	0.00	0.13
Avail Cap(c_a), veh/h	92	1288	576	194	1556	696	662	720	612	92	0	306
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	0.00	0.00	1.00
Uniform Delay (d), s/veh	45.9	30.6	23.8	42.8	22.1	0.0	39.6	18.3	21.4	0.0	0.0	32.6
Incr Delay (d2), s/veh	11.4	43.3	3.1	113.1	2.9	0.0	7.6	0.1	2.0	0.0	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	24.7	6.4	11.2	12.8	0.0	6.2	0.3	5.0	0.0	0.0	1.0
LnGrp Delay(d),s/veh	57.3	73.9	26.8	155.9	25.0	0.0	47.2	18.4	23.4	0.0	0.0	33.5
LnGrp LOS	E	F	C	F	C		D	B	C			C
Approach Vol, veh/h		1694			1344			705			41	
Approach Delay, s/veh		65.5			46.8			38.1			33.5	
Approach LOS		E			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	39.5	19.2	22.5	7.7	46.8	0.0	41.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.5	35.0	18.5	18.0	5.0	40.5	5.0	31.5
Max Q Clear Time (g_c+I1), s	12.5	37.0	13.9	4.0	4.1	27.0	0.0	12.8
Green Ext Time (p_c), s	0.0	0.0	0.7	1.0	0.0	11.7	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	53.4
HCM 2010 LOS	D

Level-of-Service (LOS) Calculations: Updated Project Partial Lane Closures (northbound-southbound) on Pats Ranch Road between Limonite Avenue and 68th Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	653	139	117	1079	2	356	3	98	1	8	31
Future Volume (veh/h)	20	653	139	117	1079	2	356	3	98	1	8	31
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	1900	1863	1863	1900
Adj Flow Rate, veh/h	22	710	151	127	1173	0	387	3	107	1	9	34
Adj No. of Lanes	1	2	1	1	2	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	1071	479	157	1303	583	418	18	651	2	64	241
Arrive On Green	0.02	0.30	0.30	0.09	0.37	0.00	0.24	0.42	0.42	0.00	0.19	0.19
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	43	1546	1774	342	1293
Grp Volume(v), veh/h	22	710	151	127	1173	0	387	0	110	1	0	43
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	0	1590	1774	0	1635
Q Serve(g_s), s	1.2	16.9	7.1	6.8	30.2	0.0	20.6	0.0	4.2	0.1	0.0	2.1
Cycle Q Clear(g_c), s	1.2	16.9	7.1	6.8	30.2	0.0	20.6	0.0	4.2	0.1	0.0	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.97	1.00		0.79
Lane Grp Cap(c), veh/h	41	1071	479	157	1303	583	418	0	669	2	0	305
V/C Ratio(X)	0.54	0.66	0.32	0.81	0.90	0.00	0.93	0.00	0.16	0.41	0.00	0.14
Avail Cap(c_a), veh/h	92	1071	479	215	1303	583	432	0	669	92	0	305
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.6	29.3	25.9	43.1	28.8	0.0	36.0	0.0	17.4	48.1	0.0	32.8
Incr Delay (d2), s/veh	10.5	3.2	1.7	14.6	10.2	0.0	25.6	0.0	0.5	84.7	0.0	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	0.7	8.7	3.3	4.0	16.5	0.0	13.1	0.0	1.9	0.1	0.0	1.0
LnGrp Delay(d),s/veh	57.1	32.6	27.7	57.8	39.0	0.0	61.6	0.0	17.9	132.8	0.0	33.7
LnGrp LOS	E	C	C	E	D		E		B	F		C
Approach Vol, veh/h		883			1300			497			44	
Approach Delay, s/veh		32.4			40.8			51.9			36.0	
Approach LOS		C			D			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.1	33.7	27.2	22.5	6.7	40.0	4.6	45.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	11.7	28.8	23.5	18.0	5.0	35.5	5.0	36.5
Max Q Clear Time (g_c+I1), s	8.8	18.9	22.6	4.1	3.2	32.2	2.1	6.2
Green Ext Time (p_c), s	0.1	7.5	0.1	0.6	0.0	2.8	0.0	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	40.0
HCM 2010 LOS	D

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	69	4	13	389	231	15
Future Volume (veh/h)	69	4	13	389	231	15
Number	5	12	3	8	4	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	75	4	14	423	251	16
Adj No. of Lanes	1	1	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	122	109	783	1374	706	316
Arrive On Green	0.07	0.07	0.44	0.74	0.20	0.20
Sat Flow, veh/h	1774	1583	1774	1863	3632	1583
Grp Volume(v), veh/h	75	4	14	423	251	16
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1863	1770	1583
Q Serve(g_s), s	1.9	0.1	0.2	3.6	2.8	0.4
Cycle Q Clear(g_c), s	1.9	0.1	0.2	3.6	2.8	0.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	122	109	783	1374	706	316
V/C Ratio(X)	0.61	0.04	0.02	0.31	0.36	0.05
Avail Cap(c_a), veh/h	973	869	783	2225	2323	1039
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.0	20.2	7.3	2.1	16.0	15.0
Incr Delay (d2), s/veh	4.9	0.1	0.0	0.1	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	1.1	0.1	0.1	1.8	1.4	0.2
LnGrp Delay(d),s/veh	26.0	20.3	7.4	2.2	16.3	15.1
LnGrp LOS	C	C	A	A	B	B
Approach Vol, veh/h	79			437	267	
Approach Delay, s/veh	25.7			2.4	16.3	
Approach LOS	C			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		7.7	25.0	13.8				38.8
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		25.5	20.5	30.5				55.5
Max Q Clear Time (g_c+I1), s		3.9	2.2	4.8				5.6
Green Ext Time (p_c), s		0.2	0.0	4.4				4.8

Intersection Summary	
HCM 2010 Ctrl Delay	9.5
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	1	17	46	6	36	46	317	24	8	228	6
Future Volume (veh/h)	17	1	17	46	6	36	46	317	24	8	228	6
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	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	18	1	18	50	7	39	50	345	26	9	248	7
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	780	40	718	438	81	291	85	480	36	21	866	387
Arrive On Green	0.47	0.47	0.47	0.47	0.47	0.47	0.05	0.28	0.28	0.01	0.24	0.24
Sat Flow, veh/h	1354	84	1512	724	170	612	1774	1711	129	1774	3539	1583
Grp Volume(v), veh/h	18	0	19	96	0	0	50	0	371	9	248	7
Grp Sat Flow(s),veh/h/ln	1354	0	1596	1507	0	0	1774	0	1840	1774	1770	1583
Q Serve(g_s), s	0.0	0.0	0.4	0.0	0.0	0.0	1.6	0.0	10.5	0.3	3.3	0.2
Cycle Q Clear(g_c), s	0.3	0.0	0.4	1.8	0.0	0.0	1.6	0.0	10.5	0.3	3.3	0.2
Prop In Lane	1.00		0.95	0.52		0.41	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	780	0	757	810	0	0	85	0	517	21	866	387
V/C Ratio(X)	0.02	0.00	0.03	0.12	0.00	0.00	0.59	0.00	0.72	0.44	0.29	0.02
Avail Cap(c_a), veh/h	780	0	757	810	0	0	352	0	1318	230	2291	1025
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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.1	0.0	8.1	8.5	0.0	0.0	27.0	0.0	18.8	28.4	17.8	16.6
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.3	0.0	0.0	6.4	0.0	1.9	13.8	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	0.2	0.0	0.2	0.9	0.0	0.0	0.9	0.0	5.5	0.2	1.6	0.1
LnGrp Delay(d),s/veh	8.1	0.0	8.2	8.8	0.0	0.0	33.4	0.0	20.7	42.3	18.0	16.6
LnGrp LOS	A		A	A			C		C	D	B	B
Approach Vol, veh/h		37			96			421			264	
Approach Delay, s/veh		8.1			8.8			22.2			18.7	
Approach LOS		A			A			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		32.0	7.3	18.7		32.0	5.2	20.8
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		27.5	11.5	37.5		27.5	7.5	41.5
Max Q Clear Time (g_c+I1), s		2.4	3.6	5.3		3.8	2.3	12.5
Green Ext Time (p_c), s		0.7	0.0	3.8		0.6	0.0	3.7

Intersection Summary	
HCM 2010 Ctrl Delay	18.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	318	570	8	1	426	53	2	4	0	81	29	191
Future Volume (veh/h)	318	570	8	1	426	53	2	4	0	81	29	191
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	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	346	620	9	1	463	58	2	4	0	88	32	208
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	396	1662	24	3	861	385	117	280	0	147	312	265
Arrive On Green	0.22	0.47	0.47	0.00	0.24	0.24	0.07	0.15	0.00	0.08	0.17	0.17
Sat Flow, veh/h	1774	3571	52	1774	3539	1583	1774	1863	0	1774	1863	1583
Grp Volume(v), veh/h	346	307	322	1	463	58	2	4	0	88	32	208
Grp Sat Flow(s),veh/h/ln	1774	1770	1854	1774	1770	1583	1774	1863	0	1774	1863	1583
Q Serve(g_s), s	11.3	6.7	6.7	0.0	6.8	1.7	0.1	0.1	0.0	2.9	0.9	7.6
Cycle Q Clear(g_c), s	11.3	6.7	6.7	0.0	6.8	1.7	0.1	0.1	0.0	2.9	0.9	7.6
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	396	823	863	3	861	385	117	280	0	147	312	265
V/C Ratio(X)	0.87	0.37	0.37	0.34	0.54	0.15	0.02	0.01	0.00	0.60	0.10	0.78
Avail Cap(c_a), veh/h	428	914	957	148	1267	567	532	558	0	532	558	475
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	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.5	10.4	10.4	29.9	19.8	17.8	26.2	21.7	0.0	26.6	21.2	23.9
Incr Delay (d2), s/veh	16.9	0.3	0.3	56.6	0.5	0.2	0.1	0.0	0.0	3.8	0.1	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	3.3	3.5	0.1	3.4	0.8	0.0	0.1	0.0	1.6	0.5	3.7
LnGrp Delay(d),s/veh	39.4	10.7	10.7	86.5	20.3	18.0	26.3	21.7	0.0	30.4	21.3	29.0
LnGrp LOS	D	B	B	F	C	B	C	C		C	C	C
Approach Vol, veh/h		975			522			6			328	
Approach Delay, s/veh		20.9			20.2			23.3			28.6	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.6	32.4	8.5	14.6	17.9	19.1	9.5	13.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	31.0	18.0	18.0	14.5	21.5	18.0	18.0
Max Q Clear Time (g_c+I1), s	2.0	8.7	2.1	9.6	13.3	8.8	4.9	2.1
Green Ext Time (p_c), s	0.0	7.7	0.0	0.5	0.2	5.8	0.1	0.7

Intersection Summary	
HCM 2010 Ctrl Delay	22.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	653	139	117	1079	2	356	3	98	1	8	31
Future Volume (veh/h)	20	653	139	117	1079	2	356	3	98	1	8	31
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	1900	1863	1900
Adj Flow Rate, veh/h	22	710	151	127	1173	0	387	3	107	1	9	34
Adj No. of Lanes	1	2	1	1	2	1	2	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	42	1201	537	159	1435	642	495	776	660	0	76	286
Arrive On Green	0.02	0.34	0.34	0.09	0.41	0.00	0.14	0.42	0.42	0.00	0.22	0.22
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	1863	1583	0	342	1293
Grp Volume(v), veh/h	22	710	151	127	1173	0	387	3	107	0	0	43
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1863	1583	0	0	1635
Q Serve(g_s), s	1.1	14.5	6.1	6.1	25.8	0.0	9.5	0.1	3.7	0.0	0.0	1.8
Cycle Q Clear(g_c), s	1.1	14.5	6.1	6.1	25.8	0.0	9.5	0.1	3.7	0.0	0.0	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	0.00		0.79
Lane Grp Cap(c), veh/h	42	1201	537	159	1435	642	495	776	660	0	0	362
V/C Ratio(X)	0.52	0.59	0.28	0.80	0.82	0.00	0.78	0.00	0.16	0.00	0.00	0.12
Avail Cap(c_a), veh/h	101	1201	537	237	1435	642	924	776	660	0	0	362
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	0.00	0.00	1.00
Uniform Delay (d), s/veh	42.3	23.9	21.1	39.1	23.2	0.0	36.2	14.9	16.0	0.0	0.0	27.2
Incr Delay (d2), s/veh	9.8	2.1	1.3	10.9	5.3	0.0	2.7	0.0	0.5	0.0	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	7.5	2.8	3.5	13.6	0.0	4.7	0.0	1.7	0.0	0.0	0.9
LnGrp Delay(d),s/veh	52.0	26.1	22.4	49.9	28.4	0.0	38.9	14.9	16.5	0.0	0.0	27.9
LnGrp LOS	D	C	C	D	C		D	B	B			C
Approach Vol, veh/h		883			1300			497			43	
Approach Delay, s/veh		26.1			30.5			33.9			27.9	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.4	34.2	17.1	23.9	6.6	40.0	0.0	41.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	11.7	28.8	23.5	18.0	5.0	35.5	5.0	36.5
Max Q Clear Time (g_c+I1), s	8.1	16.5	11.5	3.8	3.1	27.8	0.0	5.7
Green Ext Time (p_c), s	0.1	9.0	1.1	0.4	0.0	6.1	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	29.7
HCM 2010 LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	69	4	13	389	231	15
Future Volume (veh/h)	69	4	13	389	231	15
Number	5	12	3	8	4	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	75	4	14	423	251	16
Adj No. of Lanes	2	1	1	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	230	106	736	2658	457	388
Arrive On Green	0.07	0.07	0.41	0.75	0.25	0.25
Sat Flow, veh/h	3442	1583	1774	3632	1863	1583
Grp Volume(v), veh/h	75	4	14	423	251	16
Grp Sat Flow(s),veh/h/ln	1721	1583	1774	1770	1863	1583
Q Serve(g_s), s	1.0	0.1	0.2	1.7	5.8	0.4
Cycle Q Clear(g_c), s	1.0	0.1	0.2	1.7	5.8	0.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	230	106	736	2658	457	388
V/C Ratio(X)	0.33	0.04	0.02	0.16	0.55	0.04
Avail Cap(c_a), veh/h	1776	817	736	3974	1149	977
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.0	21.6	8.5	1.7	16.3	14.2
Incr Delay (d2), s/veh	0.8	0.1	0.0	0.0	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.1	0.1	0.8	3.1	0.2
LnGrp Delay(d),s/veh	22.8	21.7	8.6	1.8	17.3	14.3
LnGrp LOS	C	C	A	A	B	B
Approach Vol, veh/h	79			437	267	
Approach Delay, s/veh	22.8			2.0	17.1	
Approach LOS	C			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		7.8	25.0	16.6				41.6
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		25.5	20.5	30.5				55.5
Max Q Clear Time (g_c+I1), s		3.0	2.2	7.8				3.7
Green Ext Time (p_c), s		0.2	0.0	4.3				4.8

Intersection Summary	
HCM 2010 Ctrl Delay	9.2
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	1	17	46	6	36	46	317	24	8	228	6
Future Volume (veh/h)	17	1	17	46	6	36	46	317	24	8	228	6
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	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	18	1	18	50	7	39	50	345	26	9	248	7
Adj No. of Lanes	1	1	0	0	1	0	1	2	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	808	41	744	455	84	301	86	849	64	21	405	345
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.05	0.25	0.25	0.01	0.22	0.22
Sat Flow, veh/h	1354	84	1512	724	170	612	1774	3338	250	1774	1863	1583
Grp Volume(v), veh/h	18	0	19	96	0	0	50	182	189	9	248	7
Grp Sat Flow(s),veh/h/ln	1354	0	1596	1507	0	0	1774	1770	1819	1774	1863	1583
Q Serve(g_s), s	0.0	0.0	0.3	0.0	0.0	0.0	1.5	4.8	4.8	0.3	6.7	0.2
Cycle Q Clear(g_c), s	0.3	0.0	0.3	1.7	0.0	0.0	1.5	4.8	4.8	0.3	6.7	0.2
Prop In Lane	1.00		0.95	0.52		0.41	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	808	0	786	840	0	0	86	450	462	21	405	345
V/C Ratio(X)	0.02	0.00	0.02	0.11	0.00	0.00	0.58	0.40	0.41	0.43	0.61	0.02
Avail Cap(c_a), veh/h	808	0	786	840	0	0	365	1315	1351	238	1251	1063
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	7.3	0.0	7.3	7.6	0.0	0.0	26.0	17.3	17.3	27.4	19.7	17.2
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.3	0.0	0.0	6.2	0.6	0.6	13.7	1.5	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	0.2	0.0	0.2	0.9	0.0	0.0	0.9	2.4	2.5	0.2	3.6	0.1
LnGrp Delay(d),s/veh	7.3	0.0	7.3	7.9	0.0	0.0	32.2	17.9	17.9	41.1	21.2	17.2
LnGrp LOS	A		A	A			C	B	B	D	C	B
Approach Vol, veh/h		37			96			421			264	
Approach Delay, s/veh		7.3			7.9			19.6			21.8	
Approach LOS		A			A			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		32.0	7.2	16.7		32.0	5.2	18.7
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		27.5	11.5	37.5		27.5	7.5	41.5
Max Q Clear Time (g_c+I1), s		2.3	3.5	8.7		3.7	2.3	6.8
Green Ext Time (p_c), s		0.7	0.0	3.4		0.6	0.0	3.5

Intersection Summary	
HCM 2010 Ctrl Delay	18.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	318	570	8	1	426	53	2	4	0	81	29	191
Future Volume (veh/h)	318	570	8	1	426	53	2	4	0	81	29	191
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	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	346	620	9	1	463	58	2	4	0	88	32	208
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	393	1639	24	3	844	377	115	314	0	145	40	260
Arrive On Green	0.22	0.46	0.46	0.00	0.24	0.24	0.06	0.17	0.00	0.08	0.19	0.19
Sat Flow, veh/h	1774	3571	52	1774	3539	1583	1774	1863	0	1774	215	1400
Grp Volume(v), veh/h	346	307	322	1	463	58	2	4	0	88	0	240
Grp Sat Flow(s),veh/h/ln	1774	1770	1854	1774	1770	1583	1774	1863	0	1774	0	1616
Q Serve(g_s), s	11.7	7.1	7.1	0.0	7.1	1.8	0.1	0.1	0.0	3.0	0.0	8.8
Cycle Q Clear(g_c), s	11.7	7.1	7.1	0.0	7.1	1.8	0.1	0.1	0.0	3.0	0.0	8.8
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.00	1.00		0.87
Lane Grp Cap(c), veh/h	393	812	850	3	844	377	115	314	0	145	0	300
V/C Ratio(X)	0.88	0.38	0.38	0.35	0.55	0.15	0.02	0.01	0.00	0.61	0.00	0.80
Avail Cap(c_a), veh/h	414	882	924	143	1224	547	514	539	0	514	0	468
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	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.4	11.0	11.0	31.0	20.7	18.7	27.2	21.5	0.0	27.6	0.0	24.2
Incr Delay (d2), s/veh	18.5	0.3	0.3	60.9	0.6	0.2	0.1	0.0	0.0	4.0	0.0	5.3
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	7.7	3.5	3.6	0.1	3.5	0.8	0.0	0.1	0.0	1.6	0.0	4.4
LnGrp Delay(d),s/veh	41.9	11.3	11.3	91.9	21.3	18.9	27.3	21.6	0.0	31.6	0.0	29.5
LnGrp LOS	D	B	B	F	C	B	C	C		C		C
Approach Vol, veh/h		975			522			6			328	
Approach Delay, s/veh		22.2			21.2			23.5			30.1	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.6	33.0	8.5	16.1	18.3	19.3	9.6	15.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	31.0	18.0	18.0	14.5	21.5	18.0	18.0
Max Q Clear Time (g_c+I1), s	2.0	9.1	2.1	10.8	13.7	9.1	5.0	2.1
Green Ext Time (p_c), s	0.0	7.6	0.0	0.7	0.1	5.7	0.1	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	23.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	1257	255	204	990	0	367	18	177	0	8	29
Future Volume (veh/h)	36	1257	255	204	990	0	367	18	177	0	8	29
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	1900	1863	1863	1900
Adj Flow Rate, veh/h	39	1366	277	222	1076	0	399	20	192	0	9	32
Adj No. of Lanes	1	2	1	1	2	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	59	1384	619	229	1723	771	213	52	502	2	65	230
Arrive On Green	0.03	0.39	0.39	0.13	0.49	0.00	0.12	0.34	0.34	0.00	0.18	0.18
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	152	1455	1774	359	1278
Grp Volume(v), veh/h	39	1366	277	222	1076	0	399	0	212	0	0	41
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	0	1606	1774	0	1637
Q Serve(g_s), s	2.2	38.3	12.9	12.5	22.4	0.0	12.0	0.0	10.0	0.0	0.0	2.1
Cycle Q Clear(g_c), s	2.2	38.3	12.9	12.5	22.4	0.0	12.0	0.0	10.0	0.0	0.0	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.91	1.00		0.78
Lane Grp Cap(c), veh/h	59	1384	619	229	1723	771	213	0	554	2	0	295
V/C Ratio(X)	0.66	0.99	0.45	0.97	0.62	0.00	1.87	0.00	0.38	0.00	0.00	0.14
Avail Cap(c_a), veh/h	115	1384	619	229	1723	771	213	0	554	89	0	295
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	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	47.8	30.2	22.5	43.4	18.9	0.0	44.0	0.0	24.7	0.0	0.0	34.5
Incr Delay (d2), s/veh	12.2	21.3	2.3	50.9	1.7	0.0	410.8	0.0	2.0	0.0	0.0	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	1.3	22.7	6.0	9.3	11.3	0.0	30.1	0.0	4.7	0.0	0.0	1.0
LnGrp Delay(d),s/veh	60.0	51.5	24.8	94.2	20.6	0.0	454.8	0.0	26.7	0.0	0.0	35.5
LnGrp LOS	E	D	C	F	C		F		C			D
Approach Vol, veh/h		1682			1298			611			41	
Approach Delay, s/veh		47.3			33.2			306.2			35.5	
Approach LOS		D			C			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	17.4	43.6	16.5	22.5	7.8	53.2	0.0	39.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	12.9	39.1	12.0	18.0	6.5	45.5	5.0	25.0
Max Q Clear Time (g_c+I1), s	14.5	40.3	14.0	4.1	4.2	24.4	0.0	12.0
Green Ext Time (p_c), s	0.0	0.0	0.0	1.2	0.0	16.9	0.0	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	85.7
HCM 2010 LOS	F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	329	100	87	239	315	54
Future Volume (veh/h)	329	100	87	239	315	54
Number	5	12	3	8	4	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	358	109	95	260	342	59
Adj No. of Lanes	1	1	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	434	388	608	1126	660	295
Arrive On Green	0.24	0.24	0.34	0.60	0.19	0.19
Sat Flow, veh/h	1774	1583	1774	1863	3632	1583
Grp Volume(v), veh/h	358	109	95	260	342	59
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1863	1770	1583
Q Serve(g_s), s	11.4	3.3	2.2	3.8	5.2	1.9
Cycle Q Clear(g_c), s	11.4	3.3	2.2	3.8	5.2	1.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	434	388	608	1126	660	295
V/C Ratio(X)	0.82	0.28	0.16	0.23	0.52	0.20
Avail Cap(c_a), veh/h	757	675	608	1729	1806	808
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.4	18.3	13.6	5.4	21.9	20.5
Incr Delay (d2), s/veh	4.0	0.4	0.5	0.1	0.6	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	6.1	1.5	1.2	2.0	2.6	0.8
LnGrp Delay(d),s/veh	25.4	18.7	14.2	5.5	22.5	20.9
LnGrp LOS	C	B	B	A	C	C
Approach Vol, veh/h	467			355	401	
Approach Delay, s/veh	23.8			7.8	22.3	
Approach LOS	C			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		19.1	25.0	15.7				40.7
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		25.5	20.5	30.5				55.5
Max Q Clear Time (g_c+I1), s		13.4	4.2	7.2				5.8
Green Ext Time (p_c), s		1.2	0.2	3.9				4.3

Intersection Summary	
HCM 2010 Ctrl Delay	18.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	10	26	9	9	25	83	277	20	35	346	6
Future Volume (veh/h)	23	10	26	9	9	25	83	277	20	35	346	6
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	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	25	11	28	10	10	27	90	301	22	38	376	7
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	742	207	526	185	197	410	120	468	34	71	867	388
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.07	0.27	0.27	0.04	0.25	0.25
Sat Flow, veh/h	1365	466	1187	240	446	926	1774	1715	125	1774	3539	1583
Grp Volume(v), veh/h	25	0	39	47	0	0	90	0	323	38	376	7
Grp Sat Flow(s),veh/h/ln	1365	0	1653	1611	0	0	1774	0	1841	1774	1770	1583
Q Serve(g_s), s	0.0	0.0	0.7	0.0	0.0	0.0	2.8	0.0	8.6	1.2	5.0	0.2
Cycle Q Clear(g_c), s	0.4	0.0	0.7	0.9	0.0	0.0	2.8	0.0	8.6	1.2	5.0	0.2
Prop In Lane	1.00		0.72	0.21		0.57	1.00		0.07	1.00		1.00
Lane Grp Cap(c), veh/h	742	0	732	793	0	0	120	0	502	71	867	388
V/C Ratio(X)	0.03	0.00	0.05	0.06	0.00	0.00	0.75	0.00	0.64	0.54	0.43	0.02
Avail Cap(c_a), veh/h	742	0	732	793	0	0	626	0	2014	369	3360	1503
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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.7	0.0	8.8	8.8	0.0	0.0	25.3	0.0	17.7	26.0	17.6	15.8
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.1	0.0	0.0	9.0	0.0	1.4	6.1	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	0.2	0.0	0.4	0.4	0.0	0.0	1.6	0.0	4.5	0.7	2.4	0.1
LnGrp Delay(d),s/veh	8.8	0.0	8.9	9.0	0.0	0.0	34.3	0.0	19.1	32.2	18.0	15.8
LnGrp LOS	A		A	A			C		B	C	B	B
Approach Vol, veh/h		64			47			413			421	
Approach Delay, s/veh		8.9			9.0			22.4			19.2	
Approach LOS		A			A			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		29.0	8.2	18.1		29.0	6.7	19.6
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		24.5	19.5	52.5		24.5	11.5	60.5
Max Q Clear Time (g_c+I1), s		2.7	4.8	7.0		2.9	3.2	10.6
Green Ext Time (p_c), s		0.5	0.2	4.5		0.5	0.0	4.5

Intersection Summary	
HCM 2010 Ctrl Delay	19.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	386	0	2	260	94	4	13	3	13	0	255
Future Volume (veh/h)	252	386	0	2	260	94	4	13	3	13	0	255
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	1863	1863	1863	1900	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	274	420	0	2	283	102	4	14	3	14	0	277
Adj No. of Lanes	1	2	0	1	2	1	0	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	343	1417	0	5	743	332	0	159	34	186	574	488
Arrive On Green	0.19	0.40	0.00	0.00	0.21	0.21	0.00	0.11	0.11	0.10	0.00	0.31
Sat Flow, veh/h	1774	3632	0	1774	3539	1583	0	1488	319	1774	1863	1583
Grp Volume(v), veh/h	274	420	0	2	283	102	0	0	17	14	0	277
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	1583	0	0	1806	1774	1863	1583
Q Serve(g_s), s	6.9	3.8	0.0	0.1	3.2	2.5	0.0	0.0	0.4	0.3	0.0	6.9
Cycle Q Clear(g_c), s	6.9	3.8	0.0	0.1	3.2	2.5	0.0	0.0	0.4	0.3	0.0	6.9
Prop In Lane	1.00		0.00	1.00		1.00	0.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	343	1417	0	5	743	332	0	0	193	186	574	488
V/C Ratio(X)	0.80	0.30	0.00	0.41	0.38	0.31	0.00	0.00	0.09	0.08	0.00	0.57
Avail Cap(c_a), veh/h	551	2348	0	190	1629	729	0	0	696	683	718	610
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	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.0	9.5	0.0	23.3	15.8	15.6	0.0	0.0	18.8	18.9	0.0	13.6
Incr Delay (d2), s/veh	4.3	0.1	0.0	47.4	0.3	0.5	0.0	0.0	0.2	0.2	0.0	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	3.8	1.8	0.0	0.1	1.6	1.2	0.0	0.0	0.2	0.2	0.0	3.1
LnGrp Delay(d),s/veh	22.3	9.6	0.0	70.6	16.2	16.1	0.0	0.0	19.0	19.0	0.0	14.6
LnGrp LOS	C	A		E	B	B			B	B		B
Approach Vol, veh/h		694			387			17			291	
Approach Delay, s/veh		14.6			16.4			19.0			14.8	
Approach LOS		B			B			B			B	

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	4.6	23.2	0.0	18.9	13.5	14.3	9.4	9.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	31.0	18.0	18.0	14.5	21.5	18.0	18.0
Max Q Clear Time (g_c+I1), s	2.1	5.8	0.0	8.9	8.9	5.2	2.3	2.4
Green Ext Time (p_c), s	0.0	5.4	0.0	0.7	0.4	4.6	0.0	0.8

Intersection Summary	
HCM 2010 Ctrl Delay	15.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	1257	255	204	990	0	367	18	177	0	8	29
Future Volume (veh/h)	36	1257	255	204	990	0	367	18	177	0	8	29
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	1900	1863	1900
Adj Flow Rate, veh/h	39	1366	277	222	1076	0	399	20	192	0	9	32
Adj No. of Lanes	1	2	1	1	2	1	2	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	59	1384	619	229	1723	771	413	643	546	0	65	230
Arrive On Green	0.03	0.39	0.39	0.13	0.49	0.00	0.12	0.34	0.34	0.00	0.18	0.18
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	1863	1583	0	359	1278
Grp Volume(v), veh/h	39	1366	277	222	1076	0	399	20	192	0	0	41
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1863	1583	0	0	1637
Q Serve(g_s), s	2.2	38.3	12.9	12.5	22.4	0.0	11.5	0.7	9.0	0.0	0.0	2.1
Cycle Q Clear(g_c), s	2.2	38.3	12.9	12.5	22.4	0.0	11.5	0.7	9.0	0.0	0.0	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	0.00		0.78
Lane Grp Cap(c), veh/h	59	1384	619	229	1723	771	413	643	546	0	0	295
V/C Ratio(X)	0.66	0.99	0.45	0.97	0.62	0.00	0.97	0.03	0.35	0.00	0.00	0.14
Avail Cap(c_a), veh/h	115	1384	619	229	1723	771	413	643	546	0	0	295
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	0.00	0.00	1.00
Uniform Delay (d), s/veh	47.8	30.2	22.5	43.4	18.9	0.0	43.8	21.7	24.4	0.0	0.0	34.5
Incr Delay (d2), s/veh	12.2	21.3	2.3	50.9	1.7	0.0	35.4	0.1	1.8	0.0	0.0	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	1.3	22.7	6.0	9.3	11.3	0.0	7.5	0.4	4.2	0.0	0.0	1.0
LnGrp Delay(d),s/veh	60.0	51.5	24.8	94.2	20.6	0.0	79.2	21.8	26.2	0.0	0.0	35.5
LnGrp LOS	E	D	C	F	C		E	C	C			D
Approach Vol, veh/h		1682			1298			611			41	
Approach Delay, s/veh		47.3			33.2			60.7			35.5	
Approach LOS		D			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	17.4	43.6	16.5	22.5	7.8	53.2		39.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	12.9	39.1	12.0	18.0	6.5	45.5		25.0
Max Q Clear Time (g_c+I1), s	14.5	40.3	13.5	4.1	4.2	24.4		11.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.8	0.0	16.9		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	44.4
HCM 2010 LOS	D

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	329	100	87	239	315	54
Future Volume (veh/h)	329	100	87	239	315	54
Number	5	12	3	8	4	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	358	109	95	260	342	59
Adj No. of Lanes	2	1	1	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	544	250	620	2437	489	416
Arrive On Green	0.16	0.16	0.35	0.69	0.26	0.26
Sat Flow, veh/h	3442	1583	1774	3632	1863	1583
Grp Volume(v), veh/h	358	109	95	260	342	59
Grp Sat Flow(s),veh/h/ln	1721	1583	1774	1770	1863	1583
Q Serve(g_s), s	5.7	3.7	2.2	1.4	9.7	1.7
Cycle Q Clear(g_c), s	5.7	3.7	2.2	1.4	9.7	1.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	544	250	620	2437	489	416
V/C Ratio(X)	0.66	0.44	0.15	0.11	0.70	0.14
Avail Cap(c_a), veh/h	1495	688	620	3346	968	823
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.2	22.3	13.1	3.1	19.5	16.6
Incr Delay (d2), s/veh	1.4	1.2	0.5	0.0	1.8	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	2.8	1.7	1.1	0.7	5.2	0.7
LnGrp Delay(d),s/veh	24.6	23.5	13.7	3.1	21.4	16.7
LnGrp LOS	C	C	B	A	C	B
Approach Vol, veh/h	467			355	401	
Approach Delay, s/veh	24.3			5.9	20.7	
Approach LOS	C			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		13.8	25.0	19.9				44.9
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		25.5	20.5	30.5				55.5
Max Q Clear Time (g_c+I1), s		7.7	4.2	11.7				3.4
Green Ext Time (p_c), s		1.5	0.2	3.7				4.3

Intersection Summary	
HCM 2010 Ctrl Delay	17.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	10	26	9	9	25	83	277	20	35	346	6
Future Volume (veh/h)	23	10	26	9	9	25	83	277	20	35	346	6
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	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	25	11	28	10	10	27	90	301	22	38	376	7
Adj No. of Lanes	1	1	0	0	1	0	1	2	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	700	195	496	175	186	387	118	1047	76	70	532	452
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.07	0.31	0.31	0.04	0.29	0.29
Sat Flow, veh/h	1365	466	1187	240	446	926	1774	3346	243	1774	1863	1583
Grp Volume(v), veh/h	25	0	39	47	0	0	90	158	165	38	376	7
Grp Sat Flow(s),veh/h/ln	1365	0	1653	1611	0	0	1774	1770	1820	1774	1863	1583
Q Serve(g_s), s	0.0	0.0	0.8	0.0	0.0	0.0	2.9	4.0	4.0	1.2	10.6	0.2
Cycle Q Clear(g_c), s	0.5	0.0	0.8	1.0	0.0	0.0	2.9	4.0	4.0	1.2	10.6	0.2
Prop In Lane	1.00		0.72	0.21		0.57	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	700	0	690	747	0	0	118	554	569	70	532	452
V/C Ratio(X)	0.04	0.00	0.06	0.06	0.00	0.00	0.76	0.29	0.29	0.54	0.71	0.02
Avail Cap(c_a), veh/h	700	0	690	747	0	0	590	1825	1877	348	1667	1417
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	10.1	0.0	10.2	10.2	0.0	0.0	26.9	15.2	15.2	27.7	18.8	15.0
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.2	0.0	0.0	9.7	0.3	0.3	6.5	1.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	0.5	0.0	0.0	1.7	2.0	2.1	0.7	5.7	0.1
LnGrp Delay(d),s/veh	10.2	0.0	10.3	10.4	0.0	0.0	36.6	15.5	15.5	34.1	20.5	15.0
LnGrp LOS	B		B	B			D	B	B	C	C	B
Approach Vol, veh/h		64			47			413			421	
Approach Delay, s/veh		10.3			10.4			20.1			21.6	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		29.0	8.4	21.3		29.0	6.8	22.9
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		24.5	19.5	52.5		24.5	11.5	60.5
Max Q Clear Time (g_c+I1), s		2.8	4.9	12.6		3.0	3.2	6.0
Green Ext Time (p_c), s		0.5	0.2	4.2		0.5	0.0	4.2

Intersection Summary	
HCM 2010 Ctrl Delay	19.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	386	0	2	260	94	4	13	3	13	0	255
Future Volume (veh/h)	252	386	0	2	260	94	4	13	3	13	0	255
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	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	274	420	0	2	283	102	4	14	3	14	0	277
Adj No. of Lanes	1	2	0	1	2	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	337	1363	0	5	700	313	68	245	53	171	0	352
Arrive On Green	0.19	0.39	0.00	0.00	0.20	0.20	0.04	0.16	0.16	0.10	0.00	0.22
Sat Flow, veh/h	1774	3632	0	1774	3539	1583	1774	1488	319	1774	0	1583
Grp Volume(v), veh/h	274	420	0	2	283	102	4	0	17	14	0	277
Grp Sat Flow(s),veh/h/ln	1774	1770	0	1774	1770	1583	1774	0	1806	1774	0	1583
Q Serve(g_s), s	7.6	4.2	0.0	0.1	3.6	2.8	0.1	0.0	0.4	0.4	0.0	8.4
Cycle Q Clear(g_c), s	7.6	4.2	0.0	0.1	3.6	2.8	0.1	0.0	0.4	0.4	0.0	8.4
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	337	1363	0	5	700	313	68	0	298	171	0	352
V/C Ratio(X)	0.81	0.31	0.00	0.41	0.40	0.33	0.06	0.00	0.06	0.08	0.00	0.79
Avail Cap(c_a), veh/h	502	2141	0	173	1485	664	623	0	635	623	0	556
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.9	11.0	0.0	25.5	17.9	17.6	23.7	0.0	18.0	21.1	0.0	18.8
Incr Delay (d2), s/veh	6.2	0.1	0.0	47.5	0.4	0.6	0.4	0.0	0.1	0.2	0.0	3.9
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	4.2	2.1	0.0	0.1	1.8	1.3	0.1	0.0	0.2	0.2	0.0	4.1
LnGrp Delay(d),s/veh	26.1	11.1	0.0	73.0	18.3	18.2	24.1	0.0	18.1	21.3	0.0	22.7
LnGrp LOS	C	B		E	B	B	C		B	C		C
Approach Vol, veh/h		694			387			21			291	
Approach Delay, s/veh		17.0			18.6			19.3			22.6	
Approach LOS		B			B			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.6	24.2	6.5	15.9	14.2	14.6	9.4	12.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	31.0	18.0	18.0	14.5	21.5	18.0	18.0
Max Q Clear Time (g_c+I1), s	2.1	6.2	2.1	10.4	9.6	5.6	2.4	2.4
Green Ext Time (p_c), s	0.0	5.3	0.0	1.0	0.4	4.6	0.0	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	18.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	653	139	117	1079	2	356	3	98	1	8	31
Future Volume (veh/h)	20	653	139	117	1079	2	356	3	98	1	8	31
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	1900	1900	1863	1900
Adj Flow Rate, veh/h	22	710	151	127	1173	0	387	3	107	1	9	34
Adj No. of Lanes	1	2	1	1	2	1	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	1071	479	157	1303	583	418	20	725	0	64	241
Arrive On Green	0.02	0.30	0.30	0.09	0.37	0.00	0.24	0.47	0.47	0.00	0.19	0.19
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	43	1546	0	342	1293
Grp Volume(v), veh/h	22	710	151	127	1173	0	387	0	110	0	0	43
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	0	1590	0	0	1635
Q Serve(g_s), s	1.2	16.9	7.1	6.8	30.2	0.0	20.6	0.0	3.8	0.0	0.0	2.1
Cycle Q Clear(g_c), s	1.2	16.9	7.1	6.8	30.2	0.0	20.6	0.0	3.8	0.0	0.0	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.97	0.00		0.79
Lane Grp Cap(c), veh/h	41	1071	479	157	1303	583	418	0	745	0	0	305
V/C Ratio(X)	0.54	0.66	0.32	0.81	0.90	0.00	0.93	0.00	0.15	0.00	0.00	0.14
Avail Cap(c_a), veh/h	92	1071	479	215	1303	583	432	0	745	0	0	305
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	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	46.6	29.3	25.9	43.1	28.8	0.0	36.0	0.0	14.6	0.0	0.0	32.8
Incr Delay (d2), s/veh	10.5	3.2	1.7	14.6	10.2	0.0	25.6	0.0	0.4	0.0	0.0	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	0.7	8.7	3.3	4.0	16.5	0.0	13.1	0.0	1.8	0.0	0.0	1.0
LnGrp Delay(d),s/veh	57.1	32.6	27.7	57.8	39.0	0.0	61.6	0.0	15.0	0.0	0.0	33.7
LnGrp LOS	E	C	C	E	D		E		B			C
Approach Vol, veh/h		883			1300			497			43	
Approach Delay, s/veh		32.4			40.8			51.3			33.7	
Approach LOS		C			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.1	33.7	27.2	22.5	6.7	40.0	0.0	49.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	11.7	28.8	23.5	18.0	5.0	35.5	5.0	36.5
Max Q Clear Time (g_c+I1), s	8.8	18.9	22.6	4.1	3.2	32.2	0.0	5.8
Green Ext Time (p_c), s	0.1	7.5	0.1	0.6	0.0	2.8	0.0	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	39.9
HCM 2010 LOS	D

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	69	4	13	389	231	15
Future Volume (veh/h)	69	4	13	389	231	15
Number	5	12	3	8	4	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	75	4	14	423	251	16
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	119	106	738	1398	452	384
Arrive On Green	0.07	0.07	0.42	0.75	0.24	0.24
Sat Flow, veh/h	1774	1583	1774	1863	1863	1583
Grp Volume(v), veh/h	75	4	14	423	251	16
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1863	1863	1583
Q Serve(g_s), s	2.0	0.1	0.2	3.6	5.8	0.4
Cycle Q Clear(g_c), s	2.0	0.1	0.2	3.6	5.8	0.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	119	106	738	1398	452	384
V/C Ratio(X)	0.63	0.04	0.02	0.30	0.56	0.04
Avail Cap(c_a), veh/h	918	820	738	2099	1153	980
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.4	21.5	8.5	2.0	16.3	14.3
Incr Delay (d2), s/veh	5.4	0.1	0.0	0.1	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.1	0.1	1.8	3.1	0.2
LnGrp Delay(d),s/veh	27.8	21.6	8.5	2.1	17.4	14.3
LnGrp LOS	C	C	A	A	B	B
Approach Vol, veh/h	79			437	267	
Approach Delay, s/veh	27.5			2.3	17.2	
Approach LOS	C			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		7.8	25.0	16.5				41.5
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		25.5	20.5	30.5				55.5
Max Q Clear Time (g_c+I1), s		4.0	2.2	7.8				5.6
Green Ext Time (p_c), s		0.2	0.0	4.2				4.6

Intersection Summary	
HCM 2010 Ctrl Delay	9.9
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	1	17	46	6	36	46	317	24	8	228	6
Future Volume (veh/h)	17	1	17	46	6	36	46	317	24	8	228	6
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	18	1	18	50	7	39	50	345	26	9	248	7
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	782	40	719	439	81	291	85	478	36	21	438	12
Arrive On Green	0.48	0.48	0.48	0.48	0.48	0.48	0.05	0.28	0.28	0.01	0.24	0.24
Sat Flow, veh/h	1354	84	1512	724	170	612	1774	1711	129	1774	1803	51
Grp Volume(v), veh/h	18	0	19	96	0	0	50	0	371	9	0	255
Grp Sat Flow(s),veh/h/ln	1354	0	1596	1507	0	0	1774	0	1840	1774	0	1854
Q Serve(g_s), s	0.0	0.0	0.4	0.0	0.0	0.0	1.6	0.0	10.5	0.3	0.0	7.0
Cycle Q Clear(g_c), s	0.3	0.0	0.4	1.8	0.0	0.0	1.6	0.0	10.5	0.3	0.0	7.0
Prop In Lane	1.00		0.95	0.52		0.41	1.00		0.07	1.00		0.03
Lane Grp Cap(c), veh/h	782	0	759	812	0	0	85	0	513	21	0	450
V/C Ratio(X)	0.02	0.00	0.03	0.12	0.00	0.00	0.59	0.00	0.72	0.44	0.00	0.57
Avail Cap(c_a), veh/h	782	0	759	812	0	0	353	0	1321	230	0	1203
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.0	0.0	8.0	8.4	0.0	0.0	27.0	0.0	18.8	28.4	0.0	19.2
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.3	0.0	0.0	6.4	0.0	1.9	13.8	0.0	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	0.2	0.0	0.2	0.9	0.0	0.0	0.9	0.0	5.5	0.2	0.0	3.7
LnGrp Delay(d),s/veh	8.1	0.0	8.1	8.7	0.0	0.0	33.4	0.0	20.8	42.2	0.0	20.3
LnGrp LOS	A		A	A			C		C	D		C
Approach Vol, veh/h		37			96			421			264	
Approach Delay, s/veh		8.1			8.7			22.3			21.1	
Approach LOS		A			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		32.0	7.3	18.5		32.0	5.2	20.6
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		27.5	11.5	37.5		27.5	7.5	41.5
Max Q Clear Time (g_c+I1), s		2.4	3.6	9.0		3.8	2.3	12.5
Green Ext Time (p_c), s		0.7	0.0	3.6		0.6	0.0	3.6

Intersection Summary	
HCM 2010 Ctrl Delay	19.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	318	570	8	1	426	53	2	4	0	81	29	191
Future Volume (veh/h)	318	570	8	1	426	53	2	4	0	81	29	191
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	1863	1863	1863	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	346	620	9	1	463	58	2	4	0	88	32	208
Adj No. of Lanes	1	1	0	1	1	1	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	377	901	13	3	523	445	108	575	0	0	39	254
Arrive On Green	0.21	0.49	0.49	0.00	0.28	0.28	0.06	0.31	0.00	0.00	0.18	0.18
Sat Flow, veh/h	1774	1831	27	1774	1863	1583	1774	1863	0	0	215	1400
Grp Volume(v), veh/h	346	0	629	1	463	58	2	4	0	0	0	240
Grp Sat Flow(s),veh/h/ln	1774	0	1858	1774	1863	1583	1774	1863	0	0	0	1616
Q Serve(g_s), s	13.0	0.0	17.7	0.0	16.2	1.9	0.1	0.1	0.0	0.0	0.0	9.7
Cycle Q Clear(g_c), s	13.0	0.0	17.7	0.0	16.2	1.9	0.1	0.1	0.0	0.0	0.0	9.7
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.00	0.00		0.87
Lane Grp Cap(c), veh/h	377	0	914	3	523	445	108	575	0	0	0	293
V/C Ratio(X)	0.92	0.00	0.69	0.38	0.89	0.13	0.02	0.01	0.00	0.00	0.00	0.82
Avail Cap(c_a), veh/h	377	0	914	130	587	499	468	575	0	0	0	427
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	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	26.2	0.0	13.3	34.0	23.5	18.3	30.1	16.3	0.0	0.0	0.0	26.8
Incr Delay (d2), s/veh	26.7	0.0	2.2	73.7	14.0	0.1	0.1	0.0	0.0	0.0	0.0	7.9
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	9.1	0.0	9.5	0.1	10.4	0.8	0.0	0.1	0.0	0.0	0.0	5.0
LnGrp Delay(d),s/veh	53.0	0.0	15.5	107.7	37.4	18.4	30.2	16.3	0.0	0.0	0.0	34.7
LnGrp LOS	D		B	F	D	B	C	B				C
Approach Vol, veh/h		975			522			6			240	
Approach Delay, s/veh		28.8			35.5			20.9			34.7	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.6	38.0	8.7	16.9	19.0	23.6	0.0	25.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	31.0	18.0	18.0	14.5	21.5	18.0	18.0
Max Q Clear Time (g_c+I1), s	2.0	19.7	2.1	11.7	15.0	18.2	0.0	2.1
Green Ext Time (p_c), s	0.0	5.6	0.0	0.6	0.0	0.9	0.0	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	31.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	1257	255	204	990	0	367	18	177	0	8	29
Future Volume (veh/h)	36	1257	255	204	990	0	367	18	177	0	8	29
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	1900	1900	1863	1900
Adj Flow Rate, veh/h	39	1366	277	222	1076	0	399	20	192	0	9	32
Adj No. of Lanes	1	2	1	1	2	1	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	59	1239	554	186	1493	668	328	62	596	0	65	230
Arrive On Green	0.03	0.35	0.35	0.10	0.42	0.00	0.19	0.41	0.41	0.00	0.18	0.18
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	152	1455	0	359	1278
Grp Volume(v), veh/h	39	1366	277	222	1076	0	399	0	212	0	0	41
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	0	1606	0	0	1637
Q Serve(g_s), s	2.2	35.0	13.8	10.5	25.3	0.0	18.5	0.0	9.0	0.0	0.0	2.1
Cycle Q Clear(g_c), s	2.2	35.0	13.8	10.5	25.3	0.0	18.5	0.0	9.0	0.0	0.0	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.91	0.00		0.78
Lane Grp Cap(c), veh/h	59	1239	554	186	1493	668	328	0	658	0	0	295
V/C Ratio(X)	0.66	1.10	0.50	1.19	0.72	0.00	1.22	0.00	0.32	0.00	0.00	0.14
Avail Cap(c_a), veh/h	89	1239	554	186	1493	668	328	0	658	0	0	295
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	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	47.8	32.5	25.6	44.7	24.0	0.0	40.8	0.0	20.1	0.0	0.0	34.5
Incr Delay (d2), s/veh	12.2	58.6	3.2	127.1	3.0	0.0	121.7	0.0	1.3	0.0	0.0	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	1.3	27.1	6.5	11.7	12.9	0.0	20.1	0.0	4.2	0.0	0.0	1.0
LnGrp Delay(d),s/veh	60.0	91.1	28.8	171.8	27.0	0.0	162.5	0.0	21.3	0.0	0.0	35.5
LnGrp LOS	E	F	C	F	C		F		C			D
Approach Vol, veh/h		1682			1298			611			41	
Approach Delay, s/veh		80.1			51.8			113.5			35.5	
Approach LOS		F			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	15.0	39.5	23.0	22.5	7.8	46.7	0.0	45.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.5	35.0	18.5	18.0	5.0	40.5	5.0	31.5
Max Q Clear Time (g_c+I1), s	12.5	37.0	20.5	4.1	4.2	27.3	0.0	11.0
Green Ext Time (p_c), s	0.0	0.0	0.0	1.2	0.0	11.4	0.0	1.4

Intersection Summary	
HCM 2010 Ctrl Delay	75.1
HCM 2010 LOS	E

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	329	100	87	239	315	54
Future Volume (veh/h)	329	100	87	239	315	54
Number	5	12	3	8	4	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	358	109	95	260	342	59
Adj No. of Lanes	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	425	379	545	1165	466	396
Arrive On Green	0.24	0.24	0.31	0.63	0.25	0.25
Sat Flow, veh/h	1774	1583	1774	1863	1863	1583
Grp Volume(v), veh/h	358	109	95	260	342	59
Grp Sat Flow(s),veh/h/ln	1774	1583	1774	1863	1863	1583
Q Serve(g_s), s	12.8	3.7	2.6	4.1	11.2	1.9
Cycle Q Clear(g_c), s	12.8	3.7	2.6	4.1	11.2	1.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	425	379	545	1165	466	396
V/C Ratio(X)	0.84	0.29	0.17	0.22	0.73	0.15
Avail Cap(c_a), veh/h	679	606	545	1551	852	724
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	20.7	16.9	5.4	22.9	19.5
Incr Delay (d2), s/veh	5.4	0.4	0.7	0.1	2.2	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	6.9	1.7	1.4	2.1	6.1	0.9
LnGrp Delay(d),s/veh	29.6	21.1	17.6	5.5	25.2	19.6
LnGrp LOS	C	C	B	A	C	B
Approach Vol, veh/h	467			355	401	
Approach Delay, s/veh	27.6			8.8	24.4	
Approach LOS	C			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		20.5	25.0	21.2				46.2
Change Period (Y+Rc), s		4.5	4.5	4.5				4.5
Max Green Setting (Gmax), s		25.5	20.5	30.5				55.5
Max Q Clear Time (g_c+I1), s		14.8	4.6	13.2				6.1
Green Ext Time (p_c), s		1.2	0.2	3.5				4.1

Intersection Summary	
HCM 2010 Ctrl Delay	21.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	10	26	9	9	25	83	277	20	35	346	6
Future Volume (veh/h)	23	10	26	9	9	25	83	277	20	35	346	6
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	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	25	11	28	10	10	27	90	301	22	38	376	7
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	694	193	492	173	185	383	118	546	40	70	530	10
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.07	0.32	0.32	0.04	0.29	0.29
Sat Flow, veh/h	1365	466	1187	240	446	926	1774	1715	125	1774	1823	34
Grp Volume(v), veh/h	25	0	39	47	0	0	90	0	323	38	0	383
Grp Sat Flow(s),veh/h/ln	1365	0	1653	1611	0	0	1774	0	1841	1774	0	1857
Q Serve(g_s), s	0.0	0.0	0.8	0.0	0.0	0.0	3.0	0.0	8.6	1.2	0.0	10.9
Cycle Q Clear(g_c), s	0.5	0.0	0.8	1.0	0.0	0.0	3.0	0.0	8.6	1.2	0.0	10.9
Prop In Lane	1.00		0.72	0.21		0.57	1.00		0.07	1.00		0.02
Lane Grp Cap(c), veh/h	694	0	685	741	0	0	118	0	586	70	0	540
V/C Ratio(X)	0.04	0.00	0.06	0.06	0.00	0.00	0.76	0.00	0.55	0.55	0.00	0.71
Avail Cap(c_a), veh/h	694	0	685	741	0	0	585	0	1883	345	0	1648
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.3	0.0	10.4	10.4	0.0	0.0	27.1	0.0	16.7	27.9	0.0	18.7
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.2	0.0	0.0	9.7	0.0	0.8	6.5	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	0.5	0.0	0.0	1.8	0.0	4.4	0.7	0.0	5.8
LnGrp Delay(d),s/veh	10.4	0.0	10.5	10.6	0.0	0.0	36.8	0.0	17.5	34.4	0.0	20.5
LnGrp LOS	B		B	B			D		B	C		C
Approach Vol, veh/h		64			47			413			421	
Approach Delay, s/veh		10.5			10.6			21.7			21.7	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		29.0	8.4	21.7		29.0	6.8	23.3
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		24.5	19.5	52.5		24.5	11.5	60.5
Max Q Clear Time (g_c+I1), s		2.8	5.0	12.9		3.0	3.2	10.6
Green Ext Time (p_c), s		0.5	0.1	4.3		0.5	0.0	4.4

Intersection Summary	
HCM 2010 Ctrl Delay	20.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	386	0	2	260	94	4	13	3	13	0	255
Future Volume (veh/h)	252	386	0	2	260	94	4	13	3	13	0	255
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	1863	1863	1863	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	274	420	0	2	283	102	4	14	3	14	0	277
Adj No. of Lanes	1	1	0	1	1	1	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	332	788	0	5	444	378	66	497	107	0	0	343
Arrive On Green	0.19	0.42	0.00	0.00	0.24	0.24	0.04	0.33	0.33	0.00	0.00	0.22
Sat Flow, veh/h	1774	1863	0	1774	1863	1583	1774	1488	319	0	0	1583
Grp Volume(v), veh/h	274	420	0	2	283	102	4	0	17	0	0	277
Grp Sat Flow(s),veh/h/ln	1774	1863	0	1774	1863	1583	1774	0	1806	0	0	1583
Q Serve(g_s), s	8.3	9.4	0.0	0.1	7.7	2.9	0.1	0.0	0.4	0.0	0.0	9.3
Cycle Q Clear(g_c), s	8.3	9.4	0.0	0.1	7.7	2.9	0.1	0.0	0.4	0.0	0.0	9.3
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.18	0.00		1.00
Lane Grp Cap(c), veh/h	332	788	0	5	444	378	66	0	604	0	0	343
V/C Ratio(X)	0.83	0.53	0.00	0.41	0.64	0.27	0.06	0.00	0.03	0.00	0.00	0.81
Avail Cap(c_a), veh/h	458	1028	0	158	713	606	568	0	604	0	0	507
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	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	22.0	12.1	0.0	28.0	19.2	17.4	26.1	0.0	12.6	0.0	0.0	20.9
Incr Delay (d2), s/veh	8.6	0.6	0.0	47.6	1.5	0.4	0.4	0.0	0.0	0.0	0.0	6.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	4.9	0.0	0.1	4.1	1.3	0.1	0.0	0.2	0.0	0.0	4.6
LnGrp Delay(d),s/veh	30.5	12.6	0.0	75.6	20.7	17.8	26.5	0.0	12.6	0.0	0.0	26.9
LnGrp LOS	C	B		E	C	B	C		B			C
Approach Vol, veh/h		694			387			21			277	
Approach Delay, s/veh		19.7			20.2			15.2			26.9	
Approach LOS		B			C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.7	28.3	6.6	16.7	15.0	17.9	0.0	23.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	31.0	18.0	18.0	14.5	21.5	18.0	18.0
Max Q Clear Time (g_c+I1), s	2.1	11.4	2.1	11.3	10.3	9.7	0.0	2.4
Green Ext Time (p_c), s	0.0	4.7	0.0	0.8	0.3	3.7	0.0	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	21.2
HCM 2010 LOS	C

Level-of-Service (LOS) Calculations: Updated Project (Alternative 2) Eastbound or Westbound Lane Closure between Pats Ranch Road and Wineville Avenue on Limonite Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	653	139	117	1079	2	356	3	98	1	8	31
Future Volume (veh/h)	20	653	139	117	1079	2	356	3	98	1	8	31
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	1863	1863	1900
Adj Flow Rate, veh/h	22	710	151	127	1173	0	387	3	107	1	9	34
Adj No. of Lanes	1	2	1	1	2	1	2	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	1129	505	158	1362	609	489	737	626	2	87	330
Arrive On Green	0.02	0.32	0.32	0.09	0.38	0.00	0.14	0.40	0.40	0.00	0.25	0.25
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	1863	1583	1774	342	1293
Grp Volume(v), veh/h	22	710	151	127	1173	0	387	3	107	1	0	43
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1863	1583	1774	0	1635
Q Serve(g_s), s	1.1	15.8	6.6	6.5	28.1	0.0	10.0	0.1	4.0	0.1	0.0	1.9
Cycle Q Clear(g_c), s	1.1	15.8	6.6	6.5	28.1	0.0	10.0	0.1	4.0	0.1	0.0	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.79
Lane Grp Cap(c), veh/h	41	1129	505	158	1362	609	489	737	626	2	0	417
V/C Ratio(X)	0.53	0.63	0.30	0.80	0.86	0.00	0.79	0.00	0.17	0.41	0.00	0.10
Avail Cap(c_a), veh/h	96	1129	505	225	1362	609	876	737	626	96	0	417
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	0.00	1.00
Uniform Delay (d), s/veh	44.6	26.8	23.7	41.2	26.1	0.0	38.3	16.9	18.1	46.0	0.0	26.3
Incr Delay (d2), s/veh	10.1	2.7	1.5	12.8	7.4	0.0	2.9	0.0	0.6	84.6	0.0	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	0.7	8.1	3.1	3.7	15.1	0.0	5.0	0.0	1.8	0.1	0.0	0.9
LnGrp Delay(d),s/veh	54.7	29.4	25.2	54.1	33.5	0.0	41.2	16.9	18.7	130.6	0.0	26.8
LnGrp LOS	D	C	C	D	C		D	B	B	F		C
Approach Vol, veh/h		883			1300			497			44	
Approach Delay, s/veh		29.3			35.5			36.2			29.2	
Approach LOS		C			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	33.9	17.6	28.0	6.7	40.0	4.6	41.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	11.7	28.8	23.5	18.0	5.0	35.5	5.0	36.5
Max Q Clear Time (g_c+I1), s	8.5	17.8	12.0	3.9	3.1	30.1	2.1	6.0
Green Ext Time (p_c), s	0.1	8.2	1.1	0.4	0.0	4.4	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	33.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	139	537	82	34	880	52	104	106	54	41	106	220
Future Volume (veh/h)	139	537	82	34	880	52	104	106	54	41	106	220
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	1900	1863	1863	1863
Adj Flow Rate, veh/h	151	584	89	37	957	57	113	115	59	45	115	239
Adj No. of Lanes	1	1	1	1	2	1	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	187	824	701	64	1320	591	145	485	235	120	692	310
Arrive On Green	0.11	0.44	0.44	0.04	0.37	0.37	0.08	0.21	0.21	0.07	0.20	0.20
Sat Flow, veh/h	1774	1863	1583	1774	3539	1583	1774	2313	1122	1774	3539	1583
Grp Volume(v), veh/h	151	584	89	37	957	57	113	86	88	45	115	239
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1583	1774	1770	1665	1774	1770	1583
Q Serve(g_s), s	6.1	18.8	2.4	1.5	17.1	1.7	4.6	3.0	3.2	1.8	2.0	10.5
Cycle Q Clear(g_c), s	6.1	18.8	2.4	1.5	17.1	1.7	4.6	3.0	3.2	1.8	2.0	10.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.67	1.00		1.00
Lane Grp Cap(c), veh/h	187	824	701	64	1320	591	145	371	349	120	692	310
V/C Ratio(X)	0.81	0.71	0.13	0.58	0.73	0.10	0.78	0.23	0.25	0.37	0.17	0.77
Avail Cap(c_a), veh/h	205	824	701	147	1320	591	279	432	406	433	1171	524
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	32.2	16.7	12.1	35.0	19.9	15.0	33.2	24.2	24.3	32.9	24.7	28.1
Incr Delay (d2), s/veh	19.4	5.1	0.4	8.0	3.5	0.3	8.6	0.3	0.4	1.9	0.1	4.1
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	10.7	1.1	0.9	9.0	0.8	2.6	1.5	1.5	0.9	1.0	5.0
LnGrp Delay(d),s/veh	51.6	21.8	12.5	43.0	23.4	15.4	41.8	24.5	24.7	34.8	24.8	32.2
LnGrp LOS	D	C	B	D	C	B	D	C	C	C	C	C
Approach Vol, veh/h		824			1051			287			399	
Approach Delay, s/veh		26.3			23.6			31.4			30.3	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	37.1	10.5	18.9	12.3	32.0	9.5	20.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	6.1	29.9	11.6	24.4	8.5	27.5	18.0	18.0
Max Q Clear Time (g_c+I1), s	3.5	20.8	6.6	12.5	8.1	19.1	3.8	5.2
Green Ext Time (p_c), s	0.0	6.1	0.1	1.9	0.0	5.7	0.1	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	26.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	653	139	117	1079	2	356	3	98	1	8	31
Future Volume (veh/h)	20	653	139	117	1079	2	356	3	98	1	8	31
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	1863	1863	1900
Adj Flow Rate, veh/h	22	710	151	127	1173	0	387	3	107	1	9	34
Adj No. of Lanes	1	2	1	1	1	1	2	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	1129	505	158	717	609	489	737	626	2	87	330
Arrive On Green	0.02	0.32	0.32	0.09	0.38	0.00	0.14	0.40	0.40	0.00	0.25	0.25
Sat Flow, veh/h	1774	3539	1583	1774	1863	1583	3442	1863	1583	1774	342	1293
Grp Volume(v), veh/h	22	710	151	127	1173	0	387	3	107	1	0	43
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1863	1583	1721	1863	1583	1774	0	1635
Q Serve(g_s), s	1.1	15.8	6.6	6.5	35.5	0.0	10.0	0.1	4.0	0.1	0.0	1.9
Cycle Q Clear(g_c), s	1.1	15.8	6.6	6.5	35.5	0.0	10.0	0.1	4.0	0.1	0.0	1.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.79
Lane Grp Cap(c), veh/h	41	1129	505	158	717	609	489	737	626	2	0	417
V/C Ratio(X)	0.53	0.63	0.30	0.80	1.64	0.00	0.79	0.00	0.17	0.41	0.00	0.10
Avail Cap(c_a), veh/h	96	1129	505	225	717	609	876	737	626	96	0	417
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	0.00	1.00
Uniform Delay (d), s/veh	44.6	26.8	23.7	41.2	28.4	0.0	38.3	16.9	18.1	46.0	0.0	26.3
Incr Delay (d2), s/veh	10.1	2.7	1.5	12.8	292.9	0.0	2.9	0.0	0.6	84.6	0.0	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	0.7	8.1	3.1	3.7	76.4	0.0	5.0	0.0	1.8	0.1	0.0	0.9
LnGrp Delay(d),s/veh	54.7	29.4	25.2	54.1	321.3	0.0	41.2	16.9	18.7	130.6	0.0	26.8
LnGrp LOS	D	C	C	D	F		D	B	B	F		C
Approach Vol, veh/h		883			1300			497			44	
Approach Delay, s/veh		29.3			295.2			36.2			29.2	
Approach LOS		C			F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	33.9	17.6	28.0	6.7	40.0	4.6	41.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	11.7	28.8	23.5	18.0	5.0	35.5	5.0	36.5
Max Q Clear Time (g_c+I1), s	8.5	17.8	12.0	3.9	3.1	37.5	2.1	6.0
Green Ext Time (p_c), s	0.1	8.8	1.1	0.4	0.0	0.0	0.0	0.6

Intersection Summary	
HCM 2010 Ctrl Delay	157.5
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	139	537	82	34	880	52	104	106	54	41	106	220
Future Volume (veh/h)	139	537	82	34	880	52	104	106	54	41	106	220
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	1900	1863	1863	1863
Adj Flow Rate, veh/h	151	584	89	37	957	57	113	115	59	45	115	239
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	187	1566	701	64	1320	591	145	485	235	120	692	310
Arrive On Green	0.11	0.44	0.44	0.04	0.37	0.37	0.08	0.21	0.21	0.07	0.20	0.20
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	2313	1122	1774	3539	1583
Grp Volume(v), veh/h	151	584	89	37	957	57	113	86	88	45	115	239
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1770	1665	1774	1770	1583
Q Serve(g_s), s	6.1	8.1	2.4	1.5	17.1	1.7	4.6	3.0	3.2	1.8	2.0	10.5
Cycle Q Clear(g_c), s	6.1	8.1	2.4	1.5	17.1	1.7	4.6	3.0	3.2	1.8	2.0	10.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.67	1.00		1.00
Lane Grp Cap(c), veh/h	187	1566	701	64	1320	591	145	371	349	120	692	310
V/C Ratio(X)	0.81	0.37	0.13	0.58	0.73	0.10	0.78	0.23	0.25	0.37	0.17	0.77
Avail Cap(c_a), veh/h	205	1566	701	147	1320	591	279	432	406	433	1171	524
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	32.2	13.7	12.1	35.0	19.9	15.0	33.2	24.2	24.3	32.9	24.7	28.1
Incr Delay (d2), s/veh	19.4	0.7	0.4	8.0	3.5	0.3	8.6	0.3	0.4	1.9	0.1	4.1
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	4.1	1.1	0.9	9.0	0.8	2.6	1.5	1.5	0.9	1.0	4.9
LnGrp Delay(d),s/veh	51.6	14.4	12.5	43.0	23.4	15.4	41.8	24.5	24.7	34.8	24.8	32.2
LnGrp LOS	D	B	B	D	C	B	D	C	C	C	C	C
Approach Vol, veh/h		824			1051			287			399	
Approach Delay, s/veh		21.0			23.6			31.4			30.3	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	37.1	10.5	18.9	12.3	32.0	9.5	20.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	6.1	29.9	11.6	24.4	8.5	27.5	18.0	18.0
Max Q Clear Time (g_c+I1), s	3.5	10.1	6.6	12.5	8.1	19.1	3.8	5.2
Green Ext Time (p_c), s	0.0	10.5	0.1	1.9	0.0	5.7	0.1	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	24.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	1257	255	204	990	0	367	18	177	0	8	29
Future Volume (veh/h)	36	1257	255	204	990	0	367	18	177	0	8	29
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	1863	1863	1900
Adj Flow Rate, veh/h	39	1366	277	222	1076	0	399	20	192	0	9	32
Adj No. of Lanes	1	2	1	1	2	1	2	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	60	1305	584	196	1576	705	487	705	599	2	68	242
Arrive On Green	0.03	0.37	0.37	0.11	0.45	0.00	0.14	0.38	0.38	0.00	0.19	0.19
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	3442	1863	1583	1774	359	1278
Grp Volume(v), veh/h	39	1366	277	222	1076	0	399	20	192	0	0	41
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1721	1863	1583	1774	0	1637
Q Serve(g_s), s	2.1	35.0	12.7	10.5	23.0	0.0	10.7	0.6	8.1	0.0	0.0	2.0
Cycle Q Clear(g_c), s	2.1	35.0	12.7	10.5	23.0	0.0	10.7	0.6	8.1	0.0	0.0	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.78
Lane Grp Cap(c), veh/h	60	1305	584	196	1576	705	487	705	599	2	0	310
V/C Ratio(X)	0.65	1.05	0.47	1.13	0.68	0.00	0.82	0.03	0.32	0.00	0.00	0.13
Avail Cap(c_a), veh/h	93	1305	584	196	1576	705	671	705	599	93	0	310
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	0.00	0.00	1.00
Uniform Delay (d), s/veh	45.3	30.0	22.9	42.2	21.0	0.0	39.6	18.5	20.9	0.0	0.0	32.0
Incr Delay (d2), s/veh	11.2	38.1	2.8	104.0	2.4	0.0	5.7	0.1	1.4	0.0	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	23.9	6.0	10.8	11.7	0.0	5.5	0.3	3.8	0.0	0.0	1.0
LnGrp Delay(d),s/veh	56.5	68.1	25.7	146.3	23.4	0.0	45.3	18.6	22.3	0.0	0.0	32.9
LnGrp LOS	E	F	C	F	C		D	B	C			C
Approach Vol, veh/h		1682			1298			611			41	
Approach Delay, s/veh		60.9			44.4			37.2			32.9	
Approach LOS		E			D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	39.5	17.9	22.5	7.7	46.8	0.0	40.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.5	35.0	18.5	18.0	5.0	40.5	5.0	31.5
Max Q Clear Time (g_c+I1), s	12.5	37.0	12.7	4.0	4.1	25.0	0.0	10.1
Green Ext Time (p_c), s	0.0	0.0	0.7	0.8	0.0	13.0	0.0	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	50.7
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	233	1132	90	32	849	59	93	44	67	67	117	254
Future Volume (veh/h)	233	1132	90	32	849	59	93	44	67	67	117	254
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	1900	1863	1863	1863
Adj Flow Rate, veh/h	253	1230	98	35	923	64	101	48	73	73	127	276
Adj No. of Lanes	1	1	1	1	2	1	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	292	819	696	61	1095	490	130	389	348	120	758	339
Arrive On Green	0.16	0.44	0.44	0.03	0.31	0.31	0.07	0.22	0.22	0.07	0.21	0.21
Sat Flow, veh/h	1774	1863	1583	1774	3539	1583	1774	1770	1583	1774	3539	1583
Grp Volume(v), veh/h	253	1230	98	35	923	64	101	48	73	73	127	276
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1583	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	10.5	33.2	2.8	1.5	18.4	2.2	4.2	1.6	2.9	3.0	2.2	12.5
Cycle Q Clear(g_c), s	10.5	33.2	2.8	1.5	18.4	2.2	4.2	1.6	2.9	3.0	2.2	12.5
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	292	819	696	61	1095	490	130	389	348	120	758	339
V/C Ratio(X)	0.87	1.50	0.14	0.57	0.84	0.13	0.77	0.12	0.21	0.61	0.17	0.81
Avail Cap(c_a), veh/h	296	819	696	117	1095	490	275	421	377	422	1137	509
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	30.8	21.2	12.6	36.0	24.4	18.8	34.4	23.6	24.1	34.3	24.2	28.3
Incr Delay (d2), s/veh	22.5	232.1	0.4	8.2	7.9	0.6	9.4	0.1	0.3	4.9	0.1	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	69.7	1.3	0.9	10.2	1.0	2.4	0.8	1.3	1.6	1.1	6.0
LnGrp Delay(d),s/veh	53.2	253.3	13.1	44.2	32.3	19.3	43.8	23.8	24.4	39.1	24.3	34.4
LnGrp LOS	D	F	B	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		1581			1022			222			476	
Approach Delay, s/veh		206.4			31.9			33.1			32.4	
Approach LOS		F			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	37.7	10.1	20.7	17.0	27.9	9.6	21.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	31.0	11.7	24.3	12.6	23.4	18.0	18.0
Max Q Clear Time (g_c+I1), s	3.5	35.2	6.2	14.5	12.5	20.4	5.0	4.9
Green Ext Time (p_c), s	0.0	0.0	0.1	1.7	0.0	2.8	0.1	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	115.6
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	1257	255	204	990	0	367	18	177	0	8	29
Future Volume (veh/h)	36	1257	255	204	990	0	367	18	177	0	8	29
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	1863	1863	1900
Adj Flow Rate, veh/h	39	1366	277	222	1076	0	399	20	192	0	9	32
Adj No. of Lanes	1	2	1	1	1	1	2	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	60	1305	584	196	830	705	487	705	599	2	68	242
Arrive On Green	0.03	0.37	0.37	0.11	0.45	0.00	0.14	0.38	0.38	0.00	0.19	0.19
Sat Flow, veh/h	1774	3539	1583	1774	1863	1583	3442	1863	1583	1774	359	1278
Grp Volume(v), veh/h	39	1366	277	222	1076	0	399	20	192	0	0	41
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1863	1583	1721	1863	1583	1774	0	1637
Q Serve(g_s), s	2.1	35.0	12.7	10.5	42.3	0.0	10.7	0.6	8.1	0.0	0.0	2.0
Cycle Q Clear(g_c), s	2.1	35.0	12.7	10.5	42.3	0.0	10.7	0.6	8.1	0.0	0.0	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.78
Lane Grp Cap(c), veh/h	60	1305	584	196	830	705	487	705	599	2	0	310
V/C Ratio(X)	0.65	1.05	0.47	1.13	1.30	0.00	0.82	0.03	0.32	0.00	0.00	0.13
Avail Cap(c_a), veh/h	93	1305	584	196	830	705	671	705	599	93	0	310
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	0.00	0.00	1.00
Uniform Delay (d), s/veh	45.3	30.0	22.9	42.2	26.3	0.0	39.6	18.5	20.9	0.0	0.0	32.0
Incr Delay (d2), s/veh	11.2	38.1	2.8	104.0	142.5	0.0	5.7	0.1	1.4	0.0	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	23.9	6.0	10.8	54.5	0.0	5.5	0.3	3.8	0.0	0.0	1.0
LnGrp Delay(d),s/veh	56.5	68.1	25.7	146.3	168.8	0.0	45.3	18.6	22.3	0.0	0.0	32.9
LnGrp LOS	E	F	C	F	F		D	B	C			C
Approach Vol, veh/h		1682			1298			611			41	
Approach Delay, s/veh		60.9			164.9			37.2			32.9	
Approach LOS		E			F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	39.5	17.9	22.5	7.7	46.8	0.0	40.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	10.5	35.0	18.5	18.0	5.0	40.5	5.0	31.5
Max Q Clear Time (g_c+I1), s	12.5	37.0	12.7	4.0	4.1	44.3	0.0	10.1
Green Ext Time (p_c), s	0.0	0.0	0.7	0.8	0.0	0.0	0.0	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	93.7
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	233	1132	90	32	849	59	93	44	67	67	117	254
Future Volume (veh/h)	233	1132	90	32	849	59	93	44	67	67	117	254
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	1900	1863	1863	1863
Adj Flow Rate, veh/h	253	1230	98	35	923	64	101	48	73	73	127	276
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	292	1556	696	61	1095	490	130	389	348	120	758	339
Arrive On Green	0.16	0.44	0.44	0.03	0.31	0.31	0.07	0.22	0.22	0.07	0.21	0.21
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583	1774	1770	1583	1774	3539	1583
Grp Volume(v), veh/h	253	1230	98	35	923	64	101	48	73	73	127	276
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	10.5	22.6	2.8	1.5	18.4	2.2	4.2	1.6	2.9	3.0	2.2	12.5
Cycle Q Clear(g_c), s	10.5	22.6	2.8	1.5	18.4	2.2	4.2	1.6	2.9	3.0	2.2	12.5
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	292	1556	696	61	1095	490	130	389	348	120	758	339
V/C Ratio(X)	0.87	0.79	0.14	0.57	0.84	0.13	0.77	0.12	0.21	0.61	0.17	0.81
Avail Cap(c_a), veh/h	296	1556	696	117	1095	490	275	421	377	422	1137	509
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	30.8	18.2	12.6	36.0	24.4	18.8	34.4	23.6	24.1	34.3	24.2	28.3
Incr Delay (d2), s/veh	22.5	4.2	0.4	8.2	7.9	0.6	9.4	0.1	0.3	4.9	0.1	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	11.8	1.3	0.9	10.2	1.0	2.4	0.8	1.3	1.6	1.1	6.0
LnGrp Delay(d),s/veh	53.2	22.4	13.1	44.2	32.3	19.3	43.8	23.8	24.4	39.1	24.3	34.4
LnGrp LOS	D	C	B	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		1581			1022			222			476	
Approach Delay, s/veh		26.7			31.9			33.1			32.4	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.1	37.7	10.1	20.7	17.0	27.9	9.6	21.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	31.0	11.7	24.3	12.6	23.4	18.0	18.0
Max Q Clear Time (g_c+I1), s	3.5	24.6	6.2	14.5	12.5	20.4	5.0	4.9
Green Ext Time (p_c), s	0.0	5.5	0.1	1.7	0.0	2.7	0.1	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	29.6
HCM 2010 LOS	C

SimTraffic Vehicle Queuing Reports: Pats Ranch Road/Limonite Avenue

Intersection: 1: I-15 SB On Ramp/I-15 SB Off Ramp & Limonite Ave

Movement	EB	EB	EB	WB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	L	LTR	R
Maximum Queue (ft)	526	502	502	190	220	158	196	177	305	234
Average Queue (ft)	481	362	240	119	115	52	77	91	194	132
95th Queue (ft)	568	609	517	179	179	137	171	162	294	242
Link Distance (ft)	487	487	487			666	666		671	
Upstream Blk Time (%)	45	4	3							
Queuing Penalty (veh)	0	0	0							
Storage Bay Dist (ft)				200	200			400		400
Storage Blk Time (%)				0	0					
Queuing Penalty (veh)				0	1					

Intersection: 2: I-15 NB Off Ramp/I-15 NB On Ramp & Limonite Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	T	T	R	L	LTR	R
Maximum Queue (ft)	295	352	671	565	451	429	213	258	427	399
Average Queue (ft)	218	239	55	63	243	189	83	114	174	115
95th Queue (ft)	295	321	277	267	458	391	164	213	302	270
Link Distance (ft)			666	666	637	637	637		806	
Upstream Blk Time (%)			0							
Queuing Penalty (veh)			2							
Storage Bay Dist (ft)	220	220						450		450
Storage Blk Time (%)	10	22	0							
Queuing Penalty (veh)	27	62	1							

Intersection: 3: Pats Ranch Rd & Limonite Ave

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	TR	LTR
Maximum Queue (ft)	70	344	391	345	249	797	783	797	329	359	358
Average Queue (ft)	20	136	193	138	138	335	330	105	198	47	94
95th Queue (ft)	54	250	356	376	265	710	714	546	297	186	260
Link Distance (ft)		345	345	345		783	783	783		719	547
Upstream Blk Time (%)		0	22	29		15	15	13			
Queuing Penalty (veh)		0	59	79		59	58	53			
Storage Bay Dist (ft)	220				165				210		
Storage Blk Time (%)		2			27	16			11		
Queuing Penalty (veh)		0			148	19			11		

Intersection: 1: I-15 SB On Ramp/I-15 SB Off Ramp & Limonite Ave

Movement	EB	EB	EB	WB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	L	LTR	R
Maximum Queue (ft)	550	537	503	244	220	207	221	234	275	224
Average Queue (ft)	503	461	305	133	132	74	110	110	164	105
95th Queue (ft)	533	583	562	225	229	156	202	193	259	230
Link Distance (ft)	487	487	487			666	666		671	
Upstream Blk Time (%)	63	11	3							
Queuing Penalty (veh)	0	0	0							
Storage Bay Dist (ft)				200	200			400		400
Storage Blk Time (%)				1	2	0				
Queuing Penalty (veh)				3	6	0				

Intersection: 2: I-15 NB Off Ramp/I-15 NB On Ramp & Limonite Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	T	T	R	L	LTR	R
Maximum Queue (ft)	294	336	264	204	535	351	215	272	346	316
Average Queue (ft)	238	250	78	36	225	155	73	135	190	117
95th Queue (ft)	295	309	192	129	479	326	173	237	307	258
Link Distance (ft)			666	666	637	637	637		806	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	220	220						450		450
Storage Blk Time (%)	13	19	1							
Queuing Penalty (veh)	37	52	8							

Intersection: 3: Pats Ranch Rd & Limonite Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	R	L	T	T	L	TR	LTR
Maximum Queue (ft)	74	391	348	250	788	783	324	255	182
Average Queue (ft)	16	350	125	156	384	375	209	72	48
95th Queue (ft)	52	421	352	305	768	770	297	189	136
Link Distance (ft)		344	344		783	783		732	547
Upstream Blk Time (%)		45	23		22	7			
Queuing Penalty (veh)		184	96		90	27			
Storage Bay Dist (ft)	220			165			210		
Storage Blk Time (%)		61		29	17		12	0	
Queuing Penalty (veh)		12		154	19		12	0	

Intersection: 1: I-15 SB On Ramp/I-15 SB Off Ramp & Limonite Ave

Movement	EB	EB	EB	WB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	L	LTR	R
Maximum Queue (ft)	539	502	502	274	286	134	164	182	264	214
Average Queue (ft)	476	348	199	130	130	29	64	87	176	118
95th Queue (ft)	604	571	429	207	211	87	132	148	259	226
Link Distance (ft)	487	487	487			666	666		671	
Upstream Blk Time (%)	28	4	0							
Queuing Penalty (veh)	0	0	0							
Storage Bay Dist (ft)				200	200			400		400
Storage Blk Time (%)				2	2					
Queuing Penalty (veh)				8	7					

Intersection: 2: I-15 NB Off Ramp/I-15 NB On Ramp & Limonite Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	T	T	R	L	LTR	R
Maximum Queue (ft)	295	370	399	102	315	260	172	168	290	250
Average Queue (ft)	212	230	48	44	189	150	71	97	145	77
95th Queue (ft)	315	346	208	102	301	253	138	152	232	184
Link Distance (ft)			666	666	637	637	637		806	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	220	220						450		450
Storage Blk Time (%)	8	14								
Queuing Penalty (veh)	22	40								

Intersection: 3: Pats Ranch Rd & Limonite Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	R	L	TR	LTR
Maximum Queue (ft)	70	255	302	350	250	816	817	329	429	117
Average Queue (ft)	22	147	169	69	132	796	410	214	75	30
95th Queue (ft)	57	225	248	206	286	822	1047	326	272	74
Link Distance (ft)		345	345	345		783	783		719	546
Upstream Blk Time (%)				2		37	4			
Queuing Penalty (veh)				6		225	26			
Storage Bay Dist (ft)	220				165			210		
Storage Blk Time (%)		0			14	53		13	0	
Queuing Penalty (veh)		0			155	62		13	0	

Intersection: 1: I-15 SB On Ramp/I-15 SB Off Ramp & Limonite Ave

Movement	EB	EB	EB	WB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	L	LTR	R
Maximum Queue (ft)	378	329	183	274	287	99	114	138	338	312
Average Queue (ft)	308	254	101	217	214	82	95	104	285	258
95th Queue (ft)	393	329	192	292	295	100	117	156	398	338
Link Distance (ft)	487	487	487			666	666		671	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)				200	200			400		400
Storage Blk Time (%)				4	11					
Queuing Penalty (veh)				20	56					

Intersection: 2: I-15 NB Off Ramp/I-15 NB On Ramp & Limonite Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	T	T	R	L	LTR	R
Maximum Queue (ft)	156	174	201	208	308	303	86	309	441	440
Average Queue (ft)	116	123	151	162	183	171	60	226	334	281
95th Queue (ft)	158	166	229	241	343	358	93	300	439	422
Link Distance (ft)			666	666	637	637	637		806	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	220	220						450		450
Storage Blk Time (%)			0						0	0
Queuing Penalty (veh)			0						1	2

Intersection: 3: Pats Ranch Rd & Limonite Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	L	TR	LTR
Maximum Queue (ft)	51	274	292	112	249	277	246	318	326	53
Average Queue (ft)	25	243	248	52	168	188	214	220	149	21
95th Queue (ft)	53	273	296	103	271	266	242	313	326	62
Link Distance (ft)		345	345	345		783	783		719	547
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	220				165			210		
Storage Blk Time (%)		12			13	12		14		
Queuing Penalty (veh)		4			65	24		28		

Intersection: 1: I-15 SB On Ramp/I-15 SB Off Ramp & Limonite Ave

Movement	EB	EB	EB	WB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	L	LTR	R
Maximum Queue (ft)	521	502	484	206	204	157	224	373	491	425
Average Queue (ft)	423	325	130	124	136	79	116	173	303	246
95th Queue (ft)	590	506	268	199	207	149	195	306	395	349
Link Distance (ft)	487	487	487			666	666		671	
Upstream Blk Time (%)	7	0	0							
Queuing Penalty (veh)	0	0	0							
Storage Bay Dist (ft)				200	200			400		400
Storage Blk Time (%)				0	1				0	0
Queuing Penalty (veh)				0	3				2	0

Intersection: 2: I-15 NB Off Ramp/I-15 NB On Ramp & Limonite Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	T	T	R	L	LTR	R
Maximum Queue (ft)	290	370	673	608	358	324	176	474	858	475
Average Queue (ft)	147	191	254	236	187	165	53	303	451	331
95th Queue (ft)	224	339	494	440	316	297	118	491	765	514
Link Distance (ft)			666	666	637	637	637		806	
Upstream Blk Time (%)			0						3	
Queuing Penalty (veh)			1						0	
Storage Bay Dist (ft)	220	220						450		450
Storage Blk Time (%)	1	2	17					0	7	0
Queuing Penalty (veh)	6	11	84					2	42	3

Intersection: 3: Pats Ranch Rd & Limonite Ave

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	R	L	T	T	L	TR	LTR
Maximum Queue (ft)	319	397	351	250	802	801	330	755	90
Average Queue (ft)	31	363	128	170	320	305	270	410	22
95th Queue (ft)	130	378	343	278	743	734	421	940	56
Link Distance (ft)		344	344		783	783		732	547
Upstream Blk Time (%)		51	18		18	19		17	
Queuing Penalty (veh)		210	72		73	74		95	
Storage Bay Dist (ft)	220			165			210		
Storage Blk Time (%)		65		31	10		53	0	
Queuing Penalty (veh)		23		154	20		104	0	

Intersection: 1: I-15 SB On Ramp/I-15 SB Off Ramp & Limonite Ave

Movement	EB	EB	EB	WB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	R	L	L	T	T	L	LTR	R
Maximum Queue (ft)	502	494	500	274	287	137	138	423	512	419
Average Queue (ft)	366	265	122	111	114	64	81	191	347	281
95th Queue (ft)	502	422	263	199	207	111	133	358	448	400
Link Distance (ft)	487	487	487			666	666		671	
Upstream Blk Time (%)	7	0	0							
Queuing Penalty (veh)	0	0	0							
Storage Bay Dist (ft)				200	200			400		400
Storage Blk Time (%)				1	1				1	0
Queuing Penalty (veh)				6	7				8	1

Intersection: 2: I-15 NB Off Ramp/I-15 NB On Ramp & Limonite Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	T	T	R	L	LTR	R
Maximum Queue (ft)	231	234	670	674	261	218	110	474	821	475
Average Queue (ft)	125	135	204	202	127	107	34	212	382	292
95th Queue (ft)	207	220	472	470	253	210	80	363	634	412
Link Distance (ft)			666	666	637	637	637		806	
Upstream Blk Time (%)			7	6					8	
Queuing Penalty (veh)			50	45					0	
Storage Bay Dist (ft)	220	220						450		450
Storage Blk Time (%)	0	0	11					0	10	0
Queuing Penalty (veh)	1	2	51					0	58	1

Intersection: 3: Pats Ranch Rd & Limonite Ave

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	T	R	L	TR	LTR
Maximum Queue (ft)	72	354	375	347	250	804	825	330	739	171
Average Queue (ft)	23	234	245	163	233	755	229	245	344	34
95th Queue (ft)	62	416	441	370	278	889	809	422	803	94
Link Distance (ft)		345	345	345		783	783		719	546
Upstream Blk Time (%)		1	3	26		43	2		4	
Queuing Penalty (veh)		3	8	72		254	11		25	
Storage Bay Dist (ft)	220				165			210		
Storage Blk Time (%)		29			58	32		44	0	
Queuing Penalty (veh)		10			573	65		86	0	

SimTraffic Vehicle Queuing Reports: Wineville Avenue/Cantu Galleno Ranch Road

Intersection: 10: Etiwanda Ave & Cantu-Galleano Ranch Rd

Movement	EB	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	R	L	TR	L	T	TR	L	T	T
Maximum Queue (ft)	112	25	23	66	29	29	131	130	83	64	71	93
Average Queue (ft)	45	2	5	22	12	17	62	44	28	20	36	9
95th Queue (ft)	85	12	21	49	34	38	114	92	61	45	60	40
Link Distance (ft)		1499	1499		643	643		570	570		764	764
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	150			150			160			250		
Storage Blk Time (%)												0
Queuing Penalty (veh)												0

Intersection: 10: Etiwanda Ave & Cantu-Galleano Ranch Rd

Movement	SB
Directions Served	R
Maximum Queue (ft)	63
Average Queue (ft)	31
95th Queue (ft)	49
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	100
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 11: Wineville Ave. & Cantu-Galleano Ranch Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	T	R	L	T	TR	L	TR	L	T	TR
Maximum Queue (ft)	159	95	100	54	159	110	130	270	189	31	74	71
Average Queue (ft)	84	39	41	2	67	68	83	168	82	5	19	22
95th Queue (ft)	128	68	80	18	128	107	119	254	158	22	55	54
Link Distance (ft)		1224	1224			1499	1499		801		349	349
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	320			650	240			275		225		
Storage Blk Time (%)								0				
Queuing Penalty (veh)								0				

Intersection: 10: Etiwanda Ave & Cantu-Galleano Ranch Rd

Movement	EB	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	R	L	TR	L	T	TR	L	T	T
Maximum Queue (ft)	155	25	46	47	30	53	171	87	61	66	88	49
Average Queue (ft)	51	4	6	21	6	20	58	42	23	22	42	11
95th Queue (ft)	102	19	25	44	24	45	109	79	52	51	71	35
Link Distance (ft)		1499	1499		643	643		570	570		764	764
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	150			150			160			250		
Storage Blk Time (%)	0						1					
Queuing Penalty (veh)	0						2					

Intersection: 10: Etiwanda Ave & Cantu-Galleano Ranch Rd

Movement	SB
Directions Served	R
Maximum Queue (ft)	75
Average Queue (ft)	30
95th Queue (ft)	56
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	100
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 11: Wineville Ave. & Cantu-Galleano Ranch Rd

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	L	T	TR	L	TR	L	T	TR
Maximum Queue (ft)	177	135	114	143	155	300	415	52	54	77
Average Queue (ft)	99	71	55	68	81	171	108	15	16	22
95th Queue (ft)	156	122	97	117	129	273	265	43	49	56
Link Distance (ft)		1224		1499	1499		800		349	349
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	320		240			275		225		
Storage Blk Time (%)						2	0			
Queuing Penalty (veh)						6	0			

Intersection: 10: Etiwanda Ave & Cantu-Galleano Ranch Rd

Movement	EB	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	R	L	TR	L	T	TR	L	T	T
Maximum Queue (ft)	140	25	24	47	30	53	168	82	103	70	114	51
Average Queue (ft)	50	3	3	22	12	17	68	38	23	29	45	7
95th Queue (ft)	93	15	14	39	34	44	132	69	60	60	85	29
Link Distance (ft)		1499	1499		643	643		570	570		774	774
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	150			150			160			250		
Storage Blk Time (%)	0						0					
Queuing Penalty (veh)	0						0					

Intersection: 10: Etiwanda Ave & Cantu-Galleano Ranch Rd

Movement	SB
Directions Served	R
Maximum Queue (ft)	51
Average Queue (ft)	31
95th Queue (ft)	53
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	100
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 11: Wineville Ave. & Cantu-Galleano Ranch Rd

Movement	EB	EB	EB	EB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	T	R	L	TR	L	TR	L	T	TR
Maximum Queue (ft)	283	99	74	54	264	286	300	466	26	71	53
Average Queue (ft)	140	45	33	4	58	165	164	100	7	20	23
95th Queue (ft)	244	88	70	26	134	262	270	223	24	48	53
Link Distance (ft)		1224	1224			1499		801		349	349
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	320			650	240		275		225		
Storage Blk Time (%)						2	3				
Queuing Penalty (veh)						1	9				

Intersection: 10: Etiwanda Ave & Cantu-Galleano Ranch Rd

Movement	EB	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	R	L	TR	L	T	TR	L	T	T
Maximum Queue (ft)	132	25	23	127	74	74	135	106	81	47	137	114
Average Queue (ft)	75	2	3	52	40	38	65	42	21	23	87	38
95th Queue (ft)	123	12	15	101	62	66	119	84	47	49	131	76
Link Distance (ft)		1499	1499		643	643		570	570		803	803
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	150			150			160			250		
Storage Blk Time (%)	0											0
Queuing Penalty (veh)	0											0

Intersection: 10: Etiwanda Ave & Cantu-Galleano Ranch Rd

Movement	SB
Directions Served	R
Maximum Queue (ft)	52
Average Queue (ft)	27
95th Queue (ft)	45
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	100
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 11: Wineville Ave. & Cantu-Galleano Ranch Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	T	R	L	T	TR	L	TR	L	T	TR
Maximum Queue (ft)	186	140	138	56	158	138	138	188	98	31	116	139
Average Queue (ft)	88	64	59	4	80	80	81	101	40	4	51	49
95th Queue (ft)	144	105	104	27	138	121	122	164	80	21	95	89
Link Distance (ft)		1238	1238			1499	1499		801		727	727
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	320			650	240			275		225		
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 10: Etiwanda Ave & Cantu-Galleano Ranch Rd

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	TR	L	T	T	R
Maximum Queue (ft)	150	23	149	117	74	134	65	62	47	155	175	52
Average Queue (ft)	66	6	43	38	36	53	37	20	16	91	51	30
95th Queue (ft)	121	22	91	83	67	99	74	47	36	144	123	47
Link Distance (ft)		1499		643	643		570	570		803	803	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	150		150			160			250			100
Storage Blk Time (%)	0		0								1	
Queuing Penalty (veh)	0		0								1	

Intersection: 11: Wineville Ave. & Cantu-Galleano Ranch Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	R	L	T	TR	L	TR	L	T	TR
Maximum Queue (ft)	139	211	56	138	120	118	236	136	31	104	98
Average Queue (ft)	71	108	6	72	68	69	98	55	5	43	44
95th Queue (ft)	114	180	33	118	117	114	186	107	24	91	76
Link Distance (ft)		1238			1499	1499		800		727	727
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	320		650	240			275		225		
Storage Blk Time (%)											
Queuing Penalty (veh)											

Intersection: 10: Etiwanda Ave & Cantu-Galleano Ranch Rd

Movement	EB	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	T	R	L	TR	L	T	TR	L	T	T	R
Maximum Queue (ft)	202	24	87	96	93	112	128	81	71	181	151	66
Average Queue (ft)	84	3	42	37	44	62	39	23	21	91	44	25
95th Queue (ft)	147	16	74	69	77	104	87	56	54	139	97	53
Link Distance (ft)		1499		643	643		570	570		813	813	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	150		150			160			250			100
Storage Blk Time (%)	2											
Queuing Penalty (veh)	0											

Intersection: 11: Wineville Ave. & Cantu-Galleano Ranch Rd

Movement	EB	EB	EB	EB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	T	R	L	TR	L	TR	L	T	TR
Maximum Queue (ft)	155	132	112	56	114	246	199	96	25	95	161
Average Queue (ft)	76	64	58	7	74	136	120	43	6	45	53
95th Queue (ft)	137	121	98	39	109	215	189	89	23	92	101
Link Distance (ft)		1238	1238			1499		801		727	727
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	320			650	240		275		225		
Storage Blk Time (%)						0					
Queuing Penalty (veh)						0					

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	149	410	146	64	434	30	144	657	35	25	848	96
Future Volume (veh/h)	149	410	146	64	434	30	144	657	35	25	848	96
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	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	162	446	159	70	472	33	157	714	38	27	922	104
Adj No. of Lanes	1	2	1	1	2	0	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	204	1010	452	97	754	53	202	1235	66	52	980	438
Arrive On Green	0.12	0.29	0.29	0.05	0.22	0.22	0.11	0.36	0.36	0.03	0.28	0.28
Sat Flow, veh/h	1774	3539	1583	1774	3357	234	1774	3418	182	1774	3539	1583
Grp Volume(v), veh/h	162	446	159	70	248	257	157	369	383	27	922	104
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1821	1774	1770	1831	1774	1770	1583
Q Serve(g_s), s	5.9	6.9	5.3	2.6	8.5	8.5	5.7	11.3	11.3	1.0	17.0	3.4
Cycle Q Clear(g_c), s	5.9	6.9	5.3	2.6	8.5	8.5	5.7	11.3	11.3	1.0	17.0	3.4
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	204	1010	452	97	397	409	202	639	662	52	980	438
V/C Ratio(X)	0.79	0.44	0.35	0.73	0.62	0.63	0.78	0.58	0.58	0.52	0.94	0.24
Avail Cap(c_a), veh/h	332	1457	652	146	543	559	544	834	863	199	980	438
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	28.8	19.5	19.0	31.1	23.4	23.4	28.8	17.2	17.2	32.0	23.6	18.7
Incr Delay (d2), s/veh	6.8	0.3	0.5	9.8	1.6	1.6	6.3	0.8	0.8	7.7	16.4	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	3.3	3.4	2.4	1.5	4.3	4.5	3.1	5.6	5.8	0.6	10.6	1.5
LnGrp Delay(d),s/veh	35.6	19.8	19.4	40.9	25.0	25.0	35.1	18.0	18.0	39.6	40.0	19.0
LnGrp LOS	D	B	B	D	C	C	D	B	B	D	D	B
Approach Vol, veh/h		767			575			909			1053	
Approach Delay, s/veh		23.1			26.9			21.0			37.9	
Approach LOS		C			C			C			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	8.1	23.6	12.1	23.0	12.2	19.5	6.5	28.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	27.5	20.5	18.5	12.5	20.5	7.5	31.5
Max Q Clear Time (g_c+I1), s	4.6	8.9	7.7	19.0	7.9	10.5	3.0	13.3
Green Ext Time (p_c), s	0.0	6.3	0.3	0.0	0.2	4.5	0.0	10.5

Intersection Summary	
HCM 2010 Ctrl Delay	27.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	417	68	15	406	23	190	839	35	47	556	105
Future Volume (veh/h)	96	417	68	15	406	23	190	839	35	47	556	105
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	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	104	453	74	16	441	25	207	912	38	51	604	114
Adj No. of Lanes	1	2	1	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	135	1181	528	34	483	27	255	1239	52	78	914	409
Arrive On Green	0.08	0.33	0.33	0.02	0.28	0.28	0.14	0.36	0.36	0.04	0.26	0.26
Sat Flow, veh/h	1774	3539	1583	1774	1746	99	1774	3463	144	1774	3539	1583
Grp Volume(v), veh/h	104	453	74	16	0	466	207	466	484	51	604	114
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	0	1845	1774	1770	1837	1774	1770	1583
Q Serve(g_s), s	4.2	7.2	2.4	0.7	0.0	17.9	8.3	16.8	16.8	2.1	11.2	4.2
Cycle Q Clear(g_c), s	4.2	7.2	2.4	0.7	0.0	17.9	8.3	16.8	16.8	2.1	11.2	4.2
Prop In Lane	1.00		1.00	1.00		0.05	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	135	1181	528	34	0	510	255	633	657	78	914	409
V/C Ratio(X)	0.77	0.38	0.14	0.48	0.00	0.91	0.81	0.74	0.74	0.65	0.66	0.28
Avail Cap(c_a), veh/h	303	1328	594	133	0	516	496	761	790	182	914	409
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.2	18.7	17.1	35.6	0.0	25.7	30.4	20.5	20.5	34.5	24.3	21.7
Incr Delay (d2), s/veh	9.0	0.2	0.1	10.1	0.0	20.5	6.2	3.0	2.9	8.8	1.8	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	2.4	3.5	1.1	0.4	0.0	12.0	4.5	8.7	9.0	1.2	5.7	1.9
LnGrp Delay(d),s/veh	42.2	18.9	17.2	45.6	0.0	46.2	36.6	23.6	23.4	43.3	26.1	22.1
LnGrp LOS	D	B	B	D		D	D	C	C	D	C	C
Approach Vol, veh/h		631			482			1157			769	
Approach Delay, s/veh		22.5			46.2			25.8			26.6	
Approach LOS		C			D			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.9	28.9	15.0	23.4	10.1	24.8	7.7	30.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	27.5	20.5	18.5	12.5	20.5	7.5	31.5
Max Q Clear Time (g_c+I1), s	2.7	9.2	10.3	13.2	6.2	19.9	4.1	18.8
Green Ext Time (p_c), s	0.0	5.9	0.4	3.9	0.1	0.4	0.0	7.4

Intersection Summary	
HCM 2010 Ctrl Delay	28.6
HCM 2010 LOS	C