TRAFFIC IMPACT ANALYSIS

FOR

OAK VISTA SUBDIVISION

Rocklin, California

Prepared For:

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Job No. 2962-02

Oak Vista Subdivision.rpt

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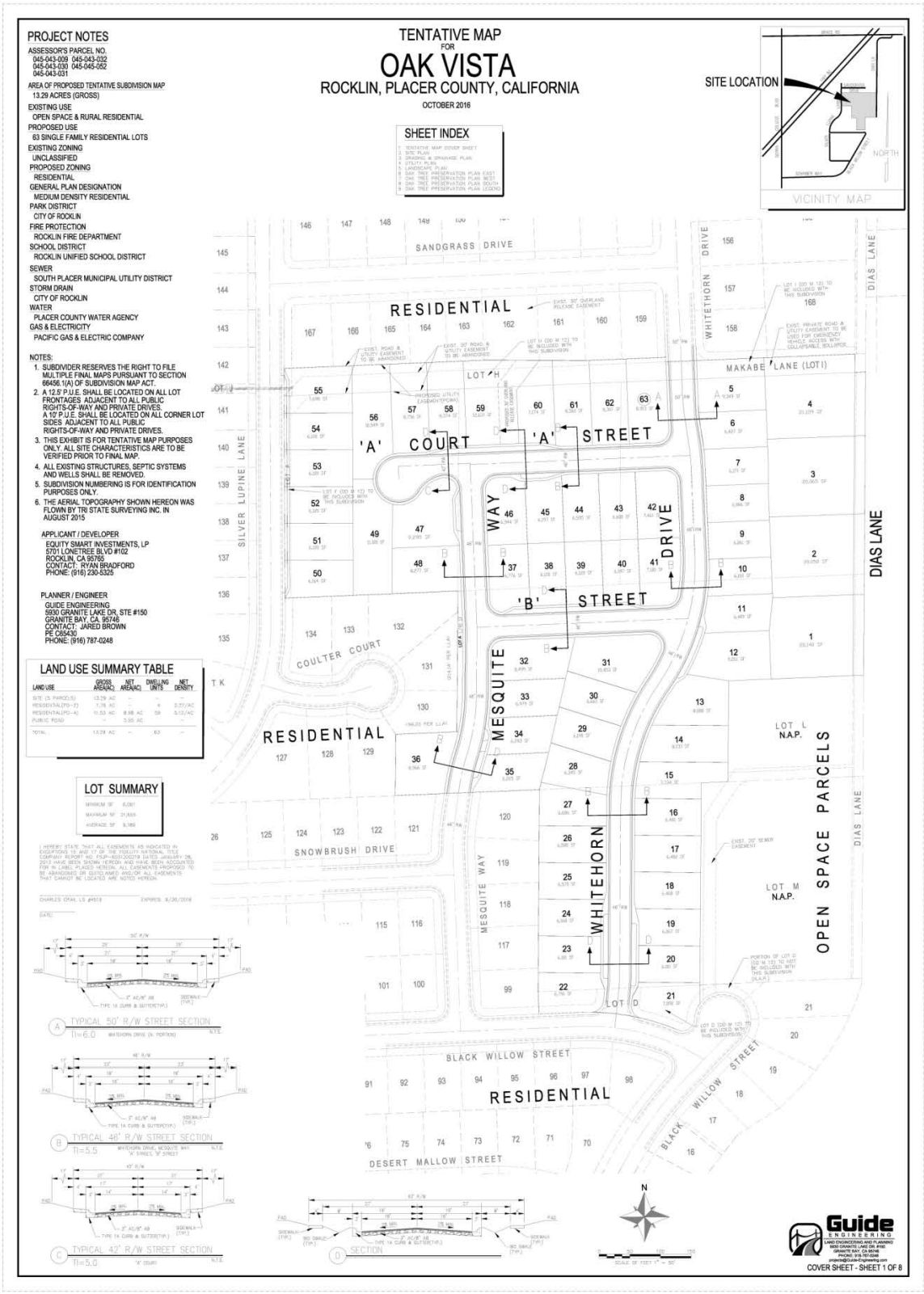
INTRODUCTION

This report documents **KD Anderson & Associates'** analysis of the traffic impacts associated with developing the **Oak Vista Subdivision** in the City of Rocklin, California. This assessment of traffic impacts has been required by the City of Rocklin, and per City staff direction addresses project impacts within the context of all transportation modes. The analysis addresses both current and future background conditions at key intersections providing access to the site and assesses traffic impacts based on adopted General Plan standards for significance. The analysis also describes the project's impact to pedestrian, bicycle and transit facilities.

Project Description

The Oak Vista Subdivision is a 63 unit single family residential development that will be located in the eastern Rocklin area east of Sierra College Blvd near the Town of Loomis, as noted in Figure 1 and Figure 2. The site is currently zoned UN (unclassified) and designated MDR (Medium Density Residential) in the Rocklin General Plan. Access to the majority of the site (59 lots) is proposed via local street connections to Schriber Way (i.e., Silver Lupine Lane, Black Widow Street, Mesquite Street). The remaining four lots have access via Dias Lane.

VICINITY MAP


TENTATIVE MAP
FOR
OAK VISTA
ROCKLIN, PLACER COUNTY, CALIFORNIA
OCTOBER 2016
PROJECT NOTES
ASSESSOR'S PARCEL NO.
045-043-009 045-043-032
045-043-030 045-045-052
045-043-031
AREA OF PROPOSED TENTATIVE SUBDIVISION MAP
13.29 ACRES (GROSS)
EXISTING USE
OPEN SPACE & RURAL RESIDENTIAL
PROPOSED USE
63 SINGLE FAMILY RESIDENTIAL LOTS
EXISTING ZONING
UNCLASSIFIED
PROPOSED ZONING
RESIDENTIAL
GENERAL PLAN DESIGNATION
MEDIUM DENSITY RESIDENTIAL
PARK DISTRICT
CITY OF ROCKLIN
FIRE PROTECTION
ROCKLIN FIRE DEPARTMENT
SCHOOL DISTRICT
ROCKLIN UNIFIED SCHOOL DISTRICT
SEWER
SOUTH PLACER MUNICIPAL UTILITY DISTRICT
STORM DRAIN
CITY OF ROCKLIN
WATER
PLACER COUNTY WATER AGENCY
GAS & ELECTRICITY
PACIFIC GAS & ELECTRIC COMPANY
NOTES:
1. SUBDIVIDER RESERVES THE RIGHT TO FILE MULTIPLE FINAL MAPS PURSUANT TO SECTION 66456.1(A) OF SUBDIVISION MAP ACT.
2. A 12.5' P.U.E. SHALL BE LOCATED ON ALL LOT FRONTAGES ADJACENT TO ALL PUBLIC RIGHTS-OF-WAY AND PRIVATE DRIVES. A 10' P.U.E. SHALL BE LOCATED ON ALL CORNER LOT SIDES ADJACENT TO ALL PUBLIC RIGHTS-OF-WAY AND PRIVATE DRIVES.
3. THIS EXHIBIT IS FOR TENTATIVE MAP PURPOSES ONLY. ALL SITE CHARACTERISTICS ARE TO BE VERIFIED PRIOR TO FINAL MAP.
4. ALL EXISTING STRUCTURES, SEPTIC SYSTEMS AND WELLS SHALL BE REMOVED.
5. SUBDIVISION NUMBERING IS FOR IDENTIFICATION PURPOSES ONLY.
6. THE AERIAL TOPOGRAPHY SHOWN HEREON WAS FLOWN BY TRI STATE SURVEYING INC. IN AUGUST 2015
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PE 055430
PHONE: (916) 787-0248
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WHITEHORN
LOT L N.A.P.
LOT M N.A.P.
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TYPICAL 46' R/W STREET SECTION
TYPICAL 42' R/W STREET SECTION
SECTION
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ENGINEERING
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SITE PLAN

EXISTING SETTING

This report section describes the facilities that are available today serving vehicular, pedestrian and bicycle traffic and transit users in Rocklin, as well as General Plan policies that guide consideration of traffic impacts.

Study Area Circulation System - Roads

Regionally, the Oak Vista Subdivision will be served by major city streets that link the site with important state highways. Interstate 80 (I-80) connects Rocklin with the balance of Placer County and the Sacramento Metropolitan area. In the area of the proposed project, access to state highways occurs at a grade separated interchange on Sierra College Blvd roughly ½ mile to the west. Community-wide circulation is provided via Sierra College Blvd, which extends south from its interchange on I-80 to Rocklin Road and the City of Roseville.

The text which follows provides additional detail regarding the streets included in the study area.

Interstate 80 (I-80) is the main east-west transportation corridor across western Placer County and the Sacramento Metropolitan area. In the area of the project I-80 is a six lane freeway. The most recent daily traffic volume information published by Caltrans indicates that in 2014 I-80 carried an *Annual Average Daily Traffic (AADT)* volume of 96,000 vehicles per day west of the Sierra College Blvd interchange and 94,000 east of the interchange. Trucks comprise 7% of the daily traffic on this portion of I-80.

Sierra College Boulevard is a major north-south Arterial connecting Placer County with Sacramento County. The roadway intersects with Rocklin Road, I-80, and Pacific Street/Taylor Road and continues north to State Route 193 near Lincoln. To the south, the roadway extends through Roseville to the Sacramento County line. In Sacramento County, it becomes Hazel Avenue and continues south to U.S. 50. Sierra College Blvd is a four lane roadway in the area of the project, with plans for eventual widening to six lanes. The General Plan EIR indicates that Sierra College Blvd carried 17,200 vehicles per day in the area between Interstate 80 and Taylor Road, but the volume has likely increased appreciably with recent development near the interchange.

Schriber Way is a two-lane commercial street that provides access to the south end of Rocklin Commons Shopping Center and extends east from Sierra College Blvd to provide access to two existing subdivisions and subsequently to the proposed project.

Dominguez Road / Bass Pro Drive is a two-lane road that links Sierra College Blvd with Rocklin Crossings. The Rocklin General Plan designates Dominguez Road as a Collector street and notes that eventually the road will be extended across Interstate 80 to its current terminus on Granite Drive.

Study Area Circulation System - Intersections

The quality of traffic flow in urban areas is often governed by the operation of key intersections. The following three intersections have been identified for evaluation in this study in consultation with City of Rocklin staff.

The **Sierra College Blvd / Westbound I-80 ramps / Rocklin Commons Drive intersection** is controlled by a coordinated traffic signal, and the intersection has several auxiliary lanes. The westbound off-ramp approach features dual left turns, a combined left+right turn lane and a separate right turn lane. The two-lane eastbound exit from Rocklin Commons is striped as separate left and right turn lanes. There are three through lanes on each Sierra College Blvd approach. The northbound approach also has a separate left turn lane and a free right turn lane onto westbound I-80. The southbound approach has an auxiliary right turn lane into Rocklin Commons, and the #3 through lane continues onto the westbound I-80 on-ramp. Crosswalks are striped across the north, west and east legs of the intersection.

The **Sierra College Blvd / Eastbound I-80 ramps / Rocklin Crossings Drive intersection** is also controlled by a coordinated traffic signal. The eastbound I-80 off-ramp has five approach lanes configured as dual left turns, two through lanes and right turn lane. The three lane westbound exit from Rocklin Crossings has a separate left turn lane, a right turn lane onto northbound Sierra College Blvd and a "free" right turn lane onto eastbound I-80 that does not pass through the traffic signal. The five-lane northbound Sierra College Blvd approach is configured as three through lanes that continue over I-80, a through lane that continued onto the eastbound on-ramp and a separate right turn lane into Rocklin Crossings. The five-lane southbound Sierra College Blvd approach has dual left turns into Rocklin Crossings, two through lanes and a free right turn lane onto eastbound I-80. Crosswalks are striped on the south, east and west legs of the intersection.

The **Sierra College Blvd / Schriber Way intersection** is a "tee" controlled by a stop sign on the westbound Schriber Way approach. The four lane northbound Sierra College Blvd approach is striped as three through lanes and a combined through+right turn lane. There are two southbound through lanes on Sierra College Blvd. Left turns are prohibited at the intersection, and this control is enforced by a striped median. The westbound Schriber Way approach is "right turns only".

The **Sierra College Blvd / Dominguez Road / Bass Pro Drive intersection** is controlled by a coordinated traffic signal. The northbound Sierra College Blvd approach has a left turn lane, three through lanes and a short right turn pocket. The southbound Sierra College Blvd approach has two through lanes and separate left turn and right turn lanes. The two-lane eastbound Dominguez Road approach has a separate left turn lane. The four-lane Bass Pro Drive approach has dual left turn lanes, a through lane and a right turn lane. Crosswalks are striped across the north and east legs of the intersection.

Standards of Significance: Levels of Service - Methodology

Levels of Service were calculated at study area intersections in order to assess the quality of existing traffic conditions and to provide a basis for analyzing project impacts. "Level of Service" is a qualitative measure of traffic operating conditions whereby a letter grade "A" through "F", corresponding to progressively worsening operating conditions, is assigned to an intersection or roadway segment.

Analysis Methodology for Intersections. The City of Rocklin utilizes a modified version of the *Interim Materials on Highway Capacity – Circular 212* (Transportation Research Board, 1980) critical movement method to determine Levels of Service at signalized intersections. Modified capacities which are approximately 5 percent higher than the published Circular 212 capacities are employed. The City of Rocklin utilizes the same modified Saturation Flow rates as the City of Roseville (i.e., 1600 for 2 phases, 1500 for 3 phases and 1450 for 4 or more phases). This methodology determines the Level of Service by comparing the volume-to-capacity (v/c) ratio of critical intersection movements to the thresholds shown in Table 1.

Caltrans traffic study guidelines suggest an alternative approach for analysis of state facilities. The methodology described in the *2010 Highway Capacity Manual* (HCM) has been used to evaluate the operation of I-80 ramp intersections on Sierra College Blvd. Current Caltrans traffic signal timing plans have been employed.

At un-signalized intersections HCM techniques base Level of Service on the length of delays experienced by motorists waiting at stop signs. Delay values can be reported as an average value for the overall operation of the intersection in the case of all-way stop controls or for each movement where motorists are required to yield the right of way to other traffic, in the case of side street stops. The City of Rocklin bases evaluation of un-signalized LOS on the overall average delay.

Table 1 presents general characteristics associated with each Level of Service grade.

At intersections, Level of Service calculations can reflect average conditions occurring over the breadth of the hour or can be indicative of conditions occurring during the highest volume 15 minute period within that hour. The choice of perspective is made by local agencies as part of their development of standards of significance. Based on the methodology used for the General Plan EIR, this analysis addresses average conditions occurring over the breadth of the peak hour.

TABLE 1
LEVEL OF SERVICE DEFINITIONS

Level of Service	Signalized Intersection	Unsignalized Intersection	Roadway (Daily)
"A"	Uncongested operations, all queues clear in a single-signal cycle. V/C < 0.60 or Average Delay ≤10 sec/veh	Little or no delay. Average Delay ≤ 10 sec/veh	Completely free flow.
"B"	Uncongested operations, all queues clear in a single cycle. V/C > 0.60 and ≤ 0.70 or Average Delay <10 and ≤25 sec/veh	Short traffic delays. Delay > 10 sec/veh and ≤ 15 sec/veh	Free flow, presence of other vehicles noticeable.
"C"	Light congestion, occasional backups on critical approaches. V/C > 0.70 and ≤ 0.80 or Average Delay <25 and ≤35 sec/veh	Average traffic delays. Delay > 15 sec/veh and ≤ 25 sec/veh	Ability to maneuver and select operating speed affected.
"D"	Significant congestions of critical approaches but intersection functional. Cars required to wait through more than one cycle during short peaks. No long queues formed. V/C > 0.80 and ≤ 0.90 or Average Delay <35 and ≤55 sec/veh	Long traffic delays. Delay > 25 sec/veh and ≤ 35 sec/veh	Unstable flow, speeds and ability to maneuver restricted.
"E"	Severe congestion with some long standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es). V/C > 0.90 and ≤ 1.00 or Average Delay <55 and ≤80 sec/veh	Very long traffic delays, failure, extreme congestion. Delay > 35 sec/veh and ≤ 50 sec/veh	At or near capacity, flow quite unstable.
"F"	Total breakdown, stop-and-go operation. V/C > 1.00 or Average Delay >80 sec/veh	Intersection often blocked by external causes. Delay > 50 sec/veh	Forced flow, breakdown.

Sources: 2000 Highway Capacity Manual, and Transportation Research Board (TRB) Special Report 209.

Traffic Signal Warrants. The extent to which a traffic signal may be justified is determined based on many factors. From the standpoint of traffic impact analysis, signal warrant criteria contained in the *California Manual of Uniform Traffic Control Devices (CMUTCD)* are employed in order to assess the relative impact of the additional traffic accompanying a development proposal. For this analysis, Warrant 3 (Peak Hour Traffic) has been employed. Variation in warrant requirements occurs based on the design speed of the road (i.e., > 40 mph)

and on the location of the intersection (i.e., rural versus urban locations). In this case, urban criteria have been employed. It is important to note that other warrants addressing factors such as pedestrian activity and collision history should be considered before a decision is made to install a traffic signal.

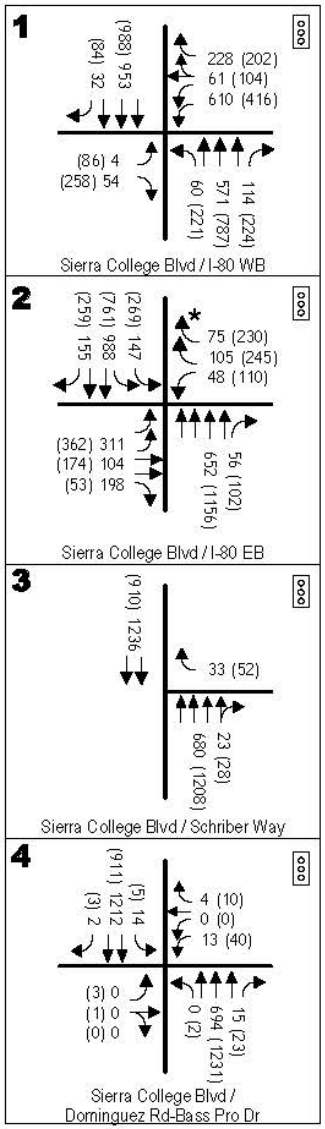
Standards of Significance. Local jurisdictions adopt Standards of Significance for determining environmental impacts relating to traffic, and in this study area the standards of the City of Rocklin apply. As indicated in the REGULATORY Setting section, the General Plan notes that Level of Service C is the minimum standard but that LOS D may be accepted during peak periods under identified circumstances.

Based on the City's significance threshold, if an intersection is already operating at an unsatisfactory Level of Service, an increase of 5 percent (i.e., an addition of 0.05) to the v/c ratio at a signalized intersection would be considered a measureable worsening of intersection operations and therefore would constitute a significant project impact. At signalized intersections assessed using HCM, an increase in overall delay of 5.0 seconds is a significant impact. If an un-signalized intersection is already operating at an unsatisfactory Level of Service (i.e., LOS D), then the addition of traffic exceeding more than 5% of the total traffic at an intersection would be a significant project impact.

Existing Traffic Volumes / Levels of Service

Traffic Volume Counts. New traffic counts were made for this study in October 2015 roughly one month after the opening of the Bass Pro Shop in Rocklin Crossings. The counts were conducted on a day when Rocklin schools were in session. Intersection turning movement counts were made at study intersections during the periods of 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m. The highest hourly traffic volume period within each two hour window was identified as the peak hour.

Figure 3 illustrates the intersection turning movement count data recorded for each count period. This figure also notes the existing geometric layout of each intersection and the location of traffic controls. This data has been used to determine the operating Level of Service at each intersection.



NORTH
N.T.S.

Legend

- XX — AM Peak Hour Volume
- (XX) — PM Peak Hour Volume
- Signalized Intersection
- ★ — Free onto Freeway

EXISTING TRAFFIC VOLUMES AND LANE CONFIGURATIONS

KD Anderson & Associates, Inc.
Transportation Engineers

2962-02 LT 11/1/2016

figure 3

Intersection Level of Service. Table 2 identifies current intersection Levels of Service at the four (4) study locations. As shown, the overall Level of Service at each location is LOS C, which meets the City's LOS D goal at locations in the immediate vicinity of state highways.

Observation of peak hour traffic conditions reveals that in the p.m. peak hour the volume of northbound traffic on Sierra College Blvd headed onto Interstate 80 is appreciable. This volume is concentrated into a single lane at the eastbound ramp intersection that continues onto the eastbound on-ramp. During peak periods this traffic is delayed and long queues form which extend beyond the Dominguez Road – Bass Pro Drive intersection.

TABLE 2
EXISTING INTERSECTION LEVEL OF SERVICE

Intersection	Control	Time Period					
		AM Peak Hour (7:00 to 9:00 a.m.)			PM Peak Hour (4:00 to 6:00 p.m.)		
		LOS	Volume / Capacity	Average Delay (sec/veh)	LOS	Volume / Capacity	Average Delay (sec/veh)
Sierra College Blvd / WB I-80 / Commons Dr	Signal	B	-	14.2	C	-	20.2
Sierra College Blvd/ EB I-80 / Crossings Dr	Signal	B	-	16.4	B	-	17.5
Sierra College Blvd / Schriber Way (overall) Westbound right turn	EB Stop	(A) A		(0.2) 9.6	(A) A	-	(0.2) 8.8
Sierra College Blvd / Dominguez Rd / Bass Pro Drive	Signal	A	0.409	-	A	0.303	-

Bold indicates conditions in excess of adopted minimum LOS standard

Traffic Signal Warrants. The peak hour traffic volume at the Sierra College Blvd / Schriber Way intersection does not satisfy MUTCD Warrant 3 (peak hour volume).

Transit Facilities

Bus Service. Rocklin is generally served by four **Placer County Transit (PCT)** bus routes: the Auburn to Light Rail Express route, the Lincoln / Rocklin / Sierra College route, the Taylor Road shuttle, and the Placer Commuter Express. PCT is a fixed-route scheduled transit system operated by Placer County. PCT principally serves the I-80 corridor area between Alta and Roseville, the State Route 65 corridor area into Lincoln, and the Highway 49 corridor. Some of the routes are "deviated." A deviated route means that the buses generally travel on a main route (e.g., I-80) but can deviate from that route up to a certain distance (three-quarters of a mile in the case of PCT) to serve the specific needs of transit patrons.

There are currently 15 bus runs a day in each direction on PCT's Auburn-Light Rail Express route between Auburn and Sacramento Regional Transit's Watt/I-80 light rail station. This route provides service to Sierra College and the Roseville Galleria shopping center. It connects with Roseville Transit and RT buses at Auburn Boulevard near I-80.

PCT's Lincoln / Rocklin / Sierra College route has 14 runs a day in each direction. This route has numerous stops within the City of Rocklin. The Taylor Road shuttle is a deviated route that connects Auburn and Sierra College with seven runs a day in each direction, although service frequency on this route may be increasing. Placer Commuter Express is a commuter bus service traveling from Rocklin Road and Bush Street in central Rocklin to downtown Sacramento with three morning and three afternoon trips.

In addition to regular bus service, PCT also provides paratransit services for patrons with more challenging transportation needs. Such services include a dial-a-ride program in the Rocklin/ Loomis area and in Granite Bay. Dial-a-ride also serves the portion of Roseville along the State Route 65 corridor adjacent to Rocklin.

Rail Service. The Capitol Corridor Intercity Train Service provides passenger rail service between Auburn and San Jose. There are three stations in Placer County: Auburn, Rocklin, and Roseville. There are currently nine runs per day in each direction, but only one run in each direction from Auburn to Oakland that serves Rocklin. There are four runs in each direction from Sacramento to Oakland and four runs in each direction from Sacramento to San Jose. Amtrak provides bus connections from Rocklin to the Sacramento Amtrak Station to connect to these additional Capitol Corridor runs. The Rocklin Multimodal Train Station is a permanent building for rail users located along the Union Pacific Railroad track at the Rocklin Road crossing.

Pedestrian Facilities

Sidewalks are available along streets throughout Rocklin, including those in the immediate vicinity of the proposed project. Sidewalks exist on both sides of Sierra College Blvd in the area north of Dominguez Road to Granite Drive. Sidewalks are in place on Bass Pro Drive and on the local streets that link the project site with Sierra College Blvd.

Bicycle Facilities

Bikeways are defined by the State of California Street and Highways Code as follows:

- Class I bikeways provide a completely separated right-of-way designated for the exclusive use of bicycles and pedestrians with cross-flows by motorists minimized (also called a bike path or trail).

- Class II bikeways provide a restricted right-of-way designated for exclusive or semiexclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross-flows by pedestrians and motorists permitted (also called a bike lane).
- Class III bikeways provide a right-of-way designated by signs or permanent markings and shared with pedestrians or motorists (also called a bike route).

The City of Rocklin's General Plan includes a Bikeway Diagram, which specifies a number of existing and proposed bike lanes and bike routes. Class II on-street bike lanes already exist on Sierra College Blvd, Bass Pro Drive and Schriber Way.

REGULATORY SETTING

City of Rocklin General Plan Circulation Element

The Circulation Element of the City of Rocklin's General Plan has, as its key goal, "To create a balanced and coordinated transportation system which utilizes all transportation modes efficiently and promotes sound land use". A complete list of the General Plan goals and policies can be found in the Circulation Element of the General Plan, and specific policies that are relevant to this project are noted below. Policy C-34 deals with the Dominguez Overcrossing on Interstate 80 that will link Granite Drive with Sierra College Blvd.

Policies for Transportation System

C-1 Provide for a circulation pattern for regional, community, and neighborhood traffic needs.

C-2 Coordinate land use and transportation planning to support transit services, NEV facilities and non-motorized transportation.

Policies for City and Regional Street System

C-7 Monitor traffic on City streets to determine improvements needed to maintain an acceptable Level of Service.

C-8 Update the Capital Improvement Program (CIP) and traffic impact fees at least every five years, or as determined necessary with the approval of major new developments or major general plan amendments not considered in the adopted Capital Improvement Program.

C-9 Provide for an annual inflationary adjustment to the City's traffic impact fee to ensure that the fee is adequate for the future construction of roads.

C-10 A. Maintain a minimum traffic Level of Service "C" for all signalized intersections during the p.m. peak hour on an average weekday, except in the circumstances described in C-10.B and C. below.

B. Recognizing that some signalized intersections within the City serve and are impacted by development located in adjacent jurisdictions, and that these impacts are outside the control of the City, a development project which is determined to result in a Level of Service worse than "C" may be approved, if the approving body finds (1) the diminished level of service is an interim situation which will be alleviated by the implementation of planned improvements or (2) based on the specific circumstances described in Section C. below, there are no feasible street improvements that will improve the Level of Service to "C" or better as set forward in the Action Plan for the Circulation Element.

C. All development in another jurisdiction outside of Rocklin's control which creates traffic impacts in Rocklin should be required to construct all mitigation necessary in

order to maintain a LOS C in Rocklin unless the mitigation is determined to be infeasible by the Rocklin City Council. The standard for determining the feasibility of the mitigation would be whether or not the improvements create unusual economic, legal, social, technological, physical or other similar burdens and considerations.

C-11 Continue to participate with adjacent jurisdictions toward the completion and improvement of streets that extend into other communities through individual cooperation and/or use of the Placer County Transportation Planning Agency (PCTPA), joint powers authorities, and similar entities.

C-12 Encourage improvements to the existing Federal Interstate and State highway system, and the addition of new routes that would benefit the City of Rocklin.

C-13 Consider a variety of funding mechanisms, either independently or with other government agencies, to fund needed regional improvements.

C-14 Prohibit residential driveways along collector or arterial streets within newly developing residential areas. This policy does not apply to multi-family residential uses, or where past decisions have created existing lots with residential frontages on collector or arterial streets.

C-15 Reduce the potential for the use of local residential streets as shortcuts for through traffic on streets that are not improved to full City standards.

C-16 Provide each new elementary school site with a minimum of two full street frontages.

C-17 Keep truck traffic away from residential areas and streets not structurally designed for truck traffic by designating truck routes.

C-18 Designate truck routes that can be used for the hauling of hazardous materials.

C-19 Maintain existing streets in a safe condition and require that new streets be built to City standards.

C-20 Maintain street design standards for arterials, collectors and local streets.

C-21 Apply appropriate street design standards for private streets.

C-22 Interconnect traffic signals and/or consider the use of roundabouts where financially feasible and warranted to provide flexibility in controlling traffic movements at intersections.

C-23 Require street designs where appropriate to connect neighborhoods. These connections allow for vehicular and pedestrian use and for the efficient movement of service and emergency vehicles.

C-24 Require landscaping and tree planting along major new streets, properties abutting highways/freeways and along existing streets as appropriate.

C-25 Minimize the impact of road construction on the natural terrain and the character of existing neighborhoods.

C-26 Minimize the impact of road construction on creek corridors and related floodplain and riparian areas.

C-27 Design and phase construction of road improvements to minimize disruption to local residents and traffic, to the extent feasible.

C-28 Design new street alignments to minimize the number of creek crossings and adverse impacts to existing wildlife habitats.

C-29 Conduct a comprehensive inventory of the vegetative structure of riparian corridors prior to specific siting of new road alignments and creek crossings. This inventory will be used as a factor in the selection of an alignment which minimizes impacts to mature riparian vegetation, while still meeting the alignment or access and engineering requirements of siting the alignment or crossing.

C-30 Restore streambed and bank contours as near as possible to pre-project conditions following construction of creek crossings.

C-31 Design road improvements and new road alignments to avoid or minimize disturbance to identified cultural resources, where feasible.

Special Street Improvement Policies

C-32 Restrict vehicular access to emergency vehicles only from the Clover Valley Community Area onto the existing portions of Clover Valley Road and Rawhide Road within the Mission Hills-Clover Valley Community Area to minimize traffic volume increases on Midas Avenue.

C-33 Seek improvement to existing railroad crossings and construction of new grade separated crossings or undercrossings where appropriate and feasible.

C-34 Provide for the extension of Dominguez Road over I-80 as a future improvement to relieve the Sierra College Boulevard/I-80 and Rocklin Road/I-80 interchanges and create access to the southeast quadrant of the Sierra College Boulevard/I-80 interchange.

C-35 Increase traffic capacity at Rocklin Road and I-80, as traffic conditions require, by widening, overcrossings, or other design features, to allow for more efficient traffic movement and pedestrian and bike facilities.

C-36 Develop a new east/west road connection between State Route 65 and Sierra College Boulevard. The road shall traverse the Northwest Rocklin area, connect to Park Drive in the northern portion of Whitney Oaks, and extend from Park Drive through Clover Valley to intersect with Sierra College Boulevard.

C-37 Develop a new north/south road connection between Sunset Boulevard and the new east/west road connection described in Policy C-36.

C-38 Provide primary vehicular access to future development within the Parcel K planning area of the North West Rocklin General Development Plan by at least two points of access. The access points shall consist of one street that intersects with Wyckford Boulevard and

another that connects to the extension of Kali Place. These facilities shall be open non-gated public streets.

C-39 Prohibit extension of Wyckford Boulevard north of Parcel K into the Whitney Ranch / Sunset Ranchos Planning Area.

C-40 Provide for the connection of Woodside Drive and Ruhkala Road in the Civic Center area.

C-41 Create a Civic Center street/drive network south of Rocklin Road that provides access to Pacific Street and South Grove Street.

C-42 Improve and extend Railroad Avenue between Farron Street and Midas Avenue to provide an alternative north/south route to Pacific Street.

C-43 Minimize the need to sever existing developed parcels for new roads designed to serve the Southeast Rocklin area.

C-44 Prohibit an easterly extension of Greenbrae Road that would connect with Southside Ranch Road.

C-45 Extend Monument Springs Drive southerly across Secret Ravine Creek to developing areas south of Greenbrae Road.

C-46 Sever Aguilar Road at a time specified by the City of Rocklin. The severing shall occur at or near the Aguilar tributary crossing to preclude through traffic.

C-47 Design road improvements and new alignments to avoid or minimize encroachments into existing yards on Aguilar Road, Greenbrae Road and Foothills Road by minimizing the use of standard curb, gutter and sidewalks, where appropriate.

C-48 Acknowledge that new taxes, fees, or assessments to finance the severing of Aguilar Road and the Monument Springs Bridge/extension identified in the policies above shall not be levied upon fully developed parcels that cannot be further subdivided.

C-49 Encourage use of a free span bridge design over Secret Ravine Creek as the environmentally preferred option whenever feasible, to minimize the fragmenting effects of any bridge crossing on riparian habitat. Pre-cast concrete bridge joists should be used, whenever possible, to avoid prolonged construction and reduce construction disturbances in riparian corridors.

City of Rocklin Capital Improvement Program

The City's Capital Improvement Program (CIP) identifies roadway and intersection improvements for City-based monitoring of traffic conditions in Rocklin and maintenance of the City's existing LOS standard. The current CIP was updated in 2007 and has a horizon year of 2025.

PROJECT IMPACTS

The proposed project is a 50 unit single family residential subdivision. The proposed use would be consistent with a new MDR designation and would replace approved / planned uses under the current Regional Commercial (RC) designation.

Project Characteristics

The characteristics of the project are described in terms of its *Trip Generation* and its *Trip Distribution.*

Trip Generation. The amount of new traffic associated with development projects is typically forecast using information developed from recognized national sources. The Institute of Transportation Engineers (ITE) publication *Trip Generation, 9th Edition* is a source recognized by the City of Rocklin and Caltrans, and applicable average trip generation rates for residential development are presented in Table 3. As shown, the proposed Oak Vista Subdivision project could generate 600 daily trip ends (½ inbound and ½ outbound), with 47 trips occurring in the a.m. peak hour and 63 trips generated in the p.m. peak hour.

TABLE 3
TRIP GENERATION RATES

Description	ITE Code	Unit/ Quantity	Trips per Unit						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Proposed Project									
Single Family Residences	210	Dwelling	9.52	25%	75%	0.75	63%	37%	1.00
Oak Vista		63 du's	600	12	35	47	40	23	63

Vehicle Trip Distribution. Having determined the number of vehicle trips that are expected to be generated by the project, it is necessary to identify the directional distribution of project-generated traffic. For residences, the general location of employment, shopping, social services and entertainment are the primary indicators of the regional trip distribution. These factors affect the distribution of trips generated by existing residential development in this area of Rocklin, and current travel patterns can be used to identify the project's trip distribution. In addition, the City of Rocklin regional travel demand forecasting model's "select link" utility can be employed to identify the origins-destinations of trips generated by residences in the study area. Because the trips from the existing residential area near the project tend to be mingled with Rocklin Crossings trips, the City's regional model select link results were employed, and Table 4 identifies the local area assumptions made for project trips.

TABLE 4
REGIONAL TRIP DISTRIBUTION ASSUMPTIONS – SHORT TERM

Direction	Route	Share of Total			
		Percent of Total	Trips		
			Daily	AM Peak Hour	PM Peak Hour
North	Sierra College Blvd beyond I-80	17%	102	8	11
	Rocklin Commons	7%	42	3	4
East	Interstate 80 east of Sierra College Blvd	7%	42	3	4
South	Sierra College Blvd Beyond Dominguez Rd	29%	174	14	19
West	Interstate 80 west of Sierra College Blvd	33%	198	16	21
East	Rocklin Crossings	7%	42	3	4
Total		100%	600	47	63

The outlying four residences generate 37 daily trips with 3 trips in the a.m. peak hour and 4 trips in the p.m. peak hour. These trips would use Dias Lane to access Brace Road. This small number of trips would not have an appreciable effect on these roads.

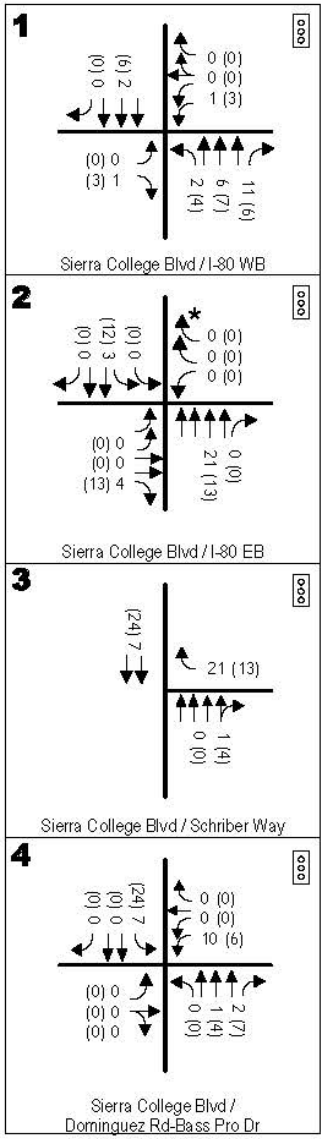
Trip Assignment. Project trips were assigned to the local street system based on the regional distribution assumptions identified above and the relative travel time via the available routes to Sierra College Blvd. Figure 4 identifies the assignment of project trips through the study intersections.

Existing Plus Project Traffic Conditions and Levels of Service

Figure 5 superimposes project trips onto the current background traffic volumes to create the "Existing plus Project" condition. Subsequent tables compare the "Existing" and "Existing plus Project" Levels of Service.

Project Traffic Impacts to Level of Service at Intersections. As shown in Table 5, because the amount of traffic associated with the project is relatively small, the addition of project traffic would not appreciably increase the length of delays occurring at study intersections, and the project does not result in any change to the peak hour Level of Service at any location. Levels of Service at each intersection will remain LOS A, B or C, all of which are within the adopted minimum standard (i.e., LOS D or better). Thus the project's impact isn't significant measured in terms of intersection Level of Service.

Traffic Signal Warrants. The addition of project trips does not result in peak hour volumes which satisfy Warrant 3 at the Sierra College Blvd / Schriber Way intersection.



NORTH

N.T.S.

Legend

- XX — AM Peak Hour Volume
- (XX) — PM Peak Hour Volume
- Signalized Intersection
- * — Free onto Freeway

PROJECT ONLY TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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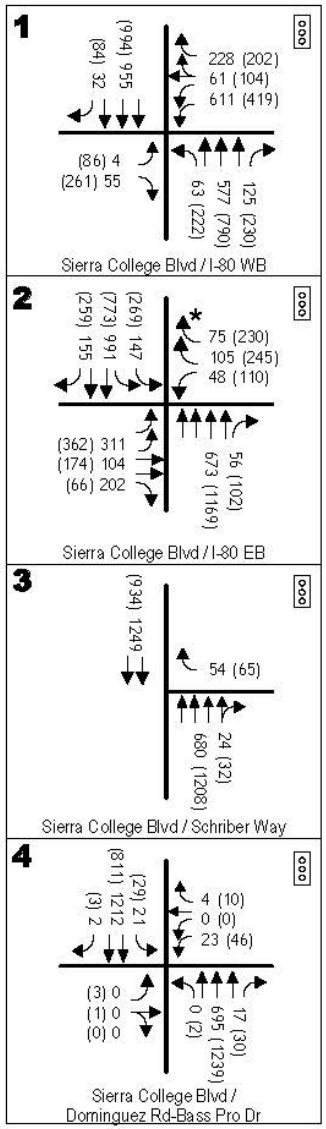
2962-02 LT 11/1/2016

figure 4



NORTH
N.T.S.

Legend

- XX — AM Peak Hour Volume
- (XX) — PM Peak Hour Volume
- Signalized Intersection
- * — Free onto Freeway

EXISTING PLUS PROJECT
TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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2962-02 LT 11/1/2016

figure 5

TABLE 5
EXISTING PLUS PROJECT PEAK HOUR
INTERSECTION LEVELS OF SERVICE

Intersection	Control	Time Period											
		AM Peak Hour (7:00 to 9:00 a.m.)						PM Peak Hour (4:00 to 6:00 p.m.)					
		Existing			Existing Plus Project			Existing			Existing Plus Project		
		LOS	V / C	Average Delay (sec/veh)	LOS	V / C	Average Delay (sec/veh)	LOS	V / C	Average Delay (sec/veh)	LOS	V / C	Average Delay (sec/veh)
Sierra College Blvd / WB I-80 / Commons Dr	Signal	B	-	14.2	B	-	14.3	C	-	20.2	C	-	20.2
Sierra College Blvd/ EB I-80 / Crossings Dr	Signal	B	-	16.4	B	-	16.5	B	-	17.5	B	-	17.6
Sierra College Blvd / Schriber Way	EB Stop												
(overall)		(A)	-	(0.2)	(A)	-	(0.2)	(A)	-	(0.2)	(A)	-	(0.3)
Westbound right turn		A		9.6	A		9.8	A		8.8	A		8.8
Sierra College Blvd / Dominguez Rd / Bass Pro Drive	Signal	A	0.409	-	A	0.412	-	A	0.303		A	0.333	-

Bold indicates conditions in excess of adopted minimum LOS standard

Project Impacts to Alternative Transportation Modes

Development of the Oak Vista Subdivision project may incrementally contribute to the demand for facilities to serve pedestrians, cyclists and transit riders in this area of Rocklin.

Pedestrian Impacts. Some of the project's residents may elect to walk to and from the site to attractions within a reasonable distance of the site, including commercial areas along Sierra College Blvd. As noted earlier, sidewalks already exist on the local streets near the project and along Sierra College Blvd north of Dominguez Drive. The new streets constructed in the subdivision will have sidewalks. Because sidewalks already exist to connect the project with probable attractions and will be provided in the project, and because the project does not interfere with any planned pedestrian facilities, the project's impact to pedestrian travel is not significant, and no additional improvements are required.

Bicycle Impacts. As with any residential development, the project may generate bicyclists who elect to use that transportation mode to reach area schools and retail or social destinations. As noted earlier, class II bike lanes already exist on Bass Pro Drive and Schriber Way.

While cycling may be a choice of some residents, due to the limited size of the project (i.e., 50 units) the number of cyclists associated with this project is not likely to create an appreciable safety impact on the streets that provide access to the project. Those residents who may choose to ride to the site would be expected to make use of designated bike lanes and would safely share the right of way with other vehicular traffic on Sierra College Blvd. Because adequate facilities are available and the project does not interfere with any planned bicycle facilities, the project's impact to bicycle circulation is not significant and no additional improvements are required.

Transit Impacts. Some project residents may take advantage of the regular Placer Transit bus service and Amtrak Capital Corridor trains that are already available in Rocklin. Because the number of additional riders created by this project is not appreciable, the project's impact is not significant and no additional transit improvements are needed.

EXISTING PLUS APPROVED PROJECTS - BASELINE IMPACTS

The traffic impacts of the Oak Vista Subdivision have also been considered within the context of future traffic conditions in this area of Rocklin assuming occupancy of other approved but as yet unconstructed projects under an "Existing Plus Approved Projects" (EPAP) condition.

Existing Plus Approved Projects (EPAP) Conditions

Land Use Assumptions. The City of Rocklin maintains a list of development proposals and tracks their completion status. This list of development proposals is updated periodically by the City of Rocklin to reflect both ongoing development activity as well as proposed changes to previously approved projects. Projects are periodically removed from the City's list if development proposals where approved entitlements have lapsed or have been withdrawn.

For purposes of this analysis and to ensure that the baseline for traffic analysis purposes includes existing and approved development at the study date, in February 2014 City of Rocklin staff evaluated recent development history in the project area to identify any additional approved development that should be assumed to be completed, to quantify the level of development that has occurred where projects have proceeded in phases (such as the Rocklin Crossings and Rocklin Commons projects) and to identify those previously approved projects that have lapsed or have been withdrawn by the project proponent. This information was updated to reflect the current occupancy of Rocklin Commons and Rocklin Crossings, as well as the number of dwellings occupied in the Crowne Pointe (Croftwood) and Rocklin 60 Subdivisions.

Table 6 presents the list of approved but not constructed projects in the vicinity of the eastern portion of the project, as well as their estimated a.m. and p.m. peak hour trip generation. As shown, the number of new a.m. peak hour trips anticipated from approved/pending development totals 1,433 while 2,467 trips are forecast in the p.m. peak hour. The p.m. forecast is greater since many of the identified projects are retail uses that are often closed during the a.m. peak hour.

Background Traffic Volume Forecasts. Not every approved project will add traffic to the study intersections. For this analysis the incremental change in traffic resulting from approved projects was added to the existing Year 2015 existing volumes, and Figure 6 presents resulting EPAP traffic volumes of the study area. Figure 7 presents EPAP with the proposed Oak Vista Subdivision project.

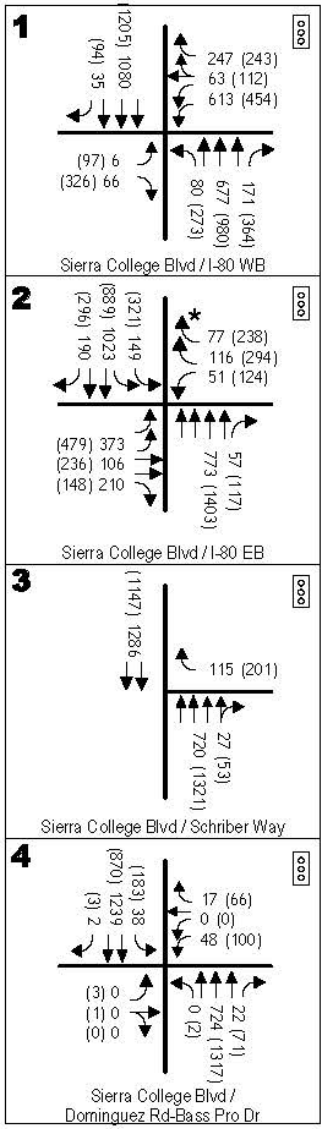
EPAP Intersection Levels of Service. Table 7 compares Existing Plus Approved Projects Levels of Service with and without the Oak Vista Subdivision. As shown, projected Levels of Service will be LOS C or better at each intersection without the Oak Vista Subdivision, and the City of Rocklin's minimum LOS C standard will be maintained at all study intersections. If Oak Vista is built, conditions at all locations would be unchanged, and the project's traffic impacts are not significant based on operating Level of Service.

Traffic Signal Warrants. The volume of traffic occurring at the Sierra College Blvd / Schriber Way intersection under EPAP and EPAP plus Project conditions does not reach the level that satisfies traffic signal warrants.

TABLE 6
APPROVED / PENDING BUT UNBUILT PROJECTS AND THEIR TRIP GENERATION

Description	Land Use	Size		AM Peak Hour			PM Peak Hour Trips		
		Quantity	Unit	In	Out	Total	In	Out	Total
Pacific St – Grove St Sub	Single Family Housing	75	du	14	42	56	47	28	75
Avalon Subdivision	Single Family Housing	79	du	15	44	59	50	29	79
Brighton Subdivision	Single Family Housing	75	du	14	42	56	47	28	75
Los Cerros Subdivision	Single Family Housing	115	du	22	64	86	74	41	115
Grove Street Subdivision	Single Family Housing	7	du	1	4	5	4	3	7
Croftwood, Unit 1 / Rocklin 60	Single Family Housing	156 (4)	du	30	87	117	101	59	160
Meyers Court Subdivision	Single Family	9	du	2	5	7	6	3	9
Granite Terrace	Single Family	42	du	8	24	32	27	15	42
ZL Rocklin	Retail / Multi-Family	140	du	24	62	86	75	55	130
Granite Marketplace (Lowes)	Home Improvement	138	ksf	105	80	185	115	130	245
Rocklin Crossings (1)	Home Improvement, Discount Superstore	148.2	ksf	86	65	151	286	277	563
Rocklin Commons (2)	Discount Superstore	49.3	ksf	24	15	39	82	88	170
The Center at Secret Ravine (3)	Retail Commercial	18.6	ksf	12	6	18	22	28	50
Parklands Subdivision	Single Family Housing	142	du	27	80	107	94	63	157
Clover Valley	Residential	558	du	106	313	419	377	186	563
Winding Lane Estates	Single Family Residential	27	du	5	15	20	18	9	27
Total				495	948	1443	1425	1042	2467

(1) 543,500 sf approved, in 2105 at total of 395,278 sf built and open
(2) 410,942 sf approved, in 2015 a total of 355,662 sf built and open
(3) 26,600 sf approved, in 2015 4,000 sf occupied
(4) 156 du vacant of under construction in November 2015

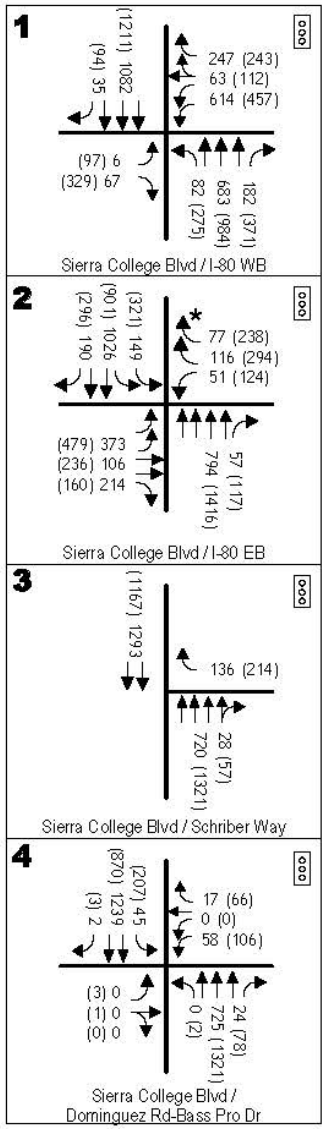


NORTH
N.T.S.

Legend

- XX — AM Peak Hour Volume
- (XX) — PM Peak Hour Volume
- Signalized Intersection
- * — Free onto Freeway

EXISTING PLUS APPROVED PROJECTS (EPAP)
TRAFFIC VOLUMES AND LANE CONFIGURATIONS



NORTH
N.T.S.

Legend

- XX — AM Peak Hour Volume
- (XX) — PM Peak Hour Volume
- Signalized Intersection
- * — Free onto Freeway

EPAP PLUS OAK VISTA SUBDIVISION
TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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2962-02 LT 11/1/2016

figure 7

TABLE 7
EXISTING PLUS APPROVED PROJECTS PLUS OAK VISTA SUBDIVISION PROJECT
PEAK HOUR INTERSECTION LEVELS OF SERVICE

Intersection	Control	Time Period											
		AM Peak Hour (7:00 to 9:00 a.m.)						PM Peak Hour (4:00 to 6:00 p.m.)					
		Existing Plus Approved – Pending Projects			EPAP Plus Project			Existing Plus Approved – Pending Projects			EPAP Plus Project		
		LOS	V / C	Average Delay (sec/veh)	LOS	V / C	Average Delay (sec/veh)	LOS	V / C	Average Delay (sec/veh)	LOS	V / C	Average Delay (sec/veh)
Sierra College Blvd / WB I-80 / Commons Dr	Signal	B	-	15.2	B	-	15.3	C	-	24.6	C	-	24.8
Sierra College Blvd/ EB I-80 / Crossings Dr	Signal	B	-	17.4	B	-	17.6	C	-	22.1	C	-	22.5
Sierra College Blvd / Schriber Way	EB Stop												
(overall)		A	-	(0.6)	(A)	-	(0.6)	(A)	-	(0.7)	(A)	-	(0.7)
Westbound right turn		B		10.4	B		10.5	A		9.8	A		9.8
Sierra College Blvd / Dominguez Rd / Bass Pro Drive	Signal	A	0.431	-	A	0.435	-	A	0.477	-	A	0.494	-

Bold indicates conditions in excess of adopted minimum LOS standard

LONG TERM CUMULATIVE CONDITIONS

This report section addresses long term traffic conditions based on the City of Rocklin's General Plan traffic model.

Basis for Long Term Projections. The travel demand forecasting model used for the City of Rocklin General Plan Update EIR is the basis for the long term cumulative traffic volume forecasts used for this analysis, and the technical approach employed to use model results to create intersection turning movements for study area intersections mimics the approach used for the GPU EIR. The traffic model was run for one cumulative scenario:

1 Cumulative without the Oak Vista Subdivision.

The Year 2030 a.m. and p.m. forecasts were compared to forecasts from the model's baseline Year 2008 model that had been adjusted to include current development at the I-80 / Sierra College Blvd intersection. The net difference in volume forecasts was determined. These net changes were then added or subtracted from the current peak hour approach volumes observed in 2015 to create the adjusted cumulative Year 2030 approach volumes.

Existing and adjusted cumulative traffic volumes were then compared to identify equivalent growth rates for intersection approaches for use in creating intersection turning movement volumes. To finalize peak hour intersection turning movements, the segment growth factors were applied to observed peak hour volumes and the results were balanced to best approximate conditions on each leg using the methodologies contained in the Transportation Research Board's (TRB's) NCHRP Report 255, *Highway Traffic Data for Urbanized Area Project Planning and Design.* This approach reflects the fact that the development of various land uses may affect current travel patterns while adding new traffic, while new roadways may provide alternative routes for existing traffic.

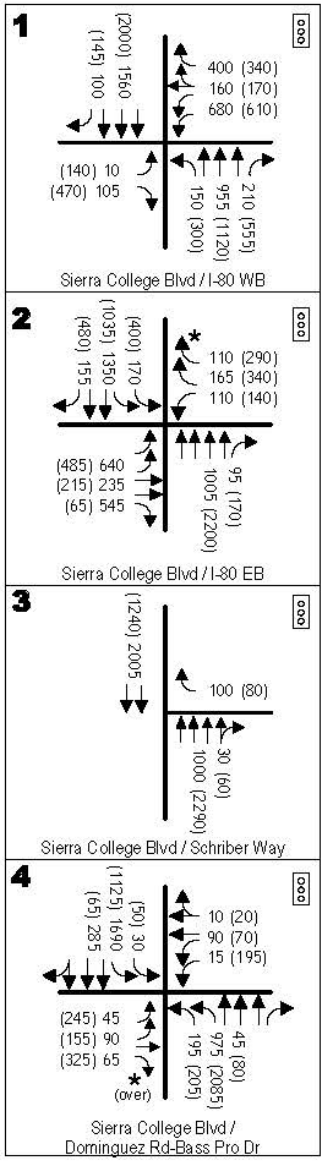
Year 2030 Plus Project traffic volumes were created by manually adding the trips associated with Oak Vista Subdivision to the forecasts. Oak Vista trips were identified by applying select link analysis to the Year 2030 forecasts to reflect the distribution patterns expected in the Year 2030 as well as the effects of the Dominguez Road crossing on local trip assignment.

Circulation System Assumptions. The traffic volume forecasts made for this analysis include those city-wide circulation system improvements incorporated into the General Plan traffic model. The cumulative analysis addresses conditions with the future extension of Dominguez Road from Granite Drive to Sierra College Blvd. Intersection Level of Service analysis also assumes the improvements to study intersections identified in the GPU EIR. However, no changes to the existing configuration of the two intersections on the I-80 / Sierra College Blvd interchange have been assumed.

Traffic Volume Forecasts. Figure 8 presents the background Cumulative No Project volumes, while Figure 9 presents the Cumulative Plus Oak Vista Subdivision forecasts. These figures also present Year 2030 intersection geometry and traffic controls.

Cumulative Year Level of Service. Table 8 compares cumulative p.m. peak hour Levels of Service at study intersections with and without the proposed Oak Vista Subdivision. As indicated all but one intersection will continue to meet the City of Rocklin's minimum LOS C standard if Oak Vista does not proceed. The Sierra College Blvd / EB I-80 ramps intersection is projected to operate at LOS E. However, it would be possible to restripe the approach in the future if projected traffic volumes do occur. Converting one of the eastbound through lanes to a through+right turn lane would yield LOS C.

Cumulative Plus Project Conditions. While most intersections will satisfy the City's LOS C minimum standard, the Sierra College Blvd / EB I-80 intersection would continue to operate at LOS E with the project. LOS E exceeds the City's minimum LOS C standard. Because conditions exceed the minimum with and without the project, the incremental change in average delay is the measure used to determine significance. At the EB ramp the incremental change in average delay resulting from Oak Vista Subdivision is 0.7 seconds which are both less than the 5.0 second increment permitted under current City policy. Thus the project's cumulative impact at this intersection is not significant and no mitigation is required.



NORTH
N.T.S.

Legend

- XX — AM Peak Hour Volume
- (XX) — PM Peak Hour Volume
- Signalized Intersection
- * — Free onto Freeway

CUMULATIVE BASE
TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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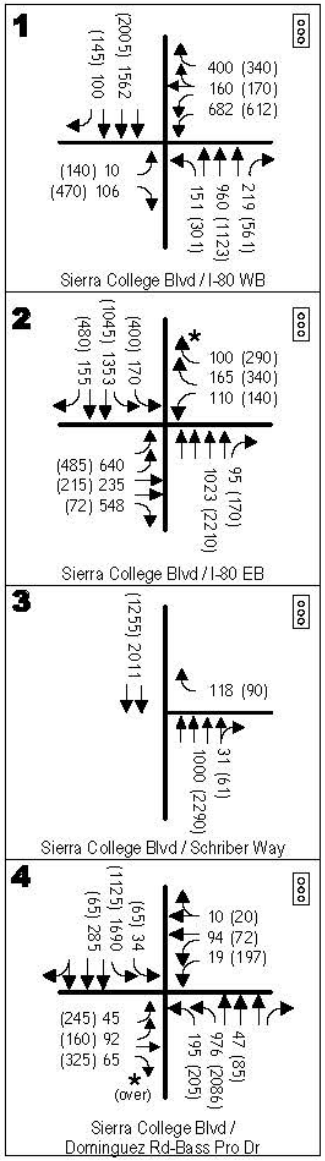
Transportation Engineers

2962-02 LT 11/1/2016

figure 8



NORTH
N.T.S.

Legend

- XX — AM Peak Hour Volume
- (XX) — PM Peak Hour Volume
- Signalized Intersection
- * — Free onto Freeway

CUMULATIVE PLUS PROJECT
TRAFFIC VOLUMES AND LANE CONFIGURATIONS

KD Anderson & Associates, Inc.
Transportation Engineers

2962-02 LT 11/1/2016

figure 9

TABLE 9
CUMULATIVE PLUS PROJECT
PEAK HOUR INTERSECTION LEVELS OF SERVICE

Intersection	Control	Time Period											
		AM Peak Hour (7:00 to 9:00 a.m.)						PM Peak Hour (4:00 to 6:00 p.m.)					
		Cumulative			Cumulative Plus Project			Cumulative			Cumulative Plus Project		
		LOS	V / C	Average Delay (sec/veh)	LOS	V / C	Average Delay (sec/veh)	LOS	V / C	Average Delay (sec/veh)	LOS	V / C	Average Delay (sec/veh)
Sierra College Blvd / WB I-80 / Commons Dr	Signal	C	-	22.9	C	-	23.0	C	-	34.8	C	-	34.9
Sierra College Blvd/ EB I-80 /	Signal	**E**	**-**	**73.7**	**E**	**-**	**74.2**	C	-	21.7	C	-	21.8
Crossings Dr	Improved	C	-	30.2	C	-	30.1	-	-	-	-	-	-
Sierra College Blvd / Schriber Way (overall)	EB Stop	(A)	-	(0.3)	(A)	-	(0.3)	(A)	-	(0.2)	(A)	-	(0.3)
Westbound right turn		A		9.0	A		9.1	B		10.4	B		10.5-
Sierra College Blvd / Dominguez Rd / Bass Pro Drive	Signal	B	0.600	-	B	0.601	-	C	0.719	-	C	0.729	-

Bold indicates conditions in excess of adopted minimum LOS standard

APPENDIX

(under separate cover)

TECHNICAL APPENDIX

FOR

OAK VISTA SUBDIVISION
TRAFFIC IMPACT ANALYSIS

Rocklin, California

Prepared For:

EQUITY SMART INVESTMENTS LP
5701 Lonetree Blvd. #102
Rocklin, CA 95765

Prepared By:

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3853 Taylor Road, Suite G
Loomis, CA 95650
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November 1, 2016

Job No. 2962-02

ALL TRAFFIC DATA

2962-02

City of Rocklin
All Vehicles & Uturns On Unshifted
On-Ramp Volumes On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7856-001 Sierra College Boulevard & I-80 WB Ramps
Date : 11/3/2015

Unshifted Count = All Vehicles & Uturns

	Sierra College Boulevard Southbound					I-80 WB Ramps Westbound					Sierra College Boulevard Northbound					I-80 WB Ramps Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	185	4	0	189	95	8	42	0	145	7	93	24	0	124	3	0	12	0	15	473	0
7:15	0	223	10	0	233	132	15	42	0	189	23	98	36	0	157	0	0	13	0	13	592	0
7:30	0	258	3	0	261	157	12	57	0	226	18	118	25	0	161	0	0	12	0	12	660	0
7:45	0	272	9	0	281	202	15	73	0	290	8	170	30	0	208	1	0	11	0	12	791	0
Total	0	938	26	0	964	586	50	214	0	850	56	479	115	0	650	4	0	48	0	52	2516	0
8:00	0	222	10	0	232	112	19	47	0	178	16	143	29	0	188	1	0	12	0	13	611	0
8:15	0	201	10	0	211	139	15	51	0	205	18	140	30	0	188	2	0	19	1	22	626	1
8:30	0	230	10	0	240	108	14	46	0	168	16	118	35	0	169	3	0	21	0	24	601	0
8:45	0	219	15	0	234	101	20	57	0	178	17	124	35	0	176	8	0	19	0	27	615	0
Total	0	872	45	0	917	460	68	201	0	729	67	525	129	0	721	14	0	71	1	86	2453	1
16:00	0	235	16	0	251	89	18	31	0	138	37	189	60	0	286	14	0	65	1	80	755	1
16:15	0	222	11	0	233	107	20	45	0	172	54	201	55	0	310	24	0	59	0	83	798	0
16:30	0	228	25	0	253	88	19	39	0	146	43	180	44	0	267	26	0	60	1	87	753	1
16:45	0	222	18	0	240	91	25	57	0	173	56	197	59	0	312	26	0	59	1	86	811	1
Total	0	907	70	0	977	375	82	172	0	629	190	767	218	0	1175	90	0	243	3	336	3117	3
17:00	0	254	21	0	275	113	25	54	0	192	57	208	63	0	328	20	0	59	0	79	874	0
17:15	0	259	18	0	277	101	32	56	0	189	59	197	53	0	309	26	0	67	1	94	869	1
17:30	0	253	27	0	280	111	22	35	0	168	49	185	49	0	283	14	0	73	0	87	818	0
17:45	0	189	38	0	227	101	20	36	0	157	47	164	46	0	257	12	0	75	0	87	728	0
Total	0	955	104	0	1059	426	99	181	0	706	212	754	211	0	1177	72	0	274	1	347	3289	1
Grand Total	0	3672	245	0	3917	1847	299	768	0	2914	525	2525	673	0	3723	180	0	636	5	821	11375	5
Apprch %	0.0%	93.7%	6.3%	0.0%		63.4%	10.3%	26.4%	0.0%		14.1%	67.8%	18.1%	0.0%		21.9%	0.0%	77.5%	0.6%			
Total %	0.0%	32.3%	2.2%	0.0%	34.4%	16.2%	2.6%	6.8%	0.0%	25.6%	4.6%	22.2%	5.9%	0.0%	32.7%	1.6%	0.0%	5.6%	0.0%	7.2%	100.0%	

AM PEAK HOUR	Sierra College Boulevard Southbound					I-80 WB Ramps Westbound					Sierra College Boulevard Northbound					I-80 WB Ramps Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	0	258	3	0	261	157	12	57	0	226	18	118	25	0	161	0	0	12	0	12	660
7:45	0	272	9	0	281	202	15	73	0	290	8	170	30	0	208	1	0	11	0	12	791
8:00	0	222	10	0	232	112	19	47	0	178	16	143	29	0	188	1	0	12	0	13	611
8:15	0	201	10	0	211	139	15	51	0	205	18	140	30	0	188	2	0	19	1	22	626
Total Volume	0	953	32	0	985	610	61	228	0	899	60	571	114	0	745	4	0	54	1	59	2688
% App Total	0.0%	96.8%	3.2%	0.0%		67.9%	6.8%	25.4%	0.0%		8.1%	76.6%	15.3%	0.0%		6.8%	0.0%	91.5%	1.7%		
PHF	.000	.876	.800	.000	.876	.755	.803	.781	.000	.775	.833	.840	.950	.000	.895	.500	.000	.711	.250	.670	.850

PM PEAK HOUR	Sierra College Boulevard Southbound					I-80 WB Ramps Westbound					Sierra College Boulevard Northbound					I-80 WB Ramps Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	222	18	0	240	91	25	57	0	173	56	197	59	0	312	26	0	59	1	86	811
17:00	0	254	21	0	275	113	25	54	0	192	57	208	63	0	328	20	0	59	0	79	874
17:15	0	259	18	0	277	101	32	56	0	189	59	197	53	0	309	26	0	67	1	94	869
17:30	0	253	27	0	280	111	22	35	0	168	49	185	49	0	283	14	0	73	0	87	818
Total Volume	0	988	84	0	1072	416	104	202	0	722	221	787	224	0	1232	86	0	258	2	346	3372
% App Total	0.0%	92.2%	7.8%	0.0%		57.6%	14.4%	28.0%	0.0%		17.9%	63.9%	18.2%	0.0%		24.9%	0.0%	74.6%	0.6%		
PHF	.000	.954	.778	.000	.957	.920	.813	.886	.000	.940	.936	.946	.889	.000	.939	.827	.000	.884	.500	.920	.965

ALL TRAFFIC DATA

2962-02

City of Rocklin
All Vehicles & Uturns On Unshifted
On-Ramp Volumes On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7856-002 Sierra College Boulevard & I-80 EB Ramps
Date : 11/3/2015

Unshifted Count = All Vehicles & Uturns

	Sierra College Boulevard Southbound					I-80 EB Ramps Westbound					Sierra College Boulevard Northbound					I-80 EB Ramps Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	25	133	26	0	184	6	0	35	0	41	0	126	7	0	133	46	24	6	0	76	434	0
7:15	44	222	41	0	307	9	0	35	0	44	0	155	5	0	160	50	25	18	0	93	604	0
7:30	26	267	45	0	338	10	0	44	0	54	0	143	13	0	156	61	25	50	0	136	684	0
7:45	41	306	31	0	378	10	0	43	0	53	0	195	10	0	205	95	29	86	0	210	846	0
Total	136	928	143	0	1207	35	0	157	0	192	0	619	35	0	654	252	103	160	0	515	2568	0
8:00	40	210	37	0	287	11	0	45	0	56	0	170	21	0	191	80	16	36	0	132	666	0
8:15	40	205	42	0	287	17	0	48	0	65	0	144	12	0	156	75	34	26	0	135	643	0
8:30	38	186	43	0	267	11	0	56	2	69	0	159	21	0	180	55	36	22	0	113	629	2
8:45	49	184	41	0	274	10	0	36	0	46	0	149	14	0	163	68	33	26	0	127	610	0
Total	167	785	163	0	1115	49	0	185	2	236	0	622	68	0	690	278	119	110	0	507	2548	2
16:00	69	156	77	0	302	23	0	137	0	160	0	253	23	0	276	85	53	8	0	146	884	0
16:15	61	166	54	0	281	24	0	117	0	141	0	284	27	0	311	75	46	9	0	130	863	0
16:30	62	135	73	0	270	36	0	113	0	149	0	208	23	0	231	99	46	21	0	166	816	0
16:45	65	174	54	0	293	31	0	110	0	141	0	299	22	0	321	95	47	16	0	158	913	0
Total	257	631	258	0	1146	114	0	477	0	591	0	1044	95	0	1139	354	192	54	0	600	3476	0
17:00	50	197	70	0	317	26	0	124	0	150	0	318	31	0	349	102	49	14	0	165	981	0
17:15	78	190	71	0	339	28	0	117	0	145	0	285	27	0	312	86	42	14	0	142	938	0
17:30	76	200	64	0	340	25	0	124	0	149	0	254	22	0	276	79	36	9	0	124	889	0
17:45	59	164	71	0	294	23	0	98	0	121	0	225	16	0	241	87	31	14	0	132	788	0
Total	263	751	276	0	1290	102	0	463	0	565	0	1082	96	0	1178	354	158	51	0	563	3596	0
Grand Total	823	3095	840	0	4758	300	0	1282	2	1584	0	3367	294	0	3661	1238	572	375	0	2185	12188	2
Apprch %	17.3%	65.0%	17.7%	0.0%		18.9%	0.0%	80.9%	0.1%		0.0%	92.0%	8.0%	0.0%		56.7%	26.2%	17.2%	0.0%			
Total %	6.8%	25.4%	6.9%	0.0%	39.0%	2.5%	0.0%	10.5%	0.0%	13.0%	0.0%	27.6%	2.4%	0.0%	30.0%	10.2%	4.7%	3.1%	0.0%	17.9%	100.0%	

AM PEAK HOUR	Sierra College Boulevard Southbound					I-80 EB Ramps Westbound					Sierra College Boulevard Northbound					I-80 EB Ramps Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	26	267	45	0	338	10	0	44	0	54	0	143	13	0	156	61	25	50	0	136	684
7:45	41	306	31	0	378	10	0	43	0	53	0	195	10	0	205	95	29	86	0	210	846
8:00	40	210	37	0	287	11	0	45	0	56	0	170	21	0	191	80	16	36	0	132	666
8:15	40	205	42	0	287	17	0	48	0	65	0	144	12	0	156	75	34	26	0	135	643
Total Volume	147	988	155	0	1290	48	0	180	0	228	0	652	56	0	708	311	104	198	0	613	2839
% App Total	11.4%	76.6%	12.0%	0.0%		21.1%	0.0%	78.9%	0.0%		0.0%	92.1%	7.9%	0.0%		50.7%	17.0%	32.3%	0.0%		
PHF	.896	.807	.861	.000	.853	.706	.000	.938	.000	.877	.000	.836	.667	.000	.863	.818	.765	.576	.000	.730	.839

PM PEAK HOUR	Sierra College Boulevard Southbound					I-80 EB Ramps Westbound					Sierra College Boulevard Northbound					I-80 EB Ramps Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	65	174	54	0	293	31	0	110	0	141	0	299	22	0	321	95	47	16	0	158	913
17:00	50	197	70	0	317	26	0	124	0	150	0	318	31	0	349	102	49	14	0	165	981
17:15	78	190	71	0	339	28	0	117	0	145	0	285	27	0	312	86	42	14	0	142	938
17:30	76	200	64	0	340	25	0	124	0	149	0	254	22	0	276	79	36	9	0	124	889
Total Volume	269	761	259	0	1289	110	0	475	0	585	0	1156	102	0	1258	362	174	53	0	589	3721
% App Total	20.9%	59.0%	20.1%	0.0%		18.8%	0.0%	81.2%	0.0%		0.0%	91.9%	8.1%	0.0%		61.5%	29.5%	9.0%	0.0%		
PHF	.862	.951	.912	.000	.948	.887	.000	.958	.000	.975	.000	.909	.823	.000	.901	.887	.888	.828	.000	.892	.948

ALL TRAFFIC DATA

2962-02

City of Rocklin
All Vehicles & Uturns On Unshifted
Nothing On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7856-003 Sierra College Boulevard & Schriber Way
Date : 11/3/2015

Unshifted Count = All Vehicles & Uturns

	Sierra College Boulevard Southbound					Schriber Way Westbound					Sierra College Boulevard Northbound					Schriber Way Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	147	0	0	147	0	0	3	0	3	0	138	3	0	141	0	0	0	0	0	291	0
7:15	1	235	0	0	236	0	0	6	0	6	0	148	0	0	148	0	0	0	0	0	390	0
7:30	1	336	0	0	337	0	0	8	0	8	0	153	6	0	159	0	0	0	0	0	504	0
7:45	1	395	0	0	396	0	0	9	0	9	0	197	4	0	201	0	0	0	0	0	606	0
Total	3	1113	0	0	1116	0	0	26	0	26	0	636	13	0	649	0	0	0	0	0	1791	0
8:00	0	249	0	0	249	0	0	11	0	11	0	175	8	0	183	0	0	0	0	0	443	0
8:15	1	256	0	0	257	0	0	5	0	5	0	155	5	0	160	0	0	0	0	0	422	0
8:30	3	210	0	0	213	0	0	6	0	6	0	172	6	0	178	0	0	0	0	0	397	0
8:45	1	221	0	0	222	0	0	2	0	2	0	164	5	0	169	0	0	0	0	0	393	0
Total	5	936	0	0	941	0	0	24	0	24	0	666	24	0	690	0	0	0	0	0	1655	0
16:00	0	181	0	0	181	0	0	14	1	15	0	270	10	0	280	0	0	0	0	0	476	1
16:15	1	194	0	0	195	0	0	16	0	16	0	290	13	0	303	0	0	0	0	0	514	0
16:30	0	194	0	0	194	1	0	7	0	8	0	229	10	0	239	0	0	0	0	0	441	0
16:45	1	215	0	0	216	0	0	16	0	16	0	300	6	0	306	0	0	0	0	0	538	0
Total	2	784	0	0	786	1	0	53	1	55	0	1089	39	0	1128	0	0	0	0	0	1969	1
17:00	1	231	0	0	232	0	0	16	0	16	0	355	13	0	368	0	0	0	0	0	616	0
17:15	0	235	0	0	235	0	0	9	1	10	0	287	6	0	293	0	0	0	0	0	538	1
17:30	0	229	0	0	229	0	0	11	0	11	0	266	3	0	269	0	0	0	0	0	509	0
17:45	0	207	0	0	207	0	0	10	0	10	0	232	6	0	238	0	0	0	0	0	455	0
Total	1	902	0	0	903	0	0	46	1	47	0	1140	28	0	1168	0	0	0	0	0	2118	1
Grand Total	11	3735	0	0	3746	1	0	149	2	152	0	3531	104	0	3635	0	0	0	0	0	7533	2
Apprch %	0.3%	99.7%	0.0%	0.0%		0.7%	0.0%	98.0%	1.3%		0.0%	97.1%	2.9%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	0.1%	49.6%	0.0%	0.0%	49.7%	0.0%	0.0%	2.0%	0.0%	2.0%	0.0%	46.9%	1.4%	0.0%	48.3%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	Sierra College Boulevard Southbound					Schriber Way Westbound					Sierra College Boulevard Northbound					Schriber Way Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	1	336	0	0	337	0	0	8	0	8	0	153	6	0	159	0	0	0	0	0	504
7:45	1	395	0	0	396	0	0	9	0	9	0	197	4	0	201	0	0	0	0	0	606
8:00	0	249	0	0	249	0	0	11	0	11	0	175	8	0	183	0	0	0	0	0	443
8:15	1	256	0	0	257	0	0	5	0	5	0	155	5	0	160	0	0	0	0	0	422
Total Volume	3	1236	0	0	1239	0	0	33	0	33	0	680	23	0	703	0	0	0	0	0	1975
% App Total	0.2%	99.8%	0.0%	0.0%		0.0%	0.0%	100.0%	0.0%		0.0%	96.7%	3.3%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.750	.782	.000	.000	.782	.000	.000	.750	.000	.750	.000	.863	.719	.000	.874	.000	.000	.000	.000	.000	.815

PM PEAK HOUR	Sierra College Boulevard Southbound					Schriber Way Westbound					Sierra College Boulevard Northbound					Schriber Way Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	1	215	0	0	216	0	0	16	0	16	0	300	6	0	306	0	0	0	0	0	538
17:00	1	231	0	0	232	0	0	16	0	16	0	355	13	0	368	0	0	0	0	0	616
17:15	0	235	0	0	235	0	0	9	1	10	0	287	6	0	293	0	0	0	0	0	538
17:30	0	229	0	0	229	0	0	11	0	11	0	266	3	0	269	0	0	0	0	0	509
Total Volume	2	910	0	0	912	0	0	52	1	53	0	1208	28	0	1236	0	0	0	0	0	2201
% App Total	0.2%	99.8%	0.0%	0.0%		0.0%	0.0%	98.1%	1.9%		0.0%	97.7%	2.3%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.500	.968	.000	.000	.970	.000	.000	.813	.250	.828	.000	.851	.538	.000	.840	.000	.000	.000	.000	.000	.893

ALL TRAFFIC DATA

2962-02

City of Rocklin
All Vehicles & Uturns On Unshifted
Nothing On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@atdtraffic.com

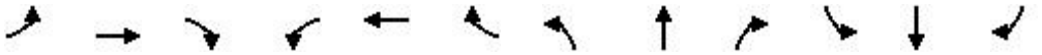
File Name : 15-7856-004 Sierra College Boulevard & Dominguez-Bass Pro Driv
Date : 11/3/2015

Unshifted Count = All Vehicles & Uturns

	Sierra College Boulevard Southbound					Dominguez-Bass Pro Drive Westbound					Sierra College Boulevard Northbound					Dominguez-Bass Pro Drive Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	3	143	0	0	146	3	0	2	0	5	0	146	2	0	148	4	0	5	0	9	308	0
7:15	5	224	0	0	229	6	0	1	0	7	0	144	5	0	149	0	0	0	0	0	385	0
7:30	1	334	0	2	337	2	0	0	0	2	0	163	2	0	165	0	0	0	0	0	504	2
7:45	5	386	0	1	392	8	0	1	0	9	0	195	6	0	201	0	0	0	0	0	602	1
Total	14	1087	0	3	1104	19	0	4	0	23	0	648	15	0	663	4	0	5	0	9	1799	3
8:00	2	240	2	1	245	1	0	1	0	2	0	183	2	0	185	0	0	0	0	0	432	1
8:15	6	252	0	0	258	2	0	2	0	4	0	153	5	0	158	0	0	0	0	0	420	0
8:30	2	203	1	0	206	8	0	2	0	10	0	168	5	0	173	1	0	0	0	1	390	0
8:45	4	215	0	1	220	4	0	0	0	4	0	179	3	0	182	0	0	0	0	0	406	1
Total	14	910	3	2	929	15	0	5	0	20	0	683	15	0	698	1	0	0	0	1	1648	2
16:00	2	174	0	1	177	7	0	2	0	9	0	278	12	0	290	0	0	0	0	0	476	1
16:15	2	205	0	0	207	11	0	3	0	14	0	307	8	0	315	0	0	0	0	0	536	0
16:30	3	185	0	1	189	7	0	3	0	10	1	219	10	0	230	0	0	2	0	2	431	1
16:45	1	223	0	0	224	11	0	3	0	14	0	313	6	0	319	2	0	0	0	2	559	0
Total	8	787	0	2	797	36	0	11	0	47	1	1117	36	0	1154	2	0	2	0	4	2002	2
17:00	1	223	3	0	227	13	0	2	0	15	0	368	7	0	375	1	1	0	0	2	619	0
17:15	1	226	0	0	227	7	0	3	0	10	1	291	4	0	296	0	0	0	0	0	533	0
17:30	2	239	0	0	241	9	0	2	0	11	1	259	6	0	266	0	0	0	0	0	518	0
17:45	3	199	0	2	204	5	0	4	0	9	0	234	3	0	237	0	0	0	0	0	450	2
Total	7	887	3	2	899	34	0	11	0	45	2	1152	20	0	1174	1	1	0	0	2	2120	2
Grand Total	43	3671	6	9	3729	104	0	31	0	135	3	3600	86	0	3689	8	1	7	0	16	7569	9
Apprch %	1.2%	98.4%	0.2%	0.2%		77.0%	0.0%	23.0%	0.0%		0.1%	97.6%	2.3%	0.0%		50.0%	6.3%	43.8%	0.0%			
Total %	0.6%	48.5%	0.1%	0.1%	49.3%	1.4%	0.0%	0.4%	0.0%	1.8%	0.0%	47.6%	1.1%	0.0%	48.7%	0.1%	0.0%	0.1%	0.0%	0.2%	100.0%	

AM PEAK HOUR	Sierra College Boulevard Southbound					Dominguez-Bass Pro Drive Westbound					Sierra College Boulevard Northbound					Dominguez-Bass Pro Drive Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:30 to 08:30																					
Peak Hour For Entire Intersection Begins at 07:30																					
7:30	1	334	0	2	337	2	0	0	0	2	0	163	2	0	165	0	0	0	0	0	504
7:45	5	386	0	1	392	8	0	1	0	9	0	195	6	0	201	0	0	0	0	0	602
8:00	2	240	2	1	245	1	0	1	0	2	0	183	2	0	185	0	0	0	0	0	432
8:15	6	252	0	0	258	2	0	2	0	4	0	153	5	0	158	0	0	0	0	0	420
Total Volume	14	1212	2	4	1232	13	0	4	0	17	0	694	15	0	709	0	0	0	0	0	1958
% App Total	1.1%	98.4%	0.2%	0.3%		76.5%	0.0%	23.5%	0.0%		0.0%	97.9%	2.1%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.583	.785	.250	.500	.786	.406	.000	.500	.000	.472	.000	.890	.625	.000	.882	.000	.000	.000	.000	.000	.813

PM PEAK HOUR	Sierra College Boulevard Southbound					Dominguez-Bass Pro Drive Westbound					Sierra College Boulevard Northbound					Dominguez-Bass Pro Drive Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	1	223	0	0	224	11	0	3	0	14	0	313	6	0	319	2	0	0	0	2	559
17:00	1	223	3	0	227	13	0	2	0	15	0	368	7	0	375	1	1	0	0	2	619
17:15	1	226	0	0	227	7	0	3	0	10	1	291	4	0	296	0	0	0	0	0	533
17:30	2	239	0	0	241	9	0	2	0	11	1	259	6	0	266	0	0	0	0	0	518
Total Volume	5	911	3	0	919	40	0	10	0	50	2	1231	23	0	1256	3	1	0	0	4	2229
% App Total	0.5%	99.1%	0.3%	0.0%		80.0%	0.0%	20.0%	0.0%		0.2%	98.0%	1.8%	0.0%		75.0%	25.0%	0.0%	0.0%		
PHF	.625	.953	.250	.000	.953	.769	.000	.833	.000	.833	.500	.836	.821	.000	.837	.375	.250	.000	.000	.500	.900



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	0	54	610	61	228	60	571	114	0	953	32
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	0	1863	1863	1863	1863	1863	1863	1863	0	1863	1863
Adj Flow Rate, veh/h	4	0	59	663	202	157	65	621	0	0	1036	35
Adj No. of Lanes	1	0	1	2	1	1	1	3	1	0	3	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	0	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	10	0	0	902	318	270	103	2806	874	0	2114	658
Arrive On Green	0.01	0.00	0.00	0.25	0.17	0.17	0.06	0.55	0.00	0.00	0.42	0.42
Sat Flow, veh/h	1774	4		3548	1863	1583	1774	5085	1583	0	5253	1583
Grp Volume(v), veh/h	4	53.1		663	202	157	65	621	0	0	1036	35
Grp Sat Flow(s),veh/h/ln	1774	D		1774	1863	1583	1774	1695	1583	0	1695	1583
Q Serve(g_s), s	0.1			9.2	5.4	4.9	1.9	3.3	0.0	0.0	8.0	0.7
Cycle Q Clear(g_c), s	0.1			9.2	5.4	4.9	1.9	3.3	0.0	0.0	8.0	0.7
Prop In Lane	1.00			1.00		1.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	10			902	318	270	103	2806	874	0	2114	658
V/C Ratio(X)	0.42			0.74	0.64	0.58	0.63	0.22	0.00	0.00	0.49	0.05
Avail Cap(c_a), veh/h	526			2024	1354	1151	853	3033	944	0	2938	915
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	26.6			18.3	20.7	20.5	24.7	6.1	0.0	0.0	11.5	9.4
Incr Delay (d2), s/veh	26.5			1.2	2.1	2.0	6.3	0.0	0.0	0.0	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
%ile BackOfQ(50%),veh/ln	0.1			4.7	2.9	2.3	1.1	1.6	0.0	0.0	3.8	0.3
LnGrp Delay(d),s/veh	53.1			19.5	22.8	22.5	31.0	6.2	0.0	0.0	11.7	9.4
LnGrp LOS	D			B	C	C	C	A			B	A
Approach Vol, veh/h					1022			686			1071	
Approach Delay, s/veh					20.6			8.5			11.6	
Approach LOS					C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3		5	6	7	8
Phs Duration (G+Y+Rc), s		35.3	18.0		7.3	28.0	4.4	14.0
Change Period (Y+Rc), s		5.7	4.4		* 4.2	5.7	4.1	4.8
Max Green Setting (Gmax), s		32.0	30.6		* 26	31.0	15.9	39.0
Max Q Clear Time (g_c+I1), s		5.3	11.2		3.9	10.0	2.1	7.4
Green Ext Time (p_c), s		14.1	2.4		0.1	12.3	0.0	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	14.2
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	311	104	198	48	0	105	0	652	56	147	988	155
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	0	1863	0	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	338	113	215	52	0	114	0	709	61	160	1074	0
Adj No. of Lanes	2	2	1	1	0	1	0	4	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	0	2	0	2	2	2	2	2
Cap, veh/h	498	646	289	118	0	0	0	2494	616	271	1889	845
Arrive On Green	0.14	0.18	0.18	0.07	0.00	0.00	0.00	0.39	0.39	0.08	0.53	0.00
Sat Flow, veh/h	3442	3539	1583	1774	52		0	6669	1583	3442	3539	1583
Grp Volume(v), veh/h	338	113	215	52	30.5		0	709	61	160	1074	0
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1774	C		0	1602	1583	1721	1770	1583
Q Serve(g_s), s	5.8	1.7	8.0	1.8			0.0	4.7	1.5	2.8	12.6	0.0
Cycle Q Clear(g_c), s	5.8	1.7	8.0	1.8			0.0	4.7	1.5	2.8	12.6	0.0
Prop In Lane	1.00		1.00	1.00			0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	498	646	289	118			0	2494	616	271	1889	845
V/C Ratio(X)	0.68	0.18	0.74	0.44			0.00	0.28	0.10	0.59	0.57	0.00
Avail Cap(c_a), veh/h	2540	1758	787	1035			0	4049	1000	1156	2236	1000
HCM Platoon Ratio	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	0.00
Uniform Delay (d), s/veh	25.2	21.5	24.1	27.9			0.0	13.0	12.1	27.7	9.7	0.0
Incr Delay (d2), s/veh	1.6	0.1	3.8	2.5			0.0	0.1	0.1	2.1	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
%ile BackOfQ(50%),veh/ln	2.8	0.8	3.8	0.9			0.0	2.1	0.7	1.4	6.2	0.0
LnGrp Delay(d),s/veh	26.8	21.6	27.8	30.5			0.0	13.1	12.1	29.7	10.0	0.0
LnGrp LOS	C	C	C	C				B	B	C	A	
Approach Vol, veh/h		666						770			1234	
Approach Delay, s/veh		26.3						13.0			12.5	
Approach LOS		C						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	
Phs Duration (G+Y+Rc), s	9.0	29.9	7.8	15.4		38.9	13.1	
Change Period (Y+Rc), s	4.1	5.7	3.7	4.1		5.7	4.1	
Max Green Setting (Gmax), s	20.9	39.3	36.3	30.9		39.3	45.9	
Max Q Clear Time (g_c+I1), s	4.8	6.7	3.8	10.0		14.6	7.8	
Green Ext Time (p_c), s	0.4	17.5	0.1	1.4		14.9	1.2	

Intersection Summary	
HCM 2010 Ctrl Delay	16.4
HCM 2010 LOS	B

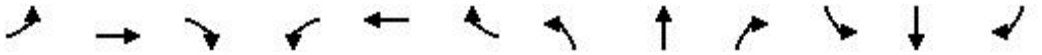
Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	33	680	23	0	1236
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	36	739	25	0	1343
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			450			426
pX, platoon unblocked	0.78					
vC, conflicting volume	1423	197			764	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	969	197			764	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	96			100	
cM capacity (veh/h)	195	811			845	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	36	211	211	211	131	672	672
Volume Left	0	0	0	0	0	0	0
Volume Right	36	0	0	0	25	0	0
cSH	811	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.04	0.12	0.12	0.12	0.08	0.40	0.40
Queue Length 95th (ft)	3	0	0	0	0	0	0
Control Delay (s)	9.6	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A						
Approach Delay (s)	9.6	0.0				0.0	
Approach LOS	A						

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	37.5%	ICU Level of Service	A
Analysis Period (min)	15		



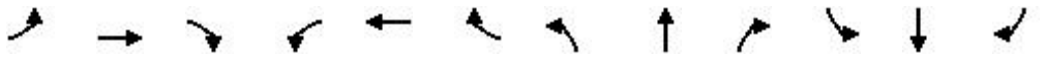
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	86	0	258	416	104	202	221	787	224	0	988	84
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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	0	1863	1863	1863	1863	1863	1863	1863	0	1863	1863
Adj Flow Rate, veh/h	93	0	280	452	193	166	240	855	0	0	1074	91
Adj No. of Lanes	1	0	1	2	1	1	1	3	1	0	3	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	0	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	122	0	0	617	287	244	296	2846	886	0	1679	523
Arrive On Green	0.07	0.00	0.00	0.17	0.15	0.15	0.17	0.56	0.00	0.00	0.33	0.33
Sat Flow, veh/h	1774	93		3548	1863	1583	1774	5085	1583	0	5253	1583
Grp Volume(v), veh/h	93	40.2		452	193	166	240	855	0	0	1074	91
Grp Sat Flow(s),veh/h/ln	1774	D		1774	1863	1583	1774	1695	1583	0	1695	1583
Q Serve(g_s), s	3.5			8.1	6.6	6.7	8.8	6.0	0.0	0.0	12.0	2.7
Cycle Q Clear(g_c), s	3.5			8.1	6.6	6.7	8.8	6.0	0.0	0.0	12.0	2.7
Prop In Lane	1.00			1.00		1.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	122			617	287	244	296	2846	886	0	1679	523
V/C Ratio(X)	0.76			0.73	0.67	0.68	0.81	0.30	0.00	0.00	0.64	0.17
Avail Cap(c_a), veh/h	420			1616	1082	919	681	2846	886	0	2347	731
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	30.7			26.3	26.8	26.8	27.0	7.8	0.0	0.0	19.1	16.0
Incr Delay (d2), s/veh	9.5			1.7	2.7	3.3	5.3	0.1	0.0	0.0	0.4	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
%ile BackOfQ(50%),veh/ln	2.0			4.1	3.6	3.1	4.7	2.8	0.0	0.0	5.6	1.2
LnGrp Delay(d),s/veh	40.2			28.0	29.5	30.1	32.2	7.9	0.0	0.0	19.5	16.1
LnGrp LOS	D			C	C	C	C	A			B	B
Approach Vol, veh/h					811			1095			1165	
Approach Delay, s/veh					28.8			13.2			19.2	
Approach LOS					C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3		5	6	7	8
Phs Duration (G+Y+Rc), s		43.3	16.1		15.4	27.9	8.7	15.2
Change Period (Y+Rc), s		5.7	4.4		* 4.2	5.7	4.1	4.8
Max Green Setting (Gmax), s		32.0	30.6		* 26	31.0	15.9	39.0
Max Q Clear Time (g_c+I1), s		8.0	10.1		10.8	14.0	5.5	8.7
Green Ext Time (p_c), s		15.7	1.6		0.6	8.1	0.1	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	20.2
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												
Volume (veh/h)	362	174	53	110	0	245	0	1156	102	269	761	259
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	0	1863	0	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	393	189	58	120	0	266	0	1257	111	292	827	0
Adj No. of Lanes	2	2	1	1	0	1	0	4	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	0	2	0	2	2	2	2	2
Cap, veh/h	548	354	159	164	0	0	0	2732	675	422	2156	965
Arrive On Green	0.16	0.10	0.10	0.09	0.00	0.00	0.00	0.43	0.43	0.12	0.61	0.00
Sat Flow, veh/h	3442	3539	1583	1774	120		0	6669	1583	3442	3539	1583
Grp Volume(v), veh/h	393	189	58	120	36.3		0	1257	111	292	827	0
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1774	D		0	1602	1583	1721	1770	1583
Q Serve(g_s), s	7.4	3.5	2.3	4.5			0.0	9.5	2.9	5.5	8.1	0.0
Cycle Q Clear(g_c), s	7.4	3.5	2.3	4.5			0.0	9.5	2.9	5.5	8.1	0.0
Prop In Lane	1.00		1.00	1.00			0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	548	354	159	164			0	2732	675	422	2156	965
V/C Ratio(X)	0.72	0.53	0.37	0.73			0.00	0.46	0.16	0.69	0.38	0.00
Avail Cap(c_a), veh/h	2322	1608	719	947			0	3702	915	1057	2156	965
HCM Platoon Ratio	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	0.00
Uniform Delay (d), s/veh	27.1	29.1	28.6	30.1			0.0	13.9	12.0	28.6	6.8	0.0
Incr Delay (d2), s/veh	1.8	1.2	1.4	6.2			0.0	0.1	0.1	2.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	1.7	1.1	2.5			0.0	4.2	1.3	2.8	3.9	0.0
LnGrp Delay(d),s/veh	28.9	30.3	30.0	36.3			0.0	14.0	12.1	30.7	6.9	0.0
LnGrp LOS	C	C	C	D				B	B	C	A	
Approach Vol, veh/h		640						1368			1119	
Approach Delay, s/veh		29.4						13.9			13.1	
Approach LOS		C						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	
Phs Duration (G+Y+Rc), s	12.4	34.7	10.0	10.9		47.1	14.9	
Change Period (Y+Rc), s	4.1	5.7	3.7	4.1		5.7	4.1	
Max Green Setting (Gmax), s	20.9	39.3	36.3	30.9		39.3	45.9	
Max Q Clear Time (g_c+I1), s	7.5	11.5	6.5	5.5		10.1	9.4	
Green Ext Time (p_c), s	0.8	17.5	0.3	1.4		19.5	1.5	

Intersection Summary	
HCM 2010 Ctrl Delay	17.5
HCM 2010 LOS	B

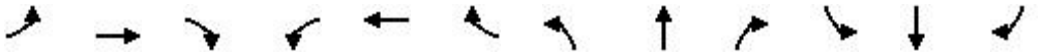
Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	52	1208	28	0	910
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	57	1313	30	0	989
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			450			426
pX, platoon unblocked	0.90	0.94			0.94	
vC, conflicting volume	1823	343			1343	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1235	13			1072	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	94			100	
cM capacity (veh/h)	152	1005			611	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	57	375	375	375	218	495	495
Volume Left	0	0	0	0	0	0	0
Volume Right	57	0	0	0	30	0	0
cSH	1005	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.06	0.22	0.22	0.22	0.13	0.29	0.29
Queue Length 95th (ft)	4	0	0	0	0	0	0
Control Delay (s)	8.8	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A						
Approach Delay (s)	8.8	0.0				0.0	
Approach LOS	A						

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	28.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	0	55	611	61	228	62	576	123	0	955	32
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	0	1863	1863	1863	1863	1863	1863	1863	0	1863	1863
Adj Flow Rate, veh/h	4	0	60	664	202	157	67	626	0	0	1038	35
Adj No. of Lanes	1	0	1	2	1	1	1	3	1	0	3	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	0	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	10	0	0	902	318	270	104	2811	875	0	2115	658
Arrive On Green	0.01	0.00	0.00	0.25	0.17	0.17	0.06	0.55	0.00	0.00	0.42	0.42
Sat Flow, veh/h	1774	4		3548	1863	1583	1774	5085	1583	0	5253	1583
Grp Volume(v), veh/h	4	53.2		664	202	157	67	626	0	0	1038	35
Grp Sat Flow(s),veh/h/ln	1774	D		1774	1863	1583	1774	1695	1583	0	1695	1583
Q Serve(g_s), s	0.1			9.2	5.4	4.9	2.0	3.4	0.0	0.0	8.1	0.7
Cycle Q Clear(g_c), s	0.1			9.2	5.4	4.9	2.0	3.4	0.0	0.0	8.1	0.7
Prop In Lane	1.00			1.00		1.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	10			902	318	270	104	2811	875	0	2115	658
V/C Ratio(X)	0.42			0.74	0.64	0.58	0.64	0.22	0.00	0.00	0.49	0.05
Avail Cap(c_a), veh/h	524			2018	1350	1148	851	3024	942	0	2930	912
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	26.7			18.4	20.8	20.5	24.8	6.1	0.0	0.0	11.5	9.4
Incr Delay (d2), s/veh	26.5			1.2	2.1	2.0	6.4	0.0	0.0	0.0	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
%ile BackOfQ(50%),veh/ln	0.1			4.7	3.0	2.3	1.2	1.6	0.0	0.0	3.8	0.3
LnGrp Delay(d),s/veh	53.2			19.6	22.9	22.5	31.2	6.2	0.0	0.0	11.7	9.4
LnGrp LOS	D			B	C	C	C	A			B	A
Approach Vol, veh/h					1023			693			1073	
Approach Delay, s/veh					20.7			8.6			11.6	
Approach LOS					C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3		5	6	7	8
Phs Duration (G+Y+Rc), s		35.4	18.1		7.4	28.1	4.4	14.0
Change Period (Y+Rc), s		5.7	4.4		* 4.2	5.7	4.1	4.8
Max Green Setting (Gmax), s		32.0	30.6		* 26	31.0	15.9	39.0
Max Q Clear Time (g_c+I1), s		5.4	11.2		4.0	10.1	2.1	7.4
Green Ext Time (p_c), s		14.2	2.4		0.1	12.3	0.0	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	14.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	311	104	201	48	0	105	0	670	56	147	991	155
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	0	1863	0	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	338	113	218	52	0	114	0	728	61	160	1077	0
Adj No. of Lanes	2	2	1	1	0	1	0	4	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	0	2	0	2	2	2	2	2
Cap, veh/h	497	651	291	118	0	0	0	2506	619	270	1893	847
Arrive On Green	0.14	0.18	0.18	0.07	0.00	0.00	0.00	0.39	0.39	0.08	0.53	0.00
Sat Flow, veh/h	3442	3539	1583	1774	52		0	6669	1583	3442	3539	1583
Grp Volume(v), veh/h	338	113	218	52	30.8		0	728	61	160	1077	0
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1774	C		0	1602	1583	1721	1770	1583
Q Serve(g_s), s	5.9	1.7	8.2	1.8			0.0	4.9	1.5	2.8	12.8	0.0
Cycle Q Clear(g_c), s	5.9	1.7	8.2	1.8			0.0	4.9	1.5	2.8	12.8	0.0
Prop In Lane	1.00		1.00	1.00			0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	497	651	291	118			0	2506	619	270	1893	847
V/C Ratio(X)	0.68	0.17	0.75	0.44			0.00	0.29	0.10	0.59	0.57	0.00
Avail Cap(c_a), veh/h	2514	1740	779	1025			0	4007	990	1145	2213	990
HCM Platoon Ratio	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	0.00
Uniform Delay (d), s/veh	25.5	21.6	24.3	28.2			0.0	13.1	12.1	28.0	9.8	0.0
Incr Delay (d2), s/veh	1.6	0.1	3.9	2.6			0.0	0.1	0.1	2.1	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
%ile BackOfQ(50%),veh/ln	2.9	0.8	3.9	1.0			0.0	2.2	0.7	1.4	6.2	0.0
LnGrp Delay(d),s/veh	27.2	21.7	28.1	30.8			0.0	13.2	12.2	30.1	10.0	0.0
LnGrp LOS	C	C	C	C				B	B	C	B	
Approach Vol, veh/h		669						789			1237	
Approach Delay, s/veh		26.6						13.1			12.6	
Approach LOS		C						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	
Phs Duration (G+Y+Rc), s	9.0	30.3	7.9	15.7		39.3	13.2	
Change Period (Y+Rc), s	4.1	5.7	3.7	4.1		5.7	4.1	
Max Green Setting (Gmax), s	20.9	39.3	36.3	30.9		39.3	45.9	
Max Q Clear Time (g_c+I1), s	4.8	6.9	3.8	10.2		14.8	7.9	
Green Ext Time (p_c), s	0.4	17.7	0.1	1.4		15.0	1.2	

Intersection Summary	
HCM 2010 Ctrl Delay	16.5
HCM 2010 LOS	B

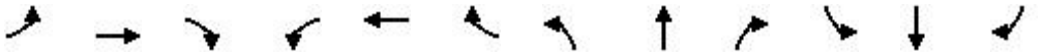
Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	51	680	24	0	1242
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	55	739	26	0	1350
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			450			426
pX, platoon unblocked	0.78					
vC, conflicting volume	1427	198			765	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	974	198			765	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	93			100	
cM capacity (veh/h)	194	810			844	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	55	211	211	211	132	675	675
Volume Left	0	0	0	0	0	0	0
Volume Right	55	0	0	0	26	0	0
cSH	810	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.07	0.12	0.12	0.12	0.08	0.40	0.40
Queue Length 95th (ft)	5	0	0	0	0	0	0
Control Delay (s)	9.8	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A						
Approach Delay (s)	9.8	0.0				0.0	
Approach LOS	A						

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	37.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	86	0	260	418	104	202	222	790	230	0	993	84
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	0	1863	1863	1863	1863	1863	1863	1863	0	1863	1863
Adj Flow Rate, veh/h	93	0	283	454	193	166	241	859	0	0	1079	91
Adj No. of Lanes	1	0	1	2	1	1	1	3	1	0	3	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	0	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	122	0	0	619	287	244	297	2848	887	0	1679	523
Arrive On Green	0.07	0.00	0.00	0.17	0.15	0.15	0.17	0.56	0.00	0.00	0.33	0.33
Sat Flow, veh/h	1774	93		3548	1863	1583	1774	5085	1583	0	5253	1583
Grp Volume(v), veh/h	93	40.3		454	193	166	241	859	0	0	1079	91
Grp Sat Flow(s),veh/h/ln	1774	D		1774	1863	1583	1774	1695	1583	0	1695	1583
Q Serve(g_s), s	3.5			8.1	6.6	6.7	8.8	6.0	0.0	0.0	12.1	2.7
Cycle Q Clear(g_c), s	3.5			8.1	6.6	6.7	8.8	6.0	0.0	0.0	12.1	2.7
Prop In Lane	1.00			1.00		1.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	122			619	287	244	297	2848	887	0	1679	523
V/C Ratio(X)	0.76			0.73	0.67	0.68	0.81	0.30	0.00	0.00	0.64	0.17
Avail Cap(c_a), veh/h	419			1614	1080	918	680	2848	887	0	2344	730
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	30.8			26.3	26.8	26.9	27.0	7.8	0.0	0.0	19.2	16.0
Incr Delay (d2), s/veh	9.5			1.7	2.7	3.3	5.3	0.1	0.0	0.0	0.4	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
%ile BackOfQ(50%),veh/ln	2.0			4.1	3.6	3.1	4.7	2.8	0.0	0.0	5.7	1.2
LnGrp Delay(d),s/veh	40.3			28.0	29.6	30.2	32.3	7.9	0.0	0.0	19.6	16.2
LnGrp LOS	D			C	C	C	C	A			B	B
Approach Vol, veh/h					813			1100			1170	
Approach Delay, s/veh					28.8			13.2			19.3	
Approach LOS					C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3		5	6	7	8
Phs Duration (G+Y+Rc), s		43.4	16.1		15.5	27.9	8.7	15.2
Change Period (Y+Rc), s		5.7	4.4		* 4.2	5.7	4.1	4.8
Max Green Setting (Gmax), s		32.0	30.6		* 26	31.0	15.9	39.0
Max Q Clear Time (g_c+I1), s		8.0	10.1		10.8	14.1	5.5	8.7
Green Ext Time (p_c), s		15.7	1.6		0.6	8.1	0.1	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	20.2
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												
Volume (veh/h)	362	174	64	110	0	245	0	1168	102	269	771	259
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	0	1863	0	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	393	189	70	120	0	266	0	1270	111	292	838	0
Adj No. of Lanes	2	2	1	1	0	1	0	4	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	0	2	0	2	2	2	2	2
Cap, veh/h	547	356	159	163	0	0	0	2738	677	421	2158	965
Arrive On Green	0.16	0.10	0.10	0.09	0.00	0.00	0.00	0.43	0.43	0.12	0.61	0.00
Sat Flow, veh/h	3442	3539	1583	1774	120		0	6669	1583	3442	3539	1583
Grp Volume(v), veh/h	393	189	70	120	36.5		0	1270	111	292	838	0
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1774	D		0	1602	1583	1721	1770	1583
Q Serve(g_s), s	7.4	3.5	2.8	4.5			0.0	9.7	2.9	5.6	8.3	0.0
Cycle Q Clear(g_c), s	7.4	3.5	2.8	4.5			0.0	9.7	2.9	5.6	8.3	0.0
Prop In Lane	1.00		1.00	1.00			0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	547	356	159	163			0	2738	677	421	2158	965
V/C Ratio(X)	0.72	0.53	0.44	0.74			0.00	0.46	0.16	0.69	0.39	0.00
Avail Cap(c_a), veh/h	2314	1602	717	943			0	3689	911	1054	2158	965
HCM Platoon Ratio	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	0.00
Uniform Delay (d), s/veh	27.3	29.2	28.9	30.2			0.0	14.0	12.0	28.7	6.8	0.0
Incr Delay (d2), s/veh	1.8	1.2	1.9	6.3			0.0	0.1	0.1	2.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	1.7	1.3	2.5			0.0	4.3	1.3	2.8	4.0	0.0
LnGrp Delay(d),s/veh	29.0	30.4	30.8	36.5			0.0	14.1	12.2	30.8	6.9	0.0
LnGrp LOS	C	C	C	D				B	B	C	A	
Approach Vol, veh/h		652						1381			1130	
Approach Delay, s/veh		29.6						13.9			13.1	
Approach LOS		C						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	
Phs Duration (G+Y+Rc), s	12.5	34.9	10.0	11.0		47.3	15.0	
Change Period (Y+Rc), s	4.1	5.7	3.7	4.1		5.7	4.1	
Max Green Setting (Gmax), s	20.9	39.3	36.3	30.9		39.3	45.9	
Max Q Clear Time (g_c+I1), s	7.6	11.7	6.5	5.5		10.3	9.4	
Green Ext Time (p_c), s	0.8	17.5	0.3	1.4		19.6	1.5	

Intersection Summary	
HCM 2010 Ctrl Delay	17.6
HCM 2010 LOS	B

Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	64	1208	31	0	930
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	70	1313	34	0	1011
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			450			426
pX, platoon unblocked	0.90	0.94			0.94	
vC, conflicting volume	1835	345			1347	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1191	0			1037	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	93			100	
cM capacity (veh/h)	163	1017			625	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	70	375	375	375	221	505	505
Volume Left	0	0	0	0	0	0	0
Volume Right	70	0	0	0	34	0	0
cSH	1017	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.07	0.22	0.22	0.22	0.13	0.30	0.30
Queue Length 95th (ft)	5	0	0	0	0	0	0
Control Delay (s)	8.8	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A						
Approach Delay (s)	8.8	0.0				0.0	
Approach LOS	A						

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	29.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	0	66	613	63	247	80	677	171	0	1080	35
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	0	1863	1863	1863	1863	1863	1863	1863	0	1863	1863
Adj Flow Rate, veh/h	7	0	72	666	218	168	87	736	0	0	1174	38
Adj No. of Lanes	1	0	1	2	1	1	1	3	1	0	3	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	0	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	16	0	0	886	328	279	115	2862	891	0	2163	674
Arrive On Green	0.01	0.00	0.00	0.25	0.18	0.18	0.06	0.56	0.00	0.00	0.43	0.43
Sat Flow, veh/h	1774	7		3548	1863	1583	1774	5085	1583	0	5253	1583
Grp Volume(v), veh/h	7	45.4		666	218	168	87	736	0	0	1174	38
Grp Sat Flow(s),veh/h/ln	1774	D		1774	1863	1583	1774	1695	1583	0	1695	1583
Q Serve(g_s), s	0.2			10.1	6.3	5.7	2.8	4.3	0.0	0.0	10.0	0.8
Cycle Q Clear(g_c), s	0.2			10.1	6.3	5.7	2.8	4.3	0.0	0.0	10.0	0.8
Prop In Lane	1.00			1.00		1.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	16			886	328	279	115	2862	891	0	2163	674
V/C Ratio(X)	0.43			0.75	0.66	0.60	0.75	0.26	0.00	0.00	0.54	0.06
Avail Cap(c_a), veh/h	486			1872	1252	1065	789	2862	891	0	2718	846
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	28.6			20.1	22.3	22.0	26.7	6.5	0.0	0.0	12.4	9.8
Incr Delay (d2), s/veh	16.8			1.3	2.3	2.1	9.6	0.0	0.0	0.0	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
%ile BackOfQ(50%),veh/ln	0.2			5.1	3.5	2.6	1.7	2.0	0.0	0.0	4.7	0.4
LnGrp Delay(d),s/veh	45.4			21.4	24.6	24.1	36.2	6.5	0.0	0.0	12.7	9.8
LnGrp LOS	D			C	C	C	D	A			B	A
Approach Vol, veh/h					1052			823			1212	
Approach Delay, s/veh					22.5			9.7			12.6	
Approach LOS					C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3		5	6	7	8
Phs Duration (G+Y+Rc), s		38.3	18.9		8.0	30.4	4.6	15.0
Change Period (Y+Rc), s		5.7	4.4		* 4.2	5.7	4.1	4.8
Max Green Setting (Gmax), s		32.0	30.6		* 26	31.0	15.9	39.0
Max Q Clear Time (g_c+I1), s		6.3	12.1		4.8	12.0	2.2	8.3
Green Ext Time (p_c), s		16.1	2.4		0.2	12.7	0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	15.2
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	373	106	210	51	0	116	0	773	57	149	1023	190
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	0	1863	0	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	405	115	228	55	0	126	0	840	62	162	1112	0
Adj No. of Lanes	2	2	1	1	0	1	0	4	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	0	2	0	2	2	2	2	2
Cap, veh/h	564	664	297	119	0	0	0	2586	639	268	1922	860
Arrive On Green	0.16	0.19	0.19	0.07	0.00	0.00	0.00	0.40	0.40	0.08	0.54	0.00
Sat Flow, veh/h	3442	3539	1583	1774	55		0	6669	1583	3442	3539	1583
Grp Volume(v), veh/h	405	115	228	55	32.7		0	840	62	162	1112	0
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1774	C		0	1602	1583	1721	1770	1583
Q Serve(g_s), s	7.4	1.8	9.1	2.0			0.0	6.0	1.6	3.0	14.0	0.0
Cycle Q Clear(g_c), s	7.4	1.8	9.1	2.0			0.0	6.0	1.6	3.0	14.0	0.0
Prop In Lane	1.00		1.00	1.00			0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	564	664	297	119			0	2586	639	268	1922	860
V/C Ratio(X)	0.72	0.17	0.77	0.46			0.00	0.32	0.10	0.60	0.58	0.00
Avail Cap(c_a), veh/h	2368	1639	733	965			0	3775	933	1078	2085	933
HCM Platoon Ratio	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	0.00
Uniform Delay (d), s/veh	26.4	22.8	25.7	30.0			0.0	13.7	12.3	29.8	10.2	0.0
Incr Delay (d2), s/veh	1.7	0.1	4.2	2.8			0.0	0.1	0.1	2.2	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
%ile BackOfQ(50%),veh/ln	3.7	0.9	4.3	1.1			0.0	2.6	0.7	1.5	6.9	0.0
LnGrp Delay(d),s/veh	28.2	22.9	29.9	32.7			0.0	13.7	12.4	31.9	10.5	0.0
LnGrp LOS	C	C	C	C				B	B	C	B	
Approach Vol, veh/h		748						902			1274	
Approach Delay, s/veh		27.9						13.6			13.2	
Approach LOS		C						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	
Phs Duration (G+Y+Rc), s	9.3	32.6	8.2	16.6		41.9	15.0	
Change Period (Y+Rc), s	4.1	5.7	3.7	4.1		5.7	4.1	
Max Green Setting (Gmax), s	20.9	39.3	36.3	30.9		39.3	45.9	
Max Q Clear Time (g_c+I1), s	5.0	8.0	4.0	11.1		16.0	9.4	
Green Ext Time (p_c), s	0.4	18.9	0.1	1.4		15.6	1.5	

Intersection Summary	
HCM 2010 Ctrl Delay	17.4
HCM 2010 LOS	B

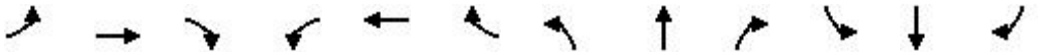
Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	115	720	27	0	1286
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	125	783	29	0	1398
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			450			426
pX, platoon unblocked	0.77					
vC, conflicting volume	1496	210			812	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1048	210			812	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	84			100	
cM capacity (veh/h)	172	795			810	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	125	224	224	224	141	699	699
Volume Left	0	0	0	0	0	0	0
Volume Right	125	0	0	0	29	0	0
cSH	795	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.16	0.13	0.13	0.13	0.08	0.41	0.41
Queue Length 95th (ft)	14	0	0	0	0	0	0
Control Delay (s)	10.4	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	10.4	0.0				0.0	
Approach LOS	B						

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	38.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	97	0	326	454	112	243	273	980	364	0	1205	94
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	0	1863	1863	1863	1863	1863	1863	1863	0	1863	1863
Adj Flow Rate, veh/h	105	0	354	493	228	193	297	1065	0	0	1310	102
Adj No. of Lanes	1	0	1	2	1	1	1	3	1	0	3	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	0	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	136	0	0	635	311	264	346	2913	907	0	1652	514
Arrive On Green	0.08	0.00	0.00	0.18	0.17	0.17	0.20	0.57	0.00	0.00	0.32	0.32
Sat Flow, veh/h	1774	105		3548	1863	1583	1774	5085	1583	0	5253	1583
Grp Volume(v), veh/h	105	44.9		493	228	193	297	1065	0	0	1310	102
Grp Sat Flow(s),veh/h/ln	1774	D		1774	1863	1583	1774	1695	1583	0	1695	1583
Q Serve(g_s), s	4.6			10.5	9.2	9.2	12.9	9.0	0.0	0.0	18.6	3.7
Cycle Q Clear(g_c), s	4.6			10.5	9.2	9.2	12.9	9.0	0.0	0.0	18.6	3.7
Prop In Lane	1.00			1.00		1.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	136			635	311	264	346	2913	907	0	1652	514
V/C Ratio(X)	0.77			0.78	0.73	0.73	0.86	0.37	0.00	0.00	0.79	0.20
Avail Cap(c_a), veh/h	355			1365	914	776	576	2913	907	0	1982	617
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	36.0			31.1	31.4	31.4	30.9	9.2	0.0	0.0	24.4	19.4
Incr Delay (d2), s/veh	8.9			2.1	3.3	3.9	6.8	0.1	0.0	0.0	1.9	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
%ile BackOfQ(50%),veh/ln	2.6			5.3	5.0	4.3	6.9	4.2	0.0	0.0	8.9	1.6
LnGrp Delay(d),s/veh	44.9			33.2	34.8	35.3	37.8	9.3	0.0	0.0	26.3	19.6
LnGrp LOS	D			C	C	D	D	A			C	B
Approach Vol, veh/h					914			1362			1412	
Approach Delay, s/veh					34.0			15.5			25.8	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3		5	6	7	8
Phs Duration (G+Y+Rc), s		51.3	18.6		19.7	31.5	10.2	18.1
Change Period (Y+Rc), s		5.7	4.4		* 4.2	5.7	4.1	4.8
Max Green Setting (Gmax), s		32.0	30.6		* 26	31.0	15.9	39.0
Max Q Clear Time (g_c+I1), s		11.0	12.5		14.9	20.6	6.6	11.2
Green Ext Time (p_c), s		16.8	1.7		0.7	5.2	0.1	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	24.6
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												
Volume (veh/h)	479	236	148	124	0	294	0	1403	117	321	889	296
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	0	1863	0	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	521	257	161	135	0	320	0	1525	127	349	966	0
Adj No. of Lanes	2	2	1	1	0	1	0	4	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	0	2	0	2	2	2	2	2
Cap, veh/h	668	526	235	175	0	0	0	2535	626	464	2061	922
Arrive On Green	0.19	0.15	0.15	0.10	0.00	0.00	0.00	0.40	0.40	0.13	0.58	0.00
Sat Flow, veh/h	3442	3539	1583	1774	135		0	6669	1583	3442	3539	1583
Grp Volume(v), veh/h	521	257	161	135	41.8		0	1525	127	349	966	0
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1774	D		0	1602	1583	1721	1770	1583
Q Serve(g_s), s	11.4	5.3	7.6	5.9			0.0	14.9	4.2	7.7	12.4	0.0
Cycle Q Clear(g_c), s	11.4	5.3	7.6	5.9			0.0	14.9	4.2	7.7	12.4	0.0
Prop In Lane	1.00		1.00	1.00			0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	668	526	235	175			0	2535	626	464	2061	922
V/C Ratio(X)	0.78	0.49	0.68	0.77			0.00	0.60	0.20	0.75	0.47	0.00
Avail Cap(c_a), veh/h	1996	1382	618	814			0	3181	786	909	2061	922
HCM Platoon Ratio	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	0.00
Uniform Delay (d), s/veh	30.3	30.9	31.9	34.8			0.0	19.0	15.7	33.0	9.5	0.0
Incr Delay (d2), s/veh	2.0	0.7	3.5	7.0			0.0	0.2	0.2	2.5	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	2.6	3.6	3.2			0.0	6.6	1.9	3.8	6.1	0.0
LnGrp Delay(d),s/veh	32.3	31.6	35.4	41.8			0.0	19.2	15.9	35.5	9.7	0.0
LnGrp LOS	C	C	D	D				B	B	D	A	
Approach Vol, veh/h		939						1652			1315	
Approach Delay, s/veh		32.7						18.9			16.5	
Approach LOS		C						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	
Phs Duration (G+Y+Rc), s	14.8	37.0	11.5	15.9		51.8	19.5	
Change Period (Y+Rc), s	4.1	5.7	3.7	4.1		5.7	4.1	
Max Green Setting (Gmax), s	20.9	39.3	36.3	30.9		39.3	45.9	
Max Q Clear Time (g_c+I1), s	9.7	16.9	7.9	9.6		14.4	13.4	
Green Ext Time (p_c), s	1.0	14.4	0.4	2.1		20.1	2.0	

Intersection Summary	
HCM 2010 Ctrl Delay	22.1
HCM 2010 LOS	C

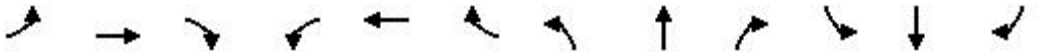
Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	201	1321	53	0	1147
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	218	1436	58	0	1247
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			450			426
pX, platoon unblocked	0.90	0.89			0.89	
vC, conflicting volume	2088	388			1493	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1088	0			946	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	77			100	
cM capacity (veh/h)	190	967			643	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	218	410	410	410	263	623	623
Volume Left	0	0	0	0	0	0	0
Volume Right	218	0	0	0	58	0	0
cSH	967	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.23	0.24	0.24	0.24	0.15	0.37	0.37
Queue Length 95th (ft)	22	0	0	0	0	0	0
Control Delay (s)	9.8	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A						
Approach Delay (s)	9.8	0.0				0.0	
Approach LOS	A						

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	39.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	0	67	614	63	247	82	682	180	0	1082	35
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	0	1863	1863	1863	1863	1863	1863	1863	0	1863	1863
Adj Flow Rate, veh/h	7	0	73	667	218	168	89	741	0	0	1176	38
Adj No. of Lanes	1	0	1	2	1	1	1	3	1	0	3	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	0	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	16	0	0	887	328	279	118	2865	892	0	2160	673
Arrive On Green	0.01	0.00	0.00	0.25	0.18	0.18	0.07	0.56	0.00	0.00	0.42	0.42
Sat Flow, veh/h	1774	7		3548	1863	1583	1774	5085	1583	0	5253	1583
Grp Volume(v), veh/h	7	45.5		667	218	168	89	741	0	0	1176	38
Grp Sat Flow(s),veh/h/ln	1774	D		1774	1863	1583	1774	1695	1583	0	1695	1583
Q Serve(g_s), s	0.2			10.1	6.3	5.7	2.9	4.3	0.0	0.0	10.1	0.8
Cycle Q Clear(g_c), s	0.2			10.1	6.3	5.7	2.9	4.3	0.0	0.0	10.1	0.8
Prop In Lane	1.00			1.00		1.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	16			887	328	279	118	2865	892	0	2160	673
V/C Ratio(X)	0.43			0.75	0.66	0.60	0.76	0.26	0.00	0.00	0.54	0.06
Avail Cap(c_a), veh/h	485			1868	1250	1063	788	2865	892	0	2713	845
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	28.6			20.1	22.3	22.1	26.7	6.5	0.0	0.0	12.5	9.9
Incr Delay (d2), s/veh	16.8			1.3	2.3	2.1	9.4	0.0	0.0	0.0	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
%ile BackOfQ(50%),veh/ln	0.2			5.1	3.5	2.6	1.7	2.0	0.0	0.0	4.7	0.4
LnGrp Delay(d),s/veh	45.5			21.4	24.6	24.1	36.1	6.5	0.0	0.0	12.7	9.9
LnGrp LOS	D			C	C	C	D	A			B	A
Approach Vol, veh/h					1053			830			1214	
Approach Delay, s/veh					22.5			9.7			12.6	
Approach LOS					C			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3		5	6	7	8
Phs Duration (G+Y+Rc), s		38.4	18.9		8.1	30.4	4.6	15.0
Change Period (Y+Rc), s		5.7	4.4		* 4.2	5.7	4.1	4.8
Max Green Setting (Gmax), s		32.0	30.6		* 26	31.0	15.9	39.0
Max Q Clear Time (g_c+I1), s		6.3	12.1		4.9	12.1	2.2	8.3
Green Ext Time (p_c), s		16.1	2.4		0.2	12.6	0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	15.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	373	106	214	51	0	116	0	791	57	149	1026	190
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	0	1863	0	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	405	115	233	55	0	126	0	860	62	162	1115	0
Adj No. of Lanes	2	2	1	1	0	1	0	4	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	0	2	0	2	2	2	2	2
Cap, veh/h	563	673	301	118	0	0	0	2592	641	267	1922	860
Arrive On Green	0.16	0.19	0.19	0.07	0.00	0.00	0.00	0.40	0.40	0.08	0.54	0.00
Sat Flow, veh/h	3442	3539	1583	1774	55		0	6669	1583	3442	3539	1583
Grp Volume(v), veh/h	405	115	233	55	33.2		0	860	62	162	1115	0
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1774	C		0	1602	1583	1721	1770	1583
Q Serve(g_s), s	7.5	1.8	9.4	2.0			0.0	6.2	1.6	3.1	14.2	0.0
Cycle Q Clear(g_c), s	7.5	1.8	9.4	2.0			0.0	6.2	1.6	3.1	14.2	0.0
Prop In Lane	1.00		1.00	1.00			0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	563	673	301	118			0	2592	641	267	1922	860
V/C Ratio(X)	0.72	0.17	0.77	0.46			0.00	0.33	0.10	0.61	0.58	0.00
Avail Cap(c_a), veh/h	2341	1620	725	954			0	3731	922	1066	2061	922
HCM Platoon Ratio	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	0.00
Uniform Delay (d), s/veh	26.8	22.9	25.9	30.3			0.0	13.8	12.5	30.1	10.3	0.0
Incr Delay (d2), s/veh	1.8	0.1	4.2	2.8			0.0	0.1	0.1	2.2	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.9	4.4	1.1			0.0	2.8	0.7	1.5	6.9	0.0
LnGrp Delay(d),s/veh	28.5	23.0	30.2	33.2			0.0	13.9	12.5	32.3	10.7	0.0
LnGrp LOS	C	C	C	C				B	B	C	B	
Approach Vol, veh/h		753						922			1277	
Approach Delay, s/veh		28.2						13.8			13.4	
Approach LOS		C						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	
Phs Duration (G+Y+Rc), s	9.3	33.0	8.2	16.9		42.3	15.1	
Change Period (Y+Rc), s	4.1	5.7	3.7	4.1		5.7	4.1	
Max Green Setting (Gmax), s	20.9	39.3	36.3	30.9		39.3	45.9	
Max Q Clear Time (g_c+I1), s	5.1	8.2	4.0	11.4		16.2	9.5	
Green Ext Time (p_c), s	0.4	19.1	0.1	1.4		15.7	1.5	

Intersection Summary	
HCM 2010 Ctrl Delay	17.6
HCM 2010 LOS	B

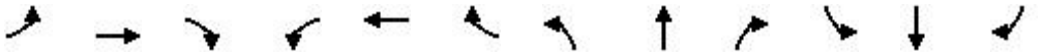
Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	133	720	28	0	1293
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	145	783	30	0	1405
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			450			426
pX, platoon unblocked	0.77					
vC, conflicting volume	1501	211			813	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1053	211			813	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	82			100	
cM capacity (veh/h)	171	795			810	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	145	224	224	224	142	703	703
Volume Left	0	0	0	0	0	0	0
Volume Right	145	0	0	0	30	0	0
cSH	795	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.18	0.13	0.13	0.13	0.08	0.41	0.41
Queue Length 95th (ft)	17	0	0	0	0	0	0
Control Delay (s)	10.5	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	10.5	0.0				0.0	
Approach LOS	B						

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	39.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	97	0	328	456	112	243	275	983	370	0	1210	94
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	0	1863	1863	1863	1863	1863	1863	1863	0	1863	1863
Adj Flow Rate, veh/h	105	0	357	496	228	193	299	1068	0	0	1315	102
Adj No. of Lanes	1	0	1	2	1	1	1	3	1	0	3	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	0	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	136	0	0	638	311	264	348	2917	908	0	1652	514
Arrive On Green	0.08	0.00	0.00	0.18	0.17	0.17	0.20	0.57	0.00	0.00	0.32	0.32
Sat Flow, veh/h	1774	105		3548	1863	1583	1774	5085	1583	0	5253	1583
Grp Volume(v), veh/h	105	45.1		496	228	193	299	1068	0	0	1315	102
Grp Sat Flow(s),veh/h/ln	1774	D		1774	1863	1583	1774	1695	1583	0	1695	1583
Q Serve(g_s), s	4.6			10.6	9.3	9.2	13.0	9.0	0.0	0.0	18.8	3.7
Cycle Q Clear(g_c), s	4.6			10.6	9.3	9.2	13.0	9.0	0.0	0.0	18.8	3.7
Prop In Lane	1.00			1.00		1.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	136			638	311	264	348	2917	908	0	1652	514
V/C Ratio(X)	0.77			0.78	0.73	0.73	0.86	0.37	0.00	0.00	0.80	0.20
Avail Cap(c_a), veh/h	353			1360	910	774	573	2917	908	0	1975	615
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	36.2			31.2	31.6	31.6	31.0	9.2	0.0	0.0	24.5	19.4
Incr Delay (d2), s/veh	8.9			2.1	3.4	3.9	7.1	0.1	0.0	0.0	2.0	0.2
Initial Q Delay(d3),s/veh	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6			5.4	5.0	4.3	7.1	4.2	0.0	0.0	9.1	1.6
LnGrp Delay(d),s/veh	45.1			33.3	34.9	35.4	38.1	9.3	0.0	0.0	26.5	19.6
LnGrp LOS	D			C	C	D	D	A			C	B
Approach Vol, veh/h					917			1367			1417	
Approach Delay, s/veh					34.2			15.6			26.0	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3		5	6	7	8
Phs Duration (G+Y+Rc), s		51.5	18.8		19.9	31.6	10.2	18.1
Change Period (Y+Rc), s		5.7	4.4		* 4.2	5.7	4.1	4.8
Max Green Setting (Gmax), s		32.0	30.6		* 26	31.0	15.9	39.0
Max Q Clear Time (g_c+I1), s		11.0	12.6		15.0	20.8	6.6	11.3
Green Ext Time (p_c), s		16.8	1.7		0.7	5.1	0.1	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	24.8
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												
Volume (veh/h)	479	236	158	124	0	294	0	1415	117	321	899	296
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	0	1863	0	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	521	257	172	135	0	320	0	1538	127	349	977	0
Adj No. of Lanes	2	2	1	1	0	1	0	4	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	0	2	0	2	2	2	2	2
Cap, veh/h	666	548	245	175	0	0	0	2514	621	463	2046	915
Arrive On Green	0.19	0.15	0.15	0.10	0.00	0.00	0.00	0.39	0.39	0.13	0.58	0.00
Sat Flow, veh/h	3442	3539	1583	1774	135		0	6669	1583	3442	3539	1583
Grp Volume(v), veh/h	521	257	172	135	42.3		0	1538	127	349	977	0
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1774	D		0	1602	1583	1721	1770	1583
Q Serve(g_s), s	11.5	5.3	8.2	5.9			0.0	15.4	4.2	7.8	12.9	0.0
Cycle Q Clear(g_c), s	11.5	5.3	8.2	5.9			0.0	15.4	4.2	7.8	12.9	0.0
Prop In Lane	1.00		1.00	1.00			0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	666	548	245	175			0	2514	621	463	2046	915
V/C Ratio(X)	0.78	0.47	0.70	0.77			0.00	0.61	0.20	0.75	0.48	0.00
Avail Cap(c_a), veh/h	1973	1366	611	804			0	3145	777	898	2046	915
HCM Platoon Ratio	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	0.00
Uniform Delay (d), s/veh	30.7	30.8	32.1	35.2			0.0	19.5	16.1	33.4	9.8	0.0
Incr Delay (d2), s/veh	2.0	0.6	3.6	7.0			0.0	0.2	0.2	2.5	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	2.6	3.8	3.3			0.0	6.8	1.9	3.9	6.3	0.0
LnGrp Delay(d),s/veh	32.7	31.5	35.7	42.3			0.0	19.7	16.2	35.9	10.0	0.0
LnGrp LOS	C	C	D	D				B	B	D	B	
Approach Vol, veh/h		950						1665			1326	
Approach Delay, s/veh		32.9						19.4			16.8	
Approach LOS		C						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	
Phs Duration (G+Y+Rc), s	14.9	37.1	11.6	16.5		52.0	19.6	
Change Period (Y+Rc), s	4.1	5.7	3.7	4.1		5.7	4.1	
Max Green Setting (Gmax), s	20.9	39.3	36.3	30.9		39.3	45.9	
Max Q Clear Time (g_c+I1), s	9.8	17.4	7.9	10.2		14.9	13.5	
Green Ext Time (p_c), s	0.9	14.1	0.4	2.2		19.9	2.0	

Intersection Summary	
HCM 2010 Ctrl Delay	22.5
HCM 2010 LOS	C

Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	212	1321	56	0	1167
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	230	1436	61	0	1268
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			450			426
pX, platoon unblocked	0.90	0.89			0.89	
vC, conflicting volume	2101	389			1497	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1085	0			939	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	76			100	
cM capacity (veh/h)	190	965			646	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	230	410	410	410	266	634	634
Volume Left	0	0	0	0	0	0	0
Volume Right	230	0	0	0	61	0	0
cSH	965	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.24	0.24	0.24	0.24	0.16	0.37	0.37
Queue Length 95th (ft)	23	0	0	0	0	0	0
Control Delay (s)	9.9	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A						
Approach Delay (s)	9.9	0.0				0.0	
Approach LOS	A						

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	105	680	160	400	150	955	210	0	1560	100
Future Volume (veh/h)	10	0	105	680	160	400	150	955	210	0	1560	100
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	0	1863	1863	1863	1863	1863	1863	1863	0	1863	1863
Adj Flow Rate, veh/h	10	0	105	680	265	230	150	955	0	0	1560	100
Adj No. of Lanes	1	0	1	2	1	1	1	3	1	0	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	22	0	0	807	343	291	186	3317	1033	0	2563	798
Arrive On Green	0.01	0.00	0.00	0.23	0.18	0.18	0.10	0.65	0.00	0.00	0.50	0.50
Sat Flow, veh/h	1774	10		3548	1863	1583	1774	5085	1583	0	5253	1583
Grp Volume(v), veh/h	10	61.9		680	265	230	150	955	0	0	1560	100
Grp Sat Flow(s),veh/h/ln	1774	E		1774	1863	1583	1774	1695	1583	0	1695	1583
Q Serve(g_s), s	0.5			17.6	13.0	13.4	8.0	7.7	0.0	0.0	21.2	3.2
Cycle Q Clear(g_c), s	0.5			17.6	13.0	13.4	8.0	7.7	0.0	0.0	21.2	3.2
Prop In Lane	1.00			1.00		1.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	22			807	343	291	186	3317	1033	0	2563	798
V/C Ratio(X)	0.46			0.84	0.77	0.79	0.81	0.29	0.00	0.00	0.61	0.13
Avail Cap(c_a), veh/h	219			1230	754	641	438	4460	1389	0	2982	928
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	47.3			35.6	37.4	37.5	42.2	7.2	0.0	0.0	17.1	12.7
Incr Delay (d2), s/veh	14.6			3.4	3.7	4.8	8.0	0.0	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4			9.0	7.1	6.2	4.3	3.6	0.0	0.0	9.9	1.4
LnGrp Delay(d),s/veh	61.9			39.0	41.1	42.3	50.2	7.2	0.0	0.0	17.4	12.7
LnGrp LOS	E			D	D	D	D	A			B	B
Approach Vol, veh/h					1175			1105			1660	
Approach Delay, s/veh					40.1			13.1			17.1	
Approach LOS					D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3		5	6	7	8
Phs Duration (G+Y+Rc), s		68.5	26.3		14.3	54.3	5.3	22.5
Change Period (Y+Rc), s		5.7	4.4		* 4.2	5.7	4.1	4.8
Max Green Setting (Gmax), s		84.5	33.4		* 24	56.5	11.9	39.0
Max Q Clear Time (g_c+I1), s		9.7	19.6		10.0	23.2	2.5	15.4
Green Ext Time (p_c), s		43.5	2.3		0.3	25.4	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	22.9
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	640	235	545	110	0	165	0	1005	95	170	1350	155
Future Volume (veh/h)	640	235	545	110	0	165	0	1005	95	170	1350	155
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	0	1863	0	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	640	235	545	110	0	165	0	1005	95	170	1350	0
Adj No. of Lanes	2	2	1	1	0	1	0	4	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	0	2	0	2	2	2	2	2
Cap, veh/h	1063	698	312	136	0	0	0	1446	357	1099	2118	948
Arrive On Green	0.31	0.20	0.20	0.08	0.00	0.00	0.00	0.45	0.45	0.32	0.60	0.00
Sat Flow, veh/h	3442	3539	1583	1774	110		0	6669	1583	3442	3539	1583
Grp Volume(v), veh/h	640	235	545	110	71.5		0	1005	95	170	1350	0
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1774	E		0	1602	1583	1721	1770	1583
Q Serve(g_s), s	16.7	6.1	20.9	6.5			0.0	13.3	3.1	3.7	26.2	0.0
Cycle Q Clear(g_c), s	16.7	6.1	20.9	6.5			0.0	13.3	3.1	3.7	26.2	0.0
Prop In Lane	1.00		1.00	1.00			0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1063	698	312	136			0	1446	357	1099	2118	948
V/C Ratio(X)	0.60	0.34	1.75	0.81			0.00	0.70	0.27	0.15	0.64	0.00
Avail Cap(c_a), veh/h	1063	698	312	156			0	2618	647	1099	2118	948
HCM Platoon Ratio	1.00	1.00	1.00	1.00			1.00	2.00	2.00	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	0.00
Uniform Delay (d), s/veh	31.1	36.6	42.5	48.1			0.0	26.2	14.6	25.8	13.8	0.0
Incr Delay (d2), s/veh	1.0	0.3	348.6	23.4			0.0	2.8	1.8	0.1	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
%ile BackOfQ(50%),veh/ln	8.1	3.0	39.3	4.1			0.0	6.0	1.5	1.8	13.2	0.0
LnGrp Delay(d),s/veh	32.0	36.9	391.1	71.5			0.0	29.0	16.4	25.9	15.3	0.0
LnGrp LOS	C	D	F	E				C	B	C	B	
Approach Vol, veh/h		1420						1100			1520	
Approach Delay, s/veh		170.7						27.9			16.5	
Approach LOS		F						C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	
Phs Duration (G+Y+Rc), s	39.5	29.6	11.9	25.0		69.1	36.9	
Change Period (Y+Rc), s	5.7	* 5.7	3.7	4.1		5.7	4.1	
Max Green Setting (Gmax), s	14.9	* 43	9.3	20.9		62.3	21.7	
Max Q Clear Time (g_c+I1), s	5.7	15.3	8.5	22.9		28.2	18.7	
Green Ext Time (p_c), s	6.3	8.6	0.0	0.0		14.4	0.8	

Intersection Summary	
HCM 2010 Ctrl Delay	73.7
HCM 2010 LOS	E

Notes

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	100	1000	30	0	2005
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	109	1087	33	0	2179
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			450			426
pX, platoon unblocked	0.69	0.94			0.94	
vC, conflicting volume	2193	288			1120	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1127	0			780	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	89			100	
cM capacity (veh/h)	137	1014			779	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	109	311	311	311	188	1090	1090
Volume Left	0	0	0	0	0	0	0
Volume Right	109	0	0	0	33	0	0
cSH	1014	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.11	0.18	0.18	0.18	0.11	0.64	0.64
Queue Length 95th (ft)	9	0	0	0	0	0	0
Control Delay (s)	9.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A						
Approach Delay (s)	9.0	0.0				0.0	
Approach LOS	A						

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	485	215	65	140	0	340	0	2200	170	400	1035	480
Future Volume (veh/h)	485	215	65	140	0	340	0	2200	170	400	1035	480
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	0	1863	0	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	485	215	65	140	0	340	0	2200	170	400	1035	0
Adj No. of Lanes	2	2	1	1	0	1	0	4	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	0	2	0	2	2	2	2	2
Cap, veh/h	729	315	141	156	0	0	0	2481	613	878	2463	1102
Arrive On Green	0.21	0.09	0.09	0.09	0.00	0.00	0.00	0.77	0.77	0.25	0.70	0.00
Sat Flow, veh/h	3442	3539	1583	1774	140		0	6669	1583	3442	3539	1583
Grp Volume(v), veh/h	485	215	65	140	92.0		0	2200	170	400	1035	0
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1774	F		0	1602	1583	1721	1770	1583
Q Serve(g_s), s	13.7	6.2	4.1	8.3			0.0	26.2	2.3	10.4	13.3	0.0
Cycle Q Clear(g_c), s	13.7	6.2	4.1	8.3			0.0	26.2	2.3	10.4	13.3	0.0
Prop In Lane	1.00		1.00	1.00			0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	729	315	141	156			0	2481	613	878	2463	1102
V/C Ratio(X)	0.67	0.68	0.46	0.90			0.00	0.89	0.28	0.46	0.42	0.00
Avail Cap(c_a), veh/h	729	698	312	156			0	2618	647	878	2463	1102
HCM Platoon Ratio	1.00	1.00	1.00	1.00			1.00	2.00	2.00	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	0.00
Uniform Delay (d), s/veh	38.3	46.8	45.9	47.9			0.0	10.3	3.9	33.3	6.9	0.0
Incr Delay (d2), s/veh	2.3	2.6	2.3	44.1			0.0	5.2	1.1	0.4	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	3.2	1.9	6.0			0.0	11.9	1.2	5.0	6.6	0.0
LnGrp Delay(d),s/veh	40.6	49.4	48.2	92.0			0.0	15.5	5.0	33.7	7.5	0.0
LnGrp LOS	D	D	D	F				B	A	C	A	
Approach Vol, veh/h		765						2370			1435	
Approach Delay, s/veh		43.8						14.7			14.8	
Approach LOS		D						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	
Phs Duration (G+Y+Rc), s	32.7	46.7	13.0	13.5		79.5	26.5	
Change Period (Y+Rc), s	5.7	* 5.7	3.7	4.1		5.7	4.1	
Max Green Setting (Gmax), s	14.9	* 43	9.3	20.9		62.3	21.7	
Max Q Clear Time (g_c+I1), s	12.4	28.2	10.3	8.2		15.3	15.7	
Green Ext Time (p_c), s	1.9	12.8	0.0	1.2		12.4	1.0	

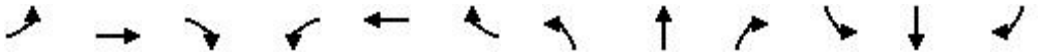
Intersection Summary	
HCM 2010 Ctrl Delay	21.7
HCM 2010 LOS	C

Notes

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	80	2290	60	0	1240
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	87	2489	65	0	1348
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			450			426
pX, platoon unblocked	0.77	0.69			0.69	
vC, conflicting volume	3196	655			2554	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1124	0			1022	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	88			100	
cM capacity (veh/h)	154	751			467	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	87	711	711	711	421	674	674
Volume Left	0	0	0	0	0	0	0
Volume Right	87	0	0	0	65	0	0
cSH	751	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.12	0.42	0.42	0.42	0.25	0.40	0.40
Queue Length 95th (ft)	10	0	0	0	0	0	0
Control Delay (s)	10.4	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	10.4	0.0				0.0	
Approach LOS	B						

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	0	106	682	160	400	151	960	219	0	1562	100
Future Volume (veh/h)	10	0	106	682	160	400	151	960	219	0	1562	100
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	0	1863	1863	1863	1863	1863	1863	1863	0	1863	1863
Adj Flow Rate, veh/h	10	0	106	682	265	230	151	960	0	0	1562	100
Adj No. of Lanes	1	0	1	2	1	1	1	3	1	0	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	22	0	0	809	343	291	187	3319	1033	0	2562	798
Arrive On Green	0.01	0.00	0.00	0.23	0.18	0.18	0.11	0.65	0.00	0.00	0.50	0.50
Sat Flow, veh/h	1774	10		3548	1863	1583	1774	5085	1583	0	5253	1583
Grp Volume(v), veh/h	10	62.0		682	265	230	151	960	0	0	1562	100
Grp Sat Flow(s),veh/h/ln	1774	E		1774	1863	1583	1774	1695	1583	0	1695	1583
Q Serve(g_s), s	0.5			17.7	13.1	13.4	8.0	7.8	0.0	0.0	21.2	3.2
Cycle Q Clear(g_c), s	0.5			17.7	13.1	13.4	8.0	7.8	0.0	0.0	21.2	3.2
Prop In Lane	1.00			1.00		1.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	22			809	343	291	187	3319	1033	0	2562	798
V/C Ratio(X)	0.46			0.84	0.77	0.79	0.81	0.29	0.00	0.00	0.61	0.13
Avail Cap(c_a), veh/h	219			1227	752	640	437	4450	1386	0	2976	927
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	47.4			35.6	37.5	37.6	42.2	7.2	0.0	0.0	17.2	12.7
Incr Delay (d2), s/veh	14.6			3.5	3.7	4.8	8.0	0.0	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4			9.1	7.1	6.3	4.4	3.7	0.0	0.0	9.9	1.4
LnGrp Delay(d),s/veh	62.0			39.1	41.2	42.4	50.3	7.2	0.0	0.0	17.4	12.8
LnGrp LOS	E			D	D	D	D	A			B	B
Approach Vol, veh/h					1177			1111			1662	
Approach Delay, s/veh					40.2			13.1			17.1	
Approach LOS					D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3		5	6	7	8
Phs Duration (G+Y+Rc), s		68.7	26.4		14.4	54.4	5.3	22.6
Change Period (Y+Rc), s		5.7	4.4		* 4.2	5.7	4.1	4.8
Max Green Setting (Gmax), s		84.5	33.4		* 24	56.5	11.9	39.0
Max Q Clear Time (g_c+I1), s		9.8	19.7		10.0	23.2	2.5	15.4
Green Ext Time (p_c), s		43.6	2.3		0.3	25.4	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	23.0
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	640	235	548	110	0	165	0	1023	95	170	1353	155
Future Volume (veh/h)	640	235	548	110	0	165	0	1023	95	170	1353	155
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	0	1863	0	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	640	235	548	110	0	165	0	1023	95	170	1353	0
Adj No. of Lanes	2	2	1	1	0	1	0	4	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	0	2	0	2	2	2	2	2
Cap, veh/h	1063	698	312	136	0	0	0	1467	362	1087	2118	948
Arrive On Green	0.31	0.20	0.20	0.08	0.00	0.00	0.00	0.46	0.46	0.32	0.60	0.00
Sat Flow, veh/h	3442	3539	1583	1774	110		0	6669	1583	3442	3539	1583
Grp Volume(v), veh/h	640	235	548	110	71.5		0	1023	95	170	1353	0
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1774	E		0	1602	1583	1721	1770	1583
Q Serve(g_s), s	16.7	6.1	20.9	6.5			0.0	13.5	3.1	3.8	26.3	0.0
Cycle Q Clear(g_c), s	16.7	6.1	20.9	6.5			0.0	13.5	3.1	3.8	26.3	0.0
Prop In Lane	1.00		1.00	1.00			0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1063	698	312	136			0	1467	362	1087	2118	948
V/C Ratio(X)	0.60	0.34	1.76	0.81			0.00	0.70	0.26	0.16	0.64	0.00
Avail Cap(c_a), veh/h	1063	698	312	156			0	2618	647	1087	2118	948
HCM Platoon Ratio	1.00	1.00	1.00	1.00			1.00	2.00	2.00	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	0.00
Uniform Delay (d), s/veh	31.1	36.6	42.5	48.1			0.0	25.8	14.3	26.1	13.8	0.0
Incr Delay (d2), s/veh	1.0	0.3	352.8	23.4			0.0	2.8	1.8	0.1	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
%ile BackOfQ(50%),veh/ln	8.1	3.0	39.7	4.1			0.0	6.1	1.5	1.8	13.2	0.0
LnGrp Delay(d),s/veh	32.0	36.9	395.4	71.5			0.0	28.6	16.1	26.2	15.3	0.0
LnGrp LOS	C	D	F	E				C	B	C	B	
Approach Vol, veh/h		1423						1118			1523	
Approach Delay, s/veh		172.8						27.5			16.5	
Approach LOS		F						C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	
Phs Duration (G+Y+Rc), s	39.2	30.0	11.9	25.0		69.1	36.9	
Change Period (Y+Rc), s	5.7	* 5.7	3.7	4.1		5.7	4.1	
Max Green Setting (Gmax), s	14.9	* 43	9.3	20.9		62.3	21.7	
Max Q Clear Time (g_c+I1), s	5.8	15.5	8.5	22.9		28.3	18.7	
Green Ext Time (p_c), s	6.3	8.8	0.0	0.0		14.5	0.8	

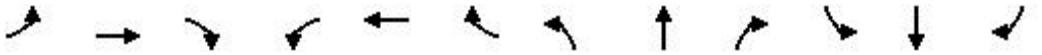
Intersection Summary	
HCM 2010 Ctrl Delay	74.2
HCM 2010 LOS	E

Notes

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	108	1005	96	0	2011
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	117	1092	104	0	2186
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			450			426
pX, platoon unblocked	0.69	0.93			0.93	
vC, conflicting volume	2238	325			1197	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1186	0			860	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	88			100	
cM capacity (veh/h)	125	1013			726	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	117	312	312	312	260	1093	1093
Volume Left	0	0	0	0	0	0	0
Volume Right	117	0	0	0	104	0	0
cSH	1013	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.12	0.18	0.18	0.18	0.15	0.64	0.64
Queue Length 95th (ft)	10	0	0	0	0	0	0
Control Delay (s)	9.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A						
Approach Delay (s)	9.0	0.0				0.0	
Approach LOS	A						

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	58.9%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	0	470	612	170	340	301	1123	561	0	2005	145
Future Volume (veh/h)	140	0	470	612	170	340	301	1123	561	0	2005	145
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	0	1863	1863	1863	1863	1863	1863	1863	0	1863	1863
Adj Flow Rate, veh/h	140	0	470	612	170	150	301	1123	0	0	2005	145
Adj No. of Lanes	1	0	1	2	1	1	1	3	1	0	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	0	2	2	2	2	2	2	2	0	2	2
Cap, veh/h	170	0	0	721	228	194	330	3326	1036	0	2192	683
Arrive On Green	0.10	0.00	0.00	0.20	0.12	0.12	0.19	0.65	0.00	0.00	0.43	0.43
Sat Flow, veh/h	1774	140		3548	1863	1583	1774	5085	1583	0	5253	1583
Grp Volume(v), veh/h	140	60.3		612	170	150	301	1123	0	0	2005	145
Grp Sat Flow(s),veh/h/ln	1774	E		1774	1863	1583	1774	1695	1583	0	1695	1583
Q Serve(g_s), s	8.8			18.9	10.1	10.5	19.0	11.2	0.0	0.0	42.2	6.5
Cycle Q Clear(g_c), s	8.8			18.9	10.1	10.5	19.0	11.2	0.0	0.0	42.2	6.5
Prop In Lane	1.00			1.00		1.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	170			721	228	194	330	3326	1036	0	2192	683
V/C Ratio(X)	0.82			0.85	0.75	0.77	0.91	0.34	0.00	0.00	0.91	0.21
Avail Cap(c_a), veh/h	297			1263	637	541	370	3446	1073	0	2198	684
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	50.6			43.8	48.3	48.5	45.5	8.8	0.0	0.0	30.5	20.3
Incr Delay (d2), s/veh	9.6			2.9	4.8	6.5	24.5	0.1	0.0	0.0	6.5	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
%ile BackOfQ(50%),veh/ln	4.8			9.6	5.5	4.9	11.5	5.2	0.0	0.0	21.0	2.9
LnGrp Delay(d),s/veh	60.3			46.7	53.2	55.0	70.0	8.8	0.0	0.0	37.0	20.5
LnGrp LOS	E			D	D	E	E	A			D	C
Approach Vol, veh/h					932			1424			2150	
Approach Delay, s/veh					49.2			21.8			35.9	
Approach LOS					D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3		5	6	7	8
Phs Duration (G+Y+Rc), s		80.3	27.6		25.4	54.9	15.0	18.7
Change Period (Y+Rc), s		5.7	4.4		* 4.2	5.7	4.1	4.8
Max Green Setting (Gmax), s		77.3	40.6		* 24	49.3	19.1	39.0
Max Q Clear Time (g_c+I1), s		13.2	20.9		21.0	44.2	10.8	12.5
Green Ext Time (p_c), s		52.1	2.2		0.3	4.9	0.2	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	34.9
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	485	215	72	140	0	340	0	2210	170	400	1045	480
Future Volume (veh/h)	485	215	72	140	0	340	0	2210	170	400	1045	480
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	0	1863	0	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	485	215	72	140	0	340	0	2210	170	400	1045	0
Adj No. of Lanes	2	2	1	1	0	1	0	4	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	0	2	0	2	2	2	2	2
Cap, veh/h	729	316	141	156	0	0	0	2486	614	874	2462	1101
Arrive On Green	0.21	0.09	0.09	0.09	0.00	0.00	0.00	0.78	0.78	0.25	0.70	0.00
Sat Flow, veh/h	3442	3539	1583	1774	140		0	6669	1583	3442	3539	1583
Grp Volume(v), veh/h	485	215	72	140	92.0		0	2210	170	400	1045	0
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1774	F		0	1602	1583	1721	1770	1583
Q Serve(g_s), s	13.7	6.2	4.6	8.3			0.0	26.4	2.3	10.4	13.5	0.0
Cycle Q Clear(g_c), s	13.7	6.2	4.6	8.3			0.0	26.4	2.3	10.4	13.5	0.0
Prop In Lane	1.00		1.00	1.00			0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	729	316	141	156			0	2486	614	874	2462	1101
V/C Ratio(X)	0.67	0.68	0.51	0.90			0.00	0.89	0.28	0.46	0.42	0.00
Avail Cap(c_a), veh/h	729	698	312	156			0	2618	647	874	2462	1101
HCM Platoon Ratio	1.00	1.00	1.00	1.00			1.00	2.00	2.00	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	0.00
Uniform Delay (d), s/veh	38.3	46.8	46.1	47.9			0.0	10.2	3.9	33.4	7.0	0.0
Incr Delay (d2), s/veh	2.3	2.6	2.8	44.1			0.0	5.3	1.1	0.4	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	3.2	2.1	6.0			0.0	12.0	1.2	5.0	6.7	0.0
LnGrp Delay(d),s/veh	40.6	49.4	48.9	92.0			0.0	15.5	5.0	33.7	7.5	0.0
LnGrp LOS	D	D	D	F				B	A	C	A	
Approach Vol, veh/h		772						2380			1445	
Approach Delay, s/veh		43.8						14.7			14.8	
Approach LOS		D						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	
Phs Duration (G+Y+Rc), s	32.6	46.8	13.0	13.6		79.4	26.6	
Change Period (Y+Rc), s	5.7	* 5.7	3.7	4.1		5.7	4.1	
Max Green Setting (Gmax), s	14.9	* 43	9.3	20.9		62.3	21.7	
Max Q Clear Time (g_c+I1), s	12.4	28.4	10.3	8.2		15.5	15.7	
Green Ext Time (p_c), s	1.9	12.7	0.0	1.2		12.5	1.0	

Intersection Summary	
HCM 2010 Ctrl Delay	21.8
HCM 2010 LOS	C

Notes

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	90	2290	60	0	1255
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	98	2489	65	0	1364
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			450			426
pX, platoon unblocked	0.78	0.70			0.70	
vC, conflicting volume	3204	655			2554	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1157	0			1060	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	87			100	
cM capacity (veh/h)	148	756			455	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	98	711	711	711	421	682	682
Volume Left	0	0	0	0	0	0	0
Volume Right	98	0	0	0	65	0	0
cSH	756	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.13	0.42	0.42	0.42	0.25	0.40	0.40
Queue Length 95th (ft)	11	0	0	0	0	0	0
Control Delay (s)	10.5	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	10.5	0.0				0.0	
Approach LOS	B						

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	46.4%	ICU Level of Service	A
Analysis Period (min)	15		

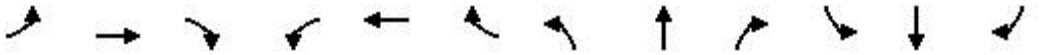
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	640	235	545	110	0	165	0	1005	95	170	1350	155
Future Volume (veh/h)	640	235	545	110	0	165	0	1005	95	170	1350	155
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	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	0	1863	0	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	640	235	545	110	0	165	0	1005	95	170	1350	0
Adj No. of Lanes	2	1	2	1	0	1	0	4	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	0	2	0	2	2	2	2	2
Cap, veh/h	1076	356	606	136	0	0	0	1446	357	1118	2139	957
Arrive On Green	0.30	0.19	0.19	0.08	0.00	0.00	0.00	0.45	0.45	0.32	0.60	0.00
Sat Flow, veh/h	3548	1863	3167	1774	110		0	6669	1583	3442	3539	1583
Grp Volume(v), veh/h	640	235	545	110	71.5		0	1005	95	170	1350	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	E		0	1602	1583	1721	1770	1583
Q Serve(g_s), s	16.3	12.4	17.8	6.5			0.0	13.3	3.1	3.7	25.9	0.0
Cycle Q Clear(g_c), s	16.3	12.4	17.8	6.5			0.0	13.3	3.1	3.7	25.9	0.0
Prop In Lane	1.00		1.00	1.00			0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1076	356	606	136			0	1446	357	1118	2139	957
V/C Ratio(X)	0.59	0.66	0.90	0.81			0.00	0.70	0.27	0.15	0.63	0.00
Avail Cap(c_a), veh/h	1076	367	624	156			0	2618	647	1118	2139	957
HCM Platoon Ratio	1.00	1.00	1.00	1.00			1.00	2.00	2.00	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	0.00
Uniform Delay (d), s/veh	31.4	39.7	41.9	48.1			0.0	26.2	14.6	25.4	13.4	0.0
Incr Delay (d2), s/veh	0.9	4.1	15.8	23.4			0.0	2.8	1.8	0.1	1.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	6.8	9.1	4.1			0.0	6.0	1.5	1.8	13.0	0.0
LnGrp Delay(d),s/veh	32.3	43.8	57.6	71.5			0.0	29.0	16.4	25.5	14.8	0.0
LnGrp LOS	C	D	E	E				C	B	C	B	
Approach Vol, veh/h		1420						1100			1520	
Approach Delay, s/veh		43.9						27.9			16.0	
Approach LOS		D						C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	
Phs Duration (G+Y+Rc), s	40.1	29.6	11.9	24.4		69.8	36.2	
Change Period (Y+Rc), s	5.7	* 5.7	3.7	4.1		5.7	4.1	
Max Green Setting (Gmax), s	14.9	* 43	9.3	20.9		62.3	21.7	
Max Q Clear Time (g_c+I1), s	5.7	15.3	8.5	19.8		27.9	18.3	
Green Ext Time (p_c), s	6.3	8.6	0.0	0.5		14.5	0.9	

Intersection Summary	
HCM 2010 Ctrl Delay	30.2
HCM 2010 LOS	C

Notes

phf = 1.0
modify to EB rt and EB th/rt



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	640	235	548	110	0	165	0	1023	95	170	1353	155
Future Volume (veh/h)	640	235	548	110	0	165	0	1023	95	170	1353	155
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	0	1863	0	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	640	235	548	110	0	165	0	1023	95	170	1353	0
Adj No. of Lanes	2	1	2	1	0	1	0	4	1	2	2	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	0	2	0	2	2	2	2	2
Cap, veh/h	1078	358	608	136	0	0	0	1467	362	1105	2137	956
Arrive On Green	0.30	0.19	0.19	0.08	0.00	0.00	0.00	0.46	0.46	0.32	0.60	0.00
Sat Flow, veh/h	3548	1863	3167	1774	110		0	6669	1583	3442	3539	1583
Grp Volume(v), veh/h	640	235	548	110	71.5		0	1023	95	170	1353	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	E		0	1602	1583	1721	1770	1583
Q Serve(g_s), s	16.2	12.4	17.9	6.5			0.0	13.5	3.1	3.7	26.0	0.0
Cycle Q Clear(g_c), s	16.2	12.4	17.9	6.5			0.0	13.5	3.1	3.7	26.0	0.0
Prop In Lane	1.00		1.00	1.00			0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1078	358	608	136			0	1467	362	1105	2137	956
V/C Ratio(X)	0.59	0.66	0.90	0.81			0.00	0.70	0.26	0.15	0.63	0.00
Avail Cap(c_a), veh/h	1078	367	624	156			0	2618	647	1105	2137	956
HCM Platoon Ratio	1.00	1.00	1.00	1.00			1.00	2.00	2.00	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	0.00
Uniform Delay (d), s/veh	31.3	39.6	41.8	48.1			0.0	25.8	14.3	25.7	13.5	0.0
Incr Delay (d2), s/veh	0.9	4.1	16.1	23.4			0.0	2.8	1.8	0.1	1.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	6.7	9.2	4.1			0.0	6.1	1.5	1.8	13.0	0.0
LnGrp Delay(d),s/veh	32.2	43.7	57.9	71.5			0.0	28.6	16.1	25.8	14.9	0.0
LnGrp LOS	C	D	E	E				C	B	C	B	
Approach Vol, veh/h		1423						1118			1523	
Approach Delay, s/veh		44.0						27.5			16.1	
Approach LOS		D						C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6	7	
Phs Duration (G+Y+Rc), s	39.7	30.0	11.9	24.4		69.7	36.3	
Change Period (Y+Rc), s	5.7	* 5.7	3.7	4.1		5.7	4.1	
Max Green Setting (Gmax), s	14.9	* 43	9.3	20.9		62.3	21.7	
Max Q Clear Time (g_c+I1), s	5.7	15.5	8.5	19.9		28.0	18.2	
Green Ext Time (p_c), s	6.3	8.8	0.0	0.4		14.5	0.9	

Intersection Summary	
HCM 2010 Ctrl Delay	30.1
HCM 2010 LOS	C

Notes

phf = 1.0
modified EB to EB rt and EB th/rt

existing
CONVENTIONAL CIRC 212 CALC
ROCKLIN 50 SUBDIVISION

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #4 Sierra College / Dominguez / Bass Pro

Cycle (sec):	100	Critical Vol./Cap.(X):	0.409
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	39	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 3	0	1	1 0 2	0	1	1 0 0	1	0	2 0 1	0	1
Volume Module:												
Base Vol:	0	694	15	14	1212	2	0	0	0	13	0	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	694	15	14	1212	2	0	0	0	13	0	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	694	15	14	1212	2	0	0	0	13	0	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	694	15	14	1212	2	0	0	0	13	0	4
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.00	1.00
FinalVolume:	0	694	15	14	1212	2	0	0	0	14	0	4
Saturation Flow Module:												
Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	1.00	1.00	2.00	1.00	1.00	1.00	0.00	2.00	1.00	1.00
Final Sat.:	1500	4500	1500	1500	3000	1500	1500	1500	0	3000	1500	1500
Capacity Analysis Module:												
Vol/Sat:	0.00	0.15	0.01	0.01	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crit Volume:	0				606			0		7		
Crit Moves:	****				****					****		

existing
CONVENTIONAL CIRC 212 CALC
ROCKLIN 50 SUBDIVISION

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #4 Sierra College / Dominguez / Bass Pro

Cycle (sec):	100	Critical Vol./Cap.(X):	0.331
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	34	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	3 0	1	1 0	2 0	1	1 0	0 1	0	2 0	1 0	1
Volume Module: >> Count Date: 3 Nov 2018 <<												
Base Vol:	2	1235	23	5	911	3	3	1	0	40	0	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	1235	23	5	911	3	3	1	0	40	0	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	1235	23	5	911	3	3	1	0	40	0	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	1235	23	5	911	3	3	1	0	40	0	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.00	1.00
FinalVolume:	2	1235	23	5	911	3	3	1	0	44	0	10
Saturation Flow Module:												
Sat/Lane:	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	1.00	1.00	2.00	1.00	1.00	1.00	0.00	2.00	1.00	1.00
Final Sat.:	1450	4350	1450	1450	2900	1450	1450	1450	0	2900	1450	1450
Capacity Analysis Module:												
Vol/Sat:	0.00	0.28	0.02	0.00	0.31	0.00	0.00	0.00	0.00	0.02	0.00	0.01
Crit Volume:	2				456			1		22		
Crit Moves:	****				****			****		****		

EXISTING PLUS ROCKLIN 50
CONVENTIONAL CIRC 212 CALC
ROCKLIN 50 SUBDIVISION

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #4 Sierra College / Dominguez / Bass Pro

Cycle (sec):	100	Critical Vol./Cap.(X):	0.412
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	39	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	3 0	1	1 0	2 0	1	1 0	0 1	0	2 0	1 0	1
Volume Module:												
Base Vol:	0	694	15	14	1212	2	0	0	0	13	0	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	694	15	14	1212	2	0	0	0	13	0	4
Added Vol:	0	1	2	7 ~~6~~	0	0	0	0	0	8	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	695	17	21 ~~20~~	1212	2	0	0	0	23 ~~21~~	0	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	695	17	20	1212	2	0	0	0	21	0	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	695	17	20	1212	2	0	0	0	21	0	4
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.00	1.00
FinalVolume:	0	695	17	20	1212	2	0	0	0	23	0	4
Saturation Flow Module:												
Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	1.00	1.00	2.00	1.00	1.00	1.00	0.00	2.00	1.00	1.00
Final Sat.:	1500	4500	1500	1500	3000	1500	1500	1500	0	3000	1500	1500
Capacity Analysis Module:												
Vol/Sat:	0.00	0.15	0.01	0.01	0.40	0.00	0.00	0.00	0.00	0.01	0.00	0.00
Crit Volume:	0				606			0		12		
Crit Moves:	****				**** ✓					*** ✓		

10/20 UPDATE NO CHANGE

EXISTING PLUS ROCKLIN 50
CONVENTIONAL CIRC 212 CALC
ROCKLIN 50 SUBDIVISION

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #4 Sierra College / Dominguez / Bass Pro

Cycle (sec):	100	Critical Vol./Cap.(X):	0.333 ✓
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	34	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	3 0	1	1 0	2 0	1	1 0	0 1	0	2 0	1 0	1
Volume Module: >> Count Date: 3 Nov 2018 <<												
Base Vol:	2	1235	23	5	911	3	3	1	0	40	0	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	1235	23	5	911	3	3	1	0	40	0	10
Added Vol:	0	3	6	24 ~~20~~	0	0	0	0	0	6 ~~5~~	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	1238	29	25	911	3	3	1	0	46 ~~45~~	0	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	1238	29	25	911	3	3	1	0	45	0	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	1238	29	25	911	3	3	1	0	45	0	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.00	1.00
FinalVolume:	2	1238	29 ~~29~~	25	911	3	3	1	0	50 ~~NC~~	0	10
Saturation Flow Module:												
Sat/Lane:	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	1.00	1.00	2.00	1.00	1.00	1.00	0.00	2.00	1.00	1.00
Final Sat.:	1450	4350	1450	1450	2900	1450	1450	1450	0	2900	1450	1450
Capacity Analysis Module:												
Vol/Sat:	0.00	0.28	0.02	0.02	0.31	0.00	0.00	0.00	0.00	0.02	0.00	0.01
Crit Volume:	2				456			1			25	
Crit Moves:	****				****			****			****	

EXISTING PLUS APPROVED PROJECTS
CONVENTIONAL CIRC 212 CALC
ROCKLIN 50 SUBDIVISION

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #4 Sierra College / Dominguez / Bass Pro

Cycle (sec):	100	Critical Vol./Cap.(X):	0.431
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	40	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	3 0	1	1 0	2 0	1	1 0	0 1	0	2 0	1 0	1
Volume Module:												
Base Vol:	0	694	15	14	1212	2	0	0	0	13	0	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	694	15	14	1212	2	0	0	0	13	0	4
Added Vol:	0	30	7	24	27	0	0	0	0	35	0	13
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	724	22	38	1239	2	0	0	0	48	0	17
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	724	22	38	1239	2	0	0	0	48	0	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	724	22	38	1239	2	0	0	0	48	0	17
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.00	1.00
FinalVolume:	0	724	22	38	1239	2	0	0	0	53	0	17
Saturation Flow Module:												
Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	1.00	1.00	2.00	1.00	1.00	1.00	0.00	2.00	1.00	1.00
Final Sat.:	1500	4500	1500	1500	3000	1500	1500	1500	0	3000	1500	1500
Capacity Analysis Module:												
Vol/Sat:	0.00	0.16	0.01	0.03	0.41	0.00	0.00	0.00	0.00	0.02	0.00	0.01
Crit Volume:	0				620			0		26		
Crit Moves:	****				****					****		

EPAP PLUS ROCKLIN 50
CONVENTIONAL CIRC 212 CALC
ROCKLIN 50 SUBDIVISION

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #4 Sierra College / Dominguez / Bass Pro

Cycle (sec):	100	Critical Vol./Cap.(X):	0.434 .435
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	40	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	3 0	1	1 0	2 0	1	1 0	0 1	0	2 0	1 0	1
Volume Module:												
Base Vol:	0	694	15	14	1212	2	0	0	0	13	0	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	694	15	14	1212	2	0	0	0	13	0	4
Added Vol:	0	31	9	30	27	0	0	0	0	43 45	0	13
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	725	24	44	1239	2	0	0	0	56 58	0	17
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	725	24	44	1239	2	0	0	0	56	0	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	725	24	44	1239	2	0	0	0	56	0	17
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.00	1.00
FinalVolume:	0	725	24	44	1239	2	0	0	0	62	0	17
Saturation Flow Module:												
Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	1.00	1.00	2.00	1.00	1.00	1.00	0.00	2.00	1.00	1.00
Final Sat.:	1500	4500	1500	1500	3000	1500	1500	1500	0	3000	1500	1500
Capacity Analysis Module:												
Vol/Sat:	0.00	0.16	0.02	0.03	0.41	0.00	0.00	0.00	0.00	0.02	0.00	0.01
Crit Volume:	0				620			0		31		
Crit Moves:	****				****					****		

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EPAP PLUS ROCKLIN 50
CONVENTIONAL CIRC 212 CALC
ROCKLIN 50 SUBDIVISION

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #4 Sierra College / Dominguez / Bass Pro

Cycle (sec):	100	Critical Vol./Cap.(X):	0.491 0.494
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	45	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	3 0	1	1 0	2 0	1	1 0	0 1	0	2 0	1 0	1
Volume Module: >> Count Date: 3 Nov 2018 <<												
Base Vol:	2	1235	23	5	911	3	3	1	0	40	0	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	1235	23	5	911	3	3	1	0	40	0	10
Added Vol:	0	85	54	198	59	0	0	0	0	65	0	56
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	1320	77	203	970	3	3	1	0	105	0	66
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	1320	77	203	970	3	3	1	0	105	0	66
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	2	1320	77	203	970	3	3	1	0	105	0	66
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.00	1.00
FinalVolume:	2	1320	77	203	970	3	3	1	0	116	0	66
Saturation Flow Module:												
Sat/Lane:	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	1.00	1.00	2.00	1.00	1.00	1.00	0.00	2.00	1.00	1.00
Final Sat.:	1450	4350	1450	1450	2900	1450	1450	1450	0	2900	1450	1450
Capacity Analysis Module:												
Vol/Sat:	0.00	0.30	0.05	0.14	0.33	0.00	0.00	0.00	0.00	0.04	0.00	0.05
Crit Volume:		440		203			3					66
Crit Moves:		****		****			****					****

CUMULATIVE PLUS ROCKLIN 50
CONVENTIONAL CIRC 212 CALC
ROCKLIN 50 SUBDIVISION

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #2 SIERR COLLEGE BLVD / EB I80

Cycle (sec):	100	Critical Vol./Cap.(X):	1.013
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ignore			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	4 0	1	2 0	2 0	1	2 0	2 0	1	1 0	0 0	1
Volume Module:												
Base Vol:	0	960	95	170	1495	155	640	235	595	110	0	165
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	960	95	170	1495	155	640	235	595	110	0	165
Added Vol:	0	12	0	0	10	0	0	0	11	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	972	95	170	1505	155	640	235	606	110	0	165
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	972	95	170	1505	0	640	235	606	110	0	165
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	972	95	170	1505	0	640	235	606	110	0	165
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.10	1.00	0.00	1.10	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	972	95	187	1505	0	704	235	606	110	0	165
Saturation Flow Module:												
Sat/Lane:	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	4.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	0.00	1.00
Final Sat.:	0	5800	1450	2900	2900	1450	2900	2900	1450	1450	0	1450
Capacity Analysis Module:												
Vol/Sat:	0.00	0.17	0.07	0.06	0.52	0.00	0.24	0.08	0.42	0.08	0.00	0.11
Crit Volume:	0				753				606	110		
Crit Moves:	****				****				****	****		

CUMULATIVE PLUS ROCKLIN 50
CONVENTIONAL CIRC 212 CALC
ROCKLIN 50 SUBDIVISION

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #4 Sierra College / Dominguez / Bass Pro

Cycle (sec):	100	Critical Vol./Cap.(X):	0.631
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	62	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0 3	0 1	2	0 2	1 0	2	0 1	0 1	2	0 1	1 0
Volume Module:												
Base Vol:	195	960	45	30	1815	305	45	90	65	15	85	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	195	960	45	30	1815	305	45	90	65	15	85	5
Added Vol:	0	3	6	20	0	0	0	0	0	5	0	0
PasserByVol:	0	0	0	20	0	0	0	0	0	0	0	0
Initial Fut:	195	963	51	50	1815	305	45	90	65	20	85	5
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	195	963	51	50	1815	305	45	90	65	20	85	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	195	963	51	50	1815	305	45	90	65	20	85	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00
FinalVolume:	215	963	57	55	1815	305	50	90	65	22	85	5
Saturation Flow Module:												
Sat/Lane:	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	2.57	0.43	2.00	1.00	1.00	2.00	1.89	0.11
Final Sat.:	2900	4350	1450	2900	3724	626	2900	1450	1450	2900	2739	161
Capacity Analysis Module:												
Vol/Sat:	0.07	0.22	0.04	0.02	0.49	0.49	0.02	0.06	0.04	0.01	0.03	0.03
Crit Volume:	107					707		90		11		
Crit Moves:	****					****		****		****		

CUMULATIVE PLUS ROCKLIN 50
CONVENTIONAL CIRC 212 CALC
ROCKLIN 50 SUBDIVISION

Level Of Service Computation Report
Circular 212 Planning Method (Future Volume Alternative)

Intersection #4 Sierra College / Dominguez / Bass Pro

Cycle (sec):	100	Critical Vol./Cap.(X):	0.729
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	84	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0 3	0 1	2	0 2	1 0	2	0 1	0 1	2	0 1	1 0
Volume Module:												
Base Vol:	205	2085	80	50	1125	65	245	155	325	195	70	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	205	2085	80	50	1125	65	245	155	325	195	70	20
Added Vol:	0	3	6	20	0	0	0	0	0	5	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	205	2088	86	70	1125	65	245	155	325	200	70	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	205	2088	86	70	1125	65	245	155	325	200	70	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	205	2088	86	70	1125	65	245	155	325	200	70	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00
FinalVolume:	226	2088	86	77	1125	65	270	155	325	220	70	20
Saturation Flow Module:												
Sat/Lane:	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450	1450
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	2.84	0.16	2.00	1.00	1.00	2.00	1.56	0.44
Final Sat.:	2900	4350	1450	2900	4112	238	2900	1450	1450	2900	2256	644
Capacity Analysis Module:												
Vol/Sat:	0.08	0.48	0.06	0.03	0.27	0.27	0.09	0.11	0.22	0.08	0.03	0.03
Crit Volume:		696			39				325	110		
Crit Moves:		****			****				****	****		